

COPY

**GUIDANCE MANUAL FOR THE PREPARATION
OF NPDES PERMIT APPLICATIONS FOR
STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITY**

**U.S. Environmental Protection Agency
Office of Water Enforcement and Permits**

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April, 1991

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PREFACE

Water quality problems have occupied an increasingly prominent role in the public's awareness over the past several decades. In 1972, Congress passed significant amendments to the Federal Water Pollution Control Act (commonly referred to as the Clean Water Act or CWA) to prohibit the discharge of any pollutant to waters of the United States from a point source unless the discharge was authorized by a National Pollutant Discharge Elimination System (NPDES) permit. NPDES permits specify monitoring, reporting and control requirements, including allowable levels of pollutants in discharges.

Efforts to improve water quality under the NPDES program have traditionally focused on reducing pollutants in discharges of industrial process wastewater and municipal sewage. Industrial process discharges and sewage outfalls were easily identified as responsible for poor, often drastically degraded water quality conditions. However, as pollution control measures were installed for these discharges, it became evident that more diffuse sources (occurring over a wide area) of water pollution were also major causes of water quality problems.

For many years, most of the environmental law makers and the public alike assumed that runoff from urban and other areas subjected to man's activities was essentially "clean" water. However, during the past twenty years or so, this view has changed. It is now recognized that rainfall picks up a multitude of pollutants from falling on and draining off streets and parking lots, construction and industrial sites, and mining, logging and agricultural areas. The pollutants are dissolved into and are carried off by the rainfall as it drains from these surfaces and areas. Through natural or manmade conveyances, the runoff is channeled into and transported by gravity flow through a wide variety of drainage facilities. Once in these facilities, the runoff may scour accumulated pollutants out of gutters, catchbasins, storm sewers, and drainage channels. The runoff eventually ends up in surface water bodies such as creeks, rivers, estuaries, bays, and oceans.

Many recent studies have shown that runoff from urban and industrial areas typically contains significant quantities of the same general types of pollutants that are found in wastewaters and industrial discharges and cause similar water quality problems. These pollutants include heavy metals (e.g., chromium, cadmium, copper, lead, nickel, zinc), pesticides, herbicides, and organic compounds such as fuels, waste oils, solvents, lubricants, and grease. These pollutants may cause problems for both human health and aquatic organisms.

In general, assessments of water quality are difficult to perform and verify. However, several national assessments have been made. For the purposes of these assessments, runoff from urban and industrial areas has been considered as a diffuse source or "nonpoint" source of pollution. Legally, however, most urban

runoff is discharged through conveyances such as separate storm sewers or other conveyances which are point sources under the CWA and are, therefore, subject to the NPDES program.

To provide a better understanding of the nature of storm water runoff from residential, commercial, and light industrial areas (collectively referred to as urban), the U.S. Environmental Protection Agency (EPA) provided funding and guidance to the Nationwide Urban Runoff Program (NURP), which was conducted from 1978 through 1983. The NURP study provided insight on what can be considered background levels of pollutants for urban runoff. NURP also concluded that the quality of urban runoff can be adversely impacted by several sources of pollutants that were not directly evaluated in the study, including illicit connections, construction and industrial site runoff, and illegal dumping.

Other studies have shown that storm sewers contain illicit discharges of non-storm water, and that wastes, particularly used oils, are improperly disposed of in storm sewers. Removal of non-storm water discharges to storm sewers presents opportunities for dramatic improvements in the quality of storm water discharges.

In 1987, the Clean Water Act was revised by adding Section 402(p) to address storm water. In summary, Section 402(p) states that prior to October 1, 1992, the NPDES program cannot require permits for discharges composed entirely of storm water unless one of the following conditions apply:

- 1) The discharge has been permitted prior to February 4, 1987 (in this case, the operator is required to maintain the existing permit).
- 2) The discharge is associated with industrial activity.
- 3) The discharge is from a large (population greater than 250,000) or medium (population greater than 100,000 but less than 250,000) municipal separate storm sewer system.
- 4) The permitting authority determines that the discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to the waters of the United States.

Section 402(p) of the CWA requires EPA to establish NPDES permit application requirements for storm water discharges associated with industrial activity; discharges from large municipal separate storm water systems (systems serving a population of 250,000 or more); and discharges from medium municipal separate storm water systems (systems serving a population of 100,000 or more, but less than 250,000). In response to this requirement, EPA published permit application requirements on November 16, 1990 (55 *FR* 47990). This manual provides guidance to facility operators discharging storm water associated with industrial activity on how to comply with the permit application requirements.

SECTION 1.0 INTRODUCTION

1.1 What Is The Purpose Of This Guidance Manual?

The Federal Water Pollution Control Act (also known as the Clean Water Act (CWA)), as amended in 1987, requires National Pollutant Discharge Elimination System (NPDES) permits for storm water discharges associated with industrial activity.

On November 16, 1990, (55 FR 47990), the Environmental Protection Agency (EPA) issued regulations establishing permit application requirements for storm water discharges associated with industrial activity. These regulations are primarily contained in Section 122.26 of Section 40 of the Code of Federal Regulations (40 CFR Part 122.26).

The purpose of this manual is to assist operators of facilities which discharge storm water associated with industrial activity in complying with the requirements for applying for an NPDES permit. This manual provides operators with an overview of the permitting process and information regarding the permit application requirements including: which forms are to be completed; where these are to be submitted; and when permit applications are due. In addition, this manual provides technical information on sample collection procedures.

1.2 How Is This Manual Organized?

This guidance manual contains five sections and several appendices. Section 2.0 explains the NPDES permit program, who must file an application and the different options for applying. Section 3.0 discusses the individual application requirements, including the necessary forms and information to be provided. Section 4.0 explains the permitting process, how applications are handled, whether an application is complete and public availability of the information. Technical guidance for the preparation of selected parts of the permit application forms is provided in Section 5.0. Pertinent regulatory guidance materials and other references are provided in Section 6.0.

Additional information is provided in the appendices to this manual. These appendices contain selected text from 40 CFR Part 122.26 (Appendix A), definitions of key terms (Appendix B), addresses for EPA Regional Offices and State agencies (Appendix C), procedures for filing a group application (Appendix D), and copies of the various permit application forms (Appendix E).

SECTION 2.0 WHAT IS THE NPDES PERMIT PROGRAM?

This section provides a description of the NPDES permitting program. Section 2.2 describes the regulatory term "storm water associated with industrial activity" which defines the scope of the NPDES program requirements with respect to industrial storm water discharges. Section 2.3 describes notification requirements for storm water discharges associated with industrial activity to large or medium municipal separate storm sewer systems. (These storm water discharges associated with industrial activity are also required to obtain NPDES permit coverage). Section 2.4 explains that storm water discharges associated with industrial activity to sanitary sewers, including combined sewers, are not required to obtain NPDES permit coverage. Section 2.5 describes three options that operators of storm water discharges associated with industrial activity may follow for obtaining permit coverage for storm water discharges associated with industrial activity: (1) individual permit applications; (2) group applications; and (3) case-by-case requirements developed for general permit coverage.

2.1 Authorized NPDES State Programs

The CWA allows States to request EPA authorization to administer the NPDES program instead of EPA. Upon authorization of a State program, the State is primarily responsible for issuing permits and administering the NPDES program in the State. At all times following authorization, State NPDES programs must be consistent with minimum Federal requirements, although they may always be more stringent.

State authority is divided into four parts: municipal and industrial permitting (including permitting for storm water discharges from non-Federal facilities); Federal facilities (including permitting for storm water discharges from Federal facilities); pretreatment; and general permitting. At this point in time, 39 States or Territories are authorized to, at a minimum, issue NPDES permits for municipal and industrial sources. In the 12 States and 6 territories without NPDES authorized programs, EPA issues all NPDES permits. In 6 of the 39 States that are authorized to issue NPDES permits for municipal and industrial sources, EPA issues permits for discharges from Federal facilities.

2.2 What Is A Storm Water Discharge Associated With Industrial Activity?

The November 16, 1990 regulation established the following definition of "storm water discharge associated with industrial activity" at 40 CFR 122.26(b)(14):

"Storm water discharge associated with industrial activity" means the discharge from any conveyance which is used for collecting and conveying storm water

and which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under 40 CFR Part 122. For the categories of industries identified in subparagraphs (i) through (x) of this subsection, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at 40 CFR 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the categories of industries identified in subparagraph (xi), the term includes only storm water discharges from all the areas (except access roads and rail lines) that are listed in the previous sentence where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water. For the purposes of this paragraph, material handling activities include the: storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are Federally, State, or municipally owned or operated that meet the description of the facilities listed in this paragraph (i)-(xi)) include those facilities designated under the provisions of 122.26(a)(1)(v). The following categories of facilities are considered to be engaging in "industrial activity" for purposes of this subsection:

(i) Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR Subchapter N (except facilities with toxic pollutant effluent standards which are exempted under category (xi) of this paragraph); (See Table 2-1)

(ii) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283 and 285) 29, 311, 32 (except 323), 33, 3441, 373;

(iii) Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 CFR 434.11(l) because the performance bond issued to the facility by the appropriate SMCRA authority has been released,

Table 2-1. CONTENTS OF 40 CFR PARTS 400 TO 471 (SUBCHAPTER N)

Part	Subchapter N - Effluent Guidelines and Standards
400	[Reserved]
401	General Provisions
402	[Reserved]
403	General pretreatment regulations for existing and new sources of pollution
405	Dairy products processing point source category
406	Grain mills point source category
407	Canned and preserved fruits and vegetables processing point source category
408	Canned and preserved seafood processing point source category
409	Sugar processing point source category
410	Textile mills point source category
411	Cement manufacturing point source category
412	Feedlots point source category
413	Electroplating point source category
414	Organic chemicals, plastics, and synthetic fibers
415	Inorganic chemicals manufacturing point source category
416	[Reserved]
417	Soap and detergent manufacturing point source category
418	Fertilizer manufacturing point source category
419	Petroleum refining point source category
420	Iron and steel manufacturing point source category
421	Nonferrous metals manufacturing point source category
422	Phosphate manufacturing point source category
423	Steam electric power generating point source category
424	Ferroalloy manufacturing point source category
425	Leather tanning and finishing point source category
426	Glass manufacturing point source category
427	Asbestos manufacturing point source category
428	Rubber manufacturing point source category
429	Timber products processing point source category
430	Pulp, paper, and paperboard point source category
431	The builders' paper and board mills point source category
432	Meat products point source category
433	Metal finishing point source category
434	Coal mining point source category; BPT, BAT, BCT limitations and new source performance standards
435	Oil and gas extraction point source category
436	Mineral mining and processing point source category
439	Pharmaceutical manufacturing point source category
440	Ore mining and dressing point source category
443	Effluent limitations guidelines for existing sources and standards of performance and pretreatment standards for new sources for the paving and roofing materials (tars and asphalt) point source category
446	Paint formulating point source category
447	Ink formulating point source category
454	Gum and wood chemicals manufacturing point source category
455	Pesticide chemicals
457	Explosives manufacturing point source category
458	Carbon black manufacturing point source category

Table 2-1. CONTENTS OF 40 CFR PARTS 400 TO 471 (SUBCHAPTER N) (continued)

Part	Subchapter N - Effluent Guidelines and Standards
459	Photographic point source category
460	Hospital point source category
461	Battery manufacturing point source category
463	Plastics molding and forming point source category
464	Metal molding and casting point source category
465	Coil coating point source category
466	Porcelain enameling point source category
467	Aluminum forming point source category
468	Copper forming point source category
469	Electrical and electronic components point source category
471	Nonferrous metals forming and metal powders point source category

or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990 and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations; (inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/operator; inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials, nor sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim);

(iv) Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under Subtitle C of RCRA;

(v) Landfills, land application sites, and open dumps that receive or have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under Subtitle D of RCRA;

(vi) Facilities involved in the recycling of materials, including metal scrap yards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093;

(vii) Steam electric power generating facilities, including coal handling sites;

(viii) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221-25), 43, 44, 45, and 5171 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified under paragraphs (i)-(vii) or (ix)-(xi) of this subsection are associated with industrial activity;

(ix) Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with Section 405 of the CWA;

(x) Construction activity including clearing, grading and excavation activities except: operations that result in the disturbance of less than five acres of total land area which are not part of a larger common plan of development or sale;

(xi) Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-25, (and which are not otherwise included within categories (ii)-(x))."

Table 2-2 lists Standard Industrial Classification (SIC) Code groups which are referenced in the regulatory definition of 'storm water associated with industrial activity'.

Several aspects of the regulatory definition are highlighted below:

- o The term 'storm water discharge associated with industrial activity' excludes storm water drained from areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas.
- o Storm water discharges associated with industrial activity include appropriate storm water discharges from Federally, State, or municipally owned or operated facilities that conduct activities that are described in subparagraphs (i)-(xi) of the regulatory definition.
- o For the categories of industries identified in subparagraph (xi), the term 'storm water discharges associated with industrial activity' includes only storm water discharges from all the areas (except access roads and rail lines) that are listed in the regulatory definition where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water.

2.3 Discharges Through Large And Medium Municipal Separate Storm Sewer Systems

Storm water discharges associated with industrial activity discharged through municipal separate storm sewers to waters of the United States are required to obtain NPDES permit coverage. In addition to meeting the requirements discussed in Section 4.0 of this manual, operators of storm water discharges associated with industrial activity which discharge through large or

Table 2-2.

STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODE GROUPS WHICH ARE REFERENCED IN THE NPDES STORM WATER REGULATIONS

SIC Code No. ⁽¹⁾	Title
10	Metal Mining
12	Coal Mining
13	Oil and Gas Extraction
14	Nonmetallic Minerals, Except Fuels
20	Food and Kindred Products
21	Tobacco Products
22	Textile Mill Products
23	Apparel and Other Textile Products
24	Lumber and Wood Products
25	Furniture and Fixtures
26	Paper and Allied Products
27	Printing and Publishing
28	Chemicals and Allied Products
29	Petroleum and Coal Products
30	Rubber and Miscellaneous Plastic Products
31	Leather and Leather Products (except 311)
32	Stone, Clay, and Glass Products
33	Primary Metal Industries
34	Fabricated Metal Products
35	Industrial Machinery and Equipment
36	Electronic and Other Electric Equipment
37	Transportation Equipment
38	Instruments and Related Products
39	Miscellaneous Manufacturing Industries
40	Railroad Transportation
41	Local and Interurban Passenger Transit
42	Trucking and Warehousing
43	United States Postal Service
44	Water Transportation
45	Transportation by Air
5015	Motor Vehicle Parts, Used
5093	Scrap and Waste Materials
5171	Petroleum Bulk Stations and Terminals

Notes:

- (1) For the exact 4-digit SIC codes within each industry group number, refer to the Standard Industrial Classification Manual, 1987 Edition, U.S. Executive Office of the President, Office of Management and Budget.

medium municipal separate storm sewer systems are required to submit the following information to the operator of the municipal separate storm sewer receiving the discharge no later than May 15, 1991 or 180 days prior to commencing such discharge:

- (i) the name of the facility;
- (ii) a contact person and phone number;
- (iii) the location of the discharge; and
- (iv) a description, including Standard Industrial Classification, which best reflects the principal products or services provided by each facility.

The terms "municipal separate storm sewer", "large municipal separate storm sewer system" and "medium municipal separate storm sewer system" are defined in Appendix B.

2.4 Discharges To Combined Sewer Systems

Discharges to municipal sanitary systems, including combined sewer systems (systems designed to convey municipal sanitary sewage and storm water) are not required to obtain NPDES permit coverage. However, these discharges may be subject to pretreatment requirements, including requirements implemented by permits issued by the operator of the municipal treatment plant.

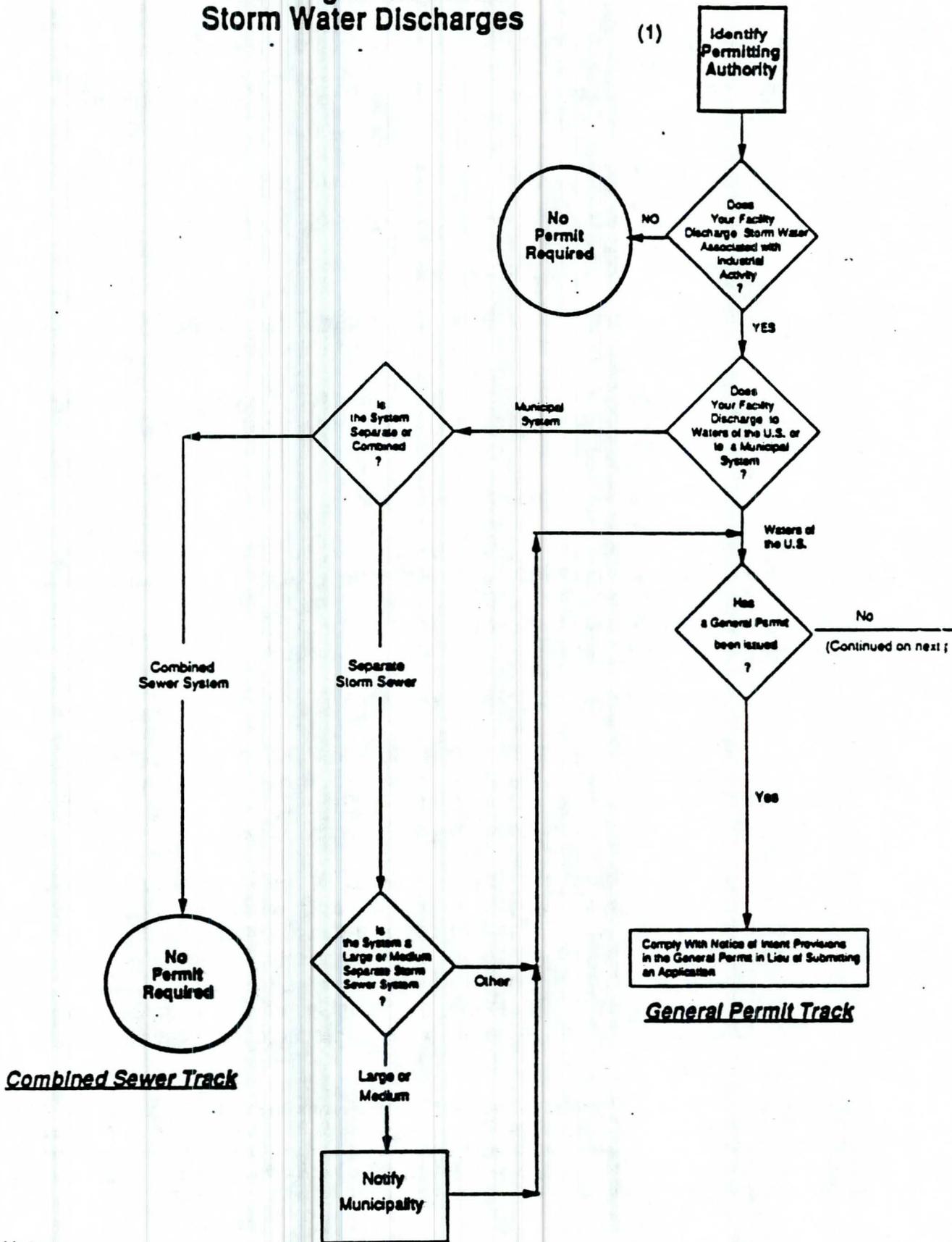
2.5 Options For Applying For Permit Coverage

The NPDES regulatory scheme provides three potential tracks for obtaining permit coverage for storm water discharges associated with industrial activity: (1) individual permit applications; (2) group applications; and (3) case-by-case requirements developed for general permit coverage.

A flowchart illustrating the three potential routes, or tracks for applying for permit coverage, as well as a route or track for discharges to combined sewers is provided in Figure 2-1. The four tracks are named: the general permit track, the group application track, the individual application track, or the combined sewer track. Dischargers following the first three are required to submit information, whereas the fourth track, the combined sewer track, illustrates that permits are not required for industrial discharges to combined sewer systems¹.

¹ NPDES permit coverage is required for storm water discharges associated with industrial activity which either discharge directly to waters of the United States, through a municipal separate storm sewer to waters of the United States, or through a privately owned conveyance to waters of the United States. Permits are not required for industrial discharges to municipal sanitary sewer systems, including combined sewer systems. However, municipalities operating combined sewer overflows are required to obtain NPDES permits.

Figure 2-1. Flowchart for NPDES Permitting of Industrial Storm Water Discharges



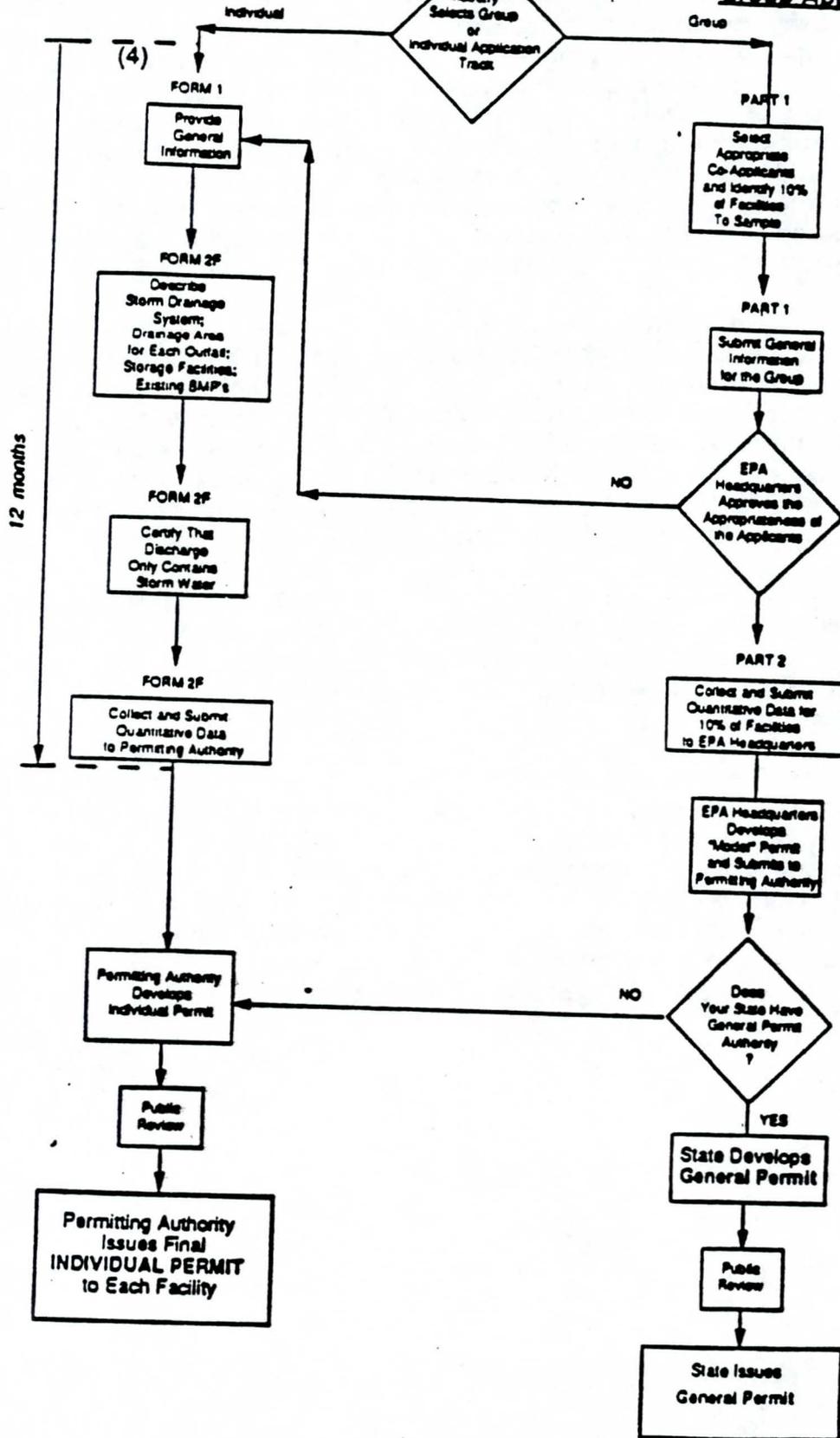
Notes:

- (1) Permitting Authority: States which have NPDES permit authority, otherwise EPA regional offices
- (2) States with NPDES permit authority can disallow participation in a group application
- (3) Time line begins at the date of publication of the final rule
- (4) Other forms may be required in addition to Forms 1 and 2F

(Continued from previous page)

Individual Application Track

(2) Group Application Track



The individual permit application track (i.e., the third tier on the flowchart) is applicable to all storm water discharges associated with industrial activity except: where the operator of the discharge is participating in a group application; where a general permit has been issued to cover the discharge and the general permit provides alternative means to obtain permit coverage; or where the discharge is to a sanitary sewer, including a combined sewer. For most storm water discharges associated with industrial activity, the requirements for an individual permit application are incorporated into Form 1 and Form 2F. Special individual application requirements for storm water discharges associated with industrial activity from construction activities, mining operations, oil and gas operations, and small businesses are discussed in Chapter 3.

The group application track (i.e., the second tier of the flowchart) allows a group of similar industries to submit a group application. This will often be an efficient alternative to preparing and submitting individual permit applications because it may reduce the cost for applicants. The requirements for group applications are discussed in Appendix D. Authorized NPDES States may establish requirements which are more stringent than EPA requirements, and may require facilities with storm water discharges associated with industrial activity to submit individual applications rather than participate in a group application.

The general permit track (i.e., the top tier of the flowchart) may be available where a general permit for the discharge has been issued. In this case, the facility operator must comply with any applicable Notice of Intent (NOI) provisions of the general permit instead of submitting an individual permit application.

The combined sewer track (i.e., the bottom tier of the flowchart) is followed if an industrial facility discharges storm water associated with industrial activity to a municipal sanitary sewer, including sewers that are part of a combined sewer systems. In this case, an NPDES permit for the storm water discharge to the combined sewer is not required. However, the operator of the sewage treatment works may develop pretreatment requirements (including requirements implemented through permits issued by the sewage treatment operator) applicable to industrial facilities discharging to combined sewers.

SECTION 3.0 INDIVIDUAL APPLICATION REQUIREMENTS

Section 2.5 of this manual describes the three options that operators of storm water discharges associated with industrial activity may follow for obtaining permit coverage for storm water discharges associated with industrial activity: (1) individual permit applications; (2) group applications; and (3) case-by-case requirements developed for general permit coverage. In addition, section 2.4 explains that storm water discharges associated with industrial activity to municipal sanitary systems, including combined sewer systems (systems designed to convey municipal sanitary sewage and storm water) are not required to obtain NPDES permit coverage.

This Chapter focusses on the procedures and requirements associated with submitting individual permit applications. Appendix D.2 discusses the procedures and requirements associated with submitting group applications.

Section 3.1 discusses the process of submitting individual permit applications. Section 3.2 provides an overview of the requirements of Form 1 and Form 2F, the individual permit application forms for most storm water discharges associated with industrial activity. Section 3.3 discusses special provisions for individual applications for storm water discharges associated with industrial activity from: small businesses; construction activities; and mining and oil and gas operations. Section 3.4 discusses deadlines for submitting individual permit applications. Section 3.5 describes the additional application forms that are necessary if storm water associated with industrial activity is mixed with non-storm water. Section 3.6 explains where to obtain and submit permit applications. Section 3.7 describes signatory requirements for individual permit applications, and Section 3.8 describes penalties for knowingly submitting false information.

3.1 The Process Of Submitting Individual Applications

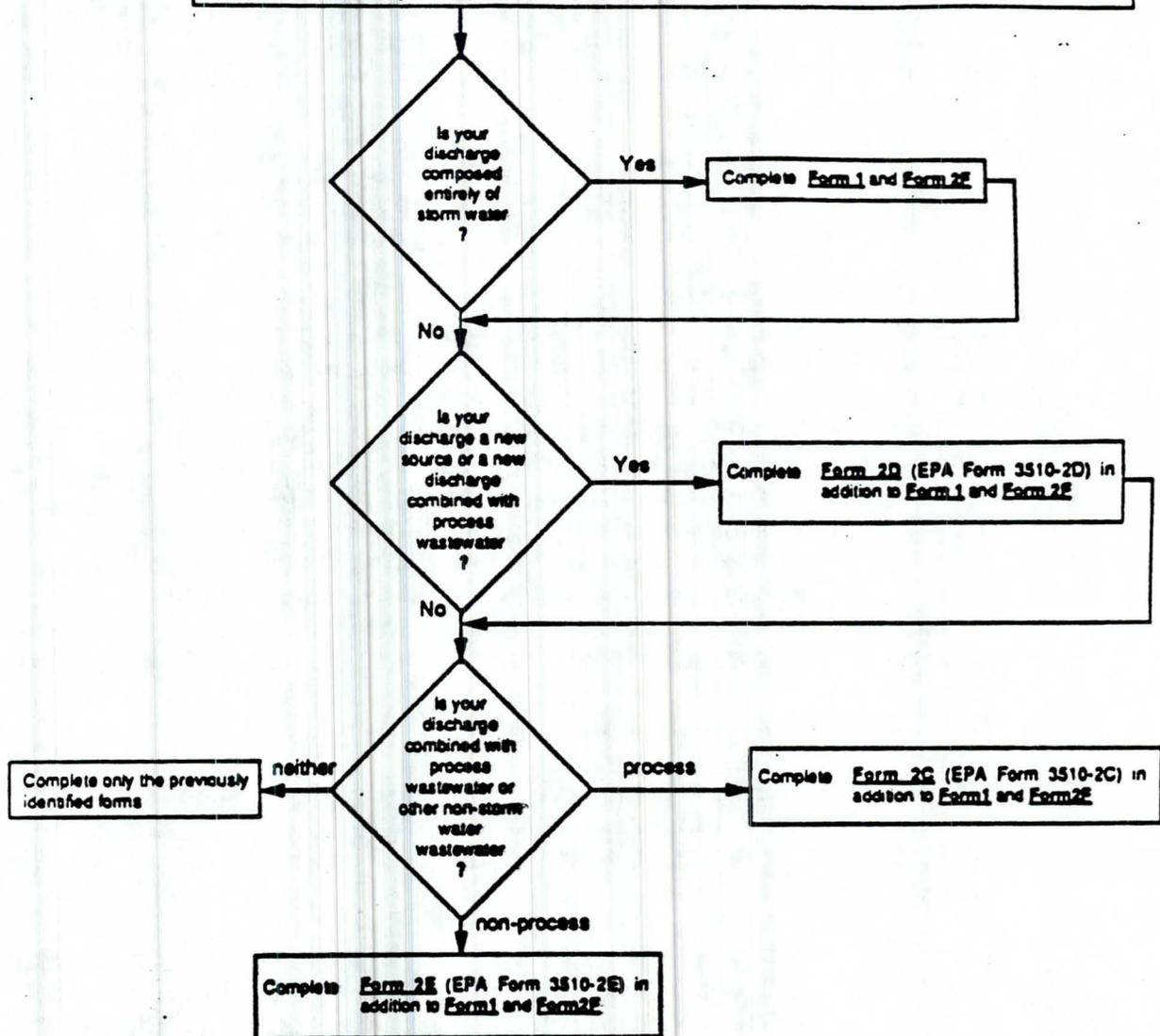
Figure 3-1 illustrates the process of selecting and submitting the application forms to use for individual permit applications for storm water discharges associated with industrial activity. The items on this list are discussed below:

- 1) Determine whether the discharge is considered a storm water discharge associated with industrial activity. Refer to the definition of "storm water discharge associated with industrial activity" provided in Section 2.2 of this guidance.
- 2) Determine whether the State in which the discharge(s) is located has an authorized NPDES program. A list of these States is provided in Appendix C. The permit application forms required by

Operators of a facility which:

- 1) discharge storm water associated with an industrial activity, or
- 2) discharge storm water that the permitting authority designates as a significant contributor of pollutants to waters of the U.S., or
- 3) discharge storm water that contributes to a violation of a water quality standard

are required to submit an application for a NPDES storm water discharge permit, unless a general permit has been issued. In this case, the facility operator must comply with the Notice of Intent provisions in lieu of submitting an application. Facility operators submitting an individual permit application must complete **FORM 1** (EPA Form 3510-1) and **FORM 2E** (EPA Form 3510-2F). Additional forms may be required as shown below.



Note: This flow chart does not address group application track or NOI/General permit track

FIGURE 3-1: FLOW DIAGRAM TO IDENTIFY WHICH FORMS MUST BE SUBMITTED WHEN APPLYING FOR AN INDIVIDUAL NPDES STORM WATER DISCHARGE PERMIT

authorized NPDES States may be different from the EPA-required forms that are discussed in this manual.

- 3) Determine the track (e.g. individual permit application track, group application track, general permit track, etc.) that the discharger will pursue to comply with application requirements. The options for different tracks are discussed in section 2.5 of this guidance.
- 4) Obtain the appropriate application forms if submitting an individual permit application. Sections 3.2, 3.3, and 3.5 of this guidance manual provide information on permit application forms and requirements. Section 3.6 describes where forms can be obtained.
- 5) Submit the completed application to the appropriate permitting regulatory agency by the application deadline (Section 3.4). Section 3.6 describes where applications are to be submitted.

3.2 Forms 1 And 2F

The requirements for individual permit application for most types of discharges composed of storm water associated with industrial activity are incorporated into Form 1 and Form 2F. (Section 3.3.2 discusses alternative individual permit application requirements for storm water discharges associated with industrial activity from construction activities and Section 3.5 discusses the additional forms necessary where storm water discharges associated with industrial activity are mixed with any non-storm water discharge).

Form 1 (EPA Form 3510-1) requires general information about the facility, including: the name and address of the facility; the facility type (i.e., SIC code); a map showing specified features, etc. See Appendix D.1 for a sample application form with instructions.

Form 2F (EPA Form 3510-2F) contains information which can be used to evaluate the pollution potential of storm water discharges associated with industrial activity, including:

- o a map showing site drainage;
- o an estimate of the area of impervious surfaces and the total area drained by each outfall;
- o a narrative description of material management practices and control measures;
- o a certification that separate storm water outfalls have been tested or evaluated for non-storm water discharges;

- o existing information regarding significant leaks or spills of toxic or hazardous pollutants at the facility that have taken place within the three years prior to the submittal of the application; and
- o sampling data for specified parameters.

See Appendix E.2 for a sample application form with instructions. Section 5.0 provides technical guidance for obtaining or estimating the following information required by Form 2F: preparing a site drainage map, detecting the presence of non-storm water discharges, measuring storm water runoff flow rates and volumes, and sampling equipment and procedures for collecting storm water discharge samples.

3.3 Special Provisions For Selected Discharges

3.3.1 Special Provisions For Small Businesses

Small businesses with storm water discharges associated with industrial activity do not have to analyze storm water discharges associated with industrial activity for the organic toxic pollutants listed in Table 2F-3 of Form 2F. (Small business with storm water discharges associated with industrial activity are subject to the other appropriate requirements of Form 1 and Form 2F, including requirements to sample for specified conventional pollutants and other specified constituents (40 CFR 122.21(g)(8)).

There are two ways in which a facility can qualify as a "small business." If the facility is a coal mine, and if the probable total annual production is less than 100,000 tons per year, past production data or estimated future production (such as a schedule of estimated total production under 30 CFR 79514[c]) may be submitted instead of conducting analyses for the organic toxic pollutants. Facilities that are not a coal mine with gross total annual sales for the most recent three years average less than \$100,000 per year (in second quarter 1980 dollars), may submit sales data for those years instead of conducting analyses for the organic toxic pollutants. The production or sales data must be for the facility which is the source of the discharge. The data should not be limited to production or sales for the process or processes which contribute to the discharge, unless those are the only processes at the facility. For sales data, in situations involving intra-corporate transfer of goods and services, the transfer price per unit should approximate market prices for those goods and services as closely as possible. Sales figures for years after 1980 should be indexed to the second quarter of 1980 by using the gross national product price deflator (second quarter of 1980 = 100). This index is available in National Income and Product Accounts of the United States (Department of Commerce, Bureau of Economic Analysis).

3.3.2 Special Provisions For Construction Activities

The application requirements for operators of storm water discharges associated with industrial activity from construction activities include Form 1 and a narrative description of:

- (i) the location (including a map) and the nature of the construction activity;
- (ii) the total area of the site and the area of the site that is expected to undergo excavation during the life of the permit;
- (iii) proposed measures, including best management practices, to control pollutants in storm water discharges during construction, including a brief description of applicable State and local erosion and sediment control requirements;
- (iv) proposed measures to control pollutants in storm water discharges that will occur after construction operations have been completed, including a brief description of applicable State and local storm water management controls;
- (v) an estimate of the runoff coefficient of the site and the increase in impervious area after the construction addressed in the permit application is completed, the nature of fill material and existing data describing the soil or the quality of the discharge; and
- (vi) the name of the receiving water.

At this time, EPA has not developed a standardized form for the narrative information accompanying Form 1 that is required in individual applications for storm water discharges associated with industrial activity from construction sites.

3.3.3 Mining And Oil And Gas Operations

Several specific regulatory provisions are applicable to storm water discharges associated with industrial activity from mining and oil and gas operations:

- (1) **Mining operations and Oil and Gas- (40 CFR 122.26(a)(2)):** The permitting authority may not require a permit for discharges of storm water runoff from mining operations or oil and gas exploration, production, processing or treatment operations or transmission facilities, composed entirely of flows which are from conveyances or systems of conveyances (including but not limited to pipes, conduits, ditches, and channels) used for collecting and conveying precipitation runoff and which are not contaminated by contact with or that has not come into contact with, any overburden.

raw material, intermediate products, finished product, byproduct or waste products located on the site of such operations.

- (2) **Oil and gas-** (40 CFR 122.26(c)(1)(iii)): The operator of an existing or new discharge composed entirely of storm water from an oil or gas exploration, production, processing, or treatment operation, or transmission facility is not required to submit a permit application, unless the facility:

(A) has had a discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 117.21 or 40 CFR 302.6 at anytime since November 16, 1987; or

(B) has had a discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 110.6 at any time since November 16, 1987; or

(C) contributes to a violation of a water quality standard.

3.4 Individual Applications Deadlines

Individual permit applications for storm water discharges associated with industrial activity which are currently not covered by an NPDES permit must be submitted by November 18, 1991.

Operators of discharges which are authorized by an individual NPDES permit must resubmit individual permit applications 180 days prior to the termination of the existing NPDES permit.

Permit applications for a new discharge of storm water associated with industrial activity must be submitted 180 days before that facility commences industrial activity which may result in a discharge of storm water associated with that industrial activity. Permit applications for a new discharge of storm water associated with industrial activity from a construction activity (see subparagraph (x) of the definition in section 2.3 of this document) must be submitted at least 90 days before the date on which construction is to commence. Persons proposing a new discharge are encouraged to submit their application well in advance of the 90 or 180 day requirements to avoid delay.

Where a general permit has been issued, deadlines for submitting a notice of intent (NOI) to be authorized to discharge under the permit are established in the permit.

3.5 When Are Additional Forms Required?

Where a storm water discharge associated with industrial activity is mixed with a non-storm water component prior to discharge, an additional application form must be submitted.

A complete permit application for a storm water discharge associated with industrial activity mixed with process wastewater, (process wastewater is water that comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, waste product or wastewater) includes Form 1, Form 2F and Form 2C.

A complete permit application for a storm water discharge associated with industrial activity mixed with new sources or new discharges of non-storm water (non-NPDES permitted discharges commencing after August 13, 1979) includes Form 1, Form 2F and Form 2D.

A complete permit application for a storm water discharge associated with industrial activity mixed with nonprocess wastewater (nonprocess wastewater includes noncontact cooling water and sanitary wastes which are not regulated by effluent guidelines or a new source performance standard, except discharges by educational, medical, or commercial chemical laboratories) includes Form 1, Form 2F and Form 2E.

3.6 Where To Obtain And Submit Applications

In States without an authorized NPDES State program, EPA issues all NPDES permits. Where EPA issues permits, permit application forms can be obtained from and submitted to the appropriate EPA Regional office. (See Appendix C.2 for a list of the addresses and telephone numbers of the EPA Regional offices).

In States with authorized NPDES programs, application forms can be obtained from and submitted to the appropriate State office. A list of these States is provided in Appendix C. The permit application forms required by authorized NPDES States may be different from the EPA-required forms that are discussed in this manual.

3.7 Signatories

Section X of Form 2F requires that all permit applications must be signed with the following 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 gather and evaluate 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."

This certification is to be signed as follows:

(A) For a corporation: by a responsible corporate official. For purposes of this section, a responsible corporate official means (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25,000,000 (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

EPA does not require specific assignments or delegation of authority to responsible corporate officers. The Agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate position rather than to specific individuals.

(B) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(C) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g. Regional Administrators of EPA).

3.8 Penalties For Knowingly Submitting False Information

The Clean Water Act provides for severe penalties for knowingly submitting false information on application forms. Section 309(c)(4) of the Clean Water Act provides that *"Any person who knowingly makes any false material statement, representation, or certification in any application, . . . shall upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than 2 years or by both. If a conviction of such person is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years or by both."*

SECTION 4.0 THE PERMITTING PROCESS

The purpose of this section is to provide the applicant with a summary of the process of issuing NPDES permits for storm water discharges associated with industrial activity.

4.1 How Are Individual Applications Processed?

Following the submission of the NPDES permit application, the permitting authority reviews the application for completeness. If additional information is required to complete the application, the permitting authority will notify the applicant. The permitting authority will specify a deadline for submitting the additional information. The effective date of the application is the date when the permitting authority determines that the application is complete.

The permitting authority may request additional information beyond what is required in the application form. The permit writer will use available information, primarily that in the permit application, to develop a draft permit or a notice to deny a permit. All draft permits and notices of intent to deny a permit will include a statement of basis or a draft fact sheet. The statement of basis will briefly describe the rationale for either proceeding with issuing a permit or denying a permit. The draft fact sheet will include the principal facts, methodology, and any legal or policy questions considered in the decision to proceed with issuing a permit.

All draft permits and notices of intent to deny a permit are subject to public notice and will be made available for public comment. The permitting agency will give public notice when: (1) a permit application has been tentatively denied, (2) a draft permit is issued, (3) an evidentiary hearing is granted, or (4) when a new source determination has been made.

After the close of the public comment period, the permitting agency will issue a final decision. The permitting agency, upon issuance of the final decision, will respond to comments, identify any changes in the tentative decision (to either permit or deny a permit) and give any reason pertinent to the changes. If a final NPDES permit is issued, the permit usually specifies the effective date, at which time, the facility is legally authorized to discharge storm water associated with an industrial activity subject to the permit conditions. A more complete description of the processes involved in obtaining an NPDES Permit is provided in 40 CFR Part 124, especially Subpart D.

4.2 Completeness Of The Application

Prospective applicants seeking an NPDES permit for storm water related industrial activity can refer to the following list that summarizes the applicant's primary responsibilities (Table 4-1). This application checklist is useful

Table 4-1. PERMIT APPLICATION CHECKLIST

Action Checklist	Date Completed/ Signature of Person Filling out
1. Determine whether a permit is required for the storm water discharge.	_____
o Refer to Section 3.0 of this manual	_____
o Contact the permitting authority, if necessary	_____
o Record name of contact person	_____
2. Determine whether the state in which the discharge(s) is located has an EPA-approved NPDES program.	_____
o Refer to Appendix C of this manual	_____
o Determine which forms need to be submitted for individual applications.	_____
o If EPA is the permitting authority, list appropriate forms (Refer to Figure 4-1)	_____
o For EPA-approved states, contact the permitting authority for appropriate forms and instructions	_____
3. Determine if a general permit will be, or has been, issued for the discharge.	_____

Table 4-1. PERMIT APPLICATION CHECKLIST (continued)

Action Checklist	Date Completed/ Signature of Person Filling out
4. If no general permit, select between participating in a group application or submitting an individual application.	_____
5. Determine what the deadlines are for the permit application.	_____
o Check Section 4.6 of this manual if EPA is the permitting authority	_____
o Contact the state permitting agency if this information is not provided in the application form or instructions provided by that agency	_____
6. Complete the appropriate application forms. All applicants are to submit Forms #1 and 2F. Refer to Figure 4-1 to determine if Forms 2C, 2D, and/or 2E need to be submitted.	_____
7. Retain a complete copy of the permit application and all supporting documentation.	_____
8. Submit the completed application forms to the appropriate permitting agency by the application deadline identified above.	_____

for the applicant for self-checking the completeness of the application prior to submission. Applications will not be considered complete unless all applicable information required is provided. If an item does not apply, "NA" (for "not applicable") may be entered in the appropriate space. If additional information is required, the applicant will be notified.

4.3 Public Availability Of Submitted Information

Section 402(j) of the Clean Water Act requires that all permit applications will be available to the public. Information in permit applications will be made available to the public upon request. Any information required in a permit application may not be claimed as confidential. Any information submitted to EPA which goes beyond that required by Form 1, Form 2F or other appropriate forms may be claimed as confidential. However, claims for confidentiality of effluent data will be denied.

If a claim of confidentiality is not asserted at the time of submitting the information, EPA may make the information public without further notice to the applicant. Claims of confidentiality will be handled in accordance with EPA's business confidentiality regulations at 40 CFR Part 2.

4.4 How Long Is A Permit Valid?

A permit will be issued by the permitting agency for a period up to, but not more than 5 years. Dischargers must reapply for a permit 180 days before the expiration date of the permit.

The permit is not transferable except after notice to and approval by the permitting authority. The Director of the permitting authority may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements that may be necessary under the CWA.

4.5 How Are NPDES Permits Enforced?

The CWA provides that any person who violates a permit condition is subject to a civil penalty not to exceed \$25,000 per day of violation. Any person who willfully or negligently violates a permit is subject to a fine of not less than \$2,500 or more than \$25,000 per day of violation, or imprisonment for not more than 1 year, or both (40 CFR 122.41(a)).

The operator of a facility must allow a representative of the permitting authority upon the presentation of credentials and other documents as may be required by law, to enter the regulated facility and inspect records pertaining to the permit. This includes, but is not limited to, monitoring and control equipment, practices, and operations regulated under this permit. The

representative may also sample the storm water discharge for any substance to assure compliance with the permit conditions. Inspection activities are to be conducted at reasonable times (40 CFR 122.41(i)(1) to (4)).

The operator must retain all records of discharge monitoring for at least three years from the date of the sample, measurement, report, or application. This includes all calibration and maintenance records, all original strip charts from continuous monitoring, copies of all records required by the permit, and all records of data used to complete the NPDES permit application 40 CFR 122.41(j)(2).

The CWA provides that any person who knowingly falsifies any record or document, tampers with or renders inaccurate any monitoring device, shall upon conviction be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 2 years, or both (40 CFR 122.41(j)(5) and (k)(2)).

Additional penalties for knowingly submitting false information in applications are described in Section 2 of this manual.

SECTION 5.0

TECHNICAL SUPPORT FOR SPECIFIC ELEMENTS OF THE NPDES PERMIT APPLICATION FORMS

5.1 Overview

The instructions provided with Form 2F are expected to be sufficient for most applicants. This section provides additional technical guidance for obtaining information required by Form 2F, including guidance for: developing site maps; identification of outfalls that discharge storm water associated with industrial activity; testing for the presence of non-storm water discharges; estimating storm water runoff flow rates and volumes; and collecting samples.

5.2 Site Drainage Map

Section III of Form 2F requires that a site drainage map be attached to the application. The site drainage map must show either topography or a delineation of the drainage area served by each outfall which discharges storm water associated with industrial activity if a topographic base map is not used. The delineation of the drainage area for each outfall that discharges storm water associated with industrial activity, can be based on site observations which identify drainage patterns. Drainage patterns should be shown on the site drainage map so that runoff from each drainage area drains to a separate outfall.

The site drainage map must show the location (and size - approximate for earthen structures) of all drainage conveyances or natural channels that convey or drain storm water off the applicant's property. The map must indicate whether the drainage system receiving the discharge is a natural water body, part of a municipal or non-municipal drainage system, or other system as applicable.

The following information must be provided and recorded on the map where appropriate:

- o Paved areas and buildings at the facility**
- o Past and present outdoor areas used for storage or disposal of significant materials**
- o Hazardous waste treatment, storage or disposal facilities, or accumulation areas (including those not requiring a RCRA permit)**
- o Injection wells**

- o Material loading and access areas (e.g., loading docks and main truck routes on the facility property)
- o Areas where pesticides, herbicides, soil conditioners, and fertilizers are applied
- o Structural control measures to reduce pollutants in storm water runoff
- o Surface water bodies which receive storm water discharges from the facility

During the preparation of a site drainage map, or the review of an existing one, emphasis should be placed on the identification of all inflow sources to ensure that inappropriate sources of non-storm water entry are not present. The map should identify points of entry to the facility site storm water drain system, including catchbasins, floor drains, and roof leaders.

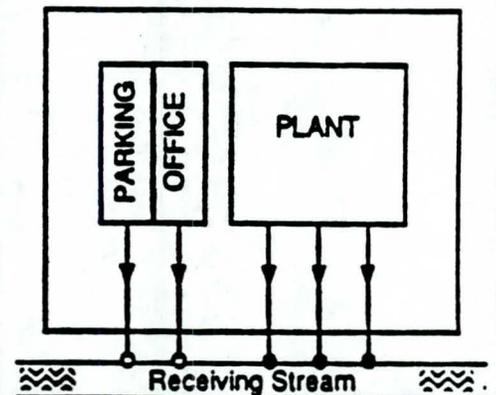
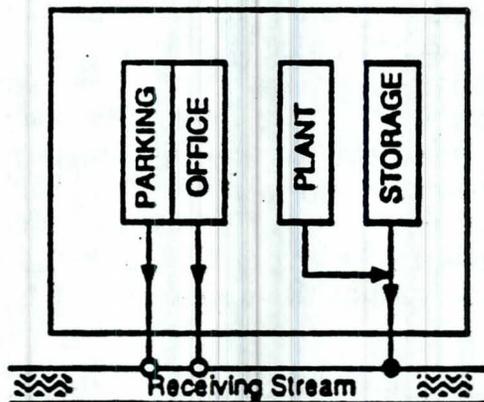
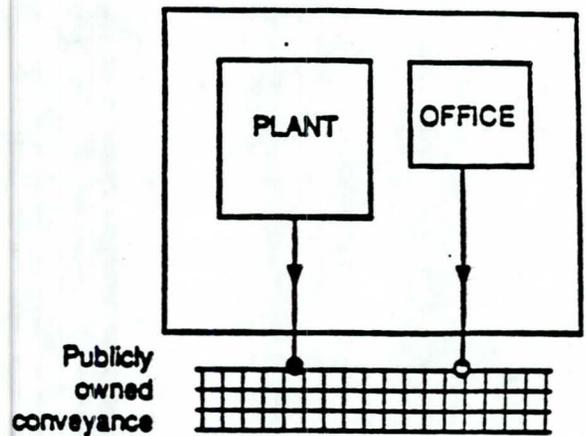
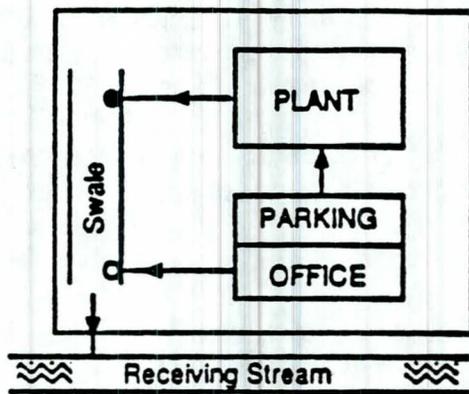
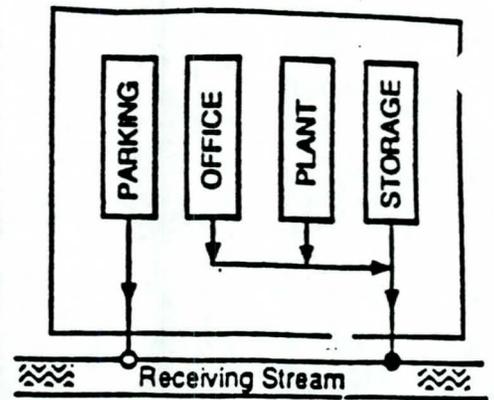
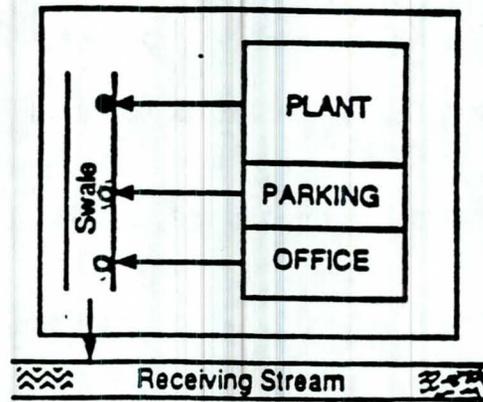
The site drainage map required in Form 2F should show the location and an identifying number or name for each storm water outfall at the facility.

5.3 Identification Of Outfalls To Be Monitored

Form 2F requires that applicants provide quantitative data for samples of storm water discharges associated with industrial activity. If a facility discharges storm water associated with industrial activity to a municipal separate storm sewer, then the facility should sample the storm water from the site prior to discharging to the municipal separate storm sewer. Storm runoff from areas located on plant lands separate from the plant's industrial activities, such as administrative buildings roofs and accompanying parking lots are not defined as storm water associated with industrial activity and hence do not need to be monitored unless the runoff is combined with storm water associated with industrial activity. Figure 5-1 shows several scenarios for storm water outfalls that may or may not need to be monitored as part of a NPDES permit application. 40 CFR 122.21(g)(7) provides that when an applicant has two or more outfalls with substantially identical effluents, the Director may allow the applicant to test only one outfall and report that the quantitative data also apply to substantially identical outfalls.

5.4 Evaluation Of The Presence Of Non-storm Water Discharges

Form 2F requires applicants to certify that all outfalls that discharge storm water associated with industrial activity have been tested or evaluated for the presence of non-storm water discharges. Applicants do not have to test for the presence of non-storm water discharges already subject to an NPDES permit. Acceptable procedures include: dry weather observations of outfalls or other appropriate observation locations; the analysis and validation of accurate piping



- Outfall discharges storm water associated with industrial activity (sampling typically required in Form 2F)
- Outfall discharges storm water that is not associated with industrial activity (sample typically not required in Form 2F).
- ➔ Storm runoff direction

Figure 5-1. EXAMPLE INDUSTRIAL STORM RUNOFF OUTFALLS WITH STORM WATER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY.

schematics; dye-tests; or other procedures for ensuring that there are no inappropriate connections or discharges to the storm drain system. The permit application requires a description of the method used, the date of testing (if applicable), and the onsite drainage locations observed during the test. Any non-storm water discharge which is not already identified in a NPDES permit which is detected must be identified in Form 2C (for process wastewater) or Form 2E (for non-process wastewater) which must accompany the storm water discharge application (Form 1 and Form 2F).

The following sections provide a description of several procedures that can be used in developing a certification and an overview of the applicability of the tests and the resources required for performing the tests. A first step should be to identify potential sources of non-storm water at the facility and to focus on those places.

5.4.1 Visual Inspection of Storm Drain at Manhole Inlet or Outfall Description

A visual inspection of the system conducted during dry weather, can be an effective method of locating illicit connections to the storm drain system. The observation should be made during normal business hours when sources of non-storm water are typically operating. A record should be kept of all observed flows and any stains, sludges, or other abnormal conditions observed. Where flows are observed, additional analysis, such as dye testing (described below) may be necessary to identify the source of the flows.

Applicability: This method is applicable to any industrial site with a storm drain system where an outfall or other location (e.g. manhole) down gradient from potential non-storm water discharges can be observed.

Resources: No special equipment is required.

5.4.2 Review and Validation of Piping Schematics Description

A careful review of piping schematic drawings for industrial sites can identify the intended routing of flows from particular areas or drains. This review should be accompanied by visual inspection to compare the "as built" condition to the plans and to determine whether any unrecorded piping modifications have been made.

Applicability: This method is most applicable for industrial sites which have large or elaborate piping arrangements, usually recorded on schematic piping drawings. It is most applicable in conjunction with use of the other techniques described below.

Resources: No special equipment is required, though dye tests may be useful in specific situations to clarify discrepancies which cannot be resolved visually.

5.4.3 Dye Tests Description

Dye tests are used to determine whether a particular inlet or fixture discharges non-storm water to the storm drain. A quantity of dye is released at the selected location while an observer watches for the dye at a downstream location. If the inlet is discharging to the storm drain, the dye will be detected at the downstream location. Dye doses should be sufficiently large so that the dye at the downstream location is visible to the naked eye.

Applicability: Dye tests are most effective for determining if an identified drain or catchbasin is connected to the storm sewer where the outfall of the storm sewer is submerged, but the receiving water can be observed. (Where the outfall or other point can be observed and is not submerged, dry weather observation can be made or water can be used instead of a dye). Dye tests can also be used where dry weather flows have been observed, but the source of the flow has not yet been observed. It is best used when there are only a limited number of possible sources of non-storm water to the storm drain that need to be investigated.

Resources: No special equipment is necessary to conduct a dye test. Dye is the only material required. Effective dyes that are safe and harmless are available in powder, tablet, or liquid form. A 20% solution of Rhodamine (liquid) costs about \$15/lb. Dye can be purchased in 2-1/2 gallon containers which weigh 25 pounds and cost about \$400. This can be diluted before each test by an approximate ratio of 10 to 1. A minimum field crew of two is needed, one to apply the dye, the other to observe the storm drain.

5.4.4 TV Line Surveys Description

TV surveys are conducted with a mobile closed-circuit television system consisting of a monitor screen, camera, drag lines, and reels and cables that allow the camera to be guided through a section of pipeline. The TV picture allows a visual inspection of the interior of the drain pipe and can be used for pipelines with diameters that range from 4 inches to approximately 48 inches. Television inspection of a storm drain provides positive information (and a documented record) of the interior of the pipelines. All inlets to the line can be identified and located. Systems for conducting TV surveys can be purchased, leased, or rented. Alternatively, a firm which specializes in this work can be hired.

Applicability: TV surveys may serve as useful tools where an initial survey identifies a non-storm water discharge and the operator is having difficulty in finding the source. A TV survey can locate entry points to the storm drain system, determine whether or not there is flow in them, and permit estimates of the flow to be made. However, in many cases, these observations will need to be supplemented by other methods to identify the specific source (above ground) of

the connection. This may be accomplished by inspection of drain maps, dye tests, or possibly smoke tests.

Resources: Resources required for a TV survey of storm drains include the following:

- o TV camera
- o TV monitor and VCR to record survey
- o Rig consisting of video cables, tow lines, and related equipment for properly guiding the camera in the line at a controlled rate, recording distance moved, and withdrawing the camera from the pipeline

The cost to conduct a TV survey can range from \$1 to \$3 per foot of storm sewer. For small surveys costs could vary from \$125 to \$200 per hour, including labor and rental of the necessary equipment. However, this cost can increase significantly if the storm sewer must be cleaned of debris prior to conducting the TV survey. On average, approximately 1000 feet of sewer can be inspected in a day. In a clean sewer, up to 2000 feet can be inspected.

The applicant should refer to "Operation and Maintenance of Wastewater Collection Systems" (CSU 1983) or similar appropriate reference documents for a detailed description of these test methods.

5.5 Estimates Of Discharge Flow Rates And Volumes

Form 2F requires applicants to provide quantitative data based on samples collected during storm event(s). One set of parameters that must be provided for such storm event(s) are flow estimates or flow measurements, and an estimate of the total volume of the discharge. The method of flow estimation or measurement must be described in the application.

EPA intends that applicants need only provide rough estimates of flows in Form 2F. The following section discusses methods for obtaining the required information. Section 5.5.1 presents a method for approximating flows and volumes which does not require flow velocity measurements. The following subsections discuss other methods that require measurements of flow velocities.

5.5.1 Estimating Flows and Volumes

Runoff flow rates and volumes can be estimated by using the total rainfall amount for the storm event and estimated runoff coefficients for the facility. Runoff coefficients represent the fraction of total rainfall that will be transmitted as runoff from the facility. As such, the coefficients reflect the ground surface or cover material. To estimate runoff volume and rates, it can be assumed that

paved areas and other impervious structures such as roofs have a runoff coefficient of 0.90 and, therefore, 90% of the rainfall is conveyed from the facility as runoff. For unpaved surfaces, it can be assumed that the runoff coefficient is about 0.50. The total volume of discharge for the event is then estimated by:

$$\text{total runoff volume (cubic ft)} = \text{total rainfall (ft)} \times [\text{facility paved area} \times 0.90 + \text{facility unpaved area} \times 0.50]$$

The facility areas used in this calculation should be in units of square feet and should include only those areas drained by the outfall sampled. To estimate an average flow rate, divide the volume by the duration of the rainfall event. If desired, a more accurate estimate can be made by using more specific runoff coefficients for different parts of the facility based on the type of ground cover (Chow 1964 contains various runoff coefficients and discusses their use).

5.5.2 Flow Rate Measurements

There are a variety of techniques for measuring or estimating flow rates. Flow measuring devices based on pipe invert sections (e.g., flumes, weirs, and others) are commercially available. For locations that may be used for routine monitoring in the future, the applicant may consider installing these types of devices for ease in future measurements. The installed cost of a weir, for example, typically ranges from about \$1,000 to \$5,000. Once installed, the weir must be calibrated so that future measurements of stage (i.e., depth of flow) can be converted directly to flow volumes. The installation and calibration of such devices should be performed by experienced personnel.

To estimate flow rates in units of volume per time such as cubic feet per second, information on flow velocities and depth of flow are required. The remainder of this section discusses methods for collecting these data.

Flow rate estimates may also be obtained by measuring depth of flow and velocity in a pipe of known diameter or other conveyance structure at frequent intervals during a storm runoff event. For a pipe or other structure of known size, the cross-sectional area of flow can be calculated for any depth of flow using geometric relationships. Flow velocities can be measured by using suitable units (e.g., propeller operated devices) attached to a portable current meter. Flow velocity measurements should be obtained from representative locations throughout the flow cross-section. Such units are commercially available at costs ranging from about \$1,000 to \$3,000. While these devices may be fairly expensive, they are easy to use and they provide accurate data if used properly.

Flow velocities can be estimated using simpler methods, such as measuring the time of passage of an object (e.g., an orange) between two points a known distance apart (e.g., manholes).

Facility operators who are more familiar with measuring flows in pipes or open channels may use the Chezy-Manning equation, for example, to calculate flow velocities:

$$v = \frac{1.49}{n} (r_H)^{2/3} (S^{1/2})$$

where: v = velocity [ft/s]
 n = Manning roughness constant
 r_H = hydraulic radius [ft]
 S = slope of the energy line [ft/ft]

A complete discussion of the use of this equation, other appropriate equations, and the identified parameters can be found in most fluid mechanics references (e.g., Chow, 1964).

5.5.3 Estimation of Flow Rates Based on Flow Velocity Measurements

If the measurements of flow depth are recorded and converted to cross-sectional areas (in square feet), and the corresponding velocities for each depth are recorded (in feet per minute), then the flow rate (Q) in cubic feet per minute (cfm) is:

$$Q = (\text{area})(\text{velocity})$$

The maximum flow rate is the highest value recorded during the storm event. The time-weighted average flow rate for the storm event can be estimated by the average of the individual values recorded.

5.5.4 Estimation of Volumes Based on Flow Rate Estimates

The total volume of discharge can be estimated by first multiplying each of the flow rates determined above by a time interval that represents the portion of the total storm duration associated with the measurement, and then adding all such partial volumes. If the time intervals used are seconds, then the total flow of runoff will be in units of cubic feet.

A procedure for calculating the total runoff volume from a set of discrete measurements of flow depth and velocity during a storm runoff event is discussed below and presented in Table 5-1. The basic steps for calculating this information are as follows:

- Step 1: Measure and tabulate flow depths and velocities every 20 minutes during at least the first 3 hours of the runoff event.

- Step 2: Calculate and tabulate the cross-sectional area of flow for each of the flow depths measured. Calculate the flow rate (Q) for each discrete set of flow rate and flow velocity measurements. $Q = (\text{area})(\text{velocity})$.
- Step 3: Plot flow rate, Q versus time as shown in Table 5-1.
- Step 4: Assign each flow rate measurement a duration equal to the sum of 1/2 the time interval between the preceding and succeeding measurements. In the ideal case of uniform 20 minute intervals, the durations are $[(20)\frac{1}{2} + (20)\frac{1}{2} = 20$ minutes].
- Step 5: Compute the flow volume associated with each observation (V_1, V_2, \dots, V_9) by multiplying the measured flow rate by the duration (in this case, 20 minutes). Be sure the units are consistent. For example, if durations are in minutes and flow velocities are in cubic feet per second (cfs), convert the durations to seconds or the velocities to feet per minute.
- $\text{Volume (V)} = \text{Flow Rate (cfm)} \times \text{Duration (minutes)}$
- Step 6: The beginning volume can be approximated by assuming that the flow rate is zero at time zero and increases linearly to the first calculated flow rate (Q_1) at 20 minutes (see Table 5-1).
- The final volume can be approximated similarly by assuming that flow drops uniformly from the last calculated flow rate (Q_9) to zero at the time when Q_{10} would have been taken.
- Step 7: Total the individual volumes calculated in Step 5 with the initial and final volume approximations calculated in Step 6 to obtain the total runoff volume.

Table 5-1. Example Calculation of the Total Runoff Flow Volume from Field Data

Station: **OUTFALL-1**

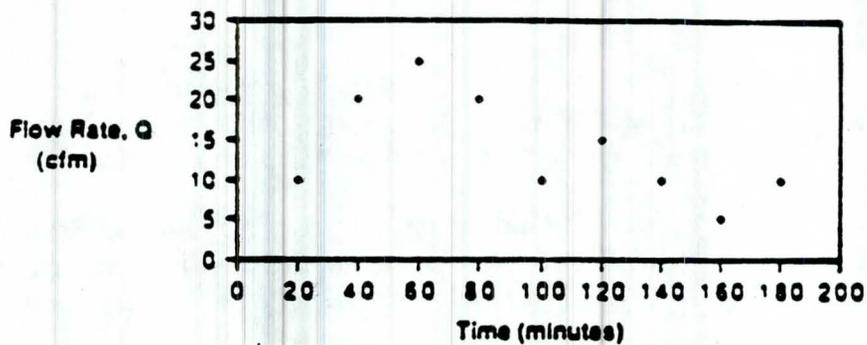
Date: **7-20-90**

Step 1: Measure or estimate the following data

TIME (minutes)	FLOW VELOCITY (feet per minute)	FLOW DEPTH (feet)
0	-	-
20	4	0.2
40	8	0.4
60	10	0.5
80	8	0.4
100	4	0.2
120	6	0.3
140	4	0.2
160	2	0.1
180	4	0.2

Step 2: Convert flow depths to area of flow based on the geometry of the conveyance structure and calculate flow rates. Q (cubic feet per minute - cfm). $Q = (\text{area})(\text{velocity})$

Step 3: Plot flow rate Q versus time



Step 4: Assign a time duration to each flow rate

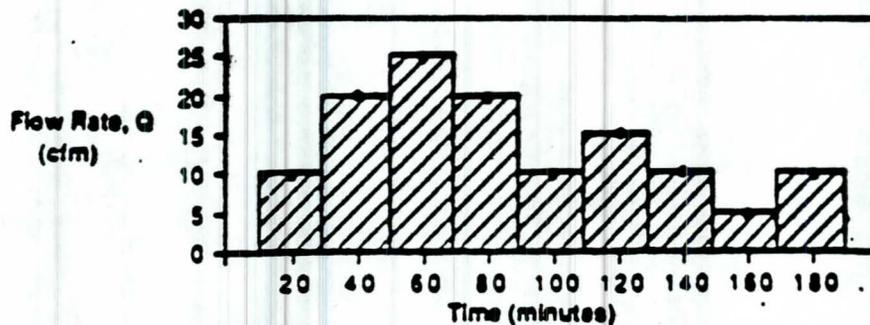
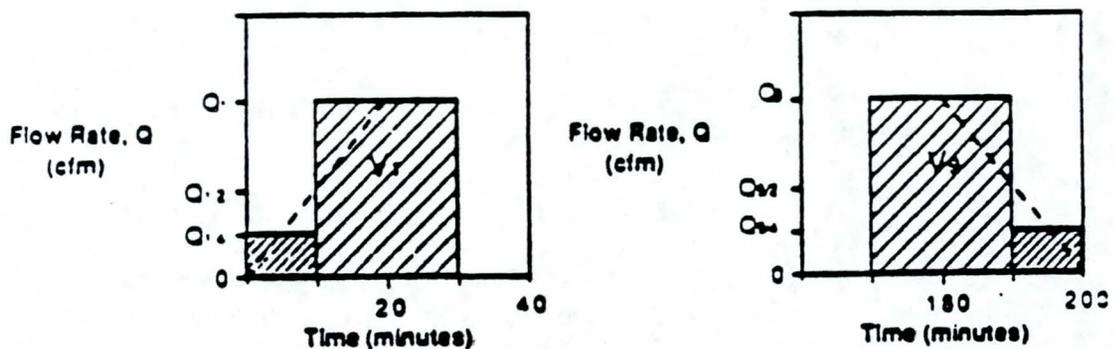


Table 5-1. Example Calculation of the Total Runoff Flow Volume from Field Data (concluded)

Step 5: Calculate individual flow volumes

Flow Volume (V)	=	Flow Rate (Q)	x	Time	=	
V ₁	=	10 cfm	x	20 min	=	200 cubic feet
V ₂	=	20 cfm	x	20 min	=	400 cubic feet
V ₃	=	25 cfm	x	20 min	=	500 cubic feet
V ₄	=	20 cfm	x	20 min	=	400 cubic feet
V ₅	=	10 cfm	x	20 min	=	200 cubic feet
V ₆	=	15 cfm	x	20 min	=	300 cubic feet
V ₇	=	10 cfm	x	20 min	=	200 cubic feet
V ₈	=	5 cfm	x	20 min	=	100 cubic feet
V ₉	=	10 cfm	x <td 20 min	=	200 cubic feet	

Step 6: Calculate the initial and final volumes



$$\text{initial volume} = \frac{Q_1}{4} \times 10 \text{ minutes} = 25 \text{ cubic feet}$$

$$\text{final volume} = \frac{Q_9}{4} \times 10 \text{ minutes} = 25 \text{ cubic feet}$$

Step 7: Total the partial volumes calculated in steps 5 and 6

Total storm runoff = 2,550 cubic feet

5.6 Collecting Storm Water Discharge Samples

This section provides guidance for collecting grab samples, flow-weighted composite samples, and identifying the constituents or parameters that must be monitored. Section VII of Form 2F requires that specific pollutants in storm water discharges be measured and reported as concentrations and as total mass. At least one representative storm event must be sampled to collect this information. If samples from more than one storm are analyzed and the results are representative of the discharge, the results must be reported in Section VII of Form 2F.

A representative storm is a storm that is "typical" for the area in terms of intensity, volume, and duration. The storm must have a volume greater than 0.1 inch, must be preceded by at least 72 hours of dry weather, and should not vary by more than 50% from the average rainfall volume and duration.

A representative storm event must be sampled to provide water quality data for the initial runoff period (i.e., a grab sample to measure first-flush effects). A flow-weighted composite sample must also be collected and analyzed separately from the grab sample to provide an estimate of the average runoff water quality for the storm event. Data from samples analyzed in the past may be used, provided that:

- o All data requirements in Form 2F are met;
- o Sampling was done no more than three years before submission of the permit application; and
- o All water quality data are representative of the present discharge.

Among the factors which would cause the data to be unrepresentative are significant changes in production level, changes in raw materials, processes, or final products, and significant changes in storm water management activities.

Grab samples and flow-weighted composite samples must be collected and analyzed from each of the storm runoff outfalls identified on the site drainage map in Section III of Form 2F. However, if an applicant has two or more substantially identical outfalls, they may request permission from the permitting authority to sample and analyze only one outfall and submit the results of the analysis for the other substantially identical outfalls. Substantially identical outfalls are those from drainage areas undergoing similar activities where the discharges are expected to be of similar water quality. If the request is granted, identify which outfall was tested and describe why the outfalls which were not tested are substantially identical. Provide this information on a separate sheet attached to the application form.

5.6.1 Grab Samples

A grab sample must be collected during the first 30 minutes of the runoff (or as soon thereafter as practicable). The sample collected should be large enough for all of the laboratory analyses to be performed, but at least 100 milliliters (ml). Grab samples are typically collected by filling the sample container just below the water surface in the flow channel. Extension rods or cables can be used to reach inaccessible locations. The grab sample should be collected from near the center of the flow channel, where turbulence is at a maximum (and therefore the storm runoff is well mixed), or at a site specified in an existing permit, or at any site adequate for the collection of a sample that would be representative of the storm water quality.

All samples must be properly handled (i.e., holding time prior to analysis, storage temperature, preservation methods) and analyzed by the methods contained in 40 CFR Part 136. Most commercial laboratories will be familiar with these requirements and can provide information on appropriate handling procedures. Quality assurance/quality control (QA/QC) methods must be implemented both in the field by the applicant and in the lab to ensure the accuracy and validity of the analytical results. Most labs can assist applicants in designing a field QA/QC program and will also provide sample containers that are suitable (e.g., container material, type, and size) to the analysis to be performed. The labs will also typically report to the applicant the results of their internal QA/QC upon request.

If an analytical method is not listed in 40 CFR 136 for a particular pollutant, then the applicant may use any suitable method for measuring the level of the pollutant in the discharge provided that the applicant submits a description of the method or a reference to a published method. The description should include the sample holding time, preservation methods, and the quality control measures used.

The parameters pH and temperature are time-dependent and must be measured in the field at the time of sample collection rather than in the laboratory.

5.6.2 Flow-Weighted Composite Samples

A flow-weighted composite sample is a single sample intended to provide the average water quality for the entire runoff event. Because this type of sample accounts for variations in flow that occur during an event, water quality data from a flow-weighted composite sample is considered to be more representative of the average runoff quality for other methods such as a time-weighted composite.

A flow-weighted composite sample can be collected during either the entire runoff event (which may be less than 3 hours) or during at least the first 3 hours of the runoff. The sample can be collected using either automatic sampling

equipment or by manually collecting and combining a series of discrete grab samples (aliquots) in an appropriate manner. In either case, appropriate procedures must be followed to obtain a sample for analysis that is flow-weighted, and hence will provide an indication of the average (or event mean) concentration for the storm runoff event.

Manually Collected Samples: A manually collected composite flow-weighted sample can be prepared by the following procedures. Collect samples of the same size (at least 100 ml and preferably 1000 ml) at regular intervals during the duration of the entire runoff event or for at least the first 3 hours of the event. Samples should be collected every 20 minutes to meet the requirement of at least 15 minutes between sample collection times. Storm runoff flow rates and flow cross-sectional areas in the conveyance should be estimated (see Section 5.5) each time an individual sample is taken. Relative flow rates rather than actual flow rates can be used. Where flow rates are estimated based on runoff coefficients, then the amount of rainfall during a given time period should be measured or estimated, and discharge flow rates assumed to be proportional to the amount of rainfall occurring during a given interval. Remove a portion (or aliquot) from each of the individual samples that is proportional to the flow rate for that time interval (there should be at least nine individual samples--i.e., three samples collected each hour during the first 3 hours of runoff) and combine them in the container that will be sent to the laboratory for analysis. Only the composite sample needs to be sent to the laboratory for analysis. The actual amount taken from each of the individual samples should be in proportion to the flow rate or volume of flow associated with that sample.

The procedure for combining aliquots of individual samples to form a flow-weighted composite sample is described below by example and shown in Table 5-2. The example is the same as that discussed in Section 5.5 and shown in Table 5-1. In the example shown in Table 5-2, the minimum number of nine samples were collected for use in preparing the composite sample. Because a grab sample must also be collected within the first 20 minutes of the runoff, two separate samples should be collected: One of the grab samples will be analyzed separately, while the second grab sample will be available for use in preparing the flow-weighted composite sample. Note that 40 CFR 122.21(g)(7) provides that quantitative data from grab samples, rather than flow-weighted samples, be provided for pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform, and fecal streptococcus.

Other methods can be used for collecting flow-weighted composite samples, including the following four methods taken from EPA's NPDES Compliance Sampling Inspection Manual, MCD-51.

- a) Constant time interval between samples, sample volume proportional to flow rate at time of sampling;

- b) Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the first sample, the flow rate at the time the sample was collected may be used;
- c) Constant sample volume, time interval between samples proportional to flow (i.e., sample taken every "X" gallons of flow); and
- d) Continuous collection of sample, with sample collection rate proportional to flow rate.

A different amount of each of the nine individual aliquots is used so that they are combined in proportion to the volume of runoff they represent. In the case of uniform time intervals between samples, the sample portions can be based on the measured flow rate associated with each sample rather than on the flow volumes calculated from each flow rate. For uniform time intervals, both flow rates (Q) and flow volumes (V) will result in the same aliquot proportions used to prepare the composite. The procedures are as follows:

1. For the sample that was collected at the highest flow rate (or volume), add the full sample volume (e.g., 1000 ml) to the composite sample container. The other eight samples will provide smaller amounts.
2. For each of the other samples, take an amount that is proportional to the largest flow rate. In other words, the amount of the individual samples used will be a simple ratio of the measured flow rates:

$$\text{Sample X (ml)} = \frac{Q_x \text{ (cfs)}}{Q_{\text{max}} \text{ (cfs)}}$$

Table 5-2.

EXAMPLE PREPARATION OF A MANUALLY COMPOSITED
WEIGHTED SAMPLE

Station: OUTFALL-1

Date: 7-20-90

Step 1: Tabulate flow rates (if a constant time duration was used) or flow volumes (if a non-constant time duration was used)

Sample	Flow Rate (cfm)
1	10
2	20
3	25
4	20
5	10
6	15
7	10
8	5
9	10

Step 2: Calculate proportions of individual samples to be used in preparing the composite sample

$$\text{Sample X (ml)} = [\text{Sample MAX (ml)}] \frac{Q_x \text{ (cfs)}}{Q_{\text{max}} \text{ (cfs)}}$$

Note: Sample 3 is Q_{max} (25 cfm)

$$\text{Sample 1} = \text{Sample 3} \times 10/25 = 0.40$$

$$\text{Sample 2} = \text{Sample 3} \times 20/25 = 0.80$$

$$\text{Sample 3} = \quad \quad \quad = 1.0$$

$$\text{Sample 4} = \text{Sample 3} \times 20/25 = 0.80$$

$$\text{Sample 5} = \text{Sample 3} \times 10/25 = 0.40$$

$$\text{Sample 6} = \text{Sample 3} \times 15/25 = 0.30$$

$$\text{Sample 7} = \text{Sample 3} \times 10/25 = 0.40$$

$$\text{Sample 8} = \text{Sample 3} \times 5/25 = 0.20$$

$$\text{Sample 9} = \text{Sample 3} \times 10/25 = 0.40$$

Table 5-2. EXAMPLE PREPARATION OF A MANUALLY COMPOSITED FLOW-WEIGHTED SAMPLE (continued)

Step 3: Use a convenient volume from the sample corresponding to the largest flow rate (Sample 3) and corresponding amounts from the other samples

Note: The final volume of the composite sample must be large enough so that all of the appropriate analyses can be performed. The analytical laboratory should be consulted prior to sample collection. The amount of Sample 3 used in this sample is 1000 ml.

Remaining amounts used:

Sample 1: 400 ml
Sample 2: 800 ml
Sample 4: 800 ml
Sample 5: 400 ml
Sample 6: 300 ml
Sample 7: 400 ml
Sample 8: 200 ml
Sample 9: 400 ml

Therefore, the total sample volume is 4,700 ml (i.e., 4.7 liters or about 1.2 gallons)

In the example shown in Table 5-2, Sample 3 had the highest flow rate ($Q_3 = 25$ cfm). Assume that 1000 ml of this sample was added to the composite container. Then the amount of Sample 1 to add to the composite, assuming that flow rate $Q_1 = 10$ cfm, is:

$$\begin{aligned} \text{Sample 1 (ml)} &= \frac{[\text{Sample 3 (in ml)}] \times Q_1 \text{ (cfs)}}{Q_3 \text{ (cfs)}} \\ &= \frac{(1000 \text{ ml}) \times 10 \text{ (cfs)}}{25 \text{ (cfs)}} \end{aligned}$$

3. Repeat this process for each discrete sample to produce a flow-weighted composite sample for laboratory analysis. As shown in Table 5-2, the total composite sample volume is 4,700 ml.

The personnel collecting the individual samples and preparing the composite sample should contact the analytical laboratory personnel to ensure that a large enough sample is submitted. Based on the analyses to be performed on the composite sample, the laboratory personnel can require a minimum sample size.

As illustrated in the example, the computation is simplified when the time interval between the samples is uniform. When there are different time intervals between samples, the procedure is only slightly more complicated. In this case, the individual sample volumes used should be based on the runoff volume (calculated from the individual flow rates and durations) associated with the sample, as opposed to simply the storm flow rate associated with each sample.

Automatic Samplers: Automatic samplers are labor-saving devices but are fairly expensive to purchase. The samplers consist of an intake device set in the channel which is attached by tubing to a pump that can draw a sample from the storm drain into a sample bottle. However, in order for the sample obtained to be flow-weighted composite, the automatic sampler must be triggered by the flow sensing device. Samples of fixed volume are collected each time the flow sensing device indicates that a specified quantity of flow has passed the sample point.

An appropriate flow sensing device, coupled to the automatic sampler is necessary for the automatic system to produce a flow-weighted composite. If the monitoring equipment does not employ such a coupled system, then the automatic sampler merely serves as a mechanical means for withdrawing the sample (usually at fixed time intervals). The guidance given above for properly

combining manually collected samples to obtain a flow-weighted composite will apply in this case.

Automatic samplers generally range in price from about \$8,000 to \$16,000 for equipment costs alone. Units with telemetry are in the upper end of this range. The equipment included with a standard unit includes a fabricated weir, an automatic sampler with silica sample containers, software to control the remote computer data logger, housing for unit, thermistor, and pressure sensor. The installation and flow rating of a unit will cost approximately \$6,000 to \$8,000 depending on whether the unit is installed in a manhole, open culvert or channel, or stream. Digital doppler velocity sensors can also be purchased and installed. Such units would replace the weir, data logger, and pressure sensor identified above.

5.6.3 Pollutants to Be Analyzed

Section VII of Form 2F requires that several common pollutants must be analyzed for in both the grab sample and the flow-weighted composite sample while additional analyses are dependent upon existing NPDES permit conditions or whether the discharger has reason to believe other pollutants may be present in the storm runoff discharge. A separate table should be completed for each outfall. Note that 40 CFR 122.21(g)(7) provides that rather than using a flow-weighted sample for quantitative data for pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform, and fecal streptococcus, a grab sample must be used.

Part A of Section VII requires that both grab samples and flow-weighted composite samples be analyzed for:

- Biological oxygen demand (BOD₅)
- Chemical oxygen demand (COD)
- Total suspended solids (TSS)
- Total Kjeldahl Nitrogen (TKN)
- Nitrate plus nitrite nitrogen
- Total phosphorus

In addition, grab samples must be analyzed for pH.

Part B of Section VII requires that each pollutant limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing permit) be analyzed for and reported separately for each outfall in Part B.

Part C of Section VII requires the listing of any pollutant shown in Tables 2F-2, 2F-3, and 2F-4 that the discharger knows or has reason to believe is present

in the discharge and was not already identified above (see Form 2F in Appendix D for these three tables).

Table 2F-2 includes conventional and non-conventional pollutants. For any pollutant from this table listed in Part C, the applicant is required to either report quantitative data or briefly describe the reason the pollutant is expected to be discharged.

Table 2F-3 lists toxic pollutants. For every pollutant listed in Table 2F-3 that is expected to be discharged in concentrations of 10 parts per billion (ppb) or greater, the applicant is required to submit quantitative data. For acrolein; acrylonitrile; 2,4 dinitrophenol; and 2-methyl-4, 6 dinitrophenol the applicant must submit quantitative data if these four pollutants (collectively) are expected to be discharged in concentrations of 100 ppb or greater. For every other pollutant listed in Table 2F-3 that is expected to be discharged in concentrations less than 10 ppb (or 100 ppb total for the four pollutants listed above), then the applicant must either submit quantitative data or briefly describe the reasons the pollutant is expected to be discharged.

Table 2F-4 lists hazardous substances. For each outfall, the applicant must list any pollutant from Table 2F-4 that is known or believed to be present in the discharge and explain why they believe it to be present. No analysis is required, but if the applicant has analytical data, it must be reported.

Under 40 CFR 117.12(a)(2), certain discharges of hazardous substances (listed in 40 CFR 177.21 or 40 CFR 302.4) may be exempted from the requirements of Section 311 of the CWA, which establishes reporting requirements, civil penalties, and liability for cleanup costs for spills of oil and hazardous substances. A discharge of a particular substance may be exempted if the origin, source, and amounts of the discharged substances are identified in the NPDES permit application or in the permit, if the permit contains a requirement for treatment of the discharge, and if the treatment is in place. To apply for an exclusion of the discharge of any hazardous substance from the requirements of Section 311, attach additional sheets of paper to the form and provide for the following information:

1. The substance and the amount of each substance which may be discharged.
2. The origin and source of the discharge of the substance.

3. The treatment which is to be provided for the discharge by:
 - a. An onsite treatment system separate from any treatment system treating the normal discharge;
 - b. A treatment system designed to treat the normal discharge and which is additionally capable of treating the amount of the substance identified under paragraph 1 above, or
 - c. Any combination of the above.

See 40 CFR 117.12(a)(2) and (c), published on August 29, 1979, in 44 Federal Register (FR) 50766 for further information on exclusions from Section 311 of the CWA.

5.6.4 Reporting

All sampling data obtained for the purpose of completing Section VII of Form 2F must be reported as concentration and as total mass. The applicant may report some or all of the required data by attaching separate sheets of paper instead of filling out pages VII-1 and VII-2 if the separate sheets contain all the required information in a format which is consistent with pages VII-1 and VII-2 in spacing and in identification of pollutants and columns. Use the following abbreviations in the columns headed "Units."

ppm = parts per million
mg/l = milligrams per liter
ppb = parts per billion
ug/l = micrograms per liter
lbs = pounds
ton = tons (English tons)
mg = milligrams
g = grams
T = tonnes (metric tons)
kg = kilograms

All reporting of values for metals must be in terms of "total recoverable metal" unless:

- (i) An applicable promulgated effluent limitation or standard specifies the limitation for the metal in dissolved, valent, or total form
- (ii) All approved analytical methods for the metal measure only its dissolved form (e.g., hexavalent chromium)

- (iii) The permitting authority has determined that in establishing case-by-case limitations it is necessary to express the limitations on the metal in dissolved, valent, or total form to carry out the provisions of the CWA.

If only one grab sample and one flow-weighted composite sample is collected and analyzed for a given outfall, complete only the "Maximum Values" columns and insert "1" into the "Number of Storm Events Sampled" column.

To calculate total mass from the water quality analyses, multiply the concentration reported by the lab by the flow volume associated with the sample. For the grab samples collected within 30 minutes of the storm runoff, the concentrations of the individual pollutants should all be multiplied by the flow volume calculated in Step 5 shown in Table 5-1. Care must be exercised to ensure that consistent units are used. For the flow-weighted composite sample, the concentrations of the individual pollutants should all be multiplied by the total runoff volume calculated in Step 7 of Table 5-1.

SECTION 6.0 REFERENCES

- California State University, Sacramento, Department of Civil Engineering. 1983. Operation and Maintenance of Wastewater Collection Systems. A field training program for EPA, Office of Water Programs Operations.
- Chow, V.T. 1964. Handbook of Applied Hydrology. McGraw-Hill, Inc. New York. 1418 p.
- Shelly, P.E. 1979. Monitoring Requirements, Methods, and Costs for the Nationwide Urban Runoff Program (NURP). EPA-600/9-76-014.
- U.S. Environmental Protection Agency, Office of Water, Nonpoint Source Division. Methodology for Analysis of Detention Basins for control of urban Runoff Quality. Prepared by Woodward-Clyde Consultants. September 1986.
- U.S. Executive Office of the President, Office of Management and Budget. 1987. Standard Industrial Classification Manual.
- U.S. Environmental Protection Agency, Office of Water. NPDES Compliance Inspection Manual, May 1988. MCD-51.

APPENDIX A: SELECTED TEXT FROM 40 CFR SECTION 122.26

Section 122.26(a) Storm water discharges (applicable to State NPDES programs, see § 123.25).

(a) Permit requirement. (1) Prior to October 1, 1992, discharges composed entirely of storm water shall not be required to obtain a NPDES permit except:

- (i) a discharge with respect to which a permit has been issued prior to February 4, 1987;
- (ii) A discharge associated with industrial activity (see 122.26(a)(4));
- (iii) A discharge from a large municipal separate storm sewer system;
- (iv) A discharge from a medium municipal separate storm sewer system;
- (v) A discharge which the Director, or in States with approved NPDES programs, either the

Director or the EPA Regional Administrator, determines to contribute to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States. This designation may include a discharge from any conveyance or system of conveyances used for collecting and conveying storm water runoff or a system of discharges from municipal separate storm sewers, except for those discharges from conveyances which do not require a permit under paragraph (2) of this subsection or agricultural storm water runoff which is exempted from the definition of point source at 122.2.

The Director may designate discharges from municipal separate storm sewers on a system-wide or jurisdiction-wide basis. In making this determination the Director may consider the following factors:

(A) The location of the discharge with respect to waters of the United States as defined at 40 CFR 122.2.

(B) The size of the discharge;

(C) The quantity and nature of the pollutants discharged to waters of the United States; and

(D) Other relevant factors.

(2) The Director may not require a permit for discharges of storm water runoff from mining operations or oil and gas exploration, production, processing or treatment operations or transmission facilities, composed entirely of flows which are from conveyances or systems of conveyances (including but not limited to pipes, conduits, ditches, and channels) used for collecting and conveying precipitation runoff and which are not contaminated by contact with or that has not come into contact with, any overburden, raw material, intermediate products, finished product, byproduct or waste products located on the site of such operations.

(3) Large and Medium Municipal Separate Storm Sewer Systems. (i) Permits must be obtained for all discharges from large and medium municipal separate storm sewer systems.

(ii) The Director may either issue one system-wide permit covering all discharges from municipal separate storm sewers within a large or medium municipal storm sewer system or issue distinct permits for appropriate categories of discharges within a large or medium municipal separate storm sewer system including, but not limited to: all discharges owned or operated by the same municipality; located within the same jurisdiction; all discharges within a system that discharge to the same watershed; discharges within a system that are similar in nature; or for individual discharges from municipal separate storm sewers within the system.

(iii) The operator of a discharge from a municipal separate storm sewer which is part of a large or medium municipal separate storm sewer system must either:

(A) participate in a permit application (to be a permittee or a co-permittee) with one or more other operators of discharges from the large or medium municipal storm sewer system which covers all, or a portion of all, discharges from the municipal separate storm sewer system;

(B) submit a distinct permit application which only covers discharges from the municipal separate storm sewers for which the operator is responsible; or

(C) a regional authority may be responsible for submitting a permit application under the following guidelines:

(1) the regional authority together with co-applicants shall have authority over a storm water management program that is in existence, or shall be in existence at the time Part I of the application is due;

(2) the permit applicant or co-applicants shall establish their ability to make a timely submission of Part I and Part 2 of the municipal application;

(3) each of the operators of municipal separate storm sewer within the systems described in paragraphs 122.26(b)(4)(i), (ii), and (iii) or (b)(7)(i), (ii), and (iii), that are under the purview of the designated regional authority, shall comply with the application requirements of paragraph 122.26(d).

(iv) One permit application may be submitted for all or a portion of all municipal separate storm sewers within adjacent or interconnected large or medium municipal separate storm sewer systems. The Director may issue one system-wide permit covering all, or a portion of all municipal separate storm sewers in adjacent or interconnected large or medium municipal separate storm sewer systems.

(v) Permits for all or a portion of all discharges from large or medium municipal separate storm sewer systems that are issued on a system-wide, jurisdiction-wide, watershed or other basis may specify different conditions relating to different discharges covered by the permit, including different management programs for different drainage areas which contribute storm water to the system.

(vi) Co-permittees need only comply with permit conditions relating to discharges from the municipal separate storm sewers for which they are operators.

(4) Discharges through large and medium municipal separate storm sewer systems.

In addition to meeting the requirements of 122.26(c), an operator of a storm water discharge associated with industrial activity which discharges through a large or medium municipal separate storm sewer system shall submit, to the operator of the municipal separate storm sewer system receiving the discharge no later than [insert date 180 days after publication] or 180 days prior to commencing such discharge: the name of the facility; a contact person and phone number; the location of the discharge; a description, including Standard Industrial Classification, which best reflects the principal products or services provided by each facility; and any existing NPDES permit number.

(5) Other Municipal Separate Storm Sewers. The Director may issue permits for municipal separate storm sewers that are designated under subparagraph (1)(v) of this paragraph on a system-wide basis, jurisdiction-wide basis, watershed basis or other appropriate basis, or may issue permits for individual discharges.

(6) Non-Municipal Separate Storm Sewers. For storm water discharges associated with industrial activity from point sources which discharge through a non-municipal or non-publicly owned separate storm sewer system, the Director, in his discretion, may issue: a single NPDES permit, with each discharger a co-permittee to a permit issued to the operator of the portion of the system that discharges into waters of the United States; or, individual permits to each discharger of storm water associated with industrial activity through the non-municipal conveyance system.

(i) All storm water discharges associated with industrial activity that discharge through a storm water discharge system that is not a municipal separate storm sewer must be covered by an individual permit, or a permit issued to the operator of the portion of the system that discharges to waters of the United States, with each discharger to the non-municipal conveyance a co-permittee to that permit.

(ii) Where there is more than one operator of a single system of such conveyances, all operators of storm water discharges associated with industrial activity must submit applications.

(iii) Any permit covering more than one operator shall identify the effluent limitations, or other permit conditions, if any, that apply to each operator.

(7) Combined Sewer Systems. Conveyances that discharge storm water runoff combined with municipal sewage are point sources that must obtain NPDES permits in accordance with the procedures of 122.21 and are not subject to the provisions of this section.

(8) Whether a discharge from a municipal separate storm sewer is or is not subject to regulation under this section shall have no bearing on whether the owner or operator of the discharge is eligible for funding under Title II, Title III or Title VI of the Clean Water Act. See 40 CFR Part 35, Subpart I, Appendix A(b)H.2.j.

Section 122.26(c) Application requirements for storm water discharges associated with industrial activity.

(1) Individual application. Dischargers of storm water associated with industrial activity are required to apply for an individual permit, apply for a permit through a group application, or seek coverage under a promulgated storm water general permit. Facilities that are required to obtain an individual permit, or any discharge of storm water which the Director is evaluating for designation (see

40 CFR 124.52(c)) under paragraph (a)(1)(v) and is not a municipal separate storm sewer, and which is not part of a group application described under paragraph (2), shall submit an NPDES application in accordance with the requirements of § 122.21 as modified and supplemented by the provisions of the remainder of this paragraph. Applicants for discharges composed entirely of storm water shall submit Form 1 and Form 2F. Applicants for discharges composed of storm water and non-storm water shall submit Form 1, Form 2C, and Form 2F. Applicants for new sources or new discharges (as defined in § 122.2 of this part) composed of storm water and non-storm water shall submit Form 1, Form 2D, and Form 2F.

(i) Except as provided in paragraphs 122.26(c)(1)(ii)-(iv), the operator of a storm water discharge associated with industrial activity subject to this section shall provide:

(A) a site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) of the facility including: each of its drainage and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each past or present area used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied, each of its hazardous waste treatment, storage or disposal facilities (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility;

(B) an estimate of the area of impervious surfaces (including paved areas and building roofs) and the total area drained by each outfall (within a mile radius of the facility) and a narrative description of the following: significant materials that in the three years prior to the submittal of this application have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage or disposal of such materials; materials management practices employed, in the three years prior to the submittal of this application, to minimize contact by these materials with storm water runoff; materials loading and access areas; the location, manner and frequency in which pesticides, herbicides, soil conditioners and fertilizers are applied; the location and a description of existing structural and non-structural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the ultimate disposal of any solid or fluid wastes other than by discharge;

(C) a certification that all outfalls that should contain storm water discharges associated with industrial activity have been tested or evaluated for the presence of non-storm water discharges which are not covered by a NPDES permit; tests for such non-storm water discharges may include smoke tests, fluorometric dye tests, analysis of accurate schematics, as well as other appropriate tests. The certification shall include a description of the method used, the date of any testing, and the on-site drainage points that were directly observed during a test;

(D) existing information regarding significant leaks or spills of toxic or hazardous pollutants at the facility that have taken place within the three years prior to the submittal of this application;

(E) quantitative data based on samples collected during storm events and collected in accordance with section 122.21 of this Part from all outfalls containing a storm water discharge associated with industrial activity for the following parameters:

(1) Any pollutant limited in an effluent guideline to which the facility is subject;

(2) Any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit);

(3) Oil and grease, pH, BOD₅, COD, TSS, total phosphorus, total Kjeldahl nitrogen, and nitrate plus nitrite nitrogen;

(4) Any information on the discharge required under paragraph 122.21(g)(7)(iii) and (iv) of this Part;

(5) Flow measurements or estimates of the flow rate, and the total amount of discharge for the storm event(s) sampled, and the method of flow measurement or estimation; and

(6) The date and duration (in hours) of the storm event(s) sampled, rainfall measurements or estimates of the storm event (in inches) which generated the sampled runoff and the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event (in hours);

(F) Operators of a discharge which is composed entirely of storm water are exempt from the requirements of paragraphs 122.21(g)(2), (g)(3), (g)(4), (g)(5), (g)(7)(i), (g)(7)(ii), and (g)(7)(v); and

(G) Operators of new sources or new discharges (as defined in § 122.2 of this Part) which are composed in part or entirely of storm water must include estimates for the pollutants or parameters listed in subparagraph (E) of this paragraph instead of actual sampling data, along with the source of each estimate. Operators of new sources or new discharges composed in part or entirely of storm water must provide quantitative data for the parameters listed in subparagraph (E) of this paragraph within two years after commencement of discharge, unless such data has already been reported under the monitoring requirements of the NPDES permit for the discharge. Operators of a new source or new discharge which is composed entirely of storm water are exempt from the requirements of paragraphs 122.21(k)(3)(ii), (k)(3)(iii), and (k)(5).

(ii) The operator of an existing or new storm water discharge that is associated with industrial activity solely under paragraph (b)(14)(x) of this section, is exempt from the requirements of paragraphs 122.21(g) and 122.26(c)(1)(i) of this Part. Such operator shall provide a narrative description of:

(A) the location (including a map) and the nature of the construction activity;

(B) the total area of the site and the area of the site that is expected to undergo excavation during the life of the permit;

(C) proposed measures, including best management practices, to control pollutants in storm water discharges during construction, including a brief description of applicable State and local erosion and sediment control requirements;

(D) proposed measures to control pollutants in storm water discharges that will occur after construction operations have been completed, including a brief description of applicable State or local erosion and sediment control requirements;

(E) an estimate of the runoff coefficient of the site and the increase in impervious area after the construction addressed in the permit application is completed, the nature of fill material and existing data describing the soil or the quality of the discharge; and

(F) the name of the receiving water.

(iii) The operator of an existing or new discharge composed entirely of storm water from an oil or gas exploration, production, processing, or treatment operation, or transmission facility is not required to submit a permit application in accordance with paragraph (i) of this section, unless the facility:

(A) has had a discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 117.21 or 40 CFR 302.6 at anytime since November 16, 1987; or

(B) has had a discharge of storm water resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 110.6 at any time since November 16, 1987; or

(C) contributes to a violation of a water quality standard.

(iv) The operator of an existing or new discharge composed entirely of storm water from a mining operation is not required to submit a permit application unless the discharge has come into contact with, any overburden, raw material, intermediate products, finished product, byproduct or waste products located on the site of such operations.

(v) Applicants shall provide such other information the Director may reasonably require under paragraph 122.21(g)(13) of this Part to determine whether to issue a permit and may require any facility subject to paragraph (c)(1)(ii) to comply with paragraph (c)(1)(i) of this section.

Section 122.26(e) Application deadlines. Any operator of a point source required to obtain a permit under paragraph (a)(1) that does not have an effective NPDES permit covering its storm water outfalls shall submit an application in accordance with the following deadlines:

(1) For any storm water discharge associated with industrial activity identified in 122.26(b)(14)(i)-(xi), that is not part of a group application as described in paragraph (c)(2) or which is not covered under a promulgated storm water general permit, a permit application made pursuant to 122.26(c) shall be submitted to the Director by November 18, 1991;

(2) For any group application submitted in accordance with 122.26(c)(2):

(i) Part 1 of the application shall be submitted to the Director, Office of Water Enforcement and Permits by September 30, 1991;

(ii) Based on information in the Part 1 application, the Director will approve or deny the members in the group application within 60 days after receiving Part 1 of the group application.

(iii) Part 2 of the application shall be submitted to the Director, Office of Water Enforcement and Permits no later than 12 months, or by May 18, 1992 whichever comes first after the date of approval of the Part 1 application.

(iv) Facilities that are rejected as members of a group by the permitting authority shall have 12 months to file an individual permit application from the date they receive notification of their rejection.

(v) A facility listed under paragraph (b)(14)(i)-(xi) may add on to a group application submitted in accordance with paragraph (e)(2)(i) at the discretion of the Office of Water Enforcement and Permits, and only upon a showing of good cause by the facility and the group applicant; the request for the addition of the facility shall be made no later than February 18, 1992; the addition of the facility shall not cause the percentage of the facilities that are required to submit quantitative data to be less than 10%, unless there are over 100 facilities in the group that are submitting quantitative data; approval to become part of group application must be obtained from the group or the trade association representing the individual facilities.

(3) For any discharge from a large municipal separate storm sewer system;

(i) Part 1 of the application shall be submitted to the Director by November 18, 1991;

(ii) Based on information received in the Part 1 application the Director will approve or deny a sampling plan under 122.26(d)(1)(iv)(E) within 90 days after receiving the Part 1 application;

(iii) Part 2 of the application shall be submitted to the Director by November 16, 1992.

(4) For any discharge from a medium municipal separate storm sewer system;

(i) Part 1 of the application shall be submitted to the Director by May 18, 1992.

(ii) Based on information received in the Part 1 application the Director will approve or deny a sampling plan under 122.26(d)(1)(iv)(E) within 90 days after receiving the Part 1 application.

(iii) Part 2 of the application shall be submitted to the Director by May 17, 1993.

(5) A permit application shall be submitted to the Director within 60 days of notice, unless permission for a later date is granted by the Director (see 40 CFR 124.52(c)), for:

(i) a storm water discharge which the Director, or in States with approved NPDES programs, either the Director or the EPA Regional Administrator, determines that the discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States (see paragraph (a)(1)(v) of this section);

(ii) A storm water discharge subject to paragraph (c)(1)(v) of this section.

(6) Facilities with existing NPDES permits for storm water discharges associated with industrial activity shall maintain existing permits. New applications shall be submitted in accordance with the requirements of 40 CFR 122.21 and 40 CFR 122.26(c) 180 days before the expiration of such permits. Facilities with expired permits or permits due to expire before May 18, 1992 shall submit applications in accordance with the deadline set forth under 122.26(e)(1).

Section 122.26(f) Petitions.

(1) Any operator of a municipal separate storm sewer system may petition the Director to require a separate NPDES permit (or a permit issued under an approved NPDES State program) for any discharge into the municipal separate storm sewer system.

(2) Any person may petition the Director to require a NPDES permit for a discharge which is composed entirely of storm water which contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States.

(3) The owner or operator of a municipal separate storm sewer system may petition the Director to reduce the Census estimates of the population served by such separate system to account for storm water discharged to combined sewers as defined by 40 CFR 35.2005(b)(11) that is treated in a publicly owned treatment works. In municipalities in which combined sewers are operated, the Census estimates of population may be reduced proportional to the fraction, based on estimated lengths, of the length of combined sewers over the sum of the length of combined sewers and municipal separate storm sewers where an applicant has submitted the NPDES permit number associated with each discharge point and

a map indicating areas served by combined sewers and the location of any combined sewer overflow discharge point.

(4) Any person may petition the Director for the designation of a large or medium municipal separate storm sewer system as defined by subsections (b)(4)(iv) or (b)(7)(iv) of this rule.

(5) The Director shall make a final determination on any petition received under this section within 90 days after receiving the petition.

APPENDIX B: DEFINITIONS OF KEY TERMS

The following are definitions of terms found in the NPDES general definitions (40 CFR 122.2), the storm water regulations (55 FR 47990), and terms commonly used in relation to storm water discharges.

(1) "Best management practices ("BMPs")" means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

(2) "Contiguous zone" means the entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and the Contiguous Zone.

(3) "Co-permittee" means a permittee to a NPDES permit that is only responsible for permit conditions relating to the discharge for which it is operator.

(4) "Discharge" when used without qualification means the "discharge of a pollutant."

(5) "Discharge of a pollutant" means:

(i) Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or

(ii) Any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft which is being used as a means of transportation.

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channelled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any "indirect discharger."

(6) "Effluent limitation" means any restriction imposed by the Director on quantities, discharge rates, and concentrations of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone," or the ocean.

(7) "Effluent limitations guidelines" means a regulation published by the Administrator under section 304(b) of CWA to adopt or revise "effluent limitations."

(8) "Illicit discharge" means any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges from fire fighting activities.

(9) "Incorporated place" means the District of Columbia, or a city, town or village that is incorporated under the laws of the State in which it is located.

(10) "Large municipal separate storm sewer system" means all municipal separate storm sewers that are either:

- (i) located in an incorporated place with a population of 250,000 or more as determined by the latest Decennial Census by the Bureau of Census (Appendix F); or
- (ii) located in the counties listed in Appendix H, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties; or
- (iii) owned or operated by a municipality other than those described in paragraph (i) or (ii) and that are designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under paragraphs (i) or (ii). In making this determination the Director may consider the following factors:
 - (A) physical interconnections between the municipal separate storm sewers;
 - (B) the location of discharges from the designated municipal separate storm sewer relative to discharges from municipal separate storm sewers described in subparagraph (i);
 - (C) the quantity and nature of pollutants discharged to waters of the United States;
 - (D) the nature of the receiving waters; and
 - (E) other relevant factors; or
- (iv) the Director may, upon petition, designate as a large municipal separate storm sewer system, municipal separate storm sewers located within the boundaries of a region defined by a storm water management regional authority based on a jurisdictional, watershed, or other appropriate basis that includes one or more of the systems described in paragraphs (i), (ii), (iii).

(11) "Major municipal separate storm sewer outfall" (or "major outfall") means a municipal separate storm sewer outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive storm water from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more).

(12) "Major outfall" means a major municipal separate storm sewer outfall.

(13) "Medium municipal separate storm sewer system" means all municipal separate storm sewers that are either:

- (i) located in an incorporated place with a population of 100,000 or more but less than 250,000, as determined by the latest Decennial Census by the Bureau of Census (Appendix G); or
- (ii) located in the counties listed in Appendix I, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties; or
- (iii) owned or operated by a municipality other than those described in paragraph (i) or (ii) and that are designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under paragraphs (i) or (ii). In making this determination the Director may consider the following factors:
 - (A) physical interconnections between the municipal separate storm sewers;
 - (B) the location of discharges from the designated municipal separate storm sewer relative to discharges from municipal separate storm sewers described in subparagraph (i);
 - (C) the quantity and nature of pollutants discharged to waters of the United States;
 - (D) the nature of the receiving waters; or
 - (E) other relevant factors; or
- (iv) the Director may, upon petition, designate as a medium municipal separate storm sewer system, municipal separate storm sewers located within the boundaries of a region defined by a storm water management regional authority based on a jurisdictional, watershed, or

other appropriate basis that includes one or more of the systems described in paragraphs (i), (ii), (iii).

(14) "Municipal separate storm sewer" means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

(i) owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;

(ii) designed or used for collecting or conveying storm water;

(iii) which is not a combined sewer; and

(iv) which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

(15) "National Pollutant Discharge Elimination System (NPDES)" means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of CWA. The term includes an "approved program."

(16) "New discharger" means any building, structure, facility, or installation:

(i) From which there is or may be a "discharge of pollutants;"

(ii) That did not commence the "discharge of pollutants" at a particular "site" prior to August 13, 1979;

(iii) Which is not a "new source," and

(iv) Which has never received a finally effective NPDES permit for discharges at that "site."

This definition includes an "indirect discharger" which commences discharging into "waters of the United States" after August 13, 1979. It also includes any existing mobile point source (other than an offshore or coastal oil and gas exploratory drilling rig or a coastal oil and gas developmental drilling rig) such as a seafood processing rig, seafood processing vessel, or aggregate plant, that begins discharging at a "site" for which it does not have a permit; and any offshore or coastal mobile oil and gas exploratory drilling rig or coastal mobile oil and gas developmental drilling rig that commences the discharge of pollutants after August 13, 1979, at a "site" under EPA's permitting jurisdiction for which it is not covered by an individual or general permit and which is located in an area determined by the Regional Administrator in the issuance of a final permit to be an area of biological concern. In determining whether an area is an area of biological concern, the Regional Administrator shall consider the factors specified in 40 CFR 125.122(a) (1) through (10).

An offshore or coastal mobile exploratory drilling rig or coastal mobile developmental drilling rig will be considered a "new discharger" only for the duration of its discharge in an area of biological concern.

(17) "New source" means any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of which commenced:

(i) After promulgation of standards of performance under section 306 of CWA which are applicable to such source, or

(ii) After proposal of standards of performance in accordance with section 306 of CWA which are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal.

(18) "Outfall" means a "point source" as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connects segments of the same stream or other waters of the United States and are used to convey waters of the United States.

(19) "Overburden" means any material of any nature, consolidated or unconsolidated, that overlies a mineral deposit, excluding topsoil or similar naturally-occurring surface materials that are not disturbed by mining operations.

(20) "Owner or operator" means the owner or operator of any "facility or activity" subject to regulation under the NPDES program.

(21) "Permit" means an authorization, license, or equivalent control document issued by EPA or an "approved State" to implement the requirements of this part and Parts 123 and 124. "Permit" includes an NPDES "general permit" (Section 122.28). Permit does not include any permit which has not yet been the subject of final agency action, such as a "draft permit" or a "proposed permit."

(22) "Person" means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

(23) "Point source" means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

(24) "Pollutant" means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 *et seq.*)), heat, wrecked or discharged equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean:

(i) Sewage from vessels; or

(ii) Water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if the State determines that the injection or disposal will not result in the degradation of ground or surface water resources.

Radioactive materials covered by the Atomic Energy Act are those encompassed in its definition of source, byproduct, or special nuclear materials. Examples of materials not covered include radium and accelerator-produced isotopes. See Train v. Colorado Public Interest Research Group, Inc., 426 U.S. 1 (1976).

(25) "Privately owned treatment works" means any device or system which is (a) used to treat wastes from any facility whose operator is not the operator of the treatment works and (b) not a "POTW."

(26) "Process wastewater" means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

(27) "Proposed permit" means a State NPDES "permit" prepared after the close of the public comment period (and, when applicable, any public hearing and administrative appeals) which is sent to EPA for review before final issuance by the State. A "proposed permit" is not a "draft permit."

(28) "Publicly owned treatment works ("POTW")" means any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a "State" or "municipality." This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

(29) "Runoff coefficient" means the fraction of total rainfall that will appear at the conveyance as runoff.

(30) "Significant materials" includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical the facility is required to report pursuant to Section 313 of Title III of SARA; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

(31) "Site" means the land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity.

(32) "Storm water" means storm water runoff, snow melt runoff, and surface runoff and drainage.

(33) "Storm water discharge associated with industrial activity" means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under 40 CFR Part 122. For the categories of industries identified in subparagraphs (i) through (x) of this subsection, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process waste waters (as defined at 40 CFR 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water. For the categories of industries identified in subparagraph (xi), the term includes only storm water discharges from all the areas (except access roads and rail lines) that are listed in the previous sentence where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water. For the purposes of this paragraph, material handling activities include the: storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are Federally, State, or municipally owned or operated that meet the description of the facilities listed in this paragraph (i)-(xi)) include those facilities designated under the provisions of 122.26(a)(1)(v). The

following categories of facilities are considered to be engaging in "industrial activity" for purposes of this subsection:

(i) Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards under 40 CFR Subchapter N (except facilities with toxic pollutant effluent standards which are exempted under category (xi) of this paragraph);

(ii) Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283) 29, 311, 32 (except 323), 33, 3441, 373;

(iii) Facilities classified as Standard Industrial Classifications 10 through 14 (mineral industry) including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 CFR 434.11(l) because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or except for areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990 and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations; (inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/operator; inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials, nor sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim);

(iv) Hazardous waste treatment, storage, or disposal facilities, including those that are operating under interim status or a permit under Subtitle C of RCRA;

(v) Landfills, land application sites, and open dumps that receive or have received any industrial wastes (waste that is received from any of the facilities described under this subsection) including those that are subject to regulation under Subtitle D of RCRA;

(vi) Facilities involved in the recycling of materials, including metal scrapyards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as Standard Industrial Classification 5015 and 5093;

(vii) Steam electric power generating facilities, including coal handling sites;

(viii) Transportation facilities classified as Standard Industrial Classifications 40, 41, 42 (except 4221-25), 43, 44, 45, and 5171 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified under paragraphs (i)-(vii) or (ix)-(xi) of this subsection are associated with industrial activity;

(ix) Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with Section 405 of the CWA;

(x) Construction activity including clearing, grading and excavation activities except: operations that result in the disturbance of less than five acres of total land area which are not part of a larger common plan of development or sale;

(xi) Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, 4221-25, (and which are not otherwise included within categories (ii)-(x));

(34) "Total dissolved solids" means the total dissolved (filterable) solids as determined by use of the method specified in 40 CFR Part 136.

(35) "Toxic pollutant" means any pollutant listed as toxic under section 307(a)(1) of CWA.

(36) "Variance" means any mechanism or provision under section 301 or 316 of CWA or under 40 CFR Part 125, or in the applicable "effluent limitations guidelines" which allows modification to or waiver of the generally applicable effluent limitation requirements or time deadlines of CWA. This includes provisions which allow the establishment of alternative limitations based on fundamentally different factors or on sections 301(c), 301(g), 301(h), 301(i), or 316(a) of CWA.

(37) "Waters of the United States" or "waters of the U.S." means:

(i) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(ii) All interstate water, including interstate "wetlands",

(iii) All other water such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands", sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

(A) Which are or could be used by interstate or foreign travelers for recreational or other purposes;

(B) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(C) Which are used or could be used for industrial purposes by industries in interstate commerce:

(iv) All impoundments of waters otherwise defined as waters of the United States under this definition;

(v) Tributaries of waters identified in paragraphs (i) through (vi) of this definition;

(vi) The territorial sea; and

(vii) "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (i) through (vi) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States. [See Note 1 of this section.]

(38) "Wetlands" means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

APPENDIX C:

**INFORMATION FOR EPA REGIONAL OFFICES AND STATES WITH
APPROVED NPDES PROGRAMS**

- C.1 Federal, State, and Regional Permitting Agency Contacts
- C.2 Addresses and Telephone Numbers of EPA Regional Offices
and States within the Regional Office Jurisdictions

APPENDIX C.1: FEDERAL, STATE, AND REGIONAL PERMITTING AGENCY CONTACTS

- Alabama** Department of Environmental Management
Water Division
1751 Cong. W.L. Dickinson Drive
Montgomery, AL 36130
(205) 271-7825
- Alaska** Department of Environmental Conservation
Division of Environmental Quality Management
Pouch O
Juneau, AK 99811
(907) 465-2640
- Arizona** Department of Health Services
Office of Waste and Water Quality Management
2005 N. Central Avenue
Phoenix, AZ 85007
(602) 257-2305
- Arkansas** Department of Pollution Control and Ecology
NPDES Branch
8001 National Drive
Little Rock, AR 72209
(501) 562-7444
- California** State Water Resources Control Board
P.O. Box 100
901 P Street
Sacramento, CA 95801
(916) 322-3132
- Colorado** Department of Health
Water Quality Control Division
Permits and Enforcement Section
4210 E. 11th Avenue, Room 200
Denver, CO 80220
(303) 331-3015
- Connecticut** Department of Environmental Protection
Water Compliance and Hazardous Substances
122 Washington Street
Hartford, CT 06106
(203) 566-3245
- and U.S. EPA Region X
- and U.S. EPA Region IX

- Delaware Department of Natural Resources and Environmental Control
 Division of Water Resources
 89 Kings Highway
 P.O. Box 1401
 Dover, DE 19903
 (302) 736-4761
- District Department of Consumer and of Columbia and U.S. EPA
 Environmental Control Division Region III
 5010 Overlook Avenue, S.W.
 Washington, D.C. 20032
 (202) 767-7370
- Florida Department of Environmental Regulation and U.S. EPA
 Div. of Environmental Programs Region IV
 Water Quality Planning Section
 2600 Blairstone Road, Ste 531
 Twin Towers Office Building
 Tallahassee, FL 32301
 (904) 488-0780
- Georgia Department of Natural Resources
 Environmental Protection Division,
 Water Protection Branch
 Floyd Towers East - Room 1058
 205 Butler Street, S.W.
 Atlanta, GA 30334
 (404) 656-4887
- Hawaii Department of Health
 Pollution Investigation and
 Enforcement Division
 P.O. Box 3378
 Honolulu, HI 96801
 (808) 548-6505
- Idaho Department of Health and Welfare and U.S. EPA
 Bureau of Water Quality Region X
 State House
 Boise, ID 83720
 (208) 334-4250
- Illinois Illinois Environmental Protection Agency
 Division of Water Pollution Control
 2200 Churchill Road
 Springfield, IL 62706
 (217) 782-1654
- Indiana Indiana Department of Environmental Management
 105 S. Meridian Street
 P.O. Box 6015
 Indianapolis, IN 46225
 (317) 232-8488

Iowa	Department of Natural Resources Environmental Protection Division Surface and Ground Water Protection Bureau Henry A. Wallace Building 900 E. Grand Avenue Des Moines, IA 50319 (515) 281-8690	
Kansas	State Department of Health and Environment Division of Environment Bureau of Water Quality Forbes AFB Building No. 740 Topeka, KS 66612 (913) 862-9360 x257	
Kentucky	Department of Environmental Protection Department of Environmental Protection Division of Water Quality 18 Reilly Road, Fort Boone Plaza Frankfort, KY 40601 (502) 564-3410	
Louisiana	Department of Environmental Quality Office of Water Resources Permits Programs P.O. Box 44091 Baton Rouge, LA 70804-4091 (504) 922-0530	and U.S. EPA Region VI
Maine	Department of Environmental Protection Bureau of Water Quality Control State House, Station 17 Augusta, ME 04333 (207) 289-3355 Boston, MA 02203 (617) 565-3519	and U.S. EPA Region I
Maryland	Department of Natural Resources Water Resources Administration (water resources programs) Tawes State Office Building Annapolis, MD 21401 (301) 269-3846 Department of Health and Mental Hygiene Environmental Health Administration (water quality standards, NPDES permits, and sewage treatment) 201 W. Preston Street Baltimore, MD 21203 (301) 225-6300	

Massachusetts Department of Environmental
Quality Engineering
Division of Water Pollution
Control & Division of Water
Supply
1 Winter Street
Boston, MA 02108
(617) 292-5673

and U.S. EPA
Region I

Michigan Department of Natural Resources
Water Resources Commission
Water Quality Division
P.O. Box 30028
Lansing, MI 48909
(517) 373-1949

Minnesota Minnesota Pollution Control Agency
Division of Water Pollution Control
520 Lafayette Road
St. Paul, MN 55155
(612) 296-7202

Mississippi Dept. of Natural Resources
and Water Division
P.O. Box 10385, Southport Mall
Jackson, MS 39209
(601) 961-5171

and Department of Environmental
Quality
Surface Water Division
Bureau of Pollution Control
P.O. Box 10385
Jackson, MS 39289

Missouri Department of Natural Resources
Water Quality Program
Division of Environmental Quality
Jefferson State Office Building
205 Jefferson Street
Jefferson City, MO 65102
(314) 751-1300

Montana Department of Health and Environmental
Sciences
Division of Environmental Sciences
Water Quality Bureau
Cogswell Building, Room A206
Helena, MT 59620
(406) 444-2406

Nebraska Department of Environmental Control
Water Pollution Control Division
State House Station
P.O. Box 94877-301 Centennial Mall
Lincoln, NE 68509
(402) 471-2186

Nevada Department of Conservation and
Natural Resources
Water Resources Division
201 S. Fall Street, Room 221
Carson City, NV 89710
(702) 885-4380

New Hampshire Water Supply and Pollution
Control Commission
Hazen Drive
P.O. Box 95
Concord, NH 03301
(603) 271-2458

and U.S. EPA
Region I

New Jersey Department of Environmental
Protection
Division of Water Resources
1474 Prospect Street
P.O. Box CN029
Trenton, NJ 08625
(609) 292-1638

New Mexico Health and Environment
Department
Environmental Improvement
Division
Surface Water Quality Bureau
1190 St. Francis Drive
Santa Fe, NM 87504-0968
(505) 827-2918

and U.S. EPA
Region VI

New York Department of Environmental
Conservation
Permit Administrator
50 Wolf Road
Albany, NY 12233

North Carolina Department of Natural Resources
and Community Development
Division of Environmental
Management
Water Quality Section
P.O. Box 27687
Raleigh, NC 27611
(919) 733-5083

North Dakota Department of Health
Division of Water Supply
and Pollution Control
1200 Missouri Avenue
Bismark, ND 58501
(701) 224-2345

Ohio Environmental Protection Agency
Waste Water Pollution Control
1800 Watermark Drive
P.O. Box 1049
Columbus, OH 43266-0149
(614) 466-7427

Oklahoma Water Resources Board
P.O. Box 53585
Oklahoma City, OK 73152

and U.S. EPA
Region VI

State Department of Health
Permits and Compliance Division
P.O. Box 53551
Oklahoma City, OK 73152

Oregon Department of Environmental Quality (DEQ)
Water Quality Division
522 S.W. Fifth Avenue
P.O. Box 1760
Portland, OR 97207
(503) 229-5324

Pennsylvania Department of Environmental Resources
Bureau of Water Quality Management
P.O. Box 2063, 11th Floor/Fulton Bldg.
200 N. 3rd Street
Harrisburg, PA 17120
(717) 787-2666

Puerto Rico Environmental Quality Board
Division of Water/Water
Resources
P.O. Box 11488
Santurce, PR 00910
(809) 725-5140

and U.S. EPA
Region II

Rhode Island Department of Environmental
Management
Division of Water Resources
75 Davis St., 209 Cannon Bldg.
Providence, RI 02908
(401) 277-2234

South Carolina Department of Health and Environmental Control
Environmental Quality Control
2600 Bull Street
Columbia, SC 29201
(803) 734-4880

South Dakota Department of Water and Natural Resources
Division of Environmental Regulation
Point Source Control Program
Joe Foss Building
120 E. Capitol
Pierre, SD 57501
(605) 773-3351

Tennessee Department of Public Health
Division of Water Quality Control
TERRA Building, 2nd floor
150 9th Ave., N.
Nashville, TN 37219-5405
(615) 741-3111

Texas Texas Water Commission
P.O. Box 13087
Capitol Station
Austin, TX 78711-3087
(512) 463-8028

Texas Railroad Commission
P.O. Drawer 12967
Austin, TX 78711
(512) 463-8028

Utah Department of Health
Bureau of Water Pollution Control
288 N. 1460 W.
P.O. Box 16690
Salt Lake City, UT 84116-0690
(801) 538-6146

Vermont State Water Resources Board
(water pollution control)
58 E. State Street
Montpelier, VT 05602
(802) 828-2871

Water Quality Division
(water quality)
Department of Water Resources
and Environmental Engineering
103 S. Main Street
Waterbury, VT 05676
(802) 244-5638

and U.S. EPA
Region VIII

and U.S. EPA
Region VI

Virginia State Water Control Board
211 N. Hamilton Street
P.O. Box 11143
Richmond, VA 23230
(804) 257-0056

Washington Washington Dept. of Ecology
Office of Water Programs
Mail Stop PV/11
Olympia, WA 98504
(206) 459-6000

and Environmental Permit
Information Center
Department of Ecology
Headquarters Office, PV-11
St. Martin's College
Campus-Lacey
Olympia, WA 98504

West Department of Natural Resources
Virginia Division of Water Resources
1800 Washington Street, East
Charleston, WV 25305
(304) 348-2107

Wisconsin Department of Natural Resources
Division of Environmental Standards
Bureau of Water Resources and
Management
P.O. Box 7921
Madison, WI 53707
(608) 266-2121

Wyoming Department of Environmental Quality
Water Quality Division
Herschler Building
122 West 25th Street
Cheyenne, WY 82002
(307) 777-7781

Virgin US EPA, Region II
Islands

Guam US EPA, Region IX

American US EPA, Region IX
Samoa

District of US EPA, Region III
Columbia

Northern US EPA, Region IX
Marianas

APPENDIX C.2: ADDRESSES AND TELEPHONE NUMBERS OF EPA REGIONAL OFFICES AND STATES WITHIN THE REGIONAL OFFICE JURISDICTION

REGION I

NPDES Permits, Water Management Division, EPA 9141,
U.S. Environmental Protection Agency, John F. Kennedy Building,
Boston, Massachusetts 02203, (617) 565-3420, FTS 835-3420.

Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island,
and Vermont.

REGION II

NPDES Permits, Water Management Division, EPA 9270,
U.S. Environmental Protection Agency, Jacob K. Javitz Federal Building,
26 Federal Plaza, New York, New York 10278, (212) 264-2657, FTS 264-2657.

New Jersey, New York, Virgin Islands, and Puerto Rico.

REGION III

NPDES Permits, Water Management Division, EPA 9360,
U.S. Environmental Protection Agency, 841 Chestnut Building,
Philadelphia, Pennsylvania 19107, (215) 597-9800, FTS 597-9800.

Delaware, District of Columbia, Maryland, Pennsylvania,
Virginia, and West Virginia.

REGION IV

NPDES Permits, Water Management Division, EPA 9441,
U.S. Environmental Protection Agency, 345 Courtland Street, N.E.,
Atlanta, Georgia 30365, (404) 347-4727, FTS 257-4727.

Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina,
South Carolina, and Tennessee.

REGION V

NPDES Permits, Water Management Division, EPA 9560,
U.S. Environmental Protection Agency, 230 South Dearborn Street,
Chicago, Illinois 60604, (312) 353-2000, FTS 353-2000.

Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin.

REGION VI

NPDES Permits, Water Management Division, EPA 9670,
U.S. Environmental Protection Agency, First Interstate Bank Tower at Fountain Place,
1445 Ross Avenue, 12th Floor, Suite 1200,
Dallas, Texas 75202, (214) 655-6444, FTS 255-6444.

Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

REGION VII

**NPDES Permits, Water Management Division, EPA 9790,
U.S. Environmental Protection Agency, 726 Minnesota Avenue,
Kansas City, Missouri 66101, (913) 551-7000, FTS 276-7000.**

Iowa, Kansas, Missouri, and Nebraska.

REGION VIII

**NPDES Permits, Water Management Division, EPA 9871,
999 18th Street, Suite 500, U.S. Environmental Protection Agency,
Denver, Colorado 80202, (303) 293-1603, FTS 330-1603.**

Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming.

REGION IX

**NPDES Permits, Water Management Division, EPA 9920,
U.S. Environmental Protection Agency, 75 Hawthorne Street,
San Francisco, California 94105, (415) 744-2125, FTS 484-2125.**

**Arizona, California, Hawaii, Nevada, Guam, American Samoa, and
Trust Territories.**

REGION X

**NPDES Permits, Water Management Division, EPA 9031,
U.S. Environmental Protection Agency, 1200 6th Avenue,
Seattle, Washington 98101, (206) 442-1200, FTS 399-1200.**

Alaska, Idaho, Oregon, and Washington.

As an alternative to submitting an individual application, a facility (except facilities that have existing individual NPDES permits for storm water or process discharge) may participate in a group application for sufficiently similar facilities. The intent of the group application process is to reduce the collection and reporting burdens of participating industries. Group applications involve a two part application process. Group applications do not have specific forms; rather, the applicants are required to submit the information described below.

Acceptable participants for a group application include those facilities that are part of the same industrial subcategory (see Table 2-1 for a list of the SIC codes that are considered industrial plants in the regulations - Part 405 to Part 471) or have sufficiently similar services or activities.

Part 1 of the group application must contain the following information: (There is no standard form for Part 1 of a group application. For Part 2 the relevant portion of form 2F should be used.) When determining the number of dischargers identified for Part 2 sampling under paragraph (D), unless the group is less than 11 members in size, a minimum of 10 facilities must conduct and submit quantitative sampling data.

122.26(c)(2) Group application for discharges associated with industrial activity. In lieu of individual applications or notice of intent to be covered by a general permit for storm water discharges associated with industrial activity, a group application may be filed by an entity representing a group of applicants (except facilities that have existing individual NPDES permits for storm water) that are part of the same subcategory (see 40 CFR Subchapter N, Part 405 to 471) or, where such grouping is inapplicable, are sufficiently similar as to be appropriate for general permit coverage under § 122.28 of this Part. The Part 1 application shall be submitted to the Office of Water Enforcement and Permits, U.S. EPA, 401 M Street, S.W. Washington, D.C. 20460 (EN-336) for approval. Once a Part 1 application is approved, group applicants are to submit Part 2 of the group application to the Office of Water Enforcement and Permits. A group application shall consist of:

(i) Part 1. Part 1 of a group application shall:

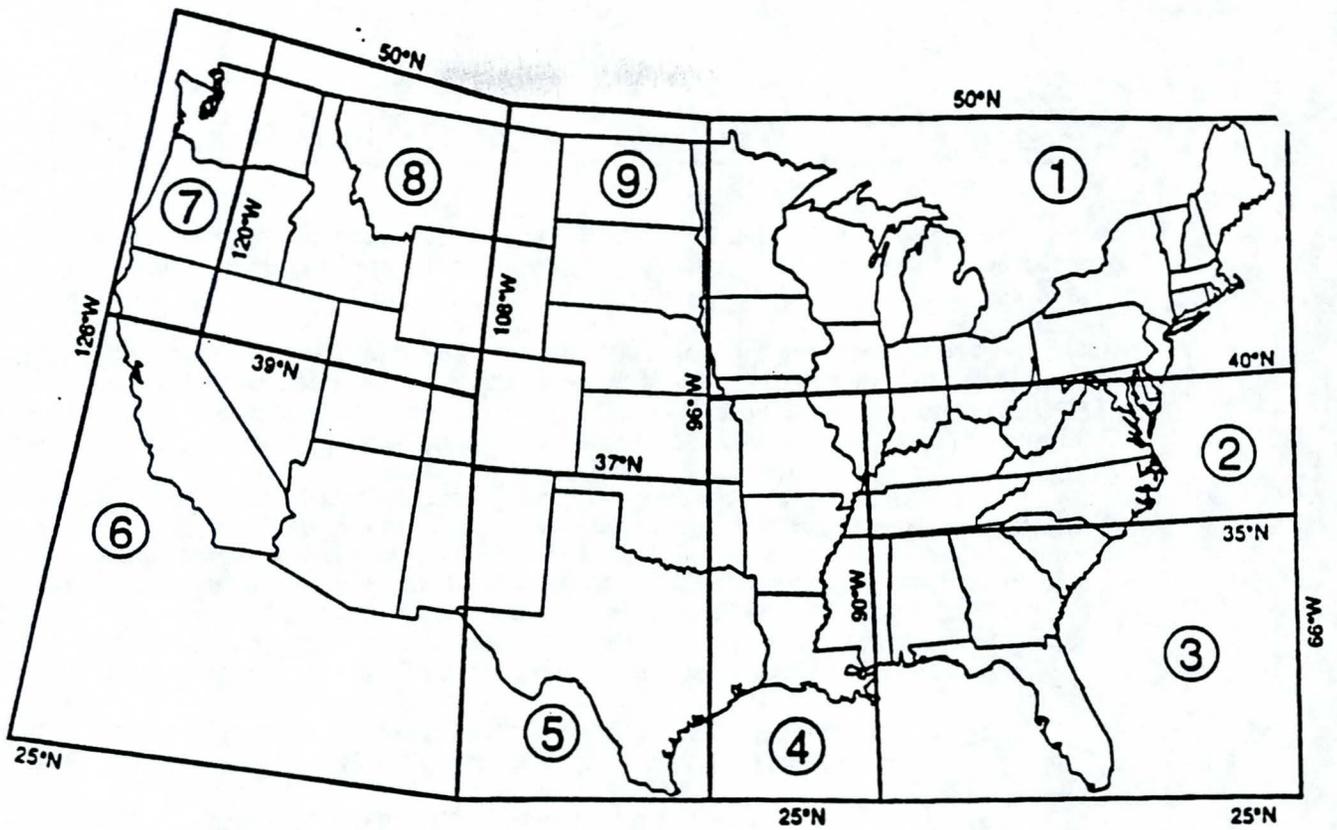
(A) identify the participants in the group application by name and location. Facilities participating in the group application shall be listed in nine subdivisions, based on the facility location relative to the nine precipitation zones indicated in Appendix Figure D-1 to this Part.

(B) include a narrative description summarizing the industrial activities of participants of the group application and explaining why the participants, as a whole, are sufficiently similar to be covered by a general permit;

(C) include a list of significant materials stored exposed to precipitation by participants in the group application and materials management practices employed to diminish contact by these materials with precipitation and storm water runoff;

(D) identify ten percent of the dischargers participating in the group application (with a minimum of 10 dischargers, and either a minimum of two dischargers from each precipitation zone indicated in Appendix Figure D-1 of this Part in which ten or more members of the group are located, or one discharger from each precipitation zone indicated in Appendix Figure D-1 of this Part in which nine or fewer members of the group are located) from which quantitative data will be submitted in Part 2. If more than 1,000 facilities are identified in a group application, no more than 100 dischargers must submit quantitative data in Part 2. Groups of between four and ten dischargers may be formed. However, in groups of between four and ten, at least half the facilities must submit quantitative data, and at least one facility in each precipitation zone in which members of the group are located must submit data. A description of why the facilities selected to perform sampling and analysis are representative of the group as a whole, in terms of the information provided in subparagraphs (i)(B) and (i)(C) of this paragraph, shall accompany this section. Different factors impacting the nature of the storm water discharges, such as processes used and material management, shall be represented, to the extent feasible, in a manner roughly equivalent to their proportion in the group.

(ii) Part 2. Part 2 of a group application shall contain quantitative data (NPDES Form 2F), as modified by paragraph (c)(1) of this section, so that when Part 1 and Part 2 of the group application are taken together, a complete NPDES application (Form 1, Form 2C, and Form 2F) can be evaluated for each discharger identified in paragraph (c)(2)(i)(D) of this section.



Source: Methodology for Analysis of Detention Basins for Control of Urban Runoff Quality, prepared for U.S. Environmental Protection Agency, Office of Water, Nonpoint Source Division, Washington, DC, 1986.

Note: Alaska and Hawaii are included in Zone 7. The Virgin Island and Puerto Rico are included in Zone 3.

Appendix Figure D-1. Rainfall Zones of the United States

APPENDIX D.1: EPA REVIEW PROCEDURES FOR A GROUP APPLICATION

As shown in Figure 2-1, EPA Headquarters has 60 days to approve or deny the Part 1 application. When the Part 1 application is approved, group applicants are to submit Part 2 to the same address.

Part 2 of the group application must contain quantitative data (i.e., the data required in Form 2F) so that when Parts 1 and 2 of the group application are taken together, a complete NPDES permit application [Form 1, Form 2C (if necessary based on the criteria for use of this form), and Form 2F] can be evaluated for each of the dischargers designated in Item 4 of Part 1.

Although there is no such thing as a group permit, the data submitted by the group will be used to develop general permits or individual permits for all of the facilities participating in the group application (see Figure 2-1). EPA and NPDES States with general permit authority may develop a general permit that can then be modified as necessary for each industrial subcategory (e.g., based on SIC codes). NPDES States without general permitting authority can develop individual permits for the facilities participating in the group based on the information reported in the application. The group application process and related timeframes are summarized below:

- a) Part 1 of the application must be submitted to the Director, EPA Office of Water Enforcement and Permits, by September 30, 1991.
- b) Based on information submitted in Part 1 of the group application, EPA Headquarters will approve or deny the group coapplicants within 60 days after receipt.
- c) Part 2 of the application must be submitted to EPA, Office of Water Enforcement and Permits no later than May 18, 1992.
- d) A facility identified in the definition of "storm water associated with industrial activity" (summarized in Table 2-2) may add on to a group application submitted in accordance with item (2a) above at the discretion of the Office of Water Enforcement and Permits, and only upon a showing of good cause by the facility and the group applicant.
- e) Facilities identified in Table 2-2 may apply for a storm water discharge permit as part of a group application previously submitted in accordance with item (2a) above, if the application for the additional facility is made within 15 months from the date of publication of the final general permit rule; the addition of the facility shall not reduce the percentage of the facilities that are required to submit quantitative data below 10%, unless there are over 100 facilities in the group that are submitting quantitative data. Approval to become part of group application must be obtained from the group or the trade association representing the individual facilities and from the Office of Water Enforcement and Permits.

APPENDIX E:

**NPDES PERMIT APPLICATION FORMS AND INSTRUCTIONS FOR
THE PERMITTING PROCESS**

Appendix

E.1	Form 1
E.2	Form 2F
E.3	Form 2C
E.4	Form 2D
E.5	Form 2E