Friday
January 9, 1998

Part II

Environmental Protection Agency

40 CFR Parts 122 and 123

National Pollutant Discharge Elimination System—Proposed Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 122 and 123

[No. W–97–12 (Proposed Rule) and No. W–97–15 (Information Collection Request); FRL–5937–8]

RIN 2040–AC82

National Pollutant Discharge Elimination System—Proposed Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The National Pollutant Discharge Elimination System (NPDES) existing storm water program (Phase I) is resulting in significant improvement of surface water quality in the United States by reducing polluted runoff from a large number of priority sources, including major industrial facilities, large and medium city storm sewers (''municipal separate storm sewer systems'' or ''MS4s''), as well as construction sites that disturb 5 or more acres. Today's proposed NPDES storm water regulations (Phase II), which will be finalized by March 1, 1999, would expand this existing national program to smaller municipalities and construction sites that disturb 1 to 5 acres. In this expansion, EPA is proposing ''safety valves'' which would allow certain sources to be excluded from the national program based on the lack of impact on water quality, as well as to pull in other sources not regulated on a national basis based on localized adverse impact on water quality. Finally, EPA is proposing to conditionally exclude from the NPDES storm water program, industrial facilities that have ''no exposure'' of industrial activities to storm water, thereby reducing application of the program to many industrial activities currently covered by the program that have no industrial storm water discharges. This rule would establish a cost effective, flexible approach for reducing negative environmental impact by storm water discharges from these currently unregulated sources.

The ''National Water Quality Inventory, 1994 Report to Congress'' indicates that storm water discharges from a variety of sources including separate storm sewers, construction, waste disposal, and resource extraction activities are major causes of water quality impairment; roughly 46 percent of the identified cases of water quality impairment of estuarine square miles surveyed, for example, are attributable to storm sewer runoff. EPA believes that the implementation of the six minimum measures, which focus on a ''best management practices'' (BMP) approach, identified for the small municipalities in this proposal should significantly reduce pollutants in urban storm water compared to existing levels in a cost effective manner. If after implementing the six minimum measures there is still a water quality problem, the municipality would expand or use better tailored BMPs in their minimum measures to result in water quality improvement. Similarly, EPA believes that implementation of BMP controls at small construction sites will also result in a significant reduction is pollutant discharges and an improvement in surface water quality. EPA believes this rule will cost significantly less than the existing 1995 rule that is currently in place, and will result in significant monetized financial, recreational and health benefits, as well as benefits that EPA has been unable to monetize, including reduced scouring and erosion of streambeds, improved aesthetic quality of waters, reduced eutrophication of aquatic systems, benefit to wildlife and endangered and threatened species, tourism benefits, biodiversity benefits and reduced siting costs of reservoirs. In addition, there will be an economic savings from the proposed ''no exposure'' streamlining. The rule would provide for a NPDES program approach that: encourages the use of general permits, provides flexibility for municipalities to determine the nature of storm water controls, provides flexibility in use of watershed approaches, is consistent with the existing storm water Phase I program, recognizes and includes existing programs, utilizes the existing NPDES program which is Federally enforceable and takes advantage of existing structures and mechanisms for public participation. EPA is inviting comment on alternative approaches that may be available to allow efficient and effective targeting of environmental problems for the Phase II program, without extension of the NPDES program to Phase II dischargers. EPA is committed to continue seeking the input of all stakeholders in the development of this proposed rule, including continuing to seek input and advice from the Phase II Subcommittee of the Urban Wet Weather Flows Federal Advisory Committee which was established in 1995.

DATES: *Public Comment Period for the Proposed Rule and Information Collection Request (ICR).* The public comment period for this proposed rule and ICR will be from date of publication in the **Federal Register** until April 9, 1998.

Public Meetings/Hearings. The public meetings/hearings will include a presentation on the proposed rule and allow interested parties the opportunity to provide written and/or oral comments for the official record. Public meetings/hearings will be held at the times and locations provided below. If all statements are finished before 4:00 pm the hearings may be finished early. The hearing dates are:

1. February 23, 1998, 1:00 p.m. to 4:00 p.m., Washington, DC
2. February 25, 1998, 1:00 p.m. to 4:00 p.m., Boston, Massachusetts
3. February 27, 1998, 1:00 p.m. to 4:00 p.m., Atlanta, Georgia
4. March 2, 1998, 1:00 p.m. to 4:00 p.m., Chicago, Illinois
5. March 4, 1998, 1:00 p.m. to 4:00 p.m., Dallas, Texas
6. March 6, 1998, 1:00 p.m. to 4:00 p.m., San Francisco, California

ADDRESSES: *Public Comments.* All public comments regarding the proposed rule shall be submitted by mail to: ''ATTN: Storm Water Proposed Rule Comment Clerk—W–97–12, Water Docket, Mail Code 4101, EPA; 401 M Street, SW; Washington, DC 20460.'' All public comments regarding the proposed amendment to the ICR shall be submitted by mail to: ''ATTN: Storm Water Proposed Rule ICR Comment Clerk—W–97–15, Water Docket, Mail Code 4101, EPA; 401 M Street, SW, Washington, DC 20460'' and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, D.C. 20503, marked ''Attention: Desk Officer for EPA.''

Please submit an original and three copies of your comments and enclosures (including references). Commenters who want EPA to acknowledge receipt of their comments should enclose a self-addressed, stamped envelope. No facsimiles (faxes) will be accepted. Comments may also be submitted electronically to ow-docket@epamail.epa.gov. Electronic comments must be submitted as an ASCII file avoiding the use of special characters or forms of encryption. Electronic comments must be identified by the docket number (W–97–12 (storm water proposed rule) and W–97–15 (storm water proposed rule ICR)). Comments and data will also be accepted on disks in WordPerfect in 5.1 format or ASCII file format. Electronic comments on this notice may be filed online at many Federal Depository Libraries.

To ensure that EPA can read, understand and therefore properly respond to public comments, EPA would prefer that commenters cite, where possible, the paragraph(s) or sections in the proposed rule language, preamble or supporting documents to which the comment refers. Commenters should use a separate paragraph for each issue discussed.

Public Hearings. The hearing locations are:

1. Washington, DC—Auditorium of the USEPA Education Center, 401 M St. SW, Washington, DC 20460
2. Boston—John A. Volpe National Transportation Systems Center—Auditorium (Bldg. #2), 55 Broadway—Kendall Square, Cambridge, MA 02142
3. Atlanta—Atlanta Federal Center, (Room C, AFC Conference Center), 61 Forsyth St. SW, Atlanta, GA 30303–3104
4. Chicago—USEPA Region 5 (Rm 331) 77 W. Jackson Blvd., Chicago, IL 60604–3590
5. Dallas—USEPA Region 6 (Regional Conference Room, 12th floor), 1445 Ross Ave., Dallas, TX 75202–2733
6. San Francisco—USEPA Region 9 (Marianas/ Palau Room, First Floor), 75 Hawthorne Street, San Francisco, CA 94105–3901

Docket. The complete administrative record for the proposed rule and the ICR have been established under docket numbers W–97–12 (proposed rule) and W–97–15 (ICR), and includes supporting documentation as well as printed, paper versions of electronic comments. Copies of information in the record are available upon request. A reasonable fee may be charged for copying. The record is available for inspection and copying from 9 a.m. to 4 p.m., Monday through Friday, excluding legal holidays at the Water Docket, EPA, Room 2616, 401 M Street, SW, Washington, D.C. For access to docket materials, please call 202/260–3027 to schedule an appointment.

FOR FURTHER INFORMATION CONTACT: George Utting, Office of Wastewater Management, Environmental Protection Agency, Mail Code 4203, 401 M Street, SW, Washington, DC 20460; (202) 260–5816; sw2@epamail.epa.gov.

SUPPLEMENTARY INFORMATION: Entities potentially regulated by this action include:

Category	Examples of regulated entities
Federal Government.	Owners or operators of municipal separate storm sewer systems.
Tribal Government.	Owners or operators of a separate storm sewer system, or dischargers of storm water associated with industrial activity.
State Government.	Owners or operators of small municipal separate storm sewer systems.
Local Government.	Owners or operators of small municipal separate storm sewer systems (serving populations less than 100,000) and municipal construction and industrial activities.
Industry	Owners or operators of industrial facilities who may be dischargers of storm water associated with industrial or other activity.
Construction Activity.	Construction site owners or operators.
Public	Persons who may want to participate in the petition process.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that EPA is now aware could potentially be regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether you are regulated by this action, you should carefully examine the applicability criteria in §§ 122.26(b)(15), 122.31, 122.32, and 123.35 of the proposed rule. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

Table of Contents

Legal Authority: 33 U.S.C. 1311; 33 U.S.C. 1342; 33 U.S.C. 1361.

CFR Citation: 40 CFR 122; 40 CFR 123.

I. Background

A. Water Quality Concerns/Environmental Impacts

In 1972, Congress amended the Federal Water Pollution Control Act (referred to as the Clean Water Act (CWA)) to prohibit the discharge of any pollutant to waters of the United States from a point source unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit. The NPDES program is a permit program designed to regulate point source discharges.

Initial efforts to improve water quality under the NPDES program primarily focused on reducing pollutants in industrial process wastewater and municipal sewage. This focus developed because many sources of industrial process wastewater and municipal sewage were not adequately controlled and represented immediate and pressing environmental problems. Furthermore, these discharges were easily identified as responsible for poor, often drastically degraded, water quality conditions.

As pollution control measures for industrial process wastewater and municipal sewage were further developed, refined, and implemented, it became increasingly evident that more diffuse sources of water pollution were significant causes of water quality impairments. Specifically, storm water runoff draining large surface areas, such as agricultural and urban land, was found to be a major cause of adverse water quality impairment, including nonattainment of designated uses. In 1987, Congress amended the CWA to require implementation of a comprehensive approach for addressing storm water discharges under the NPDES program. Storm water discharges have a number of environmental effects that can occur from land development, illicit discharges, construction site runoff, and improper disposal of materials. The following section entitled, Studies and Assessments of Storm Water Runoff, discusses these four issues. Problems can also occur from agricultural storm water discharges and return flows from irrigated agriculture. This area of concern, however, is statutorily exempted from regulation under the NPDES program (see CWA section 502(14)). Other sources may be of concern in certain areas and can be addressed on a case-by-case (or category-by-category) basis through the NPDES permitting authority's designation authority.

Storm water runoff from lands modified by human activities can harm surface water resources, and, in turn, violate water quality standards, in two ways: (1) by changing natural hydrologic patterns and (2) by elevating pollutant concentrations and loadings. Storm water runoff may contain or mobilize high levels of contaminants, such as sediment, suspended solids, nutrients, heavy metals, pathogens, toxins, oxygen-demanding substances, and floatables. Such contaminants are carried to nearby streams, rivers, lakes, and estuaries. Individually and combined, these pollutants can reduce water quality and threaten one or more designated beneficial uses. Often, an increased volume of runoff or contaminants can lead to violations of applicable State water quality standards.

1. Studies and Assessments of Storm Water Runoff

a. Urban Development

In support of today's proposal regarding land development, the United States Environmental Protection Agency (EPA) has relied on several broad-based assessments of storm water runoff and related water quality impacts, including: (1) *Nationwide Urban Runoff Program (NURP)* study (U.S. Environmental Protection Agency, Office of Water 1983. Final Report of the Nationwide Urban Runoff Program Washington, D.C.), (2) *America's Clean Water—The States' Nonpoint Source Assessment* (Association of State and Interstate Water Pollution Control Administrators 1985. America's Clean Water—The States' Nonpoint Source Assessment. Prepared in cooperation with the U.S. Environmental Protection Agency, Office of Water, Washington, D.C.), (3) *U.S. Geological Survey Urban-Storm Water Data Base for 22 Metropolitan Areas Throughout the United States* (Driver, N.E., Mustard, M.H., Rhinesmith, R.B. and Middleburg, R.F. 1985. U.S. Geological Survey Urban Storm Water Data Base for 22 Metropolitan Areas Throughout the United States. U.S. Geological Survey Report No. 85–337, Lakewood, CO.), and (4) *The National Water Quality Inventory, 1994 Report to Congress* (U.S. Environmental Protection Agency, Office of Water 1995. National Water Quality Inventory: 1994 Report to Congress Washington, D.C. EPA 841–R–95–005.) These studies, which provide important data regarding storm water runoff and associated pollutant loads, are briefly discussed below. (For an extensive summary and review of storm water research, see *Makepeace, D.K., Smith, D.W., and S.J. Stanley 1995.*

''Urban Storm Water Quality: Summary of Contaminant Data.'' Critical Reviews in Environmental Science and Technology, 25(2):93–139.).

The Nationwide Urban Runoff Program (NURP) study, which was conducted to facilitate understanding of the nature of urban runoff from residential, commercial, and industrial areas, is the largest study of storm water undertaken to date. One focus of the NURP study was to characterize the water quality of discharges from separate storm sewer systems that drain residential, commercial, and light industrial (industrial parks) sites. Storm water samples from 81 residential and commercial properties in 22 urban/suburban areas nationwide were collected and analyzed during a 5-year period, between 1978 and 1983. The majority of samples collected in the study were analyzed for eight conventional pollutants and three metals.

Data collected under the NURP study indicated that discharges from separate storm sewer systems draining runoff from residential, commercial, and light industrial areas carried more than ten times the level of total suspended solids (TSS) on an annual loading basis, as discharges from municipal sewage treatment plants that provide secondary treatment. The study compared TSS in runoff from residential and commercial sites (180 mg/l) with TSS in effluent from treatment plants providing secondary treatment (25 mg/l). The NURP study also indicated that runoff from residential and commercial areas carried somewhat higher annual loadings of chemical oxygen demand (COD), total lead, and total copper compared to effluent from secondary treatment plants.

When analyzing annual loadings associated with storm water runoff, it is important to note that discharges associated with urban runoff are highly intermittent and that short-term loadings may have shock loading effects on receiving water, such as low dissolved oxygen levels. NURP study findings also showed that fecal coliform counts in urban runoff are typically in the tens to hundreds of thousands per hundred milliliter of runoff during warm weather conditions, although the study suggested that fecal coliform may not be the most appropriate indicator organism for identifying potential health risks in storm water runoff.

Monitoring data summarized in the NURP study provide important information about urban runoff from residential, commercial, and light industrial areas. The NURP study did conclude, however, that the quality of urban runoff can be adversely affected by several sources of pollution that were not directly evaluated in the study, including illicit discharges, construction site runoff, and illegal dumping. The findings of the NURP study were reinforced by findings reported in a study entitled, *U.S. Geological Survey-Storm Water Data Base for 22 Metropolitan Areas Throughout the United States* (Driver et al., 1985). This report summarized monitoring data compiled during the mid-1980s, covering 717 storm events at 99 sites in 22 metropolitan areas. In sum, the U.S. Geological Survey (USGS) monitoring most consistently observed problems of metals and sediment concentrations in urban storm water runoff.

The report entitled, *America's Clean Water—the States' Nonpoint Source Assessment* (ASIWPCA, 1985), is a comprehensive study of diffuse pollution sources. Conducted under the sponsorship of the Association of State and Interstate Water Pollution Control Administrators (ASIWPCA) and EPA, the study revealed that 38 States reported urban runoff as a major cause of designated beneficial use impairment and 21 States reported storm water runoff from construction sites as a major cause of use impairment.

The National Water Quality Inventory, 1994 Report to Congress (U.S. EPA, 1995b) provides a national assessment of water quality, based on biennial reports submitted by the States under 305(b) of the CWA. In the 305(b) reports, States, Tribes, and Territories assess their individual water quality control programs by examining attainment or nonattainment of designated uses. A designated use is the legally applicable use specified in a water quality standard for a watershed, waterbody, or segment of a waterbody. As such, each 305(b) report must indicate the fraction of a States' waters that are fully supporting, partially supporting, or not supporting designated beneficial uses. Designated uses include support of aquatic life or water-contact recreation.

The 1994 Report to Congress—based on a compilation of 60 individual 305(b) reports submitted by States, Tribes, and Territories—assessed the following percentages of total waters nationwide: 17 percent of river and stream miles, 42 percent of lake, pond, and reservoir acres, and 78 percent of estuary square miles. In waterbodies where designated beneficial uses were not being met, States, Tribes, and Territories first identified and then assigned water quality impairments based on the following categories of sources: diffuse sources, industrial process wastewaters and municipal sewage, combined sewer overflows, and natural and other sources.

Leading sources of water quality impairment nationwide identified in the report include diffuse sources (i.e., urban storm water runoff—runoff from agricultural and urban sources, construction sites, land disposal of waste, and resource extraction), industrial process wastewaters, and municipal point sources. The report identified industrial process wastewaters as a leading source of pollution for 11 percent of impaired acres of lakes, ponds, and reservoirs and for 27 percent of acres of estuaries. The report cited municipal point sources as a leading source of pollution for 17 percent of impaired rivers and streams, 19 percent of impaired lakes, ponds, and reservoirs, and 39 percent of impaired estuaries. The report further assessed pollution from diffuse sources, including storm water runoff from agricultural and urban sources, construction sites, land disposal of waste, and resource extraction and indicated that diffuse sources were a leading cause of impaired waters, as follows. Twelve percent of rivers and streams were impaired by urban runoff/storm sewers, and 11 percent were impaired by resource extraction. Eighteen percent of lakes, ponds, and reservoirs impaired by urban runoff/storm sewers, and 11 percent were impaired by land disposal of wastes. Forty-six percent of estuaries were impaired by urban runoff/storm sewers, and 13 percent were impaired by land disposal of wastes. It should be noted that storm water runoff from urban areas contributes a much broader range of pollutants than the section 305(b) reports are intended to evaluate.

b. Illicit Discharges

Studies have shown that storm water discharges from separate storm sewer systems often include wastes and wastewater from non-storm water sources, commonly referred to as illicit discharges. These discharges are ''illicit'' because the storm sewer systems are not designed to accept and discharge, or to process, such wastes. These discharges would be required to be permitted under the CWA. As a result, illicit discharges to separate storm sewer systems can create severe widespread contamination and water-quality problems. A particular problem involves illicit discharges of sanitary wastes that can be directly linked to high bacterial counts in receiving waters and can be dangerous to public health.

The NURP study, discussed previously, determined that during

substantial dry periods, many storm water outfalls continue to discharge to receiving waterbodies. Pollutant levels in these flows, which are commonly referred to as dry weather flows, were shown to be high enough to significantly degrade receiving water quality.

The Ann Arbor and Ypsilanti water quality projects inspected 660 businesses, homes, and other buildings and identified 14 percent of the buildings as having improper storm sewer drain connections. The program assessment revealed that, on average, 60 percent of automobile-related businesses, including service stations, automobile dealerships, car washes, body shops, and light industrial facilities, had illicit connections to storm sewer drains. The program assessment also showed that a majority of the illicit discharges to the storm sewer system resulted from improper plumbing and connections, which had been approved by the municipality when installed. (*Huron River Pollution Abatement Program*, Washtenaw County Statutory Drainage Board, 1987.)

Inflows from aging sanitary sewer collection systems are another illicit discharge-related problem. Sanitary sewer systems frequently develop leaks and cracks resulting in discharges of pollutants to receiving waters through separate storm sewers. These pollutants include sanitary waste and sewer main construction materials (e.g., asbestos cement, brick, cast iron, vitrified clay). Municipalities have long recognized the problems of storm water infiltration into sanitary sewer collection systems, because this type of infiltration often disrupts the operation of the municipal sewage treatment plant. However, the reverse problem of sewage exfiltration out of the sanitary sewer collection system into the storm water collection system can occur during dry weather periods.

c. Construction Site Runoff

Storm water discharges generated during construction activities can cause an array of water quality impacts. Specifically, the biological, chemical, and physical integrity of the waters may become severely compromised. Water quality impairment results, in part, because a number of pollutants are preferentially absorbed onto mineral or organic particles found in fine sediment. The interconnected process of erosion (detachment of the soil particles), sediment transport and delivery is the primary pathway for introducing key pollutants, such as nutrients (particularly phosphorus), metals, and organic compounds into aquatic systems (Novotny, V. and G. Chesters. 1989. ''Delivery of Sediment and Pollutants from Nonpoint Sources: A Water Quality Perspective.'' *Journal of Soil and Water Conservation,* 44(6): 568–576.). Estimates indicate that 80 percent of the phosphorus and 73 percent of the Kjeldahl nitrogen in streams is associated with eroded sediment (USDA. 1989. *The Second RCA Appraisal, Soil, Water and Related Resources on Nonfederal Land in the United States, Analysis of Condition and Trends,* cited in Fennessey, L.A.J., and A.R. Jarrett. 1994. ''The Dirt in a Hole: a Review of Sedimentation Basins for Urban Areas and Construction Sites.'' *Journal of Soil and Water Conservation,* 49(4): 317–323.).

In watersheds experiencing intensive construction activity, the localized impacts of water quality may be severe because of high pollutant loads, primarily sediments. Siltation is the second largest cause of impaired water quality in rivers and lakes (U.S. EPA, 1995b, p. ES–8.). Introduction of coarse sediment (coarse sand or larger) or a large amount of fine sediment is also a concern because of the potential of filling lakes and reservoirs (along with the associated remediation costs for dredging), as well as clogging stream channels (e.g., Paterson, R.G., Luger, M.I., Burby, E.J., Kaiser, E.J., Malcolm, H.R., and A.C. Beard. 1993. ''Costs and Benefits of Urban Erosion and Sediment Control: North Carolina Experience.'' *Environmental Management,* 17(2):167–178.). Large inputs of coarse sediment into stream channels will initially reduce stream depth and minimize habitat complexity by filling in pools (U.S. Environmental Protection Agency. 1991. *Monitoring Guidelines to Evaluate Effects of Forestry Activities on Streams in the Pacific Northwest and Alaska.* Seattle, WA: Region 10, Water Division. 166 pp. EPA/910/9–91–001.). In addition, studies have shown that stream reaches affected by construction activities often extend well downstream of the construction site. For example, between 4.8 and 5.6 kilometers of stream below construction sites in the Patuxent River watershed were observed to be impacted by sediment inputs (Fox, H.L. 1974. *Effects of Urbanization on the Patuxent River, with Special Emphasis on Sediment Transport, Storage, and Migration.* Ph.D. Dissertation, Johns Hopkins University, Baltimore, Maryland, 276 pp. as cited in Klein, R.D. 1979. ''Urbanization and Stream Quality Impairment.'' *Water Resources Bulletin,* 15(4): 948–963.).

A primary concern at most construction sites is the erosion and transport process related to fine sediment because rain splash, rills (i.e., a channel small enough to be removed by normal agricultural practices and typically less than 1 foot deep), and sheetwash (*California Storm Water Best Management Practice Handbooks—Construction Activity,* Blue Print Service, Oakland, CA.) encourage the detachment and transport of this material to waterbodies. Forest road construction sites in steep areas or along stream banks, however, may initiate landslides, debris flows, or other types of mass wasting events (Megahan, W.F. 1984. ''Road Effects and Impacts—Watershed.'' In *Proceedings, Forest Transportation Symposium,* USDA Forest Service Region 2, Lakewood, CO. pp, 57–97). In these cases, coarse sediment inputs may be of greatest concern. Construction sites can also generate other pollutants associated with wastes onsite such as sanitary wastes or concrete truck washout.

Although streams and rivers naturally carry sediment loads, erosion from construction sites and runoff from developed areas can elevate these loads to levels well above those in undisturbed watersheds. It is generally acknowledged that erosion rates from construction sites are much greater than from almost any other land use (Novotny, V. and H. Olem. 1994. *Water Quality: Prevention, Identification, and Management of Diffuse Pollution.* Van Nostrand Reinhold, NY. p. 36.). Results from both field studies and erosion models indicate that erosion rates from construction sites are typically an order of magnitude larger than row crops and several orders of magnitude greater than rates from well-vegetated areas, such as forests or pastures (U.S. Department of Agriculture, Soil Conservation Service. 1970. *Controlling Erosion on Construction Sites. Agriculture Information Bulletin,* Washington, D.C. 32 pp.; Meyer, L.D., Wischmeier, W.H., and W.H. Daniel. 1971. ''Erosion, Runoff and Revegetation of Denuded Construction Sites.'' *Transactions of the ASAE,* 14(1):138–141; Owen, O.S. 1975. *Natural Resource Conservation.* MacMillan, New York as cited in Paterson, R.G., Luger, M.I., Burby, R.J., Edward, J.K., Malcom, H.R., and A.C. Beard. 1993. ''Costs and Benefits of Urban Erosion and Sediment Control: The North Carolina Experience.'' *Environmental Management,* 17(2): 167–178.). Wolman and Schick (Wolman, M.G. and A.P. Schick. 1967. ''Effects of Construction on Fluvial Sediment, Urban and Suburban Areas of Maryland.'' *Water Resources Research,* 3(2): 451–464) studied the impacts of development on fluvial systems in

Maryland and determined that sediment yields in areas undergoing construction were 1.5 to 75 times greater than detected in natural or agricultural catchments. The authors summarize the potential impacts of construction on sediment yields by stating that ''the equivalent of many decades of natural or even agricultural erosion may take place during a single year from areas cleared for construction.'' (Wolman and Schick, 1967)

Similar impacts from storm water runoff have been reported in a number of other studies. For example, Daniel et al. monitored three residential construction sites in southeastern Wisconsin and determined that annual sediment yields were more than 19 times the yields from agricultural areas (Daniel, T.C., McGuire, D., Stoffel, D., and B. Miller. 1979. ''Sediment and Nutrient Yield from Residential Construction Sites.'' *Journal of Environmental Quality,* 8(3): 304–308.). Studies have examined the effects of road construction on erosion rates and sediment yields in forested areas. In northern Idaho, the erosion rate per unit area of surface cleared for logging road construction averaged 220 times the erosion rate of undisturbed areas over a 6-year period (Megahan, W.F., and W.J. Kidd. 1972. *Effects of Logging Roads on Sediment Production Rates in the Idaho Batholith.* USDA Forest Service Research Paper INT–123, Odgen, UT. 14pp.). Other studies have documented increased surface erosion following logging road construction, but at increases smaller than the 220-fold increase reported in the 1972 study (Megahan, 1984).

A highway construction project in West Virginia disturbed only 4.2 percent of a 4.72 square mile basin, but resulted in a three-fold increase in suspended sediment yields (Downs, S.C., and D.H. Appel. *Progress Report on the Effects of Highway Construction on Suspended-Sediment Discharge in the Coal River and Trace Fork, West Virginia.* U.S. Geological Survey Water Resources Investigations Report 84–4275, Charleston, WV. 20pp.). During the largest storm event, it was estimated that 80 percent of the sediment in the stream originated from the construction site. As is often the case, the increase in suspended sediment load could not be detected further downstream, where the drainage area was more than 50 times larger (269 sq. mi.). Another study evaluated the effect of 290 acres of highway construction on watersheds ranging in size from 5 to 38 square miles. Suspended sediment loads in the smallest watershed increased by 250 percent, and the estimated sediment yield from the construction area was 37 tons/acre over a 2-year period (Hainly, R.A. 1980. *The Effects of Highway Construction on Sediment Discharge into Blockhouse Creek and Stream Valley Run, Pennsylvania.* U.S. Geological Survey Water Resources Investigations Report 80–68, Harrisburg, PA. 50pp.). A more recent study in Hawaii showed that highway construction increased suspended sediment loads by 56 to 76 percent in three small (1 to 4 sq. mi.) basins (Hill, B.R. 1996. *Streamflow and Suspended-Sediment Loads Before and During Highway Construction, North Halawa, Haiku, and Kamooalii Drainage Basins, Oahu, Hawaii, 1983–91.* U.S. Geological Survey Water Resources Investigations Report 96–4259, Honolulu, HI. 34pp.) A 1970 study determined that sediment yields from construction areas can be as much as 500 times the levels detected in rural areas (National Association of Counties Research Foundation. 1970. *Urban Soil Erosion and Sediment Control.* U.S. Department of the Interior, Federal Water Quality Administration, Water Pollution Control Research Series, Program #15030 DTL, Washington, D.C.)

Yorke and Herb (Yorke, T.H., and W.J. Herb. 1978. *Effects of Urbanization on Streamflow and Sediment Transport in the Rock Creek and Anacostia River Basins, Montgomery County, Maryland, 1962–74.* U.S. Geological Survey Professional Paper 1003, Washington, DC.) evaluated nine subbasins in the Maryland portion of the Anacostia watershed for more than a decade in an effort to define the impacts of changing land use/land cover on sediment in runoff. Average annual suspended sediment yields for construction sites ranged from 7 to 100 tons/acre. Daniel et al. (Daniel et al., 1979) identified total storm runoff, followed by peak storm runoff, as the most influential factors controlling the sediment loadings from residential construction sites.

Storm water discharges from construction sites that occur when the land area is disturbed (and prior to surface stabilization) can severely impact designated uses. Examples of designated uses include public water supply, recreation, and propagation of fish and wildlife. The siltation process described previously can threaten all three designated uses by (1) depositing high concentrations of pollutants in public water supplies, (2) decreasing the depth of a waterbody which can result in its limited use by boaters, swimmers, and other recreational enthusiasts, and (3) directly impacting the habitat of fish and other aquatic species which can limit their ability to reproduce. Excess sediment can cause a number of other problems for waterbodies. It is associated with increased turbidity and reduced light penetration in the water column, as well as more long-term effects associated with habitat destruction and increased difficulty in filtering drinking water.

Numerous studies have examined the effect that excess sediment has on aquatic ecosystems. For example, sediment from road construction activity in Northern Virginia reduced aquatic insect and fish communities by up to 85 percent and 40 percent, respectively (Reed, J.R. 1997. *Stream Community Responses to Road Construction Sediments.* Bulletin No. 97. Virginia Water Resources Research Center, Virginia Polytechnic Institute, Blacksburg, Virginia, as cited in Klein, R.D. 1990. *A Survey of Quality of Erosion and Sediment Control and Storm Water Management in the Chesapeake Bay Watershed.* Chesapeake Bay Foundation, Annapolis, MD.) Other studies have shown that fine sediment (fine sand or smaller) adversely affects aquatic ecosystems by reducing light penetration, impeding sight-feeding, smothering benthic organisms, abrading gills and other sensitive structures, reducing habitat by clogging interstitial spaces within a streambed, and reducing the intergravel dissolved oxygen by reducing the permeability of the bed material (Everest, F.H., Beschta, J.C., Scrivener, K.V., Koski, J.R., Sedell, J.R., and C.J. Cederholm. 1987. ''Fine Sediment and Salmonid Production: A Paradox.'' *Streamside Management: Forestry and Fishery Interactions,* Contract No. 57, Institute of Forest Resources, University of Washington, Seattle, WA. pp.98–142. For example, 4.8 and 5.6 kilometers of stream below construction sites in the Patuxent River watershed in Maryland were found to have fine sediment amounts 15 times greater than normal (Fox, 1974 as cited in Klein, 1979). Benthic organisms in the streambed can be smothered by sediment deposits, causing changes in aquatic flora and fauna such as fish species composition (Wolman and Schick, 1967). In addition, the primary cause of coral reef degradation in coastal areas is attributed to land disturbances and dredging activities due to urban development (Rogers, C.S. 1990. ''Responses of Coral Reefs and Reef Organizations to Sedimentation.'' Marine Ecology Progress Series, 62:185–202.).

While most of the published data are from construction sites larger than 5 acres, there are no compelling reasons why erosion rates and sediment yields from smaller (less than 5 acres)

construction sites should be substantially different than those from larger (more than 5 acres) construction sites. The limited amount of data suggests that sediment yields from small sites are as high as or higher than the 20 to 150 tons/acre/year measured from larger sites (MacDonald, L.H. 1997. *Technical Justification for Regulating Construction Sites 1–5 Acres in Size.* Unpublished report submitted to the U.S. Environmental Protection Agency, Washington, DC. 28 pp.) Furthermore, logic suggests that the cumulative effects of numerous small sites will have impacts similar to those of larger sites in a particular area.

The expected contribution of small sites to total sediment yields depends, in part, on the extent to which erosion and sedimentation controls are being applied. Current storm water regulations require erosion and sedimentation controls on larger sites in urban areas which suggests that in the absence of any erosion and sedimentation controls smaller construction sites contribute a disproportionate amount of the total sediment from construction activities (MacDonald, 1997). Another view that supports the need for controls on smaller construction sites is that smaller sites are less likely to have an effective plan to control erosion and sedimentation, that these plans are less likely to be properly implemented and maintained, and that small sites are less likely to be inspected (Brown, W. and D. Caraco. 1997. *Controlling Storm Water Runoff Discharges from Small Construction Sites: A National Review.* Submitted to the U.S. Environmental Protection Agency, Office of Wastewater Management, Washington, DC. by the Center for Watershed Protection, Silver Spring, MD). Sediment delivery in urban areas should produce little difference between larger and smaller construction sites because the runoff from either site is usually delivered directly to the storm drain network.

Any assessment of impacts from smaller construction sites should consider the proportion of a particular area that is associated with small construction activity. Brown and Caraco (Brown and Caraco, 1997) surveyed 219 local jurisdictions to assess erosion and sediment control (ESC) programs. Seventy respondents provided data on the number of ESC permits for construction sites smaller than 5 acres. In 27 cases (38 percent of the respondents), more than three-quarters of the permits were for sites smaller than 5 acres; in another 18 cases (26 percent), more than half of the permits were for sites smaller than 5 acres.

In addition, data on the total acreage disturbed by smaller construction sites have been collected recently in two States (MacDonald, 1997). The most recent and complete data set is the listing of the disturbed area for each of the 3,831 construction sites permitted in North Carolina for 1994–1995 and 1995–1996. Nearly 61 percent of the sites that were 1 acre or larger were between 1.0 and 4.9 acres in size. This proportion was consistent between years. Data showed that this range of sites accounted for 18 percent of the total area disturbed by construction. The values showed very little variation between the 2 years of data. The total disturbed area for all sites over this 2-year period was nearly 33,000 acres, or about 0.1 percent of the total area of North Carolina.

As in many metropolitan areas, nine counties in the San Francisco Bay area only require ESC permits for sites larger than 5 acres. Nearly 70 percent of the 542 permits issued in the Bay area during the last 3 years were for sites between 5 and 25 acres in size. Conversations with several municipalities indicate that there may be as many as five construction sites smaller than 5 acres for every site larger than 5 acres (MacDonald, 1997). Given the available data, MacDonald (1997) estimates that construction sites less than 5 acres probably account for slightly less than one-third of the total area under construction. Regulating construction sites 1 to 5 acres in size will probably increase the amount of area being regulated by approximately 20 to 30 percent. Given the high erosion rates associated with most construction sites, this indicates that small construction sites can be a significant source of water quality impairment, particularly in small watersheds that are undergoing rapid development.

d. Improper Disposal of Materials

Improper disposal of materials may result in contaminated discharges from separate storm sewer systems in two ways. First, materials may be disposed of directly in a catch basin or other storm water conveyance. Second, materials disposed of on the ground may either drain directly to a storm sewer or be washed into a storm sewer during a storm event. Improper disposal of materials to street catchbasins and other storm sewer inlets often occurs because many people mistakenly believe that disposal to such areas is an environmentally sound practice. Part of the confusion may occur because some areas are served by combined sewer systems, which are part of the sanitary sewer collection system, and people assume that materials discharged to a catchbasin will reach an appropriate municipal sewage treatment plant. Materials that are commonly disposed of improperly include used oil; household toxic materials; radiator fluids; and litter, such as disposable cups, cans, and fast-food packages. EPA believes that there has been increasing success in addressing these problems through alternatives such as recycling and household pickup programs.

B. Statutory Background

In 1972, Congress enacted the CWA to prohibit the discharge of any pollutant to waters of the United States from a point source unless the discharge is authorized by an NPDES permit. Congress added CWA section 402(p) in 1987 to require implementation of a comprehensive approach for addressing storm water discharges. Section 402(p)(1) prohibits EPA or NPDES-authorized States or Tribes from requiring NPDES permits for discharges composed entirely of storm water (''storm water discharges'') until October 1, 1992, except for the following five classes of storm water discharges specifically listed under section 402(p)(2):

(A) a discharge subject to an NPDES permit before February 4, 1987
(B) a discharge associated with industrial activity
(C) a discharge from a municipal separate storm sewer system serving a population of 250,000 or more
(D) a discharge from a municipal separate storm sewer system serving a population of 100,000 or more but less than 250,000
(E) a discharge that an NPDES permitting authority determines to be contributing to a violation of a water quality standard or a significant contributor of pollutants to the waters of the United States.

The October 1992 deadline was later extended to October 1, 1994, by the Water Resources Development Act of 1992.

Congress clarified and amended the requirements for NPDES permits for storm water discharges in section 402(p)(3)(A). This section requires storm water discharges associated with industrial activity to meet all applicable provisions of section 402 and section 301 of the CWA, including technology-based requirements and any more stringent requirements necessary to meet water quality standards. Section 402(p)(3)(B) establishes NPDES permit standards for discharges from municipal separate storm sewer systems. NPDES permits for discharges from municipal

separate storm sewer systems (1) may be issued on a system or jurisdiction-wide basis, (2) must include a requirement to effectively prohibit non-storm water discharges into the storm sewers, and (3) must require controls to reduce pollutant discharges to the maximum extent practicable, including best management practices. As with all point source discharges under the CWA, storm water discharges are subject to more stringent limitations when necessary to meet applicable water-quality based standards pursuant to CWA section 301(b)(1)(C).

In CWA section 402(p)(4), Congress established statutory deadlines for the initial steps in implementing the NPDES program for storm water. This section required development of NPDES permit application regulations, submission of NPDES permit applications, issuance of NPDES permits sources covered by section 402(p)(2), and compliance with NPDES permit conditions. This section instructed EPA to issue regulations specifying NPDES permitting application requirements by February 4, 1989. In addition, this section required industrial facilities and large municipal separate storm sewer systems to submit NPDES permit applications by February 4, 1990. Medium municipal separate storm sewer systems were to submit NPDES permit applications by February 4, 1992. EPA was required to issue or deny all NPDES permits 1 year after each of the respective deadlines, and facilities must comply with all permit conditions within 3 years of final NPDES permit issuance. All other storm water discharges fell under the statutory moratorium for the requirement for an NPDES permit. EPA and authorized NPDES States were prohibited from requiring a permit for such sources until October 1, 1994.

Congress granted extensions to the NPDES permit application process for selected classes of discharges associated with industrial activity. On December 18, 1991, Congress enacted the Intermodal Surface Transportation Efficiency Act (ISTEA), which extended NPDES permit application deadlines for most storm water discharges associated with industrial activity from facilities that are owned or operated by certain municipalities. EPA and States authorized to administer the NPDES program could not require any municipality with a population of less than 100,000 to apply for or obtain an NPDES permit for any storm water discharge associated with industrial activity prior to October 1, 1992, except for storm water discharges from an airport, power plant, or uncontrolled sanitary landfill. See 40 CFR 122.26(e)(1); 57 FR 11524, April 2, 1992 (reservation of NPDES application deadlines for ISTEA facilities).

C. EPA's Reports to Congress

Under CWA section 402(p)(5), EPA, in consultation with the States, was required to conduct a study, first, to identify unregulated sources of storm water discharges, as well as to determine the nature and extent of pollutants in such discharges. Second, the study was to establish procedures and methods of control of such discharges to the extent necessary to mitigate impacts on water quality. Section 402(p)(5) also required EPA to report the results of the first two components of that study to Congress by October 1, 1988, and the final report by October 1, 1989.

In March 1995, EPA submitted a report wherein EPA reviewed and analyzed municipal and industrial facilities not already regulated under the initial NPDES regulations for storm water (U.S. Environmental Protection Agency, Office of Water. 1995. *Storm Water Discharges Potentially Addressed by Phase II of the National Pollutant Discharge Elimination System Storm Water Program: Report to Congress.* Washington, D.C. EPA 833–K–94–002). The report also analyzed associated pollutant loadings and water quality impacts from these unregulated sources. Based on identification of unregulated municipal sources and analysis of information on impacts of storm water discharges from municipal sources, the report recommended that the storm water program focus on the 405 ''urbanized areas'' identified by the Bureau of the Census. The report further found that a number of discharges from unregulated industrial facilities warranted further investigation to determine the need for regulation. The report classified these unregulated industrial discharges in two groups, Group A and Group B. Group A included sources that may be considered a high priority for inclusion in the NPDES program for storm water because discharges from these sources are similar or identical to regulated sources. These ''look alike'' sources were not regulated in the initial NPDES regulations for storm water due to the language used to define ''associated with industrial activity.'' In the initial regulations for storm water, ''industrial activity'' is identified using Standard Industrial Classification (SIC) codes. The use of SIC codes lead to incomplete categorization of industrial activities with discharges that needed to be regulated to protect water quality. Group B included 18 industrial sectors, specifically sources that EPA expected to contribute to storm water contamination due to the activities conducted and pollutants anticipated onsite (e.g., vehicle maintenance, machinery and electrical repair, and intensive agricultural activities).

EPA reported on the latter component of the section 402(p)(5) study via President Clinton's Clean Water Initiative, which was released on February 1, 1994 (U.S. Environmental Protection Agency, Office of Water. 1994. *Clinton's Clean Water Initiative.* Washington, D.C. EPA 800–R–94–001). This report addresses a number of issues associated with NPDES requirements for storm water discharges and proposes (1) establishing a phased compliance with a water quality standards approach for discharges from municipal separate storm sewer systems with priority on controlling discharges from municipal growth and development areas, (2) clarifying that the maximum extent practicable standard should be applied in a site-specific, flexible manner, taking into account cost considerations as well as water quality effects, (3) providing an exemption from the NPDES program for storm water discharges from industrial facilities with no activities or no significant materials exposed to storm water, (4) providing extensions to the statutory deadlines to complete implementation of the NPDES program for the storm water program, (5) targeting urbanized areas for the requirements in the NPDES program for storm water, and (6) providing control of discharges from inactive and abandoned mines located on Federal lands in a more targeted, flexible manner.

D. EPA Regulations for the NPDES Program for Storm Water

The purpose of the regulations is to protect water quality. EPA's findings are explained in Section I.A. For the final step in implementation of the point source control program for storm water, CWA section 402(p)(6) requires EPA, in consultation with States and local officials, to issue regulations for the designation of the remaining unregulated discharges to be regulated to protect water quality based on studies conducted under section 402(p)(6), which is discussed below. Under section 402(p)(6), EPA is to establish an extension of the existing storm water program to regulate newly designated sources. At a minimum, the extension must establish (1) priorities, (2) requirements for State storm water management programs, and (3) expeditious deadlines. The section 402(p)(6) program may include

performance standards, guidelines, guidance, and management practices and treatment requirements, as appropriate. For additional background information about the initial steps in the NPDES program for storm water, see 55 FR 47990, November 16, 1990 (final regulations under CWA sections 402(p)(3) and (p)(4)); 60 FR 40230, August 7, 1995 (final regulations establishing permit application deadlines under section 402(p)(6)). EPA is currently subject to a consent order to propose supplemental rules under section 402(p)(6) by November 25, 1997 (on July 16, 1997, EPA filed papers to seek an extension of the signature date for today's proposal from the original date of September 1, 1997 to the current date) and to finalize these rules by March 1, 1999. See Natural Resources Defense Council, Inc. v. Browner, Civ. No. 95–634 PLF (D.D.C., April 7, 1995). The Agency and NRDC also entered into a settlement agreement to address the portions of the existing storm water rules remanded by the 9th Circuit according to the same schedule as the consent order.

The United States District Court for the District of Columbia entered a consent decree to resolve this litigation. EPA and NRDC have also stipulated to a modification of a companion settlement agreement to extend the date for proposal of regulations to address portions of the existing storm water regulations (no exposure and construction below 5 acres), which were remanded to the Agency by the U.S. Court of Appeals for the Ninth Circuit.

In today's notice, EPA is proposing to control storm water discharges of concern through the NPDES program. Please refer to today's preamble Section I.A. for a more detailed discussion of the impacts of urbanization on water quality. EPA is also strongly encouraging partnerships and the watershed approach as the management framework for efficiently, effectively, and consistently protecting and restoring aquatic ecosystems and protecting public health. These regulations are intended to facilitate the implementation of a watershed approach by providing the NPDES permitting authority and municipalities the flexibility to address local environmental problems by using general permits.

E. EPA Outreach Efforts

On September 9, 1992, EPA published a notice requesting information and public comment on how to prepare regulations under section 402(p)(6) (see 57 FR 41344). The notice identified three sets of issues associated with developing new NPDES storm water regulations: (1) how should EPA identify unregulated sources of storm water to protect water quality, (2) what types of control strategies should EPA develop for these sources, and (3) what are appropriate deadlines for implementing new requirements.

The September 9, 1992, notice presented a range of alternatives under each issue in an attempt to illustrate, and obtain input on, the full range of potential approaches for the regulation of unregulated sources to protect water quality. The notice recognized that potential sources for coverage under the section 402(p)(6) regulations would fall into two main categories: municipal separate storm sewer systems and individual (commercial and residential) sources. EPA recognized that a major distinction between most options for identifying sources to be regulated was either to require targeted municipalities to develop source controls and management programs for storm water discharges within their jurisdictions or to require permits for discharges from facilities on an individual basis.

EPA received more than 130 comments on the September 9, 1992, notice. Approximately 43 percent of the comments came from municipalities, 29 percent from trade groups or industries, 24 percent from State or Federal agencies, and approximately 4 percent from other miscellaneous sources. No comments were received from environmental groups. For further discussion of the comments received, see *Storm Water Discharges Potentially Addressed by Phase II of the National Pollutant Discharge Elimination System: Report to Congress* (EPA, 1995a), pp. 1–21 to 1–22, and Appendix J (which provides a detailed summary of the comments received as they relate to the specific issues raised in the notice).

In early 1993, the Rensselaerville Institute and EPA held public and expert meetings to assist in developing and analyzing options for identifying unregulated sources and possible controls. The report on the 1993 meetings indicates that the two options most favored by the various groups participating were:

- A program in which States would select sources to be controlled in a manner that was consistent with criteria developed by EPA. The comprehensive program under section 402(p)(6) would provide States with flexibility to rely on either NPDES requirements or other frameworks to control targeted sources.
- A tiered approach that would provide for EPA selection of high priority sources for control by NPDES permits and State selection of other sources for control under a State water quality program other than the NPDES program.

(Appendix I, ''Report on the EPA Storm Water Management Program (Rensselaerville Study).'' EPA, 1995a).

EPA also conducted outreach with representatives of small entities in conjunction with the convening of a Small Business Advocacy Review Panel under the Small Business Regulatory Enforcement Fairness Act (SBREFA). EPA, in consultation with the Small Business Administration, invited 29 small entity representatives and streamlining representatives to participate in this outreach effort. Many of the representatives contacted in this outreach had been working closely with EPA in developing this proposed rule through the FACA Committee and the Storm Water Phase II FACA Subcommittee. The further discussion of this process is found at Section VII, Regulatory Flexibility Act.

In May 1997, EPA conducted two telephone conference calls and held an all-day meeting at EPA headquarters to solicit the advice and recommendations of representatives. EPA eventually received 12 sets of written comments from representatives (see Small Business Advocacy Review Panel (SBREFA). August 7, 1997. *Final Report on EPA's Planned Proposed Rule for the National Pollutant Discharge Elimination System: Storm Water Phase II.*) On June 19, 1997, the Small Business Advocacy Review Panel was convened to review the proposed rule. The panel consisted of officials from EPA, the Small Business Administration, and the Office of Management and Budget. The panel considered representatives' comments previously submitted to EPA and allowed representatives to provide additional comments. Based on comments and its own discussions, the Panel has provided findings regarding the elements of an IRFA and specific recommendations regarding the proposed rule to EPA. The recommendations of the panel are discussed in Section VII.B., Regulatory Flexibility Act, SBREFA Panel Process.

F. The FACA Committee Effort

To assist EPA in coordinating implementation of the urban municipal wet weather water pollution control program, EPA established the Urban Wet Weather Flows Advisory Committee (hereinafter, ''FACA Committee'') under the Federal Advisory Committee Act (FACA). The Office of Management and Budget approved the charter for the FACA Committee on March 10, 1995. The

FACA Committee assisted EPA in developing cost-effective solutions for controlling the environmental and human health impacts of urban wet weather flows with a minimum of regulatory burden. The FACA Committee provided and continues to provide a forum for identifying and addressing issues associated with water quality impacts from these sources.

The FACA Committee has two subcommittees: the Storm Water Phase II FACA Subcommittee (the designation and comprehensive program requirements under CWA section 402(p)(6) are often referred to as ''Storm Water Phase II'') and the Sanitary Sewer Overflows (SSOs) FACA Subcommittee. Consistent with the requirements of FACA, the membership of both the FACA Committee and the subcommittees is balanced among EPA's various outside stakeholder interests, including representatives from municipalities, industrial and commercial sectors, agriculture, environmental and public interest groups, States, Indian Tribes, and EPA. Members have been selected and appointed for the duration of the process. A Federal official or EPA employee serves as the Designated Federal Officer and is present at all meetings. All FACA Committee and subcommittee meetings are open to the public and announced in advance in the **Federal Register**.

The Storm Water Phase II FACA Subcommittee met twelve times between September 1995 and October 1997. The 32 subcommittee members discussed the regulatory framework that serves as the basis for today's proposed rule at these meetings as well as during numerous conference calls. EPA provided subcommittee members with four successive drafts of the proposed rule and preamble, outlines of the rule, documents identifying changes made to each draft, and summaries of the written comments received on each draft, including how the comments had been addressed. EPA received extensive written comments from FACA members on a number of occasions, together with extensive oral feedback at a number of meetings and conference calls. Although the Storm Water Phase II FACA Subcommittee has not reached consensus on the details of today's proposal, they have provided EPA with significant input and insights, which EPA has tried to balance and address.

Today's proposed regulations respond to President Clinton's direction on regulatory reform. EPA sought to develop a common sense regulatory approach to allow EPA, States, and Tribes to ''manage for results'' and provide for ecosystem protection. EPA believes there is considerable latitude in CWA section 402(p)(6) in establishing the scope of coverage (i.e., the designation of sources to be regulated under the NPDES program for storm water, as well as the comprehensive program for regulating those sources). EPA has benefitted greatly from the variety of view points and the lively exchange of ideas through the FACA Committees and subcommittees. EPA has sought to build upon the issues raised in proposing the scope, method, and timing of the comprehensive program to regulate storm water and to more effectively provide outreach and technical assistance for these new regulations. The Storm Water Phase II FACA Subcommittee was also instrumental in discussing lessons learned from implementation of the existing NPDES program for storm water. Records and iterative draft versions of today's proposal have been available and continue to be available to the public at the Office of Wastewater Management's Home Page (see http://www.epa.gov/owm) or through the Point Source Information Provision Exchange System (PIPES) Home Page (see http://www.epa.gov/owmitnet/pipes/pipes.htm).

The FACA Committee has provided the Storm Water Phase II FACA Subcommittee with several recommendations for improving the existing NPDES program for storm water. Some of these recommendations are reflected as part of today's proposal. The FACA Committee provided recommendations, for example, for the proposal regarding a ''no exposure'' incentive for facilities with storm water discharges ''associated with industrial activity.'' EPA's proposal would apply this recommendation to the designation of unregulated sources under section 402(p)(6) as well. The FACA Committee also recommended that EPA clarify and define the standards applicable to NPDES permit controls for municipal separate storm sewer systems, specifically the standards that permits require for controls to reduce the discharge of pollutants ''to the maximum extent practicable'' (MEP).

G. Related Nonpoint Source Programs

1. Section 319 of the Clean Water Act

In 1987, section 319 was added to the Clean Water Act to provide a framework for funding State and local efforts to address pollutant sources not addressed by the NPDES program (i.e., nonpoint sources). To obtain funding, States are required to submit Nonpoint Source Assessment Reports identifying State waters that without additional control of nonpoint sources of pollution could not reasonably be expected to attain or maintain applicable water quality standards or the goals and requirements of the CWA. States are also required to prepare and submit for EPA approval a statewide Nonpoint Source Management Program for controlling nonpoint source water pollution to navigable waters within the State and improving the quality of such waters. State program submittals must identify specific best management practices (BMPs) and measures that the State proposes to implement in the first 4 years after program submission to reduce pollutant loadings from identified nonpoint sources to levels required to achieve the stated water quality objectives.

State programs funded under section 319 can include both regulatory and nonregulatory State and local approaches. Section 319(b)(2)(B) specifies that a combination of ''nonregulatory or regulatory programs for enforcement, technical assistance, financial assistance, education, training, technology transfer, and demonstration projects'' may be used, as necessary, to achieve implementation of the BMPs or measures identified in the section 319 submittals.

Although most States have generally emphasized the use of voluntary approaches in their section 319 programs, some States and local governments have implemented regulations and policies to control pollution from urban runoff. States such as Delaware and Florida, as well as local jurisdictions such as the Lower Colorado River Authority, are pursuing storm water management goals through numerical treatment standards for new development. Many States and local governments have enforceable erosion and sediment control regulations.

On a broader scale, nonpoint source pollution is being addressed at the watershed level by such programs as those being implemented by the State of Wisconsin, the Puget Sound Water Quality Authority, and the States that are parties to the Great Lakes Water Quality Agreement. A number of individual States and local communities have adopted legislation or regulations that limit development or require special management practices in areas surrounding water resources of special concern, such as Maryland's Critical Areas Act.

2. Section 6217 of the Coastal Zone Act Reauthorization Amendments

Section 6217 of the Coastal Zone Act Reauthorization Amendments (CZARA) of 1990 provides that States with

approved coastal zone management programs must develop and submit coastal nonpoint pollution control programs to EPA and the National Oceanic and Atmospheric Administration (NOAA) for approval. Failure to submit an approvable program will result in a reduction of Federal grants under both the Coastal Zone Management Act and section 319 of the CWA.

State coastal nonpoint pollution control programs under CZARA must include enforceable policies and mechanisms that ensure implementation of the management measures throughout the coastal management area. Section 6217(g)(5) defines management measures as ''economically achievable measures for the control of the addition of pollutants from existing and new categories and classes of nonpoint sources of pollution, which reflect the greatest degree of pollutant reduction achievable through the application of the best available nonpoint pollution control practices, technologies, processes, siting criteria, operating methods, or other alternatives.'' Congress mandated a technology-based approach based on technical and economic achievability under the rationale that neither States nor EPA have the money, time, or other resources to create and expeditiously implement a program that depends on establishing cause and effect linkages between particular land use activities and specific water quality problems. If this technology-based approach fails to achieve and maintain applicable water quality standards and to protect designated uses, CZARA 6217(b)(3) requires additional management measures.

EPA issued *Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters* under 6217(g) in January 1993. The guidance identifies management measures for five major categories of nonpoint source pollution: agriculture, forestry, urban, marinas and recreational boating, and hydromodification. The management measures reflect the greatest degree of pollutant reduction that is economically achievable for each of the listed sources. These management measures provide reference standards for the States to use in developing or refining their coastal nonpoint programs. In general, the management measures were written to describe systems designed to reduce the generation of pollutants. A few management measures, however, contain quantitative standards that specify pollutant loading reductions. For example, the New Development Management Measure, which is applicable to construction in urban areas, requires (1) that by design or performance the average annual total suspended solid loadings be reduced by 80 percent and (2) to the extent practicable, that the pre-development peak runoff rate and average volume be maintained. The management measures approach was adopted to provide State officials flexibility in selecting strategies and management systems and practices that are appropriate for regional or local conditions, provided that equivalent or higher levels of pollutant control are achieved.

Storm water discharges regulated under the existing NPDES program, such as discharges from municipal separate storm sewers serving a population of 100,000 or more and construction activities that disturb 5 or more acres, do not need to be addressed in Coastal Nonpoint Pollution Control Programs. However, potential new sources, such as urban development adjacent to or surrounding municipal systems serving a population of 100,000 or more, smaller urbanized areas, and construction sites that disturb less than 5 acres, that are identified in management measures under section 6217 guidance need to be addressed in Coastal Nonpoint Pollution Control Programs until such discharges are issued an NPDES permit. EPA and NOAA have worked and continue to work together in their activities to ensure that authorities between NPDES and CZARA do not overlap.

EPA and NOAA published *Coastal Nonpoint Pollution Control Program: Program Development and Approval Guidance* (1993), which addresses such issues as the basis and process for EPA/NOAA approval of State Coastal Nonpoint Pollution Control Programs, how EPA and NOAA expect State programs to implement management measures in conformity with EPA guidance, and procedures for reviewing and modifying State coastal boundaries to meet program requirements. The document clarifies that States generally must implement management measures for each source category identified in the EPA guidance developed under section 6217(g). The document also sets quantitative performance standards for some measures. Coastal Nonpoint Pollution Control Programs are not required to address sources that are clearly regulated under the NPDES program as point source discharges. Specifically, such programs would not need to address small municipal separate storm sewer systems and construction sites covered under NPDES storm water permits (both general and individual). The guidance also clarifies that regulatory and nonregulatory mechanisms may be used to meet the requirement for enforceable policies and mechanisms, provided that nonregulatory approaches are backed by enforceable State authority ensuring that the management measures will be implemented. Backup authority can include sunset provisions for incentive programs. For example, a State may provide additional incentives if too few owners or operators participate in a tax incentive program or develop mandatory requirements to achieve the necessary implementation of management measures.

H. Watershed-based Approach for Water Quality Programs

EPA is promoting an integrated watershed approach for storm water and other discharges that focuses on coordinated public and private sector efforts to address the highest priority water quality problems within hydrologically defined geographic areas. The watershed approach is a decisionmaking process that reflects a common strategy for information collection and analysis and a common understanding of the roles, priorities, and responsibilities of all stakeholders within a watershed. Implementation of the watershed approach is critical for the improvement of water quality in the United States, and the approach is an essential priority for EPA's water programs. EPA, therefore, is reevaluating its programs, including the NPDES, ground water, drinking water, and nonpoint source programs, to determine how they can be more effectively incorporated into the watershed approach.

EPA intends that a central role be given to watershed planning and analysis by permitting authorities implementing storm water programs under today's proposed rule. While States are not required to use a watershed approach, EPA believes that this approach would significantly improve implementation of today's proposed rule. As discussed in Section II.A., Overview, EPA designed today's proposed rule to facilitate watershed planning and analysis, particularly in the area of designating those storm water sources to be covered under the program or giving regulatory relief to storm water discharges already designated, but also in determining and implementing the requirements for the owners and operators of small municipal separate storm sewer systems. EPA expects that the NPDES permitting authority would work with State agencies who have jurisdiction

over nonpoint sources and other areas within the watershed not covered under the NPDES program in the development of a comprehensive watershed plan.

EPA's overall support of using watershed-based alternatives is described in greater detail in EPA's *Watershed Approach Framework* (June 1996; http:/www.epa.gov/OWOW/watershed/framework.html#6b) and *NPDES Watershed Strategy* (U.S. Environmental Protection Agency. March 1994. *Watershed Protection—NPDES Watershed Strategy.* Washington, D.C.). The *NPDES Watershed Strategy* discusses integration of NPDES program functions into a broader watershed protection approach and highlights areas for coordination with stakeholders to promote implementation of the approach. The *NPDES Watershed Strategy* is based on the following principles:

- Watershed protection approaches may vary in terms of specific elements, timing, and resources, but all should share a common emphasis and insistence on integrated actions, specific action items, and measurable environmental and programmatic milestones.
- Related activities within a basin or watershed must be coordinated to achieve the greatest environmental benefit and most effective level of stakeholder involvement.
- Actions relating to restoration and protection of surface water, ground water, and habitat within a basin should be based upon an integrated decision-making process, a common information base, and a common understanding of the roles, priorities, and responsibilities of all stakeholders within a basin.
- Staff and financial resources are limited and must be allocated to address environmental priorities as effectively and efficiently as possible.
- Program requirements that interfere or conflict with environmental priorities should be identified and revised to the extent possible.
- Accurate information and high quality data are necessary for decision-making and should be collected on an incremental basis; interim decisions should be made based on available data to prevent further degradation and promote restoration of natural resources.

The watershed approach would be most successful if all stakeholders are involved. In addition, within a geographic management unit (watershed/basin), a cycle of activities and a schedule for implementation must be established.

EPA recognizes that many States are coordinating their authorities, programs, and decisionmaking using a watershed management approach to achieve more efficient and better problem solving. The Agency will continue to encourage the use of the watershed approach through activities that include tailoring the EPA program to support this direction; publishing case studies for States to use as examples; creating a tools directory; undertaking other outreach efforts, such as a quarterly newsletter (*Watershed Events*); including watershed activities on the EPA Internet Home Page; training for permit writers and the regulated community; and sponsoring conferences, such as ''Watershed 96.''

State representatives of the Storm Water Phase II FACA Subcommittee supported watershed-based implementation strategies and controls and noted the following:

(T)he future demands a new model for managing water resources, based on well-defined geographic units such as basins or watersheds, that recognizes all the interconnections within the watershed that define the hydrologic cycle in that area, including surface and groundwaters as well as wetlands. The management of any watershed should reflect all of the things that make it unique, including specific precipitation patterns, topography, soil and geological characteristics, and land use.

A systems management approach would involve the development and operation of a comprehensive water resource management program—though ultimately it need not be limited to water resources—within the specific geographic area encompassing the basin or watershed. Components of such a comprehensive program would include water supply, water quality, water conservation, flood protection, land use, and protection of fish and wildlife resources. This can often be done effectively through comprehensive watershed management and planning.

As our government policies transition to a systems-based, comprehensive approach to managing water resources, we must introduce increased flexibility and latitude into current programs so that cross-categorical management of resources can flourish. Water resource management policies should also recognize the significant regional variance in the water resource. Management policies must be tailored to local hydrologic and ecological conditions. Any national policy should acknowledge unique regional and state characteristics and provide a framework for development strategies consistent with the national policy.

The States recognize that there are significant institutional obstacles, and that the new model needs to be developed in an evolutionary fashion. Substantial involvement of dischargers, users, and the general public will be essential. It will require unprecedented cooperation among many state and local entities, among state and federal agencies, and between states in the case of watersheds crossing state lines. Protection efforts should be coherent and coordinated to make the most efficient use of scarce resources and minimize inconsistency among federal, state, and local programs or agencies.

The FACA Committee is developing a recommended framework for integrating urban wet weather discharges, including storm water discharges, into the watershed approach that reflects the key principles outlined in EPA's *Watershed Approach Framework* and *NPDES Watershed Strategy*. The committee's recommendations are contained in a draft policy entitled, *A Watershed Alternative*. This framework would provide that all regulated discharges meet minimum requirements regardless of their geographic location. Based on a review and assessment of watershed conditions and a determination that water quality objectives are not being met in a particular watershed, watershed stakeholders would be able to choose to collectively pursue a watershed approach to address identified water quality problems. A key element of this watershed alternative is the development of a comprehensive watershed plan that describes (1) who will coordinate watershed planning and implementation, (2) the geographic area being covered by the watershed approach, (3) the watershed stakeholders participating in the planning and implementation effort, (4) assessments of aquatic resources and existing or potential water quality problems, (5) the coordinated watershed management activities that will be implemented, (6) the financial plan and schedule for completing the coordinated management activities, and (7) a mechanism for accountability. Once this plan were approved by the applicable regulatory authority(ies), relevant provisions of the watershed plan would be incorporated into relevant regulatory and nonregulatory mechanisms and progress in implementing the watershed plan would be evaluated periodically.

The watershed alternative has numerous inherent incentives, including greater opportunities to improve water quality and environmental conditions, more equitable allocation of resources, enhanced program efficiency and lower costs, improved coordination among programs, an improved basis for

management decisions, an emphasis on local decisionmaking, greater consistency and responsiveness, increased opportunities to use market-based incentives, and improved public relations.

EPA's key principals are also reflected in today's proposed rule. First, the Agency has structured the designation of additional sources by the permitting authority to facilitate the consideration of watershed impacts. The Agency also highly recommends that municipal storm water discharges that would be designated under this proposal be covered under general permits issued on a watershed-wide basis. Such permits could also be written to address other sources in the watershed as well. Where a comprehensive watershed plan has been developed, the Agency believes the components of that plan should be reflected in all permits issued to the parties addressed by the watershed plan.

Some stakeholders have raised concerns that the Agency is failing to consider watershed priorities in determining which sources will be designated and in the requirements to be imposed on such sources under today's proposal. The Agency disagrees. The Agency has limited its proposed designation to those sources generally believed to be of significant concern to water quality. While encouraging designation of additional sources based on considerations of water quality, including considerations made on a watershed basis, the Agency also proposes to allow a waiver of otherwise applicable requirements for some sources (construction sites under 5 acres and small municipal separate storm sewer systems serving less than 1,000 people) where the NPDES permitting authority participates in implementing a watershed plan and water quality is not impaired. Further, the Agency proposes flexible requirements for permittees in allowing consideration of BMPs tailored to the needs of the watershed. The Agency believes that this sort of flexibility will generally ensure watershed protection while allowing permitting authorities flexibility to tailor program implementation to the needs of a particular watershed and its stakeholders.

II. Description of Proposed Program

A. Overview

1. Objectives EPA Seeks to Achieve in Today's Proposal

EPA seeks to achieve several objectives in today's proposed rule. Under CWA section 402(p)(6), EPA is required to provide a comprehensive storm water program that designates and controls additional sources of storm water discharges to protect water quality. In addition, EPA is required to address discharges of storm water from the activities exempted under the 1990 storm water regulations that were remanded by the Ninth Circuit Court of Appeals in NRDC v. EPA (9th Circuit, 1992)—construction activities disturbing less than 5 acres and so-called ''light'' industrial activities not exposed to storm water (see discussion of ''no exposure'' below). EPA is also seeking to address the problem of so-called ''donut holes'' created by the existing NPDES storm water program. Donut holes are municipal separate storm sewer systems located within the urbanized areas that include systems covered by the existing NPDES storm water program, but are not currently addressed by the storm water program because of the particular drafting of the existing regulations. In other words, donut holes are gaps in the existing NPDES storm water program's regulatory scheme. EPA also is trying to facilitate and promote watershed planning as a framework for implementing water quality programs where possible.

Although the proposed program can be structured in various ways to regulate the remaining unregulated sources of storm water to protect water quality, EPA believes it can best achieve its objectives through flexible innovations within the framework of the NPDES program. Unlike the storm water regulations EPA promulgated in 1995, EPA no longer proposes to designate all storm water discharges for nationwide coverage under the NPDES program for storm water. The proposed framework for today's proposed rule is one that would balance both nationwide automatic designation and locally based designation. Nationwide designation would apply to those classes or categories of storm water discharges that EPA believes present a high likelihood of having adverse water quality impacts, regardless of location. EPA is proposing to designate the following sources on a nationwide basis: storm water discharges from small municipal separate storm sewer systems located in urbanized areas and construction activities that result in land disturbance equal to or greater than 1 acre. As noted under Section I.A.1, Studies and Assessments of Storm Water Runoff, these two sources can cause significant water quality impacts. Additional sources would not be covered on a nationwide basis either because EPA currently lacks information indicating a consistent potential for adverse water quality impact or because of EPA's belief that the likelihood of adverse impacts on water quality is low, with some exceptions on a more local basis. Additional individual sources or categories of storm water discharges could, however, be covered under the program through a local, watershed-based designation process. Permitting authorities may designate additional small municipal separate storm sewer systems when they develop designation criteria and apply these criteria to small municipal separate storm sewer systems located outside of an urbanized area, in particular those with a population of 10,000 or more and a population density of at least 1,000. Exhibit 1 illustrates the framework for today's proposal.

BILLING CODE 6560–55–P

Exhibit 1
Phase II Source Decisions

WATER QUALITY IMPACT OF SOURCES

LOW LIKELIHOOD/ INSUFFICIENT INFORMATION		HIGH LIKELIHOOD
NOT AUTOMATICALLY DESIGNATED BY RULE	**NATIONAL ASSESSMENT**	**AUTOMATICALLY DESIGNATED BY RULE**
• Non-Phase I small MS4s located outside Urbanized Areas. • Construction activity that results in the land disturbance of less than 1 acre. • Non-Phase I industrial and commercial sources.		• All non-Phase I small MS4s located outside Urbanized Areas. • Construction activity that results in the land disturbance of greater than or equal to 1 acre and less than 5 acres.
BUT DESIGNATED BY PERMITTING AUTHORITY IF:	**WATER QUALITY ASSESSMENT**	**BUT WAIVERS PROVIDED FOR:**
• A small MS4 meets the designation criteria that permitting authorities are required to develop. The criteria must be applied to at least those small MS4s located in an area with a population of at least 10,000 and a population density of at least 1,000. • Watershed plan, TMDL,* or other local water quality assessment defines need to cover small MS4s and construction activity not currently regulated. • EPA or the State determines that the storm water discharge contributes to a violation of a water quality standard or is a significant contributor of pollutants to the waters of the United States.		• Regulated small MS4s serving jurisdictions with a population of less than 1,000 where a watershed plan or TMDL assessment addresses the pollutants of concern. • Construction activities between 1 and 5 acres where: (1) activity occurs during negligible rainfall period, (2) determination of low soil loss, or (3) a watershed plan or TMDL assessment addresses the pollutants of concern.

* EPA will continue to require States to comply with their TMDL implementation schedules.

BILLING CODE 6560–55–C

The framework for the proposal provides a significant degree of flexibility. The provisions for nationwide designation of construction and small municipal separate storm sewer systems in urbanized areas allow for a waiver of applicable requirements based on appropriate water quality conditions. The proposal would allow a permitting authority to waive otherwise applicable requirements for a regulated small municipal separate storm sewer system if the jurisdiction served by the system includes a population of less than 1,000 persons and meets additional water quality-based conditions. Water quality-based conditions would be the basis for a waiver of requirements of construction activities between 1 and 5 acres, as well. For construction sources, the rule would provide significant flexibility for waiving otherwise applicable regulatory requirements where a permitting authority determines, based on water quality and watershed considerations, that storm water controls are not needed. Coverage would extend to municipal and construction sources outside the nationwide designated classes or categories based on watershed and case-by-case assessments. For the municipal program, today's proposal would provide broad discretion to NPDES permitting authorities to develop and implement criteria for designating small municipal separate storm sewer systems outside of urbanized areas. Other storm water discharges from unregulated industrial, commercial, and residential sources would not be covered unless a permitting authority determines on a case-by-case, or categorical, basis that controls would be needed to protect water quality. EPA believes that the flexibility provided in today's proposed rule would facilitate watershed planning.

2. General Requirements for Regulated Entities Under Today's Proposal

Today's proposal defines additional classes and categories of storm water discharges for coverage under the NPDES program. Those dischargers proposed to be regulated by today's proposed rule would be required to seek coverage under an NPDES permit. Furthermore, all NPDES-authorized States and Tribes would be required to implement these provisions and make any necessary amendments to current State NPDES regulations to ensure consistency with today's proposal. EPA would remain the NPDES permitting authority for States and Tribes without NPDES authorization.

EPA proposes to regulate the remaining unregulated point sources of storm water under the NPDES permitting program for a variety of reasons, primarily programmatic, but also legal. The primary reason for regulating storm water under the NPDES program is for simplicity and predictability. EPA envisions a ''seamless'' program, particularly for regulating storm water discharges from municipal separate storm sewer systems, regardless of the relative size of the source. Forty-three jurisdictions (States and territories) administer the NPDES permit program, providing an opportunity for expeditious implementation of a comprehensive program to regulate storm water to protect water quality. The NPDES program is a comparatively mature regulatory program, and affected stakeholders are familiar with, if not accustomed to, how it operates. Regulations under the NPDES program are not enforceable against an affected entity until the effective date of a permit, thus providing an opportunity to identify particularized concerns and tailor permit conditions that are relevant and meaningful on an individualized basis. The NPDES permitting authority periodically reviews the NPDES permits to ensure that applicable requirements remain relevant and ensure adequate protection of receiving waters; CWA section 402(b)(1)(B) describes the 5-year permit term. In addition, NPDES permits are enforceable. Permittees, inspectors, and enforcement authorities understand the individualized permit obligations and, over the years, judicial precedents have established clear procedural standards for the enforcement of those obligations. The NPDES program also provides clear rules for citizen participation, not only in permitting and compliance monitoring, but also in enforcement.

Legal considerations also affect the Agency's proposal to regulate the remaining unregulated storm water under the NPDES permitting program. When Congress enacted the point source storm water provisions of section 402(p) in 1987, it also enacted programs for control of nonpoint sources under section 319. The statute appears to suggest, therefore, that EPA should control point sources under section 402(p) with different, ''regulatory'' programs than the programs for controlling nonpoint sources under section 319. While EPA fully anticipates that States will provide ''reasonable assurances'' for the control of nonpoint sources in a timely and effective manner, such assurances are not yet fully developed in practice. Several States have enacted laws that prescribe State regulation in a manner that is ''more stringent'' than Federal regulation. While the CWA explicitly preserves the authority for States to enact ''more stringent'' regulations to control discharges, the Agency would be concerned that providing maximum flexibility for States to establish ''non-NPDES'' programs would leave regulatory authorities in many States in a quandary to determine whether or not programs they would design are more or less stringent than a Federal program. The NPDES program provides a useful and recognized standard in these instances.

As noted earlier, the NPDES program has a proven record of reducing and eliminating pollutant discharges. The NPDES program also provides mechanisms to assure attainment and maintenance of water quality standards. Given that regulations under section 402(p)(6) are to regulate ''to protect water quality,'' the NPDES program provides a natural fit. Notwithstanding the preceding, however, the Agency recognizes the continuing imperative to assure that environmental regulations accomplish statutory objectives in the least burdensome and most cost-effective fashion. As explained further in this preamble, the form and substance of NPDES permits to address the sources designated in today's proposal would provide greater flexibility for the newly covered sources than the existing ''standard'' NPDES permit.

Today's proposal would establish requirements for NPDES permitting authorities, regulated small municipal separate storm sewer systems, construction activities disturbing equal to or greater than 1 acre and less than 5 acres of land, and other discharges designated by the permitting authority based on local conditions.

Today's proposal includes some new requirements for NPDES permitting authorities implementing the CWA section 402(p)(6) program. As noted above, EPA is making a significant effort to build flexibility into the program. At the same time, EPA is maintaining a level of national consistency, as appropriate. Permitting authorities would be required to generally ensure that the minimum requirements proposed today would be addressed by the regulated community (e.g., permitting authorities must ensure that permits issued to municipalities include the minimum control measures established under the program). Permitting authorities would also have the ability to make numerous decisions about the program including who is regulated under the program (e.g., case-

by-case designations and waivers), what the requirements are for regulated entities (e.g., waiving otherwise applicable provisions where certain conditions are met and developing a list of regionally appropriate, field-tested BMPs that it believes to be cost-effective), and what the allocation of responsibilities is between regulated entities.

The rule proposes to extend the municipal storm water program to include the following: small municipal separate storm sewer systems within urbanized areas (with the exception of tribally-owned systems that serve less than 1,000 persons and any other system waived from the requirements by the NPDES permitting authority), small municipal separate storm sewer systems meeting the criteria (to be established by the permitting authority) for designation, and any municipal separate storm sewer system contributing substantially to the storm water pollutant loadings of a regulated, physically interconnected municipal separate storm sewer system. Small municipal separate storm sewer systems include municipal, Tribal, State, and Federal facilities and other systems located in an urbanized area that fall within the definition of a municipal separate storm sewer system. These would include, for example, State departments of transportation, universities, and military bases.

Today's proposal would require all regulated small municipal separate storm sewer systems to develop and implement a storm water management program. Program components would include, at a minimum, measures to address requirements concerning public education and outreach, public involvement, illicit discharge detection and elimination, construction site runoff control, post-construction storm water management in new development and redevelopment, and pollution prevention and good housekeeping of municipal operations. These program components would be implemented through NPDES permits. A municipality would be required to submit to the NPDES permitting authority, either in its NOI or individual permit application, the BMPs to be implemented and the measurable goals for each of the minimum control measures listed above.

The rule proposes to address all construction site activities involving clearing, grading and excavating land equal to or greater than 1 acre and less than 5 acres, unless requirements are otherwise waived by the NPDES permitting authority. Such sites, including construction site activities disturbing less than 1 acre of land that are designated by the permitting authority, would be required to implement requirements set forth in the NPDES permit, which may reference the requirements of a qualifying local program, issued to cover such sites.

The rule also proposes to address certain other sources regulated under the existing program for storm water. For municipally owned industrial sources required to be regulated under the existing NPDES storm water program but exempted from immediate compliance by the Intermodal Surface Transportation Act of 1991 (ISTEA), the rule proposes to maintain the existing deadline for seeking coverage under an NPDES permit (August 7, 2001) (EPA is requesting comment on the possibility of covering such sources in a single storm water permit for the municipality as a whole. See section II.I.3. below.) The rule also proposes to provide relief from NPDES storm water permitting requirements for industrial and other sources that provide a written certification of ''no exposure of industrial materials and activities to storm water.''

3. Integration of Today's Proposal With the Existing Storm Water Program

In developing today's proposal, members of both the FACA Committee and the Storm Water Phase II FACA Subcommittee encouraged EPA to seek opportunities to integrate, where possible, the proposed Phase II requirements with existing Phase I requirements, thus facilitating a ''seamless,'' unified storm water program. EPA believes that this objective is met by using the NPDES framework. This framework is already applied to regulated sources under the existing NPDES storm water program and would be extended to those sources that would be designated under today's proposed rule. This approach would facilitate program consistency, public access to information, and program oversight.

EPA believes that this proposal provides consistency in terms of program coverage and requirements for existing and newly proposed sources. For example, today's proposal would include most of the so-called donut holes—municipal separate storm sewer systems within urbanized areas that contain systems covered by the existing NPDES storm water program, but are not themselves addressed by the storm water program. In addition, the minimum controls required in today's proposal for regulated small municipal separate storm sewer systems would be very similar to a number of the permit requirements for medium and large municipal separate storm sewer systems under the existing storm water program. As proposed, permit requirements for all regulated municipal separate storm sewer systems (i.e., those under the existing program and those proposed today) would require implementation of BMPs. Furthermore, with regard to the development of permits to protect water quality, EPA intends to apply the August 1, 1996, *Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits* (hereinafter, ''Interim Permitting Approach'') (see Section II.L.1. for further description) to all municipal separate storm sewer systems covered by the existing and the proposed extension of the existing NPDES storm water program. EPA requests comment on the appropriateness of applying this approach to small municipal separate storm sewer systems regulated under this rule.

EPA is planning to apply similar permit requirements to construction sites below 5 acres as are applied to those above 5 acres. A waiver provision applicable to certain circumstances is proposed. In addition, today's rule proposes to allow compliance with qualifying local, Tribal, or State erosion and sediment controls to meet the erosion and sediment control requirements of the general permits for construction both above and below 5 acres.

4. General Permits

The proposal would recommend using general permits for all dischargers that would be covered under today's proposal. The use of general permits instead of individual permits reduces the administrative burden on permitting authorities, while also limiting the paperwork burden on regulated parties seeking permit coverage. Permitting authorities may, of course, require individual permits in some cases to address specific concerns, including permit noncompliance.

While general permits are probably most appropriately issued on a watershed-wide basis for all storm water permittees designated in this proposal, the Agency strongly recommends that general permits for municipal sources, in particular, be issued on a watershed basis. Permit conditions contoured to a specific watershed could reflect an approved watershed plan, special provisions concerning program implementation (e.g., allocation of responsibilities among permittees), applicable water quality standards, including designated uses, and timing of

implementation. Alternatively, the Agency recommends that municipal general permits be issued to cover the regulated small municipal separate storm sewer systems within urbanized areas. If the permitting authority issues a State-wide general permit, the permitting authority may include separate conditions tailored to individual watersheds or urbanized areas.

As discussed in Section I, today's proposed rule would provide an opportunity for regulated small municipal separate storm sewer systems to become co-permittees with municipal separate storm sewer systems covered under existing individual permits. EPA intends to consult with the Storm Water Phase II FACA Subcommittee in developing its general permits for the proposed program. The Agency would recommend that State NPDES permitting authorities use the EPA general permit as a guide in writing State-issued permits for newly regulated storm water sources. Furthermore, within the context of this rule, EPA intends to use the August 1, 1996, Interim Permitting Approach (see Section II.L.1. for further description) for sources regulated under the NPDES storm water program.

5. Tool Box

During the FACA process, many Storm Water Phase II FACA Subcommittee representatives expressed an interest in having EPA develop a ''tool box'' to assist States, Tribes, municipalities, and other parties involved in the Phase II program. EPA made a commitment to work with Storm Water Phase II FACA Subcommittee representatives in developing such a tool box, with the expectation that a tool box would facilitate implementation of the storm water program in an effective and cost-efficient manner. EPA is committed to having a preliminary working tool box by the time the proposed rule is finalized in 1999; EPA intends to have the tool box fully operational at the time of the general permit. EPA also intends to update the tool box as resources and data become available. The tool box would most likely include the following six main components: fact sheets, guidances, an information clearinghouse, training and outreach efforts, technical research, and support for demonstration projects.

In an attempt to avoid duplication, the Agency has undertaken an effort to identify and coordinate sources of information that relate to the storm water program from both inside and outside the Agency. Such information may include research and demonstration projects, grants, storm water management-related programs, and compendiums of available documents, including guidances, related directly or indirectly to the comprehensive NPDES storm water program. Based on this effort, EPA would develop a tool box containing fact sheets and guidance documents pertaining to the overall program and rule requirements (*e.g.*, guidance on municipal and construction programs, and permitting authority guidance on designation and waiver criteria); models of current programs aimed at assisting States, Tribes, municipalities, and others in establishing programs; a comprehensive list of reference documents organized according to subject area (*e.g.,* illicit discharges, watersheds, water quality standards attainment, funding sources, and similar types of references); educational materials; technical research data; and demonstration project results. The information collected by EPA will not only provide the background for tool box materials, but may also be included in, and made available through, an information clearinghouse. Due to cost concerns, EPA is still considering whether an information clearinghouse will be part of the tool box. EPA also intends to provide training workshops at the regional level with the expectation that the EPA regional offices then will assist States, Tribes, and municipalities with understanding the storm water program and will ensure that the regulated entities are aware of the availability of the tool box materials.

EPA has many funding mechanisms currently available to support activities related to storm water. These mechanisms will be included in the tool box. Many activities funded under grants and loan programs include programs in the nonpoint source area, storm water demonstration projects, and wastewater construction projects. EPA has already provided funding for numerous research efforts in these areas, including a database of BMP effectiveness studies, an assessment of technologies for storm water management, a study of the effectiveness of storm water BMPs for controlling the impacts of watershed imperviousness, protocols for wet weather monitoring, development of a dynamic model for wet weather flows, and numerous outreach projects.

EPA has entered into a cooperative agreement with the Urban Water Resources Research Council of the American Society of Civil Engineers (ASCE) to develop a scientifically-based approach and management tool for the information needed to evaluate the effectiveness of urban storm water runoff BMPs nationwide. The long-term goal of the project is to promote technical design improvements for BMPs and to better match their selection and design to the local storm water problems being addressed. The project team is collecting and evaluating existing BMP performance data, developing a BMP evaluation protocol, and designing and creating a database. Eventually the database will include the nationwide collection of information on the characteristics of structural and non-structural BMPs, data collection efforts (*e.g.,* sampling and flow gauging equipment), climatological characteristics, watershed characteristics, hydrologic data, and constituent data. The database will continue to grow as new BMP data become available. The database software will be distributed by CD–ROM and will be accessible through the Internet.

EPA and ASCE invite BMP designers, owners and operators to participate in the database development effort. To make this effort successful, a large database is essential. Interested persons are encouraged to submit their BMP performance evaluation data and associated BMP watershed characteristics for potential entry into the database. In addition, researchers planning to conduct BMP performance evaluations in the future are requested to compile and collect BMP reporting information according to a format being developed by ASCE. For more information, please contact Eric Strassler, EPA Engineering and Analysis Division, at 202–260–7150, e-mail: strassler.eric@epamail.epa.gov.

EPA intends to promote research consistent with the *Risk Management Research Plan for Wet Weather Flows* prepared by EPA's Office of Research and Development. This plan supports the priority research questions and needs of the Office of Water. Finalized in November 1996, the plan will be updated annually. It includes strategic research directions and identifies active and proposed projects for supporting each research area.

6. Deadlines Established in Today's Proposal

Exhibit 2 outlines the various deadlines proposed in today's rule. EPA believes that the dates proposed allow sufficient time for completion of both the NPDES permitting authority's and the permittee's program responsibilities. EPA requests comment on the appropriateness of the proposed deadline dates.

EXHIBIT 2.—TODAY'S PROPOSED RULE DEADLINES

Activity	Deadline date
Proposed Rule Becomes Final	3/1/99.
NPDES-Authorized States Modify NPDES Program	3/1/00.
NPDES-Authorized States Modify NPDES Program if Statutory Change is Required	3/1/01.
Permitting Authority Issues A Menu of BMPs for Regulated Small Municipal Separate Storm Sewer Systems (MS4s).	3/1/01.
ISTEA Sources Submit Permit Application	8/7/01.
Permitting Authority Issues General Permit(s) (if this type of permit coverage is selected)	3/1/02.
Regulated Small MS4s Submit Permit Application:	
a. If designated under § 122.32(a)(1) with 1990 Census as ''latest'' Census	a. 5/31/02.
b. If designated under § 122.32(a)(1) with 2000 Census as ''latest'' Census (2000 Census calculations to be completed approximately by August 2001).	b. 5/31/02.
c. If designated under § 122.32(a)(2)	c. Within 60 days of notice.
d. If designated under §§ 122.26(a)(9)(i) (C) or (D)	d. Within 180 days of notice.
Storm Water Discharges Associated With Other Activity Submit Permit Application	5/31/02.
Permitting Authority Designates Small MS4s under § 123.35(b)(2)	5/31/02 or 3/1/04 (if a watershed plan is in place).
Regulated Small MS4s' Program Developed and Implemented	2007.
Reevaluation of the Proposed Rule by EPA	3/1/12.
Permitting Authority Determination on a Petition	Within 180 days.
Non-Municipal Sources Designated Under § 122.26(a)(9)(i) (C) or (D) Submit Permit Application.	Within 180 days of notice.
Submission of No Exposure Certification	Every 5 years.

B. Readable Regulations

Today, EPA is proposing new regulations in a ''readable regulation'' format. This reader-friendly, plain English approach is a departure from traditional regulatory language and should enhance the rule's readability. These plain English regulations use questions and answers, ''you'' to identify the person who must comply, and ''must'' rather than ''shall.'' The legal implications of plain English are the same. The word ''must'' indicates a requirement. Words like ''should,'' ''could,'' or ''encourage'' indicate a recommendation or guidance. This new format, which minimizes the layers of subparagraphs, should also allow the reader to easily locate specific provisions of the regulation. Language within parentheses in today's proposal is intended as guidance. EPA requests comment on this new format and whether it provides sufficient distinction between legal obligations and EPA recommendations.

Some sections of today's proposed regulation are presented in the traditional language and format because these sections are amending or changing existing regulations. The readable regulation format was not used in these existing provisions in an attempt to avoid any possible confusion or disruption of the flow of the regulations.

C. Program Framework

EPA interprets CWA section 402(p)(6) to provide broad discretion in establishing the structural framework for the designation of additional sources, as well as the program to regulate those sources. The Agency believes it has the authority to develop the section 402(p)(6) storm water program either as part of the existing NPDES permit program or as a stand alone non-NPDES program (i.e., through an ''authorization by rule'' approach). Under either approach, the Agency would interpret section 402(p)(6) as directing the Agency to publish regulations that ''regulate'' the remaining unregulated sources, specifically to establish requirements that are federally enforceable under the CWA. At the same time that Congress enacted section 402(p), it enacted CWA section 319. Section 319(b)(2)(B) refers to ''nonregulatory or regulatory programs for enforcement.'' The Agency interprets this distinction as relevant for the purposes of interpreting the term ''regulate'' in section 402(p)(6). The Agency has considered many options for the framework, as discussed in this section. The Agency also notes that, although input from the Storm Water Phase II FACA Subcommittee was instrumental in the development of today's proposal, the subcommittee was unable to reach consensus on the structural framework for implementation.

1. Today's Approach—The NPDES Program Approach

As discussed in Section II.A, Overview, EPA sought to achieve certain goals in today's approach. EPA believes the best approach to meet these goals is through the use of the NPDES program. One of the specific goals that would be addressed through use of NPDES permits is equitable treatment of all municipal separate storm sewer systems within an urbanized area in order to solve the problem of donut holes. The existence of donut holes creates an equity problem because some similar discharges remain unregulated even though they cause the same water quality impacts. EPA believes that covering the unregulated discharges in these areas through the NPDES framework would provide the best method, given that this approach would cover urbanized areas under one single comprehensive and seamless regulatory program for storm water. For example, today's proposal would allow for a municipality to join as a co-permittee with a regulated municipality, referencing a common storm water management program (see Section II.H.3, Municipal Permit Requirements, for further discussion.) Similarly, construction activities under the existing storm water program and under today's proposed program covering 1 to 5 acres of disturbed land would be subject to essentially the same program requirements. The NPDES program approach, as proposed, is highly flexible in terms of a number of key provisions that would facilitate and promote watershed planning and sensitivity to local conditions. EPA made an intensive effort to include flexibility in today's proposed rule, and examples abound throughout the proposal. The following are some of the more significant examples of the flexible NPDES approach being proposed: using NPDES general permits for coverage of regulated sources on a watershed basis; incorporating qualifying local programs in NPDES permit requirements; selecting regionally appropriate BMPs

for municipalities; allowing minimum control measures to be implemented by another governmental entity; and allowing permitting authorities to waive otherwise applicable requirements for sources pursuant to watershed/TMDL assessments. Furthermore, EPA sought to accommodate State and Tribes seeking to coordinate the storm water program with other State and Tribal programs, including those that focus on watershed-based nonpoint source regulation.

EPA believes that a flexible approach must be in balance with the need for the program to be enforceable and to hold the regulated community accountable for fulfilling program requirements. As such, a significant benefit of using an NPDES approach is that permits would be enforceable under the CWA. Another concern for EPA and several Storm Water Phase II FACA Subcommittee members was that the program ensures citizen participation. Currently, the NPDES approach ensures citizen participation throughout the permit issuance process, as well as in enforcement proceedings.

In addition, the NPDES approach is suitable to cover all the sources that would be potentially regulated under CWA section 402(p)(6), including facilities owned or operated by Federal, State, or Tribal governments. Incorporating the section 402(p)(6) program into the NPDES approach capitalizes upon the existing governmental infrastructure for administration of the NPDES program. Moreover, much of the regulated community already understands the NPDES program and the way it works.

Some stakeholders shared concerns that the NPDES approach was unnecessarily burdensome and costly. In response, EPA proposes modifications to and clarifications about the NPDES program. EPA shares some of the stakeholder concerns; other concerns are merely misperceptions. EPA envisions that NPDES permitting authorities would use general permits for the majority of discharges designated for regulation under the comprehensive program. General permits should help to minimize any administrative burden on NPDES permitting authorities and expedite permit coverage for dischargers. The Agency also proposes provisions that would recognize actions by States and their political subdivisions in determining compliance with permit requirements. For example, small municipalities could rely on efforts by States or neighboring municipalities to satisfy permit obligations. This flexibility would allow both the permittee/municipality and the State to minimize unnecessary duplication. Another example from today's proposal would be the incorporation by reference of existing programs with locally developed standards for pollutant controls into NPDES permits. This would be to the benefit of permittees who might otherwise be subject to duplicative requirements by different levels of government (local, State, and Federal.)

2. Alternatives Considered

EPA considered a variety of alternative approaches to structure the proposed extension of the existing storm water program. Under the first option, EPA would develop a completely new non-NPDES regulatory system. Such an approach could include authorization of discharges ''by rule'' or some other type of permit program in which permits were not developed in the same way as NPDES permits. Under a second option, EPA would establish only a ''baseline'' scope of applicability for State and Tribal programs; the only nationally applicable EPA action would be the designation of sources. EPA would allow States and Tribes to use existing water pollution control programs (NPDES or otherwise) to regulate such designated sources. To the extent existing programs did not cover EPA's baseline program, States and Tribes would establish additional regulatory control mechanisms. A Storm Water Phase II FACA Subcommittee work group analyzed these approaches and provided valuable feedback to the Agency. A caucus of State representatives from the Storm Water Phase II FACA Subcommittee submitted a third option. Under their proposal, States and Tribes would have an option to develop an individual storm water management program. (As an alternative under this option, States and Tribes could choose to implement the program developed by EPA.) The individual State or Tribal storm water management program would use NPDES permits but would also rely on enforceable non-permit mechanisms (e.g., if EPA promulgated a regulation that ''deemed'' requirements under such non-permit mechanisms to be ''an effluent limitation or other limitation under CWA section 301''). Because section 402 is referenced in section 301(a), non-permit mechanisms developed by States according to the comprehensive program requirements of section 402(p)(6) would also constitute effluent limitations under section 301. Under the States' proposal, EPA would have to review and approve these programs to ensure that they provide for the same water quality results as those prescribed under the Federal program. Additionally, EPA would periodically evaluate the management plans and could require the State or Tribe to implement the Federal section 402(p)(6) program if the plan became inadequate. The State caucus representatives of the Storm Water Phase II FACA Subcommittee amplified this option in a discussion intended for inclusion in this preamble and for public comment thereon (see the next section entitled, State Alternative Program).

EPA believes the alternative approaches could provide many of the same benefits discussed previously relating to today's proposal. Specifically, EPA believes that the options could be designed to provide adequate integration of the storm water programs, enforceability, accountability, public participation, and coverage of sources (e.g., facilities owned or operated by Federal, State, or Tribal governments). The alternative approaches might also provide opportunities to streamline the control mechanisms that the Agency has not yet evaluated. Furthermore, the storm water management program proposal allows States and Tribes the maximum amount of flexibility in tailoring the section 402(p)(6) program to address their specific environmental problems.

The Agency does have some concerns about the alternative proposals, however. The alternatives establish new systems, which could cause a great deal of confusion. As explained previously, EPA is not yet aware of any such program currently in existence for regulation of storm water. None of the alternatives would provide any level of national consistency or predictability. This may be a special concern for industrial stakeholders operating in multiple States nationwide. The Agency has heard numerous concerns about inconsistencies in requirements from different jurisdictions. While today's proposed approach does not totally address this issue, the Agency at least attempts to establish a minimum program for ensuring a certain level of consistency nationwide.

In addition, EPA believes it would be very difficult to determine whether a State or Tribe has developed an adequate individual program that provides the same level of substantive control. The process of approving these alternative programs to determine whether they provide an equivalent or better level of control could take a great deal of time and further delay controlling unregulated point source discharges that are causing an adverse impact on water quality. Furthermore, if a non-NPDES option was included in

the final rule, EPA would need to determine which, if any, programmatic requirements of 40 CFR parts 122 *et seq.* should be applicable to State non-NPDES programs. EPA believes it would need to address some of the State program requirements from existing regulations including conflicts of interest among governing bodies who approve permits (consistent with CWA section 304(i)(D)), requirements for enforcement authority and penalty provisions, confidentiality of permit application information, EPA review of and objection to State permits, public notice and public hearings for permit issuance, citizens appeal of final-issued permits, and citizen intervention in enforcement proceedings. These provisions are particularly important for ensuring adequate enforcement and public participation, as well as integrity and public confidence in the program. EPA seeks comment on how these issues could be addressed in a non-NPDES program.

The Agency is seeking comment on today's proposal, as well as on the alternatives considered. Comment is further sought on whether a viable approach would be for EPA to adopt a State alternative approach for part of today's proposed storm water program. For example, were it to adopt a non-NPDES approach, EPA would need to determine what parts of the State's non-NPDES program could be submitted for EPA approval. It would seem that it is more prudent to specify particular parts of a storm water program, rather than the program in its entirety, as eligible for approval for a non-NPDES approach. Thus, a State or Tribe could propose a non-NPDES framework for the construction component (1 or more and less than 5 acres of disturbed land) of its storm water program. Likewise, a State or Tribe could propose a non-NPDES framework for storm water runoff from regulated small municipalities located outside of urbanized areas. Furthermore, another option could allow States or Tribes to seek approvability for a non-NPDES approach solely for sub-parts of the program, such as covering construction sites between 3 and 5 acres under an NPDES program, while covering between 1 and 3 acres in a non-NPDES program. In the municipal program, a non-NPDES program could be available for specific minimum control measures. EPA would like comment on these options for program approvability.

a. State Alternative Non-NPDES Program

State representatives on the Storm Water Phase II FACA Subcommittee have requested that EPA invite comment on an alternative program framework to be available to States in addition to the NPDES State storm water management program requirements in today's proposed rule.

Today's proposal would rely on the NPDES permit program to establish a comprehensive program to regulate designated sources. EPA believes, however, that section 402(p)(6) is subject to an interpretation that would allow for a comprehensive program to regulate designated sources through a regulatory program other than the NPDES permit program (e.g., through authorization by rule). For a State to qualify for a non-NPDES approach, it would probably have to decide to take such an approach from the start, however.

State representatives have suggested that a process be identified that would lead to the development of an alternative non-NPDES State storm water management program under CWA section 402(p)(6) for States wishing to take a more comprehensive approach than that of today's proposal. Under the States' proposal, States, Territories, and Tribes could elect either (1) to regulate the sources designated in today's proposal under the NPDES permit program according to the provisions of today's proposal (assuming the State, Territory, or Tribe is authorized to administer the NPDES program) or (2) to develop an alternate State storm water management program subject to public review and comment and Federal approval. The two major features of the alternative program are that it would be fully integrated into a State comprehensive water quality management program and it would include specific non-NPDES mechanisms for controlling storm water discharges. States would also have the option of employing some combination of the above.

i. Alternative Overview. Similar to today's NPDES proposal, States under the alternative proposal would need to specifically identify how urban storm water management activities would be coordinated with other water quality management activities, such as nonpoint source management and TMDL development. In addition, as proposed, the State storm water management program would be developed with involvement of municipalities, industries, environmental groups, and other stakeholders, much like the current NPDES process. Also, as with the NPDES program, the alternative program would focus principally on environmental results, rather than on the administrative or planning process itself. States propose more opportunity for citizen involvement in the initial development and implementation of the overall alternative program than is currently envisioned by today's NPDES proposal. In comparison with today's NPDES proposal, the alternative might allow for less opportunity for citizen involvement in the details of requirements imposed on dischargers (than is afforded under NPDES permits).

ii. State-Proposed Program Criteria. In seeking proposal of an alternative approach, State representatives on the Storm Water Phase II FACA Subcommittee have suggested criteria for EPA approval of an alternative State storm water management program. Such a program would be required:

(1) To demonstrate that it would result in equivalent or better protection of water quality and designated uses
(2) To provide assurances of implementation, including:
  a. Legal authorities of participating state and local agencies
  b. Resources to carry out implementation
  c. Enforceable mechanisms for implementation measures, including backup to voluntary measures
(3) To identify equivalent or better timeframes for implementation
(4) To allow equivalent or better public participation elements
(5) To provide for management of the same types of facilities in an equivalent or better manner or provide for management of activities that would result in equivalent or better protection
(6) To include objectives, measures, monitoring, and corrective action mechanisms adequate to assure that the program is being implemented and is effective

Other substantive considerations would include, at a minimum, a description of the mechanism by which storm water sources are (or would be) regulated; a description of the opportunities for public participation, including in the development of regulatory and nonregulatory mechanisms and enforcement; and a statement about the legal authority of the State to administer such a program by an officer of the State who is competent to provide such a statement.

In utilizing these criteria, the alternative program submission would cover, to at least the same extent, sources and related pollutants of concern designated in today's proposed rule (e.g., discharges from small municipal separate storm sewer systems

and from construction sites disturbing less than 5 acres, including opportunity for waiver provisions). For a State to qualify for approval of an alternative approach, the State program would need to cover additional wet weather sources not specifically designated in today's proposed rule as well. In addition, covered sources to be designated under today's proposal and other additional sources identified by the State alternative program would be expected to attain water quality standards, including designated uses. One area of flexibility that EPA foresees as a possibility under the alternative program relates to the minimum control measures required in today's NPDES proposal. Implementation of today's proposed minimum control measures in the alternative approach would not be necessary as long as the alternative program provided for control measures that addressed the same impacts to the same extent as today's proposed minimum control measures are intended to.

iii. Proposed Procedure for Approval and Periodic Review. If the final rule were to allow States an option for an alternative State storm water management program, States envision the need for both a Federal approval procedure and periodic EPA review. States would need to invest time, energy, and resources at the outset to develop such alternative programs. More planning would be necessary for such a submission than would otherwise be expected under today's proposal. In addition, a State electing to develop an alternative storm water management program might be required to evaluate, revise, and update its water quality management program at fixed intervals. States envision that, EPA, in conducting such reviews, would seek comments from the community on the performance of the statewide storm water management program. State representatives believe that this approach would provide the public within a State with much more meaningful involvement at the program level than is normally achieved through the issuance of individual or general permits.

iv. Proposed Procedure for Disapproval. State representatives have also suggested criteria for EPA use in the event that it becomes necessary to withdraw approval of a State storm water management program and require implementation of the federally prescribed NPDES program in today's proposed rule. They have proposed the following criteria:

(1) The State has not implemented its program or has ceased implementation of the program;

(2) The State is implementing its program, but the program is not effective in managing storm water from the same sources intended in the NPDES alternative;

(3) EPA has notified a State of deficiencies in its program and the State has not corrected them within 6 months, or 2 years if statutory revisions are necessary. (EPA is not required to provide the State time to make statutory revisions if the State legislature has already removed the original necessary State statutory program authority.)

EPA invites comment on the appropriateness of this alternative proposal. Specifically, comments are sought on the proposed alternative approval, review, and disapproval processes as they relate to requirements under 40 CFR Part 123. EPA invites comment on the appropriateness of these substantive criteria, including the appropriate level of specificity to ensure consistent application while providing States with flexibility, as well as the need for other substantive criteria. This would include enforceability of such an alternative to ensure equivalency or better protection of water quality as envisioned by the CWA and the need for national consistency in point source control requirements. EPA further invites comment on whether State processes for public participation would provide an adequate opportunity for input from regulated sources, as well as from the public in general.

In addition, the States have proposed that an alternative program could utilize State efforts undertaken to comply with Part 130 regulations (40 CFR Part 130). Although EPA is not proposing to amend the Part 130 regulations, EPA invites comment on how the existing Part 130 regulations could support an enforceable alternative State program. For a more complete discussion of the Part 130 regulations, see Section II.L.2, Total Maximum Daily Loads, of today's preamble.

3. Permits Versus Non-Permits

As noted previously, EPA proposes that the extension of the existing storm water program under section 402(p)(6) be administered as part of the NPDES permitting program (including the exemption for discharges associated with industrial activity composed entirely of storm water where there is ''no exposure'' to storm water). As such, the extension of the existing storm water program would be implemented through NPDES permits. NPDES permits are advantageous in many ways. As explained more fully in EPA's April 1995 guidance, *Policy Statement on Scope of Discharge Authorization and Shield Associated with NPDES Permits* (U.S. Environmental Protection Agency. July 1, 1994 (revised April 11, 1995). Memo: From Robert Perciasepe (Assistant Administrator for Water), Steven A. Herman (Assistant Administrator for Enforcement), and Jean C. Nelson (General Counsel) to Regional Administrators, Regarding ''Policy Statement on Scope of Discharge Authorization and Shield Associated with NPDES Permits.''), compliance with an NPDES permit constitutes compliance with the CWA (see CWA section 402(k)). Moreover, certain NPDES discharges qualify as ''federally permitted releases'' under section 101(10) of the Comprehensive Environmental Response, Compensation and Liability Act, also known as Superfund (see 42 U.S.C. 9601(10); 40 CFR 117.12). Additionally, permits generally require an application or a notice of intent to be covered. This information exchange assures communication between the permitting authority and the regulated community. This communication is critical in ensuring that the regulated community is aware of the requirements and the permitting authority is aware of potential impacts to water quality. The NPDES permitting process includes the public as a valuable stakeholder and ensures that the public is included and information is made publicly available. Furthermore, NPDES permits are enforceable under the CWA by citizens and Federal, State, and Tribal governments, thus ensuring adequate protection against adverse impacts on water quality.

The Agency recognizes that using NPDES permits has some drawbacks. Issuing individual NPDES permits can be burdensome on permitting authorities and the regulated community. NPDES permits are only effective for 5 years. The time spent issuing permits could restrict resources to conduct public outreach, inspections, and enforcement. Commenters have noted that the application process is costly and confusing. To address a number of these problems, EPA encourages using general permits for the majority of sources to be designated under this proposal. NPDES general permits can cover a category of dischargers within a defined geographic area. Areas can be defined very broadly to include political boundaries (e.g., county), watershed boundaries, or State or Tribal land. Furthermore, EPA is working to streamline the permit

application/NOI process to reduce the burden on the regulated community. EPA is seeking comment on today's proposed approach.

The Storm Water Phase II FACA Subcommittee work group that considered the structural framework for the extension of the existing storm water program under section 402(p)(6) also considered the appropriate legal mechanism for implementation. The subcommittee discussed numerous options and considered including self-implementing rules or ''permits-by-rule.''

A self-implementing rule would be a regulation promulgated at the Federal, State, or Tribal level. The basic principle would be that the rule would spell out the specific requirements for dischargers. The rule could impose the exact same restrictions and conditions as an NPDES permit, but generally would be effective until modified by EPA, a State, or a Tribe. EPA considered addressing the storm water program under section 402(p)(6) directly by rule instead of through a permitting program. This approach could reduce the burden on the regulated community (e.g., by not requiring permit applications). Although this approach would provide consistency across the nation, it would not address site-specific problems very well or foster coordination with authorized NPDES State programs. In discussing this option, some stakeholders raised enforcement issues and the ability of EPA, States, and Tribes to determine which discharges were subject to the program. Although EPA has several programs with self-implementing requirements (e.g., the sewage sludge program, Part 129 toxic standards under the NPDES program, and categorical standards under the pretreatment program), the Agency does not propose to take this approach under section 402(p)(6). The Agency does, however, seek comment on such an alternative.

D. Federal Role

Today's proposal describes EPA's approach to develop the extension of the existing storm water program under CWA section 402(p)(6). As in all other Federal programs, the Federal government plays an integral role in developing, implementing, overseeing, and enforcing the program. This section describes EPA's role in the revised storm water program.

1. Develop Overall Framework of the Program

As discussed previously in the overview section, the storm water program under CWA section 402(p)(6) would consist of the rule, tool box, and permits. EPA's primary role would be to ensure timely development and implementation of all components. Today's proposal is a refinement of the first step in developing the program. EPA is fully committed to continuing to work with involved stakeholders on developing the tool box and issuing permits. As noted in today's proposal, EPA would be required to assess the municipal storm water program based on (1) evaluations of data from the NPDES municipal storm water program, (2) research of water quality impacts on receiving waters from storm water, and (3) research on BMP effectiveness. EPA will attempt to seek adequate resources, within annual budgetary constraints, to ensure that these evaluations, as well as the necessary research, can be completed. (Section II.H, Municipal Role, provides a more detailed discussion of this provision.)

2. Encourage Use of a Watershed Approach

EPA is promoting an integrated approach that focuses on public and private sector efforts to address the highest priority problems within hydrologically defined geographic areas. Today's proposal offers flexibility for States and Tribes to use a watershed approach and should facilitate watershed planning on the part of States and Tribes implementing the program. Section I.H. discusses the watershed approach in more depth.

3. Provide Financial Assistance

Another important role for the Federal government would be to assist financially in developing and implementing the storm water program under section 402(p)(6). EPA has no independent authority to establish a funding mechanism. Although Congress did not establish a fund to fully finance implementation of the proposed extension of the existing NPDES storm water program under section 402(p)(6), numerous Federal financing programs (administered by EPA and other Federal agencies) could provide some financial assistance. These programs include the CWA section 106 grant program, CWA section 104(b)(3) grant program, State surface and ground water management programs under the Safe Drinking Water Act, the environmental quality incentives program, the conservation reserve program, the wetlands reserve program, and the estuary management and Federal monitoring programs. Also, the Natural Resources Conservation Service (NRCS) has some grants available to assist in projects related to erosion and sediment controls. The Agency anticipates that some of these programs would provide funds to help develop and, in limited circumstances, implement the section 402(p)(6) storm water program. Because some Federal funds are only available for limited purposes, for example, nonpoint source control programs, and because section 402(p)(6) describes a program for controlling point source discharges of storm water, EPA solicits comment on suggestions on structuring the final rule to maximize opportunities for Federal financial assistance.

4. Implement the Program for Non-NPDES Authorized States, Tribes, and Territories

Since today's proposed approach utilizes the NPDES framework, EPA would be the permitting authority for several States, Tribes, and Territories. As such, EPA would have the same responsibilities as any other NPDES permitting authority—issuing permits, designating additional sources, and taking appropriate enforcement actions—and would seek to tailor the storm water program to the specific needs of the State, Tribe, or Territory. EPA would also provide support and oversight, including outreach, training, and technical assistance to the regulated communities. See the discussions below related to the NPDES permitting authority's responsibilities for today's proposed rule provisions, and note that Section II.G. of today's preamble provides a separate discussion.

5. Oversee State Programs

Under the NPDES program, EPA plays an oversight role for NPDES-approved States and Tribes. In this role, EPA and the States or Tribes work together to implement, enforce, and improve the NPDES program. Part of this oversight role includes working with States and Tribes to modify their programs where inadequacies exist. This role would be vitally important when States and Tribes make adjustments to develop, implement, and enforce the new section 402(p)(6) proposed extension of the existing NPDES storm water program. In addition, States maintain a continuing planning process (CPP) under section 303(e) of the CWA, which EPA periodically reviews to assess the program's achievements.

In its oversight role, EPA takes action to address States and Tribes who have voluntarily sought NPDES authorization but are not fulfilling their obligations under the NPDES program. If an NPDES-authorized State or Tribe failed to implement an adequate NPDES storm water program, for example, EPA would enter into extensive discussions to

resolve outstanding issues. EPA has the authority to withdraw the entire NPDES program (partial program withdrawal is not allowed under the CWA) when resolution cannot be reached.

EPA is also working with the States and Tribes to improve nonpoint source management programs and assessments to incorporate key program elements. Nonpoint source program elements can include protecting surface and ground water; establishing partnerships with public and private partners; using a balanced approach incorporating Statewide and watershed-abatement of existing impairments; preventing future impairments; developing processes to address both impaired and threatened waters; reviewing upgrades of all program components, including program revisions on a 5-year cycle; addressing Federal land management and activities inconsistent with State programs; and managing State/Tribal nonpoint source management programs. In addition, EPA has committed to help address nonpoint source pollution stemming from Federal lands and activities.

In particular, EPA works with the States and Tribes to strengthen their nonpoint source pollution programs to address agricultural sources through the CWA section 319 program. EPA is working with other government agencies, as well as with community groups, to effect voluntary changes regarding watershed protection and reduced nonpoint source pollution. Through the FACA process, the Agency would continue to work with States to ensure that the requirements of the proposed extension of the existing storm water program under section 402(p)(6) are consistent with elements of the nonpoint source management program.

In addition, EPA and NOAA have published programmatic and technical guidance to address coastal nonpoint source pollution. Under the existing coastal protection program, EPA and NOAA review State programs and provide technical and programmatic assistance to help the coastal States upgrade their Coastal Zone Management Programs. The Agency is committed to assisting States in identifying sources of funding to develop and implement State coastal nonpoint programs.

6. Comply With Applicable Requirements as a Discharger

Today's proposal covers federally owned or operated facilities in a variety of ways. These facilities are generally areas where people reside, such as a Federal prison, hospital, or military base. These facilities could be included under the definition of a regulated small municipal separate storm sewer system, which specifically includes systems operated by the Federal facilities. For Federally owned regulated small municipal separate storm sewer systems, the proposal would require compliance with the application deadlines that apply to regulated small municipal separate storm sewer systems generally. EPA believes that all Federally owned municipal separate storm sewer systems would serve populations less than 100,000. We invite comment on the appropriateness of this assumption.

Federal facilities could also be included under the section addressing storm water discharges associated with other activities, including construction. In any case, discharges from these government-owned facilities would need to comply with all applicable NPDES requirements and any additional water quality-related requirements imposed by a State, Tribal, or local government. Failure to comply could result in enforcement actions. Federally owned and operated facilities could act as models for municipal and private sector facilities and implement or test state-of-the-art management practices and control measures.

E. State Role

Today's proposal sets forth an NPDES approach for implementing the proposed extension of the existing storm water program under section 402(p)(6). The NPDES program is a voluntary federal program consistent with the principals of federalism. Because most States are approved to implement the NPDES program, they will tailor their storm water programs to address their water quality needs and objectives. Federally-recognized Tribes also have the opportunity to administer the NPDES program. Several Tribes are currently seeking NPDES authorization and, when approved, will also tailor the proposed extension of the existing NPDES storm water program to address their local needs and objectives. While EPA is proposing the basic framework for the section 402(p)(6) program, States and Tribes have an important role in fine-tuning the program to address the water quality issues within their jurisdictions. The basic framework would allow for adjustments based on factors that vary geographically, including climate patterns and terrain.

Where States or Tribes do not have NPDES authority, they are not required to implement the storm water program, but they may still participate in water quality protection through participating in the CWA section 401 certification process (for any permits) and through development of water quality standards and TMDLs when authorized to do so.

1. Develop the Program

In developing the proposed extension of the NPDES existing storm water program under section 402(p)(6), States and Tribes must evaluate whether revisions to their NPDES programs are necessary. If so, modifications must be made in accordance with § 123.62. Under § 123.62, States and Tribes must revise their NPDES programs within 1 year or 2 years if statutory changes are necessary. EPA believes this time period is appropriate for incorporating revisions to existing NPDES programs because the basic NPDES program already addresses storm water discharges from industrial and larger municipal sources.

EPA is considering modifying the 1 year timeframe to 2 years or 3 years if statutory changes are required, where a State or Tribe has a fully developed and approved watershed program (including enforceable nonpoint source controls) by the end of the first year. EPA supports implementing the section 402(p)(6) proposed storm water program as part of a watershed approach (see more detailed discussion in previous section on watersheds) and believes it is appropriate to offer institutional incentives as encouragement. EPA is specifically seeking comment on this issue.

A State or Tribal NPDES program must meet the requirements of section 402(b) or conform to the guidelines issued under section 304(i)(2) of the CWA. Today's proposal under § 123.25 adds specific cross references to the section 402(p)(6) program components to ensure that States and Tribes adequately address these. Furthermore, EPA is proposing § 123.35, which is discussed more fully in Section II.G, NPDES Permitting Authority's Role for the CWA section 402(p)(6) Municipal Program.

In tailoring the proposed extension of the existing NPDES storm water program to accommodate their needs, States and Tribes should coordinate and utilize the data collected under several programs, including water quality management programs, TMDL programs, and water quality monitoring programs. All States and Tribes have water quality standards that consist of designated uses, criteria, an antidegradation policy, and other implementation policies and procedures. Water quality management programs are geared to achieving these goals and must be updated every 3 years. In addition, States are required to submit a prioritized ranking of waters

requiring TMDLs. (See Sections II.L.1 and II.L.2 for more information on water quality standards and TMDLs, respectively) States and interstate agencies monitor for contaminants in ambient water, fish tissue, and specific point sources. In addition, they conduct intensive monitoring in watersheds (or at specific sites within a watershed) to develop efficient control strategies for point and nonpoint sources. CWA section 305(b) Reports summarize this information and must be submitted to EPA every 2 years. It is critical that States and Tribes evaluate existing monitoring programs, revise them as needed to ensure that meaningful data are being collected, and share information with the local communities. (See Section II.L.4 for additional information on monitoring.)

2. Comply With Applicable Requirements as a Discharger

Today's proposal would cover State or Tribally owned or operated separate storm water systems in a variety of ways. These systems generally drain areas where people reside, such as a prison, hospital, or other populated facility. These systems could be included under the definition of a regulated small municipal separate storm sewer system, which specifically includes systems operated by State departments of transportation. Alternatively, they could be included under the section addressing storm water discharges associated with other activities, including construction. In any case, discharges from these government-owned facilities would need to comply with all applicable NPDES requirements. Failure to comply could result in enforcement actions. State or Tribal facilities could act as models for municipal and private sector facilities and implement or test state-of-the-art management practices and control measures.

3. Communicate With EPA

Under approved NPDES programs, States and Tribes have an ongoing obligation to share information with EPA on a periodic basis. This dialogue is particularly important in the section 402(p)(6) storm water program where these governments continue to develop a great deal of the guidance and outreach related to water quality. EPA would continue to use the FACA process in developing materials related to the section 402(p)(6) program and input from States and Tribes throughout this process would be critical.

F. Tribal Role

1. Background

a. EPA's Indian Policy

EPA is committed to the nine principles outlined in its 1984 Indian Policy, which include working with Tribes in a government-to-government relationship, recognizing Tribal sovereignty, and dealing with the Tribal government as the primary party for decisionmaking and management of environmental issues on the Indian reservations, consistent with EPA standards and regulations (U.S. Environmental Protection Agency, American Indian Environmental Office. 1996. *Working Effectively With Tribal Governments.* Participant Manual, Interim Final, U.S. EPA Training Seminar). EPA has affirmed and carried forward its commitment to the 1984 Indian Policy in many ways. In this regard, on March 14, 1994, EPA established the American Indian Environmental Office and Tribal Operations Committee. EPA believes that the approach in today's proposal is consistent with the principles of the policy. Further, today's proposal has been developed with the participation of the EPA Indian Office, noted above.

In addition to storm water, the 1987 CWA amendments specifically focus on ''Indian Tribes.'' Under section 518, EPA may treat Indian Tribes in the same manner as States for the purposes of certain provisions of the CWA, including section 402 (National Pollutant Discharge Elimination System) and section 303 (water quality standards and implementation plans). Section 518(e) establishes a number of criteria for the treatment of an Indian Tribe in the same manner as a State. These criteria are discussed in a Federal regulation regarding Tribal eligibility for administering NPDES and State sludge management programs (see 58 FR 67966, December 22, 1993; see also 59 FR 64339, December 14, 1994). Upon meeting the criteria, a Tribe seeking authorization to administer one of the CWA water quality programs would acquire Treatment in the Same Manner as a State status for that program. Under EPA's final regulation, the Tribe's water quality or sludge management program authority could extend to lands within a ''Federal Indian reservation.'' The CWA section 518(h)(1) uses the term ''Federal Indian reservation'' to define the territorial limits for Tribal authority for CWA purposes. The preambles to EPA regulations, including NPDES program regulations, more fully explain the term Federal Indian reservation. Most notably, EPA has clarified that it considers ''trust lands,'' which were validly set apart for the use of Indians, to be ''within a reservation'' for purposes of the CWA (e.g., 58 FR 67970).

Once authorized as the permitting/program authority, a Tribe (instead of EPA) may operate the NPDES and sludge management programs on its reservations. Otherwise, EPA is generally the permitting/program authority within Indian country. In any case, the Tribe may also seek authority to operate a CWA section 303 water quality standards program. Tribes with approval to operate a CWA section 303 water quality standards program may also issue certifications under CWA section 401.

b. Existing NPDES Regulations for Storm Water

The existing NPDES regulations for storm water discharges associated with industrial activities extend coverage to private, State, and federally owned industrial facilities located on Indian reservations. Further, the NPDES regulations cover industrial facilities owned or operated by a Tribe with a population of more than 100,000 people within the reservation and cover all Tribally owned or operated airports, power plants, and uncontrolled sanitary landfills. The NPDES regulations for storm water associated with industrial activity established October 1, 1992, as the deadline to apply for NPDES permit coverage. EPA issued baseline NPDES storm water general permits covering industrial and construction activities in September 1992 and a multisector NPDES storm water general permit covering a number of industrial categories in September 1995, as revised. Many industrial facilities covered under the NPDES regulations for industrial activities, including construction, and located on Indian reservations are included in the applicability sections of these general permits and can seek general permit coverage for satisfying program requirements.

Existing storm water permit application regulations address storm water discharges from large and medium municipal separate storm sewer systems (§ 122.26(a)(1)). Regulations at § 122.2 define the term ''municipality'' to include ''an Indian Tribe or an authorized Indian Tribal organization.'' Consequently, the criteria used by the NPDES permitting authority for coverage of municipal dischargers extends to separate storm sewer systems that are Tribally owned or operated. At this time, no Indian reservations are covered under the existing municipal

NPDES storm water program. Thus, the appendices to the definitions of large and medium separate storm sewer systems (Part 122, Appendices F–I) list no reservations for automatic coverage. Likewise, EPA has not yet designated an Indian reservation for coverage based on other factors to be considered under CWA section 402(p)(2)(E).

2. Today's Proposal

The current proposed regulation for the extension of the existing NPDES program for storm water would cover two types of dischargers located on reservations. First, the proposal would designate storm water discharges from any regulated small municipal separate storm sewer system, including Tribally owned or operated systems. Second, the proposal would regulate discharges associated with construction activity disturbing between one and five acres of land, including sites located on reservations. Owners or operators in each of these categories of regulated activity would need to apply for coverage under an NPDES permit within 3 years and 90 days from the date of publication of the final rule. Under existing regulations, however, EPA or an authorized NPDES Tribe may require a specified storm water discharger to apply for NPDES permit coverage before this deadline based on a determination that the discharge is contributing to a violation of a water quality standard (including designated uses) or is a significant contributor of pollutants.

Under this proposal, a Tribal governmental entity may regulate storm water discharges on its reservation in two ways—as either an NPDES-authorized Tribe or a regulated ''municipality.'' If a Tribe is already authorized to operate the NPDES program, EPA would require the Tribe to implement today's proposed regulations for the NPDES program for storm water, as it does for authorized States, for covered dischargers located on the Indian reservation. (As discussed above, a Tribe may seek NPDES authorization from EPA to operate the NPDES program in the same manner as a State.) For an outline of the role and responsibilities of the permitting authority in the storm water program, see the proposed § 123.35 (and Section II.G. of today's preamble) and existing § 123.25(a).

Under today's proposed rule, a Tribe would be a regulated ''municipality'' for NPDES program purposes in two ways, and, therefore, be required to implement the six minimum control measures to the extent allowable under Federal law. (EPA recognizes that tribal regulation of non-members on fee lands within Federal Indian Reservations raises complex legal questions. See 58 FR 67966 and 59 FR 64339. Thus, the Agency invites comment that would assist the Agency in developing final rule language to recognize that Tribes with MS4s proposed for regulation under today's proposal would only need to implement the municipal measures proposed in section 122.34 to the extent such Tribes have authority under federal Indian law.) If the Indian reservation were located within an ''urbanized area,'' as defined in § 122.32(a)(1) of today's proposed rule, the Tribe could be an owner or operator of a regulated small municipal separate storm sewer system (only the urbanized area portion of the reservation would be regulated under an NPDES permit). As discussed below, Tribal owners or operators of regulated small municipal separate storm sewer systems—serving a population under 1,000 within the urbanized area portion of the reservation—would be exempted from the proposed storm water regulation. Tribes located outside an urbanized area would not automatically be covered, but would be able to request designation as a regulated small municipal separate storm sewer system from EPA.

EPA believes that only a few Tribes located in urbanized areas would meet the criteria to be regulated small municipal separate storm sewer systems. The Tribal representative on the Storm Water Phase II FACA Subcommittee asked EPA to provide a list of the Tribes located in urbanized areas that would fall within the NPDES storm water program under today's proposal. In December 1996, EPA developed a listing of federally recognized American Indian Areas located in Bureau of the Census-designated urbanized areas (see Appendix 1). Appendix 1 not only provides a listing of reservations and individual Tribes, but also the name of the particular urbanized area in which the reservation is located and an indication of whether the urbanized area contains a medium or large municipal separate storm sewer system that is already covered by the existing storm water regulations (''Phase I'').

There are 27 Tribes on this list; 20 are outside of Oklahoma and 7 are in Oklahoma. EPA recognizes that the list could have errors and invites comment on its accuracy. The applicability of CWA section 518 to Tribes located in Oklahoma would be determined on a case-by-case basis because of unique historical and legal considerations particular to that State. In authorization of the Oklahoma NPDES program, EPA retained jurisdiction to regulate discharges in ''Indian Country'' (61 FR 65049, December 10, 1996). In the cases of the 20 Tribes outside of Oklahoma, Tribal populations within urbanized areas range from very small numbers to more than 32,000. In the case of the seven Oklahoma Tribes, the population numbers are much larger. It is unlikely, however, that large populations fall within areas that would be determined to be an Indian reservation, as defined in section 518. In the cases of the 20 Tribes outside of Oklahoma, 9 Tribes have populations less than 1,000 and, thus, would be waived from proposed requirements for the municipal program. Eight Tribes have a population between 1,000 and 10,000, and 3 have a population above 10,000.

As mentioned previously, EPA proposes to exempt from the proposed municipal program those Tribally owned small municipal separate storm sewer systems in urbanized areas that serve populations equal to or less than 1,000 persons. As a practical matter, EPA believes that it may be unlikely that a Tribe with such a small population would have the technical, administrative, and governmental capability, including the staff, to implement a storm water management program. Unlike similarly situated political subdivisions of States, these Tribes in urbanized areas lack the opportunity for support from States. Moreover, EPA anticipates that a Tribe of this size might consider cooperative arrangements with surrounding local governmental entities regarding storm water program implementation. The nine exempt Tribes in urbanized areas (populations below 1,000) include:

- Augustine Band of Cahuilla Mission of Indians of the Augustine Reservation, CA.
- Cabazon Band of Cahuilla Mission of Indians of the Cabazon Reservation, CA.
- Redding Rancheria of California.
- Seminole Tribe of Florida, Dania, Big Cypress and Brighton Reservations.
- Penobscot Tribe of Maine.
- Shakopee Mdewakanton Sioux Community of Minnesota (Prior Lake).
- Las Vegas Tribe of Paiute Indians of the Las Vegas Indian Colony, NV.
- Reno-Sparks Indian Colony, NV.
- Ysleta del Sur Pueblo of Texas.

These nine Tribes in urbanized areas would not be subject to permit requirements under today's proposal, unless EPA subsequently and specifically designated the discharges from their storm water systems as a water quality problem. It is important to note that this is a preliminary list of exempted Tribes—it may be the case that additional tribally-owned small

municipal separate storm sewer systems would be eligible for the exemption based on the population in the portion of the reservation that is located within the urbanized area. EPA seeks comment on any additional Tribes listed in Appendix 1 that may qualify for this proposed exemption.

Outside of urbanized areas, non-authorized Tribes would be subject to potential designation by EPA based on the criteria established for designating all other small municipal separate storm sewer systems. A Tribe not otherwise covered by the proposed extension of the existing NPDES storm water program would also be able to request designation for coverage by EPA. In both cases, a Tribe would need to comply with all terms, limitations, and conditions of the applicable municipal NPDES permit. EPA designation and NPDES permit coverage would allow a Tribe to operate a federally recognized ''municipal'' storm water management program and extend Federal recognition to requirements the Tribe would place on dischargers of storm water into the Tribe's separate storm sewer system. This federal regulation could result in federal enforcement of the Tribal program. Moreover, the designation for NPDES coverage would provide an opportunity for a Tribe to enhance its role in the regulation of storm water discharges within its reservation without having to undertake the entire NPDES program and its existing requirements.

During the public comment period following today's proposal, EPA plans to notify each of the Tribes in urbanized areas that are or may be impacted by this proposed regulation and will engage in a discussion of the impact of the regulation on these Tribes. EPA invites comment regarding the appropriateness of its approach to Tribes in urbanized areas, specifically the proposed exemption for Tribal municipal separate storm sewer systems serving populations under 1,000 people.

3. Other Relevant Issues

During the Storm Water Phase II FACA Subcommittee process, the Tribal representative asked how EPA would apply the NPDES program with respect to non-federally recognized Indian reservations and Tribes. At present, EPA interprets section 518 of the CWA as applying only to federally recognized Tribes and Indian reservations and as not applicable to non-federally recognized Indian reservations and Tribes. EPA regional offices will deal with this issue on a case-by-case basis when it is brought to their attention. In addition, a State representative requested EPA to clarify the meaning of ''ownership of a Tribal municipal separate storm sewer system.'' In response, EPA notes that an Indian tribe or an authorized Indian Tribal organization is a municipality under section 502(4) of the CWA, unless a Tribe is treated as a State under section 518(e) of the CWA. ''Indian Tribe'' means any Indian Tribe, band, group, or community recognized by the Secretary of the Interior and exercising governmental authority over a Federal Indian reservation.

G. NPDES Permitting Authority's Role for the CWA Section 402(p)(6) Municipal Program

As noted previously, the NPDES permitting authority can be EPA or an authorized State or an authorized Tribe. For clarity, the following discussion describes the role of the NPDES permitting authority under today's proposal.

1. Comply With Other Requirements

NPDES permitting authorities would need to perform certain duties to implement the CWA section 402(p)(6) program. EPA is proposing § 123.35(a) to emphasize that permitting authorities have existing obligations under the NPDES program with which they must comply. Section 123.35 focuses on specific issues related to the role of the NPDES authority to support administration and implementation of the municipal storm water program under CWA section 402(p)(6).

2. Designate Sources

A new § 123.35(b) addresses the requirements for the NPDES permitting authority to designate sources of storm water discharges to be regulated under §§ 122.32 through 122.36 of today's proposed rule. NPDES permitting authorities would be required to develop a process, as well as criteria, to designate municipal sources and the authority to designate a small municipal separate storm sewer system where the otherwise applicable requirements have been waived under proposed § 122.33(b) if circumstances change. EPA is proposing that EPA may make designations if an NPDES-approved State or Tribe fails to do so.

NPDES permitting authorities could also designate areas that should be included in the storm water program (as regulated small municipal separate storm sewer systems) but are not located in an ''urbanized area'' and, therefore, would not be designated automatically. Such areas would be brought into the program if found to have actual or potential exceedances of water quality standards, including impairment of designated uses, or other adverse impacts on water quality, as determined by local conditions or watershed and TMDL assessments. EPA's aim is to address adversely impacted areas while protecting areas with the potential for problems. EPA encourages NPDES permitting authorities, local governments, and the interested public to work together in the context of a watershed plan to address water quality issues, including those associated with municipal storm water runoff (see Section I.H. of today's preamble for further discussion).

a. Develop Designation Criteria

Under a new § 123.35(b), the NPDES permitting authority would need to establish designation criteria to evaluate whether a storm water discharge results in or has the potential to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts. These criteria would need to be applied to all municipal separate storm sewer systems located outside of an urbanized area with a population of at least 10,000 and a population density of at least 1,000. EPA estimates a total of 583 incorporated places and 2 municipios in Puerto Rico (Arroyo and Fajardo) fall within this 10,000 population/1,000 density subset and would need to be examined for potential designation.

EPA would recommend that the NPDES permitting authority consider, in a balanced manner, certain locally-focused criteria for designating any incorporated place, county, or place under the jurisdiction of a governmental entity located outside of an urbanized area on the basis of other significant water quality impacts. EPA proposes to recommend consideration of criteria that would include discharge to sensitive waters, high growth or growth potential, high population density, contiguity to an urbanized area, significant contributor of pollutants to waters of the United States, and ineffective control of water quality concerns by other programs. The proposed designation criteria are intended to help encourage the permitting authority to use an objective method for identifying and designating, on a local basis, sources that adversely impact water quality.

- *Discharge to sensitive waters:* The potential impacts of storm water runoff depend, in part, on the sensitivity of the receiving waters. For example, cold water fisheries, such as trout streams, show greater levels of impairment from

poor erosion and sediment control programs than do other fisheries that are less dependent on the stream substrate. EPA recommends that permitting authorities identify, in coordination with Federal, State, and local agencies, and perhaps prioritize, designations with regard to the sensitivity of the resource. Sensitive waters generally include public drinking water intakes and their designated protection areas; swimming beaches and waters in which swimming occurs; shellfish beds; designated Outstanding National Resource Waters; National Marine Sanctuaries; waters within Federal, State, and local parks; and waters containing threatened or endangered species and their habitat, as well as other waters so designated.

- *High growth or growth potential:* To protect watersheds and their receiving waters from nearly certain adverse impacts, EPA proposes to recommend that areas of high growth or growth potential should also be identified and included in the designation criteria. Using this factor could minimize future restoration or retrofitting costs. Growth potential can be measured in various ways, including projected building starts, comprehensive plans, zoning maps, bond ratings, and the condition of infrastructure and building vacancies. EPA would recommend that, for any given 10-year period, discharges from municipal separate storm sewer systems in areas with localized population growth rates of more than 10 percent should be evaluated for designation. Members of the Storm Water Phase II FACA Subcommittee questioned whether a 1 percent threshold (10 percent over a 10-year period) for ''high'' growth was reasonable. According to EPA calculations based on Census data from 1980 to 1990, the average rate of growth in the United States during that 10-year period was more than 4 percent. For the same period, the average rate of growth within urbanized areas was 15.7 percent and the average for outside of urbanized areas was just more than 1 percent. EPA believes that these calculations help to support the statement that a growth percentage that is more than 10 times the national average for areas outside of urbanized areas is indeed a high rate of growth for these areas and should be a basis for designation of municipal storm water systems.
- *High population density:* Population density is related to the level of human activity, which has been shown to be directly linked to levels of impervious land surfaces. Therefore, EPA recommends ''high population density'' as one criterion for designation of municipal sources. Even areas with relatively low population densities (i.e., less than two residential units per acre) can have 10 to 20 percent impervious area (Schueler, T. 1987. *Controlling Urban Runoff: A Practical Manual for Planning & Designing Urban BMPs.* Metropolitan Washington Council of Governments). Macroinvertebrate diversity becomes poor when impervious land exceeds 10 to 15 percent (Klein, 1979). Since this study, extensive research from around the country has found this threshold to be consistent with other studies (Schueler, T. 1995. *Environmental Land Planning Series: Site Planning for Urban Stream Protection.* Prepared for Metropolitan Washington Council of Governments.). Further, higher density residential areas (i.e., two to ten residential units per acre) have been correlated with as much as 35 percent imperviousness. By recommending this criterion, EPA does not aim to encourage lower density development and urban sprawl but rather good urban design and development patterns.
- *Contiguity to an urbanized area:* The areas closely outside of an urbanized area have a good potential for future growth and may also have significant impacts on a neighboring regulated municipality that is within the urbanized area. This designation criterion would allow for an extension of the seamless coverage provided by the regulation of urbanized areas where necessary. The proposed rule also captures this concept in § 123.35(b)(4).
- *Significant contributor of pollutants to waters of the United States:* This criterion is one of the basic tenets of designation and is meant to capture all significantly contributing sources in an effort to have both comprehensive and equitable coverage (see CWA section 402(p)(2)(E), 40 CFR 122.26(a)(5)). It also aids in developing a watershed approach.
- *Ineffective control of water quality concerns by other programs:* EPA proposes to recommend that NPDES permitting authorities carefully consider whether the storm water runoff from a potentially designated area is effectively addressed under other regulations or programs, such as CZARA and other nonpoint source programs. For example, an area covered under the National Estuary Program (NEP) under CWA section 320 is required to develop a Comprehensive Conservation and Management Plan (CCMP) for managing the estuarine watershed. The CCMP addresses three general resource areas: water and sediment quality, living resources, and land use and water resources. The permitting authority could determine that the NEP comprehensively addresses impacts to water quality from storm water discharges for certain systems and, therefore, the systems would not need to be designated under the CWA section 402(p)(6) program.

These criteria are meant to be taken in the aggregate, with a great deal of flexibility as to how each would be weighed in order to best account for watershed and other local conditions and to allow for a more tailored case-by-case analysis. The application of criteria is meant to be geographically specific. Furthermore, each criterion does not have to be met in order for the owner or operator of a small municipal separate sewer system to qualify for designation, nor would a system necessarily be designated on the basis of one or two criteria alone. EPA plans to provide comprehensive guidance to more fully develop its recommendations for appropriate criteria, as well as offer detailed information on how the criteria could be applied and what standards could be used. EPA seeks comment on additional designation criteria, as well as the validity and applicability of the proposed criteria.

EPA believes that the application of the recommended designation criteria, when considered as a composite, would provide an objective indicator of real and potential water quality impacts from urban runoff on both the local and watershed levels. EPA encourages the application of the recommended criteria in a watershed context, thereby allowing for the evaluation of the water quality impacts of the portions of a watershed outside of an urbanized area. For example, situations exist where the urbanized area represents a small portion of a degraded watershed, and the adjacent nonurbanized areas of the watershed have significant cumulative effects on the quality of the receiving waters.

b. Apply Designation Criteria

After customizing the designation criteria for local geography, the permitting authority would have to apply such criteria, at a minimum, to any incorporated place, county, or place under the jurisdiction of a governmental entity (including but not limited to Tribal or Territorial governments) located outside of an urbanized area that has both a population of at least 10,000 and a population density of 1,000 people per square mile or greater (see proposed § 123.35(b)(2)). If the NPDES permitting authority determines that the place or county meets the criteria, they would need to designate all small municipal separate storm sewer systems

located in the place or county as regulated small municipal separate storm sewer systems under the NPDES storm water program within 3 years and 90 days of publication of the final rule. Alternatively, the NPDES authority could designate within 5 years from the date of final regulation if the designation criteria are applied on a watershed basis where a comprehensive watershed plan exists (a comprehensive watershed plan is one that includes the equivalents of TMDLs) (see proposed § 123.35(b)(3)). The Agency seeks to provide incentives for watershed-based designations.

The timeframe of 3 years and 90 days would allow States and Tribes up to 2 years to make any necessary statutory changes and receive program approval from EPA, an additional year to develop their general permit and designation criteria, and then 90 days for a regulated entity to submit its individual application or Notice of Intent (NOI) under a general permit. Assuming a March 1, 1999, final rule, the resulting deadline would be May 31, 2002. EPA believes this would be an adequate timeframe and would provide significant guidance to NPDES permitting authorities on the responsibilities to be completed during this period. If an NPDES-authorized State or Tribe does not develop and apply designation criteria, then EPA might do so.

EPA believes it has adequate authority to apply a State's designation criteria (or to develop and apply designation criteria) to designate sources in an authorized NPDES State. Such authority would derive from the text of section 402(p)(6), which provides for the designation of sources other than those already regulated under section 402(p)(2). EPA does not believe that section 402(c)(1), which requires EPA to suspend issuance of Federal NPDES permits in an authorized State, would preclude EPA designation of particular small municipal separate storm sewer systems (based on subsequently-developed criteria applicable in a particular State) after promulgation of today's proposed rule because designation of sources is independent of (and precedes) the issuance of permits. In addition, as discussed later in Section II.I.4. entitled, Residual Designation Authority, EPA believes that section 402(p)(6) provides the Agency with authority to subsequently designate individual sources under today's proposed rule. Today's approach for designation by EPA, even in authorized NPDES States, would also be consistent with the authority currently available to the Agency under the existing storm water regulations at 40 CFR 122.26(a)(1)(v). Similarly, the third party petition process for small municipal separate storm sewer systems (including expeditious deadlines for acting on such petitions) is consistent with the existing storm water regulations at 40 CFR 122.26(f) (4) & (5). EPA solicits comment on the proposed designation approach.

It is important to note that NPDES permitting authorities could designate any owner or operator of a municipal separate storm sewer system, including one below 10,000 in population and 1,000 in density. EPA established the 10,000/1,000 threshold primarily for prioritization purposes based on the likelihood of adverse water quality impacts at these population and population density levels. In addition, the 1,000 persons per square mile threshold is consistent with both the Bureau of the Census definition of an ''urbanized area'' (see Section II.H.2. below) and a Storm Water Phase II FACA Subcommittee work group's discussion concerning the definition of a regulated small municipal separate storm sewer system.

EPA has considered the request from some Storm Water Phase II FACA Subcommittee members that interim deadlines be established for development of designation criteria and believes that the designation deadline identified in today's proposed rule at § 123.35(b)(3) provides States and Tribes with a flexibility that allows them to develop and apply the criteria locally in a timely fashion, while at the same time establishing an expeditious deadline.

c. Designate Physically Interconnected Municipal Separate Storm Sewer Systems

In addition to applying criteria on a local basis for potential designation, the NPDES permitting authority would be required to designate any owner or operator of a municipal separate storm sewer system that contributes substantially to the storm water pollutant loadings of a physically interconnected municipal separate storm sewer system that is regulated by the NPDES storm water program (see proposed § 123.35(b)(4)). To be ''physically interconnected,'' the municipal separate storm sewer system, including roads with drainage systems and municipal streets, of one entity would be physically connected directly to the municipal separate storm sewer system of another entity. This provision would apply to all municipal separate storm sewer systems located outside of an urbanized area. EPA added this section in recognition of the concerns of local government representatives on the Storm Water Phase II FACA Subcommittee that a local government should not have to shoulder total responsibility for a storm water program when storm water discharges from another municipality are also contributing pollutants or adversely affecting water quality. This provision would also help to provide some consistency among municipalities and facilitate watershed planning in the implementation of the NPDES storm water program. EPA recommended physical interconnectedness in the existing NPDES storm water regulations as a factor for consideration in the designation of additional sources. The municipal caucus raised an additional concern relating to sheet runoff from one adjoining jurisdiction to another, thereby contributing to the discharges of a neighboring municipal separate storm sewer system. EPA would like comment on the extent to which this problem may exist and ways in which it could be addressed. EPA also welcomes comment on this proposed designation provision.

Today's proposal does not include interim deadlines for identifying physically interconnected municipal separate storm sewer systems. EPA believes that this determination would occur on a case-by-case basis where deadlines would only work to limit the permitting authority's ability to identify such systems. However, in accordance with the deadlines identified in § 123.35(b)(3) of today's proposal, EPA encourages the permitting authority to make that determination within 3 years from the date of publication of the final rule or within 5 years if the permitting authority is implementing a comprehensive watershed plan. Alternatively, the affected jurisdiction could use the petition process under 40 CFR 122.26(f) in seeking to have the permitting authority designate the contributing jurisdiction.

d. Address Public Petition for Designation

Today's proposal would recognize the existing opportunity for the public to petition the permitting authority for designation of a point source to be regulated to protect water quality, as contained in existing NPDES regulations (see 40 CFR 122.26(f)). Any person may petition the permitting authority to require an NPDES permit for a discharge composed entirely of storm water that contributes to a violation of a water quality standard or is a significant contributor of pollutants to the waters of the United States (see proposed § 123.35(c)). NPDES permitting authorities would have to make a final

determination on any petition within 180 days after receiving the petition (see proposed § 123.35(c)). EPA believes that setting a limit of 180 days balances the public's need for a final determination within a finite period of time and the NPDES permitting authority's need to control its workload. EPA is also proposing that if an NPDES-approved State or Tribe fails to act within the 180-day timeframe, EPA may make a determination on the petition. EPA believes that public involvement is an important component of the NPDES program for storm water and feels that this provision encourages public participation. Section II.K, Public Involvement/Public Role, further discusses this topic.

The Storm Water Phase II FACA Subcommittee provided EPA with extensive feedback on today's proposed approach. Several commenters have questioned the justification for the use of urbanized areas or the designation criteria selected by EPA as guidance to the NPDES permitting authority (see § 123.35(b)(1)). Municipal members of the subcommittee noted that the proposed rule could result in inequities among local governments and would not cover all contributors of pollutants to receiving waters. Some subcommittee representatives expressed concern that the proposed rule would impede the watershed approach due to its blanket coverage within urbanized areas but only specific designation outside of urbanized areas. Today's proposed rule addresses the problem of perceived inequities through the provision that any municipal separate storm sewer system can be designated by the permitting authority if found to be significantly contributing pollutants to the waters of the United States or contributing to an exceedance of water quality standards. EPA believes that the proposed approach, which provides for the designation of sources to be regulated based on local conditions, would facilitate watershed planning.

EPA relies on data summarized in the NURP study and in the CWA section 305(b) reports to support an approach for targeted designation outside of urbanized areas. EPA has developed designation criteria based on findings of the NURP study and other studies that indicate pollutants of concern, including total suspended solids, chemical oxygen demand, and temperature. These criteria were the subject of considerable discussion by the Storm Water Phase II FACA Subcommittee and were revised in response to recommendations from the subcommittee. EPA invites comment on this issue. EPA would be particularly interested in data submitted on storm water discharges and associated pollutants of concern.

3. Provide Waivers

EPA received comments from numerous State representatives that the proposal should recognize the efforts of existing State programs to address the significant concerns that potentially impact watersheds. In response, the Agency is proposing to provide some flexibility under § 122.33(b) that allows NPDES permitting authorities to waive otherwise applicable requirements for certain regulated small municipal sources. Such waivers could be granted in cases where the jurisdiction served by the regulated small municipal separate storm sewer system includes a population of less than 1,000 persons, its discharges are not contributing substantially to the storm water pollutant loadings of a physically interconnected regulated municipal separate storm sewer system, and the owner or operator of the small municipal separate storm sewer system has certified that storm water controls are not needed based on (1) wasteload allocations that are part of TMDLs that address the pollutants of concern, or (2) a comprehensive watershed plan, implemented for the waterbody, that includes the equivalents of TMDLs and addresses the pollutants of concern. If such a waiver is granted, the TMDLs or watershed plan would need to demonstrate with reasonable assurance that load reductions take place pursuant to CWA section 303(d). It is important to note that EPA will continue to require States to comply with their TMDL implementation schedules.

Where a State is the NPDES permitting authority, the permitting authority would be responsible for the development of the TMDLs or their equivalent determination as part of a watershed plan as well as the assessment of the extent a small municipal separate storm sewer system's discharge is contributing pollutants to a neighboring regulated system. In states where EPA is the permitting authority, EPA would use a State's watershed plan and TMDLs, where available. From these assessments, the permitting authority could make its determination regarding wasteload allocations and might determine that storm water controls are not required for certain small municipal separate storm sewer systems. Once these determinations are made, the owner or operator of the regulated small municipal separate storm sewer system, in seeking a waiver from the otherwise applicable requirements under today's proposal, would be responsible for certifying on a form provided by the NPDES permitting authority that they are covered by TMDLs or a watershed plan that indicates that discharges from their particular system are not having an adverse impact on water quality (i.e., they were not assigned wasteload allocations under TMDLs) and, therefore, implementation of storm water controls is not necessary and the waiver provision requirements have been met. Since the municipal waiver is indefinite, the owner or operator would not need to re-certify at the beginning of each permit term. EPA encourages the permitting authorities to make their waiver determinations as soon as possible in an attempt to avoid having the owners or operators of regulated small municipal separate storm sewer systems apply for a permit and begin to develop a program, but then later be waived from the applicable requirements. EPA seeks comment from permitting authorities on how they envision the process of implementing municipal waivers under today's proposed rule. Specifically, EPA would like comment on how the program could operate on a basis of self-certification for waivers.

The NPDES permitting authority could, at any time, mandate compliance with program requirements from a previously waived regulated small municipal separate storm sewer system if circumstances change. For example, a waiver could be withdrawn in circumstances in which the permitting authority later determines that a storm water discharge to a small stream would cause adverse impacts to water quality resulting in a violation of water quality standards. A ''change in circumstances'' could involve receipt of new information by the permitting authority.

EPA invites comments on concerns that the permitting authority could improperly grant waivers in an effort to provide relief to regulated entities based on concerns unrelated to water quality. EPA is also concerned that a permitting authority could redirect resources from other environmental programs in order to develop a watershed approach that promotes the issuance of the greatest number of waivers possible.

EPA also invites comment on the option of broadening the universe of potential waivers by waiving the requirements of all small municipal separate storm sewer systems that have a population below 5,000, rather than 1,000, and meet the same criteria as in today's proposal.

An option not proposed by EPA today is a waiver based on low population or low population density alone. EPA

considered a waiver option based on a simple population threshold. This option would have automatically waived all places within urbanized areas with a population of 1,000 persons or below. EPA found it difficult to justify a particular threshold number without allowing for more flexibility or additional criteria in order to determine if storm water controls were necessary. This option also did not fully account for water quality impacts and would create arbitrary donut holes, some of which could have significant impacts on water quality and should be regulated. Small entity representatives commented, however, that municipalities with less than 1,000 persons may lack the technical capacity to certify that their discharges are not contributing to adverse water quality impacts in areas where a TMDL or comprehensive watershed plan has not been developed by the permitting authority. This concern was shared by the Federal Small Business Advocacy Review Panel (see Section VII. below). EPA is thus requesting comment on the option of waiving coverage for all municipalities with less than 1,000 people (including those located in urbanized areas) unless the permitting authority determines that they should be required based on significant adverse water quality impacts.

In addition to waivers, the Agency is also considering possible approaches for providing incentives for local decisionmaking that would limit the adverse water quality impact associated with uncontrolled growth in a watershed. In situations where there are special controls or incentives (e.g. transferable development rights, traditional neighborhood development ordinances) in place directing development toward compact/mixed use development and away from wetlands, open space, or other protected lands, it may be possible to provide some relief to municipalities in terms of implementation of the proposed minimum control measures in areas of infill, or compact mixed use, the relief would pertain to minimum control measures concerning construction and new infill development or redevelopment. Where TMDLs are done in a watershed, the use of such controls or incentives by municipalities might be considered as the basis for the TMDLs. EPA solicits comment on this approach and any other recommendations for the use of such incentives.

4. Issue Permits

NPDES permitting authorities have a number of responsibilities regarding the permit process. The Agency is proposing §§ 123.35(d) through (g) to ensure a certain level of consistency for permits, yet providing numerous opportunities for flexibility. NPDES permitting authorities must issue NPDES permits to cover municipal sources that would be regulated under § 122.32 of today's proposed rule, unless waived under § 122.33(b). EPA encourages permitting authorities to use general permits as the vehicle for permitting and regulating small municipal separate storm sewer systems. The Agency notes, however, that some owners or operators may wish to take advantage of the option to join as a co-permittee with a municipality regulated under the existing NPDES storm water program.

Today's proposal includes a provision, § 123.35(f), that requires NPDES permitting authorities to include the requirements in proposed § 122.34 including as modified in accordance with §§ 122.33(a)(3), 122.34(c), 122.35(b)) for NPDES permits issued for regulated small municipal separate storm sewer systems. See Section II.H.3.a, Minimum Control Measures, for more details on the actual requirements.

In an attempt to avoid duplication of effort, EPA is specifically proposing in § 122.34(c) to allow NPDES permitting authorities to include permit provisions that incorporate by reference qualifying local, Tribal, or State municipal storm water management program requirements that address one or more of the minimum controls of proposed § 122.34(b). For a local, Tribal, or State program to ''qualify,'' it would need to impose, at a minimum, the relevant requirements of § 122.34(b). A regulated small municipal separate storm sewer system would still need to submit an application, either an individual application or an NOI under a general permit, but would follow the requirements of the qualifying local, Tribal, or State program instead. The Agency invites comment on this approach.

Under § 122.35(b), NPDES permitting authorities might also recognize existing responsibilities among governmental entities for the minimum control measures in an NPDES small municipal storm water permit. For example, the permit might allow for the State to be responsible for addressing construction site runoff and require that the municipalities develop substantive controls for the remaining minimum control measures. By acknowledging existing programs, this provision is meant to reduce the duplication of efforts and to increase the flexibility of the NPDES storm water program.

In § 123.35(e), EPA is proposing that NPDES permitting authorities specify a time period of up to 5 years from the issuance date of an NPDES permit for regulated small municipal separate storm sewer system owners or operators to fully develop and implement their storm water programs. EPA believes this time period is adequate. As discussed more fully below, permitting authorities should be providing extensive support to the local governments to assist them in developing and implementing their programs.

Under proposed § 123.35(g), if an NPDES permitting authority issues a general permit to authorize storm water discharges from regulated small municipal separate storm sewer systems, the NPDES permitting authority would also need to provide or issue a menu of regionally appropriate and field-tested BMPs that the permitting authority determines to be cost-effective. The regulated small municipal separate storm sewer systems could choose to either select from this menu or select other BMPs that they feel are appropriate. The purpose of this menu is to provide small municipal separate storm sewer systems with additional guidance to assist them in implementing their storm water program. The menu would be further elaborated upon in guidance materials provided as part of the tool box (for further discussion regarding the tool box see Section II.A.5.). The menu itself is not intended to replace more comprehensive BMP guidance materials. Separate guidance documents that discuss the results from EPA-sponsored nationwide general studies on the construction, operation and maintenance of BMPs would be provided as part of the tool box efforts.

The permitting authority may include this menu in the general permit when it is issued. This menu would need to be issued within two years of the publication of the final rule. This deadline tracks the amount of time that the State permitting authority would have to make any necessary regulatory or statutory changes to their program to accommodate the rule requirements. If an NPDES-approved State or Tribe failed to provide or issue this menu within two years of the publication of the final rule, EPA would be able to do so. Failure of the State to issue the menu of BMPs would not affect the legal status of the general permit. Measurable goals identified in a small municipal storm sewer system's NOI, or individual application, would not be considered a condition of the NPDES permit unless, and until, the permitting authority or EPA provided or issued the menu of

BMPs. The issuance of the menu of BMPs would be critical to assure protection of water quality since it triggers the permittee's requirement to meet narrative performance standards.

5. Support and Oversee the Local Programs

NPDES permitting authorities would be responsible for supporting and overseeing the local municipal programs. EPA is proposing § 123.35(h) to highlight issues associated with these responsibilities.

To the extent possible, NPDES permitting authorities should provide financial assistance to local municipalities, which often have limited resources, for the development and implementation of local programs. EPA recognizes that funding for programs at the State and Tribal levels may also be limited, but strongly encourages States and Tribes to provide whatever assistance possible. In lieu of actual dollars, NPDES permitting authorities could provide cost-cutting assistance in a number of ways. For example, NPDES permitting authorities could develop outreach materials for municipalities to distribute or the NPDES permitting authority could actually distribute the materials. Another option would be to implement an erosion and sediment control program across an entire State (or Tribal land), thus alleviating the need for the municipality to implement its own program. Obviously, NPDES permitting authorities would need to balance the need for site-specific controls, which could be best handled by a local municipality, with the need to offer financial relief. EPA, States, Tribes, and municipalities should work as a team in making these kinds of decisions.

NPDES permitting authorities would be responsible for overseeing the local programs. They would need to work with the regulated community and other stakeholders to assist in local program development and implementation. This might include sharing information, analyzing reports, and taking enforcement actions, as necessary. NPDES permitting authorities play a vital role in supporting local programs by providing technical and programmatic assistance, conducting research projects, and monitoring watersheds. Another important role for NPDES permitting authorities would be to ensure adequate legal authority at the local level so that municipalities could implement their part of the CWA section 402(p)(6) program.

NPDES permitting authorities are encouraged to coordinate and utilize the data collected under several programs. States and Tribes address point and nonpoint source storm water discharges through a variety of programs. In developing the CWA section 402(p)(6) program, EPA recommends that States and Tribes coordinate all of their water programs, including the continuing planning process (CPP), the existing storm water program, the CZARA program, and nonpoint source programs.

In addition, NPDES permitting authorities would be encouraged to use a brief (e.g., two-page) reporting format to facilitate compiling and analyzing data from submitted reports under proposed § 122.34. EPA would develop a model form for this purpose.

H. Municipal Role

1. Scope of Today's Proposal

The Agency has selected for today's proposal an equitable and comprehensive four-pronged approach for the designation and coverage of municipal sources. First, the approach would define for automatic coverage the sources believed to be of most concern. Second, the approach would designate sources that meet a set of objective criteria used to measure the potential for water quality impacts. Third, the approach would designate on a case-by-case basis sources that ''contribute substantially to the storm water pollutant loadings of a physically-interconnected [regulated] municipal separate storm sewer system.'' Finally, the approach would designate on a case-by-case basis, upon petition, sources that ''contribute to a violation of a water quality standard or are a significant contributor of pollutants.''

As explained earlier, today's proposed rule would automatically designate for regulation small municipal separate storm sewer systems located in urbanized areas and would require that NPDES permitting authorities examine for potential designation, at a minimum, a particular subset of small municipal separate storm sewer systems located outside of urbanized areas. Any small municipal separate storm sewer system automatically designated by the proposed rule or designated by the permitting authority under today's proposed rule would be defined as a ''regulated'' small municipal separate storm sewer system. Today's proposal also includes a provision that would allow for a waiver from the otherwise applicable requirements for some regulated small municipal separate storm sewer systems, where warranted, based on a comprehensive water quality-based assessment.

In today's proposed rule, all regulated small municipal separate storm sewer systems would need to establish a storm water program that meets the requirements of six minimum control measures, unless the system qualifies for, and the NPDES permitting authority grants, a waiver. These minimum control measures would be public education and outreach on storm water impacts, public involvement/participation, illicit discharge detection and elimination, construction site storm water runoff control, post-construction storm water management in new development and redevelopment, and pollution prevention/good housekeeping for municipal operations. Today's proposal would allow for a great deal of flexibility in how an owner or operator of a regulated small municipal separate storm sewer system would be authorized to discharge under an NPDES permit by providing various options for obtaining permit coverage and satisfying the required minimum control measures. For example, the NPDES permitting authority could incorporate by reference qualifying State, Tribal, or local programs in the NPDES general permit and could recognize existing responsibilities among different governmental entities for the implementation of minimum control measures. In addition, a regulated small municipal separate storm sewer system could participate in the storm water management program of an adjoining regulated medium or large municipal separate storm sewer system and could arrange to have another governmental entity implement a minimum control measure for them.

2. Municipal Definition

This section explains which small municipal separate storm sewer systems would be regulated under today's proposed rule. This section also proposes several definitions of terms used to describe the applicability of the proposed program requirements. For one particularly important definition, the definition of an ''urbanized area,'' the discussion includes case studies and a map as examples. This section concludes with a discussion of the three alternatives EPA considered for determining which small municipal separate storm sewer systems would be covered by today's proposed rule.

Regulatory Language in Today's Proposal

The CWA does not define the term ''municipal separate storm sewer.'' EPA has exercised its discretion to define the scope of municipal systems consistent with its existing regulations. EPA

defined municipal separate storm sewer in the existing storm water permit application regulations to mean, in part, a conveyance or system of conveyances (including roads with drainage systems and municipal streets) that is ''owned or operated by a State, city, town borough, county, parish, district, association, or other public body designed or used for collecting or conveying storm water which is not a combined sewer and which is not part of a Publicly Owned Treatment Works as defined at 40 CFR 122.26'' (see 40 CFR 122.26(b)(8)(i)). Today's proposed rule adds to this definition ''the United States'' as a potential owner or operator of a municipal separate storm sewer. This addition is meant to address an omission from existing regulations and to clarify that Federal facilities are, in fact, covered by the NPDES program for municipal storm water discharges when the Federal facility is like other regulated municipal separate storm sewer systems. Federal facilities may be like other municipal separate storm sewer systems due to similar residential populations and road systems; therefore, anticipated storm water discharges would also be similar.

The existing municipal permit application regulations define ''medium'' and ''large'' municipal separate storm sewer systems as those located in an incorporated place or county with a population of at least 100,000 (medium) or 250,000 (large) as determined by the latest Decennial Census (see 40 CFR 122.26(b)(4) and 122.26(b)(7)). In today's proposed rule, these regulations have been revised to define all medium and large municipal separate storm sewer systems as those meeting the above population thresholds according to the 1990 Decennial Census. The decision to ''freeze'' the definition of medium and large municipal separate storm sewer systems as of the 1990 Census was based on (1) a concern with deadlines, (2) an understanding that the permitting authority could always require more from owners or operators of municipal separate storm sewer systems serving ''newly over 100,000'' populations, and (3) the Agency's intention to merge the Phase I existing and Phase II proposed programs into a single seamless storm water program (see §§ 122.26(b)(4), (b)(7) and (b)(16)).

In today's proposed rule, owners or operators of small municipal separate sewer systems may be regulated under the NPDES program for storm water. Small municipal separate sewer systems are ''all municipal separate storm sewer systems that are not designated as a ''large'' or ''medium'' municipal separate storm sewer system, pursuant to 40 CFR 122.26(b)(4) and (b)(7), or designated under 40 CFR 122.26(a)(1)(v).'' Small municipal separate storm sewer systems include, but are not limited to, systems operated by local governments (including ''municipios''), State departments of transportation, and State, Tribal, and federal facilities. The term ''State, Tribal and federal facilities'' includes, but is not limited to, military installations, penitentiaries, universities and similar institutions with separate storm sewers draining areas. Municipal systems that were designated under 40 CFR 122.26(a)(1)(v) will continue to be regulated under the existing storm water program and, therefore, are not addressed under today's proposed rule.

In today's proposed rule (see §§ 122.32(a)(1) and 122.32(a)(2)), EPA defines ''regulated small municipal separate storm sewer systems'' to include all municipal separate storm sewers that are located in:

(1) An incorporated place, county (only the portion located in an urbanized area), or other place under the jurisdiction of a governmental entity (including but not limited to Tribal or Territorial governments) located in an urbanized area, as determined by the latest Decennial Census by the Bureau of the Census (see 55 FR 42592, October 22, 1990), except for Federal Indian reservations where the population within the urbanized area is under 1,000 persons.

(2) An incorporated place, county, or other place under the jurisdiction of a governmental entity other than those described in (1) above that is designated by the NPDES permitting authority. The NPDES permitting authority may designate any municipal separate storm sewer system located outside of an urbanized area. See Section II.G, NPDES Permitting Authority Role for the CWA section 402(p)(6) Municipal Program, for more details on this process.

Definitions of Key Terms and Phrases

The Bureau of the Census definition of ''incorporated place,'' adopted by EPA for purposes of today's proposal, is any place reported to the Bureau as legally in existence under the laws of the respective State as a city, borough, town, or village, with certain exceptions. (U.S. Department of Commerce, Bureau of the Census. 1994. *Geographic Areas Reference Manual*.) Because these Bureau of the Census exceptions would be included within the term ''county'' (see definition below), they would not impact the application of today's definition of a regulated small municipal separate storm sewer system in any way.

The Bureau of the Census definition of ''county,'' adopted by EPA for the purposes of today's proposal, is ''the primary legal subdivision of every State except Alaska and Louisiana.'' (USDC, 1994) For the purposes of today's proposed rule, the term ''county'' also includes Louisiana's county equivalent known as a parish and Alaska's county equivalent, which is an organized borough. A county's unincorporated territory includes all minor civil divisions and census-designated places but excludes all incorporated places. Therefore, any area that is not an incorporated place would be included within the definition of ''county,'' with the exception of Tribal or Territorial areas.

The phrase ''place under the jurisdiction of a governmental entity'' includes, but is not limited to, places within the jurisdiction of Tribes and Territorial governments. EPA is proposing this language in order to include governmental entities that are located within an urbanized area but whose government structure may not include incorporated places or counties. For example, Federal Indian reservations are neither incorporated places nor counties, but are sovereign entities, and Puerto Rico has ''municipios'' as their primary local government. The term ''Tribes'' includes any Indian Tribe, band, group, or community recognized by the Secretary of the Interior and exercising governmental authority over a Federal Indian reservation (40 CFR 122.2). ''Territorial governments'' include the following U.S. territories: the District of Columbia, the Commonwealth of Puerto Rico, American Samoa, Guam, the Virgin Islands of the United States, and the Commonwealth of the Northern Mariana Islands. ''Municipio'' means a Puerto Rico division which has legally established boundaries and constitutes a governmental unit. ''Pueblo'' or ''ciudad'' means the barrio or group of barrios which are considered the municipio center of government.

''Federal Indian reservation'' means all land within the limits of any Indian reservation or rancheria under the jurisdiction of the U.S. Government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation (40 CFR 122.2; see also Section II.F. of today's preamble and section 518 of the CWA).

Urbanized Areas Definition

The Bureau of the Census definition of ''urbanized area,'' adopted by EPA for

the purposes of today's proposed rule, is as follows:

An urbanized area (UA) comprises a place and the adjacent densely settled surrounding territory that together have a minimum population of 50,000 people.

The ''densely settled surrounding territory'' adjacent to the place consists of the following:

1. Territory made up of one or more contiguous census blocks having a population density of at least 1,000 people per square mile provided that it is:

a. Contiguous with and directly connected by road to other qualifying territory, or

b. Noncontiguous with other qualifying territory, and:

(1) Within 1 1/2 road miles of the main body of the urbanized area and connected to it by one or more nonqualifying census blocks that [a] are adjacent to the connecting road and [b] together with the outlying qualifying territory have a total population density of at least 500 people per square mile, or

(2) Separated by water or other undevelopable territory from the main body of the urbanized area, but within 5 road miles of the main body of the urbanized area, as long as the 5 miles include no more than 1 1/2 miles of otherwise nonqualifying developable territory.

2. A place containing territory qualifying on the basis of criterion 1 [above] will be included in the urbanized area in its entirety (or partially, if the place is an extended city) if that qualifying territory includes at least 50 percent of the population of the place. If the place does not contain any territory qualifying on the basis of the above criterion, or if that qualifying territory includes less than 50 percent of the place's population, the place is excluded in its entirety.

3. Other territory with a population density of less than 1,000 persons per square mile, provided that it:

a. Eliminates an enclave of no more than 5 square miles in the territory otherwise qualifying for the urbanized area when the surrounding territory qualifies on the basis of population density, or

b. Closes an indentation in the boundary of the territory otherwise qualifying for the urbanized area when the contiguous territory qualifies on the basis of population density, provided that the indentation is no more than 1 mile across the open end, has a depth at least two times greater than the distance across the open end, and encompasses no more than 5 square miles.

(55 FR 42592, October 22, 1990)

The full definition of an ''urbanized area'' has been included primarily for informational purposes. Because the Bureau of the Census determines urbanized areas based on the latest decennial census, the owner or operator of a municipal separate storm sewer system does not need to make any calculations to determine eligibility as a regulated small municipal separate storm sewer system. The Bureau of the Census provides detailed maps and comprehensive listings of all political entities within a given urbanized area. For a more detailed description of the treatment of urbanized areas for purposes of today's proposal, see the following discussion entitled, Nationwide Designation. Also, see Appendix 3 for a listing of urbanized areas of the United States and Puerto Rico.

a. Nationwide (''Automatic'') Designation

In today's proposed rule, all small municipal separate storm sewer systems located in an incorporated place, county, or other place under the jurisdiction of a governmental entity that is included within an urbanized area would be automatically designated as ''regulated'' small municipal separate sewer systems under today's proposed storm water program, provided that they were not previously designated into the existing storm water program. Unlike medium and large municipal separate storm sewer systems under the existing storm water regulations, not all small municipal separate storm sewer systems would be designated under today's proposal and, therefore, a distinction is made in the rule between ''small'' municipal separate storm sewer systems and ''regulated small'' municipal separate storm sewer systems.

EPA estimates that this automatic designation would include approximately 3,500 incorporated places and counties (about 16% of all incorporated places and counties nationwide), 41 municipios (more than 50% of all municipios in Puerto Rico), and 27 Tribes (although 9 of these Tribes would be exempted and there are other special considerations—see Section II.F, Tribal Role). In addition, as previously discussed, this definition would include State, Tribal, and Federal highways and facilities located within urbanized areas.

It is important to note that if a county or Federal Indian reservation is only partially included in an urbanized area, only the urbanized portion of the county or Federal Indian reservation would be regulated. Although rare, even if an incorporated place is only partially included in the urbanized area, then the entire place is regulated. The regulation of counties is meant to capture all unincorporated areas located within the urbanized area in an effort to create a seamless program by avoiding the creation of unregulated areas surrounded by regulated areas, sometimes referred to as ''donut holes'' in the regulatory scheme. For example, if an urbanized area contains a regulated medium or large municipal separate sewer system that has within its boundaries some incorporated places that were originally excluded from the storm water program due to the population threshold of 100,000, most of these previously unregulated donut holes would now be defined as regulated small municipal separate sewer systems under today's proposed rule and would be covered by the NPDES program for storm water.

In Puerto Rico, EPA is proposing to regulate the entire municipio where the total population is equal to or greater than 100,000. Those municipios include Bayamon, Caguas, Carolina, Mayaguez, Ponce, and San Juan. For the other municipios that are located within an urbanized area and have populations of less than 100,000, only the pueblo will be regulated.

i. Urbanized Area Description. There are 405 urbanized areas in the United States that cover 2 percent of total U.S. land area and contain approximately 63 percent of the nation's population (see Appendix 3 for a listing of urbanized areas of the United States and Puerto Rico). These numbers include U.S. Territories, although Puerto Rico is the only territory to have census-designated urbanized areas. Urbanized areas constitute the largest and most dense areas of settlement. The purpose of determining an ''urbanized area'' is to delineate the boundaries of development and map the actual built-up urban area. The Bureau of the Census geographers liken it to flying over an urban area and drawing a line around the boundary of the built-up area as seen from the air.

An ''urbanized area'' comprises one or more places—central place(s)—and the adjacent densely settled surrounding area—urban fringe—consisting of (1) incorporated places, (2) census designated places, and (3) county nonplace territory that together have a minimum population of 50,000. ''Central places'' include both incorporated and census-designated places. ''County nonplace territory'' is the area of the county that does not include incorporated or census-designated places. (It is important to note that ''county'' as defined for the purposes of today's proposed rule includes census-designated places). The urban fringe is a contiguous area with an average population density of at least 1,000 persons per square mile at its perimeter (see full ''urbanized area'' definition above).

The basic unit for delineating the urbanized area boundary is the census block. Census blocks are based on visible physical boundaries, such as the city block, when possible or on invisible political boundaries when not. In a

larger sense, the urbanized area determination is not based on political boundaries for counties or Federal Indian reservations but is for ''places.''

• Place—A place is included in its entirety whether or not all of its census blocks meet the urbanized area definition. Therefore, this part of the urbanized area determination is based on political boundaries. However, it should be noted that in rare cases (128 places), a place is not included in its entirety, but rather is only partly included within the urbanized area, due to the existence of large expanses of vacant or very sparsely populated territory within its incorporated area. (Such ''extended cities,'' as they are called, are most common in North Carolina due to their unique annexation laws.)

• County/Federal Indian reservation—A county is included in its entirety only if all of its census blocks, based on the county's unincorporated area, meet the urbanized area definition. Unlike a place, a county is often ''split'' into urbanized and non-urbanized portions, with no regard for political boundaries. Under today's proposed rule, only the urbanized portion of a ''split county'' would be covered. The same case applies to Federal Indian reservations.

Most owners or operators of municipal separate storm sewer systems would not need to independently determine the status of coverage under today's proposal. Most likely, a list of the places, counties, and other places under the jurisdiction of a governmental entity within an urbanized area would be published with the general permit. If not, they can contact their permitting authority or the Bureau of the Census to find out if their storm sewer systems are within an urbanized area. In addition, the necessary information should be available on the Bureau of the Census Internet Home Page (see http://www.census.gov/). Using data from the latest decennial census, the Census Bureau applies the urbanized area definition nationwide (including U.S. Tribes and Territories) and determines which places and counties are included within each urbanized area. For each urbanized area, the Bureau provides full listings of who is included, as well as detailed maps and special CD–ROM files for use with computerized mapping systems (such as GIS). Each State's data center receives a copy of the list, and some maps, automatically. The States also have the CD–ROM files and a variety of publications available to them for reference from the Bureau of the Census. In addition, local or regional planning agencies may have urbanized area files already. New listings for urbanized areas based on the 2000 Census will be available by July/August 2001, but the more comprehensive computer files will not be available until late 2001/early 2002. Appendix 6 to this preamble provides a list of incorporated places and counties proposed to be automatically designated as part of today's proposed rule.

Additional designations based on subsequent census years would be governed by the Bureau of the Census' definition of an urbanized area in effect for that year. Based on historical trends, EPA expects that any area (incorporated place, county, or other place) determined by the Bureau of the Census to be included within an urbanized area as of the 1990 Census would not later be excluded from the urbanized area as of the 2000 Census due to a possible change in the Bureau of the Census' urbanized area definition. However, it is important to note that even if this situation were to occur, a small municipal separate storm sewer system once automatically designated into the NPDES program for storm water under an urbanized area calculation for any given Census year would remain regulated regardless of the results of subsequent urbanized area calculations.

Appendix 2 is a simplified urbanized area illustration to help demonstrate the concept of urbanized areas in relation to today's proposed rule. The ''urbanized area'' is the shaded area that includes within its boundaries incorporated places, a portion of a Federal Indian reservation, an entire county, and portions of three other counties. Any and all owners and operators of small municipal separate storm sewer systems located in the shaded area would be covered by the proposed rule. Any small municipal separate storm sewers located outside of the shaded area would be subject to potential designation by the permitting authority.

ii. Urbanized Area Profiles. To further illustrate the concept of urbanized areas, this section highlights two urbanized areas and their relationship to the NPDES storm water program. The first case study is the Milwaukee, Wisconsin, urbanized area, which already includes medium and large municipal separate storm sewer systems and would also include regulated small municipal separate storm sewer systems under today's proposed rule. The second case study is the Myrtle Beach, South Carolina, urbanized area, which would include only regulated small municipal separate storm sewer systems. Neither urbanized area has within its boundaries a Federal Indian reservation.

• Case Study 1: Milwaukee, WI (*total urbanized area population = 1,226,293*)

The Milwaukee, Wisconsin, urbanized area has at its core the large municipal separate storm sewer system of Milwaukee, which is contained within the county of Milwaukee. The urbanized area extends beyond the boundaries of the city of Milwaukee into the county of Milwaukee and the four surrounding counties of Racine, Wauklesha, Washington, and Ozaukee. The county of Milwaukee is entirely within the urbanized area, while the other four counties are only partially within it. A total of five counties would be included in the storm water program, but only the municipal separate storm sewer systems in the urbanized portions of the counties would be automatically designated. In addition to the five counties, 38 incorporated places are within the urbanized area and would also be automatically designated as regulated small municipal separate storm sewer systems under today's proposal: River Hills Village, Mequon, Germantown, Lannon, Sturtevant, Wind Point, Big Bend, Pewaukee, Bayside, North Bay, Butler, West Milwaukee, Thiensville, Elmwood Park, Elm Grove, Sussex, Fox Point, Hales Corners, Cedarburg, St. Francis, Grafton, Oak Creek, Brown Deer, Glendale, Greendale, Cudahy, Shorewood, Whitefish Bay, Franklin, Menomonee Falls, New Berlin, Brookfield, Greenfield, South Milwaukee, Wauwataso, Waukesha, West Allis, City of Racine. The result is a pattern where a regulated medium or large municipal separate storm sewer system core is surrounded by regulated small municipal separate storm sewer systems located within unincorporated areas (counties) and incorporated places. Each owner or operator of a municipal separate storm sewer system in these areas would be responsible for obtaining an NPDES permit for the discharges from their system.

• Case Study 2: Myrtle Beach, SC (*total urbanized area population = 58,384*)

The Myrtle Beach, South Carolina, urbanized area does not include a medium or large municipal separate storm sewer system. The entire urbanized area, with Myrtle Beach at its core, would meet the definition of a regulated small municipal separate storm sewer system. The Myrtle Beach urbanized area spreads into two counties, Harry and Georgetown counties, and covers only two incorporated places, Myrtle Beach and Surfside Beach. As was the case in the Milwaukee example, the counties of Harry and Georgetown are only partially

within the urbanized area. All owners or operators of municipal separate sewer systems located in the urbanized portions of Harry and Georgetown counties and in the two incorporated places would be included under the NPDES storm water program as regulated small municipal separate storm sewer systems, resulting in blanket coverage by the storm water program with no unregulated ''donut holes.''

iii. Rationale for Using Urbanized Areas. EPA proposes using urbanized areas to automatically designate regulated small municipal separate storm sewer systems on a nationwide basis for several reasons: (1) studies and data show a high correlation between degree of development/urbanization and adverse impacts on receiving waters due to storm water (U.S. EPA, 1983; Driver et al., 1985; Pitt, R.E. 1991. ''Biological Effects of Urban Runoff Discharges.'' Presented at the Engineering Foundation Conference: *Urban Runoff and Receiving Systems; An Interdisciplinary Analysis of Impact, Monitoring and Management,* August 1991. Mt. Crested Butte, CO. American Society of Civil Engineers, New York. 1992.; Pitt, R.E. 1995. ''Biological Effects of Urban Runoff Discharges,'' in *Storm water Runoff and Receiving Systems: Impact, Monitoring, and Assessment.* Lewis Publishers, New York.; Galli, J. 1990. *Thermal Impacts Associated with Urbanization and Storm water Management Best Management Practices.* Prepared for the Sediment and Storm water Administration of the Maryland Department of the Environment.; Klein, 1979), (2) this approach would target present and future growth areas as a preventative measure to help ensure water quality protection, (3) the determination of urbanized areas by the Bureau of the Census allows owners or operators of small municipal separate storm sewer systems to quickly determine whether they are included in the NPDES storm water program as a regulated small municipal separate storm sewer system, and (4) the blanket coverage within the urbanized area encourages the watershed approach and addresses the problem of ''donut-holes,'' where unregulated areas are surrounded by regulated areas. (Donut hole areas present a problem due to their contributing uncontrolled impacts on neighboring regulated communities and local waters.)

One drawback to the proposed approach is that it would divide some counties into regulated areas and nonregulated areas. Such ''split'' counties could have difficulty focusing efforts, such as public education and the maintenance and management of infrastructure on just the regulated areas. One commenter suggested that in the case of a ''split'' county, only the incorporated areas within the urbanized portion of the county should be regulated, not the entire urbanized portion of the county. EPA would prefer, however, to create a seamless program that does not create donut holes as this suggestion would do, but rather includes all of the municipal separate storm sewer systems within the urbanized area. EPA is attempting to eliminate the existence of donut hole areas because municipal separate storm sewer system discharge sources within them could contribute to water quality impairment and could adversely affect the storm water management efforts of the neighboring regulated communities. Furthermore, as noted previously, including the entire urbanized portion of a county would promote partnerships in watershed efforts to improve local water quality.

b. Municipal Designation by the Permitting Authority

Today's proposed rule would also allow NPDES permitting authorities to designate areas that should be included in the storm water program as regulated small municipal separate storm sewer systems but do not qualify under the regulatory ''urbanized areas'' definition. The proposed rule requires, at a minimum, that a set of designation criteria be applied to all small municipal separate storm sewer systems within a jurisdiction that includes a population of at least 10,000 and a population density of at least 1,000. Appendix 7 to this preamble provides a list of incorporated places and counties proposed to be potentially designated as part of today's proposed rule. In addition, the owner or operator of any small municipal separate storm sewer system may be the subject of a petition to the NPDES permitting authority for designation. See Section II.G, NPDES Permitting Authority's Role for the CWA section 402(p)(6) Municipal Program, for more details on the designation and petition processes. EPA believes that the approach of combining nationwide and local designation to determine municipal coverage in today's proposed rule balances the potential for significant impacts on water quality with local watershed protection and planning efforts. The Agency solicits comments on this approach and possible alternatives.

c. Waiving the Requirements for Regulated Small Municipal Separate Storm Sewer Systems

Today's proposed rule would include some flexibility in the nationwide coverage of all small municipal separate storm sewer systems located in urbanized areas by providing the NPDES permitting authority with the discretion to waive the otherwise applicable requirements of a regulated small municipal separate storm sewer system serving less than 1,000 people where assessments of local conditions and watersheds warrant such a waiver. Note that even if a regulated small municipal separate storm sewer system had requirements waived, it could subsequently be brought back into the program if circumstances change. See Section II.G, NPDES Permitting Authority's Role for the CWA section 402(p)(6) Municipal Program, for more details on this process.

i. Combined Sewer Systems. The definition of ''municipal separate storm sewer systems'' does not include combined sewer systems. A combined sewer system is a wastewater collection system that conveys sanitary wastewater and storm water through a single set of pipes to a publicly-owned treatment works (POTW) for treatment before discharging to a receiving waterbody. During wet weather events when the capacity of the combined sewer system is exceeded, the system is designed to discharge, prior to the POTW, directly into a receiving waterbody. Such an overflow is a combined sewer overflow, or CSO. Combined sewer systems are not subject to existing regulations for storm water, nor will they be subject to today's proposed regulations. EPA addresses combined sewer systems and CSOs in its National Combined Sewer Overflow (CSO) Control Policy that was issued on April 19, 1994 (59 FR 18688). The CSO Control Policy contains provisions for developing appropriate, site-specific NPDES permit requirements for combined sewer systems. CSO discharges are subject to BAT/BCT limits; municipal separate storm sewer systems are subject to MEP.

Some municipalities are served by both separate storm sewer systems and combined sewer systems. If such a municipality is located within an urbanized area, only the separate storm sewer system within that municipality would be included in the NPDES storm water program and subject to today's proposed rule. If the municipality is not located in an urbanized area, then the NPDES permitting authority would have discretion as to whether the separate storm sewer system is subject to today's

proposed rule. Under today's proposed rule, the NPDES permitting authority would use the same process to designate for coverage a municipal separate storm sewer system where the municipality is also served by a combined sewer system, as it would for municipalities that are served only by a separate storm sewer system. The Agency recognizes that municipalities that have both combined and separate storm sewer systems may wish to find ways to develop a unified program to meet all wet weather requirements more efficiently. EPA seeks comment on ways to achieve such a unified program.

d. Designation Alternatives Considered—Preliminary Options

In developing the proposed approach, EPA considered several alternative approaches for designation. Three of the primary options considered are discussed below, in no particular order. EPA seeks comment on all three of these options and welcomes ideas for other alternative options for determining the definition of a regulated small municipal separate storm sewer system.

i. Designation Option 1. One option EPA considered was the proposal suggested by the Storm Water Phase II FACA Subcommittee's Municipal De Minimis Work Group. Under this option, all municipal separate storm sewer systems would be included in the NPDES permit program, unless the system is aboveground, or underground and serving an area with a population density of less than 1,000. Local governments with no underground storm drain systems would be excluded, unless the NPDES permitting authority determined that storm drainage from aboveground (e.g., open drainage ditches) is within the control of the local government and that pollution from runoff from such drains is causing impairment to beneficial uses or exceedances of water quality standards in a permanent water body. This option would also exclude local governments with underground storm drains if they had a density of less than 1,000 persons/square mile (or some other criteria, such as building starts, rainfall, or percentage of imperviousness, if such parameters are proven better indicators of storm water pollution), unless:

- The NPDES authority finds that runoff from the local government drainage system is contributing to the impairment of beneficial uses or exceedances of water quality standards in a permanent waterbody. (The Municipal De Minimis Work Group purposely used the term ''permanent water body,'' and not the term ''waters of the United States,'' because they did not want intermittent streams, seasonal wetlands, etc. to be included. However, they did not define exactly what they envisioned to be a ''permanent water body.'') Any person could petition the NPDES authority to make or verify such a finding.
- Pollution from runoff from the local government drainage system either directly discharges to an adjacent municipality covered by these requirements or significantly contributes to the pollution from runoff that would otherwise be attributable to an adjacent municipality covered by these requirements.

While EPA believes that this option concerning aboveground/underground systems for densities of less than 1,000 persons has merit, the Storm Water Phase II FACA Subcommittee could not resolve issues associated with defining and quantifying the different types of ditches and drainage systems on a nationwide basis. The work group assumed that aboveground systems would consist primarily of vegetated ditches. However, enough data are not available to either prove or disprove this assumption. The work group found vegetated ditches highly desirable and worthy of exemption because of the benefits of natural management of storm water that they can provide. The pervious and contoured surface of vegetated ditches allows the water to percolate, resulting in an overall decrease in velocity and volume of flow and pollutant levels. However, these systems have variable removal efficiencies for pollutants and can potentially contribute additional pollutants to storm water runoff. Due to the variability of the types of aboveground system surfaces and the lack of data, EPA chose not to propose this option as its own. In addition, EPA had significant concerns about the number of smaller municipalities that would be permitted under such an approach, even though they might not contribute to significant water quality impacts. Under the approach selected for today's proposed rule, EPA believes that only those municipalities likely to contribute to significant water quality impacts would be designated into the storm water program.

ii. Designation Option 2. Another option, which was suggested by several members of the Storm Water Phase II FACA Subcommittee, would require all small municipal separate storm sewer systems to be regulated under the NPDES program for storm water and to implement the six minimum measures as described in today's approach, unless the owner or operator of the system could prove that the system is not causing adverse water quality impacts and not contributing to pollutant loads in the watershed. One commenter suggested the use of this approach with an automatic exemption based on objective criteria, such as low population and proximity to waters of the United States.

EPA acknowledges that this approach has advantages. It would guarantee that the areas of most concern are regulated, create a seamless storm water program without donut holes, avoid disputes over designation, and promote a watershed-based program because all sources in a watershed would already be in the program. In addition, its simple blanket coverage would create less confusion over whether an owner or operator of a municipal separate storm sewer system is in or out of the storm water program, and the burden for exclusion would be on the owner or operator of the municipal separate sewer system, not the permitting authority. Overall, this option best addresses the cumulative impact of all activities within a watershed that create environmental problems. By including only particular sources within a watershed, as is the case with the other options, the potential environmental benefits of the storm water program could be limited.

Although this option might appropriately address issues of fairness and simplicity, it fails to target the areas of greatest concern (i.e., areas causing significant water quality impacts) and instead would regulate all areas regardless of impacts, unless an exemption was approved. This approach, by including a universe of approximately 19,289 incorporated places and 17,796 minor civil divisions located in 3,141 counties, in addition to Tribal lands and Territories, could regulate many more entities than the current proposal, resulting in higher costs than today's proposal for all involved. The exemption process, which could apply to thousands of municipalities, would require them to spend valuable time and resources trying to prove that they have little or no impact on water quality, while the permitting authority would be saddled with the additional burden of processing and evaluating such requests. It may be the case that the administrative burden for a storm water program of this size, and the potential overregulation, would not justify the full coverage it would provide.

Furthermore, it would also be difficult to justify an automatic exemption based solely on the criteria of population size and proximity to waters of the United States. Total population (as opposed to

population density) is not a good measure of storm water impacts because it lacks an indication of where and how the population is distributed, both of which are significant factors addressed in today's proposal. For example, an area with high population could be less urbanized with fewer impacts on water quality than a place with lower population due to the size of the area involved in each. EPA anticipates extreme difficulty in determining and justifying a particular population threshold without also considering other factors that would help to both account for the variability of local conditions and indicate whether or not there are significant water quality impacts. Furthermore, a population threshold would still result in donut holes. Similar problems could be associated with the second criterion of ''proximity to waters of the United States.'' It is an important consideration but not much more telling than total population due to the variety of local conditions that could or could not make this criterion a significant factor in the determination of real or potential water quality impacts. Therefore, even the tandem use of these two criteria could lack enough information to make an informed and justifiable decision on an exemption. For the reasons discussed above, EPA chose not to propose this option.

iii. Designation Option 3. To satisfy CWA section 402(p)(5)(C), EPA recommended the approach outlined in *President Clinton's Clean Water Initiative.* This approach was similar to today's proposed approach in that the NPDES permitting authority would issue system-wide NPDES permits for all municipal separate storm sewer systems in census-designated urbanized areas. This option would require storm water management programs for municipal separate storm sewer systems in the 138 urbanized areas in which a medium or large municipal separate sewer system is located. At a minimum, the programs would address non-storm water discharges into storm sewers and storm water runoff from growth and development and significant redevelopment. NPDES permitting authorities would be encouraged to implement watershed approaches and more comprehensive program requirements where necessary and appropriate. In the remaining 267 census-designated urbanized areas (containing only small municipal separate storm sewer systems), municipal storm water management programs would be less stringent and required to focus only on controlling non-storm water discharges into storm sewers and storm water runoff from growth, development, and significant redevelopment activities.

By focusing on census-designated urbanized areas, many of the sources of greatest concern would be addressed, while also providing a clear definition of who is included in the storm water program. However, the tiered permitting requirements of this approach could create unnecessary confusion. EPA would not want to require regulated small municipal separate storm sewer systems in urbanized areas with a medium or large municipal separate storm sewer system to do more than those in urbanized areas without a medium or large municipal separate storm sewer system. Rather, EPA envisions progress toward a seamless, unified, and comprehensive NPDES storm water program with equivalent program requirements as the best approach. If this alternative option was adopted, three varying levels of requirements (the existing requirements plus two tiers for small municipal separate sewer systems) would eventually need to be unified instead of just two, as found under today's proposal. Although primarily concerned with growth associated with urbanized areas, this approach is also limited by its reliance on non-NPDES programs for addressing sources beyond urbanized areas. Environmental and municipal representatives on the Storm Water Phase II FACA Subcommittee agreed that any sources that are significant contributors of pollutants should be considered for regulation directly under an NPDES permit, including those outside of urbanized areas. For these reasons, EPA did not present this option as the lead option.

3. Municipal Permit Requirements

EPA is proposing that all owners or operators of regulated small municipal separate storm sewer systems, as defined at § 122.32, must seek coverage under an NPDES permit. EPA intends that the vast majority of discharges from these sources would be authorized under general permits issued by the NPDES permitting authority. These NPDES general permits would provide specific instructions for how to seek coverage, including application requirements. Typically, such application requirements would be satisfied by the submission of an NOI to be covered by the general permit.

For cases in which an NPDES general permit is not available or the NPDES permitting authority requests that an owner or operator be covered under an individual NPDES permit, EPA is proposing simplified individual permit application requirements at § 122.33. Under the simplified individual permit application requirements, the owner or operator would submit an application to the NPDES permitting authority that includes the information required under § 122.21(f), an estimate of square mileage served by the separate storm sewer system, and any additional information that the NPDES permitting authority requests. Consistent with CWA section 308 and analogous State law, the permitting authority could request any additional information to gain a better understanding of the system and the areas draining into the system.

Today's proposal also would allow an owner or operator of a regulated small municipal separate storm sewer system to join as a co-permittee in an existing NPDES permit issued to an adjoining medium or large municipal separate storm sewer system or designated source under the existing storm water program through a modification of that municipal separate storm sewer system's permit. This co-permittee provision would only apply if agreed to by all co-permittees. Under a co-permittee arrangement, the owner or operator of the regulated small system would need to comply with the applicable requirements of § 122.26 and the terms and conditions of the applicable permit, but would not be required to fulfill all the permit application requirements applicable to medium and large systems and permit condition requirements applicable to regulated small systems. Specifically, the regulated small system owner or operator would not be required to comply with the permit condition requirements of § 122.34 of today's proposal or with the application requirements of § 122.26(d)(1)(iii) (Part 1 source identification), § 122.26 (d)(1)(iv) (Part 1 discharge characterization), and § 122.26(d)(2)(iii) (Part 2 discharge characterization data). Furthermore, the owner or operator of the regulated small system could satisfy the requirements in § 122.26(d)(1)(v) (Part 1 management programs) and § 122.26(d)(2)(iv) (Part 2 proposed management program) by referring to the adjoining municipality's existing plan. An owner or operator pursuing this option would need to describe in the permit modification request how the adjoining municipality's storm water program addresses or would need to be supplemented in order to adequately address discharges from the municipal separate storm sewer system. The request would also need to explain the

role of the owner or operator in coordinating local storm water activities and describe the resources available to accomplish the plan.

EPA believes that this approach would support the goal of an integrated and coordinated national storm water program. Regulated small system owners or operators could take advantage of existing programs to ease the burden of creating their own from scratch. The proposal would allow them to conduct activities that are coordinated on a regional basis. For medium and large system owners or operators, this approach would promote the use of regional and watershed-based planning as an implementation framework for the storm water program and would create opportunities for sharing the resource and cost burden of the program with participating entities. EPA is particularly interested in comments regarding the actual implementation of this application provision. For instance, whether the provision contains the appropriate subsections of § 122.26(d) and whether the process as set forth creates an incentive to use this alternative for permit coverage.

In today's notice, EPA is proposing certain minimum control measures for all NPDES permits issued to regulated small municipal separate storm sewer systems, with the exception of joint co-permittees, as noted previously, to ensure equity and consistency among owners or operators. Any NPDES permit issued under this program would, at a minimum, require the owner or operator to develop, implement, and enforce a storm water management program designed to reduce the discharge of pollutants from a regulated system to the maximum extent practicable (MEP) and protect water quality (see MEP discussion in the following section). Narrative effluent limitations requiring implementation of BMPs would generally be considered the most appropriate form of effluent limitations when designed to satisfy technology requirements, including reductions of pollutants to the maximum extent practicable, and water quality-based requirements of the CWA. Examples of narrative effluent limitations include no floatables in storm water discharges and no visible sheen on waterbodies.

In the first two to three rounds of permit issuance, EPA envisions that implementation of the minimum measures and BMP-based program would be the extent of the storm water permit requirements for the large majority of regulated small municipal separate storm sewer systems. EPA assumes that a regulated small municipal separate storm sewer system implementing BMPs to satisfy the six minimum control measures would meet applicable water quality standards, because, though uncontrolled urban storm water continues to present a significant water quality problem, the six measures represent a significant level of control if properly implemented. EPA believes that the implementation of any controls, but particularly the six minimum measures identified in today's proposal, should significantly reduce pollutants in urban storm water compared to existing levels. If after implementing the six minimum control measures there is still a water quality problem associated with discharges from the municipal separate storm sewer system, the municipality would need to expand or better tailor its BMPs within the scope of the six minimum control measures for each subsequent permit. EPA envisions that this process would take two to three permit terms. During this time, EPA would revisit the regulations for the municipal storm water program. If additional specific measures to protect water quality were imposed, they would likely be the result of an assessment based on TMDLs, or the equivalent of TMDLs, where the proper allocations would be made to all contributing sources. EPA believes that the municipality's additional requirements, if any, should be guided by its equitable share based on a variety of considerations, such as cost effectiveness, proportionate contribution of pollutants, and ability to reasonably assume wasteload reductions. Narrative effluent limitations requiring implementation of BMPs are generally the most appropriate form of effluent limitations when designed to satisfy technology requirements, including reductions of pollutants to the maximum extent practicable, and water quality-based requirements of the Clean Water Act. See Section II.L, Water Quality Issues, for further discussion of this approach to permitting, consistent with EPA's interim permitting guidance.

The municipal caucus was concerned that a requirement to meet water quality standards would be interpreted by a permitting authority as a requirement to include water quality-based numeric limitations in municipal storm water permits. Municipal representatives believe that in many cases it would not be possible to develop a storm water program that would result in the attainment of numeric limitations, except at considerable cost. Today's proposal addresses this concern, as discussed above.

As part of this program, the owner or operator would be required to identify and submit to the NPDES permitting authority, either in an NOI to be covered under a general permit or in an individual permit application, the BMPs to be implemented and the measurable goals for each of the minimum control measures discussed in Section II.H.3.a., Program Requirements—Minimum Control Measures.

The term ''measurable goals'' is derived from negotiations among FACA representatives. Section 402(p)(6) of the CWA states that the program to regulate additional storm water discharges may include performance standards, guidelines, guidance, and management practices as appropriate. Discussions among FACA representatives resulted in the use of the term ''measurable goals.'' On the one hand, environmental representatives wanted to include performance standards as conditions of NPDES permits as a means of providing for specific, tangible activities to be undertaken within the municipal storm water management program. On the other hand, municipal representatives opposed the inclusion of performance standards, asserting that they were counter productive because they could encourage an owner or operator of a municipal separate storm sewer system to avoid risks associated with setting any standard that it felt it could not achieve with certainty. Out of this discussion, a compromise was reached in the use of the term ''measurable goals'' and the process embodied in the proposed rule. This process sets the issuance of a menu of regionally-appropriate BMPs as the conditions precedent to ''measurable goals'' becoming permit conditions. Some storm water management plans developed to meet requirements of the existing storm water program include provisions similar to the concept of ''measurable goals'' proposed today. Specifically, some municipal storm water management plans include, for example, inspection of or cleaning of a fixed number of storm drain inlets per year and a survey of all municipal right-of-ways to identify illicit connections to the municipal separate storm sewer system. Currently, existing permit application regulations for municipal separate storm sewer systems require identification and implementation of BMPS and not necessarily measurable goals, much less performance standards.

Qualifying State, Tribal, or local programs that meet the requirements of one or more of the minimum control measures could be incorporated by

reference into the NPDES municipal separate storm sewer system general permit. For more information regarding the general permit NOI or individual permit application, see Section II.H.3.b., Application Requirements.

Maximum Extent Practicable

Maximum extent practicable (MEP) is a technology-based control standard currently used in the existing municipal storm water program against which permit writers and permittees assess whether or not an adequate level of control has been proposed in the storm water management program. The Urban Wet Weather Flows Federal Advisory Committee recommended to EPA that MEP be applied to all permits issued to municipal separate storm sewer systems, including those proposed to be regulated today, to achieve greater cooperation and consistency, reduce conflicts and confusion, and improve economies of scale in the efforts of municipalities to manage storm water pollution.

In today's proposal, NPDES permits issued for regulated small municipal separate storm sewer systems, whether in the form of general or individual permits, would require the owner or operator to develop, implement, and enforce a storm water management program designed to reduce the discharge of pollutants to the maximum extent practicable. The permittee would be expected to reduce the pollutants to the MEP through implementation of the following minimum control measures: Public education and outreach on storm water impacts, public involvement/participation, illicit discharge detection and elimination, construction site storm water runoff control, post-construction storm water management in new development and redevelopment, and pollution prevention/good housekeeping for municipal operations.

Under today's proposed approach, MEP would be determined through a series of steps associated with identification and implementation of the minimum control measures. In issuing the general permit, for example, the NPDES permitting authority would establish requirements for each of the minimum control measures and require municipalities to identify the BMPs to be performed and measurable goals to be achieved. Permittees would then be required to identify the BMPs and associated measurable goals for addressing each of the minimum control measures in their NOIs.

Upon receipt of the NOI from a municipality, the NPDES permitting authority would then have the opportunity to review the NOI to verify that the identified BMPs and measurable goals would meet the MEP requirement and, if necessary, could ask the permittee to revise the mix of BMPs to better reflect the requirement. A similar procedure could be established for a small municipal separate storm sewer system that is a co-permittee with a municipal separate storm sewer system that is already regulated in an individual NPDES permit. This process would be followed by actual program implementation by the municipality. Under the proposed approach, implementation of BMPs consistent with storm water management program requirements at § 122.34 and permit provisions at § 122.33 would constitute compliance with the standard of ''reducing pollutants to the maximum extent practicable.''

The pollutant reductions that represent MEP may be different for each municipality, given the unique storm water concerns that may exist and the differing possible remedies. Therefore, each permittee would determine the specific details in each of the six minimum control measures that represent MEP through an evaluative process. In this process, permittees and permit writers would evaluate the proposed storm water management controls to determine whether reduction of pollutants to the MEP could be achieved with the identified BMPs. EPA envisions that this evaluative process would consider such factors as conditions of receiving waters, specific local concerns, and other aspects included in a comprehensive watershed plan. The FACA Committee is currently working to identify evaluative MEP criteria. Suggestions have included: (1) The effectiveness to address the pollutant(s) of concern, (2) public acceptance, (3) cost, (4) technical feasibility, and (5) compliance with Federal, State and local laws and regulations.

Prior to permit issuance, EPA plans to develop additional policy and technical guidance on the process of evaluating MEP for municipal separate storm sewer system permits based upon the recommendations received from the FACA Committee. This guidance would be applicable to both medium and large systems (addressed by existing requirements), as well as those addressed by today's proposal. It is important to note that States implementing their own NPDES programs may develop more stringent requirements than those proposed in today's rule. In any event, additional elaboration of the MEP determination process is not necessary prior to issuance of the final rule, because MEP is determined on a permit-by-permit basis.

a. Program Requirements—Minimum Control Measures

i. Public Education and Outreach on Storm Water Impacts. EPA is proposing that any NPDES permit issued to regulated small municipal separate storm sewer systems would require the owner or operator to implement a public education program to distribute educational materials to the community (or conduct equivalent outreach activities) about the impacts of storm water discharges on waterbodies and the steps to reduce storm water pollution. The State, EPA, environmental organizations or other public interest or trade organizations could provide materials, subject to the approval of the owner or operator of the municipal system. The materials or outreach programs should inform individuals and households about steps that can be taken to reduce storm water pollution, such as ensuring proper septic system maintenance, limiting the use and runoff of garden chemicals to appropriate amounts, properly disposing of used motor oil or household hazardous wastes, and becoming involved in local stream restoration activities. EPA would encourage individuals to participate in activities coordinated by youth service organizations, conservation corps, or other citizen groups. Other possible outreach materials could encourage citizens to participate in the municipal program by performing such services as roadside litter pickup and storm drain stenciling or highlight the potential public health risks to children if exposed to pollution when playing near storm drains. In addition, some of the materials or outreach programs should be directed toward targeted groups of commercial, industrial, and institutional entities likely to have significant storm water impacts to explain their impacts on storm water pollution (e.g., information to restaurants on the impact of grease clogging storm drains and to garages on the impacts of used oil discharges). The owner or operator is encouraged to tailor the outreach program to address the viewpoints and concerns of all communities, particularly minority and disadvantaged communities, as well as children.

EPA believes that as the public gains a greater understanding of the municipally developed program, the municipality is likely to gain more support for the program (including funding initiatives). In addition, compliance with the program would probably be greater if the public

understands the personal responsibilities expected of them and others. Well-informed citizens could even act as formal or informal educators to further disseminate information and gather support for the program, thus easing the burden on the municipalities to perform all educational activities. The public outreach provision has been tailored to respond to specific concerns raised in the course of the FACA process. For example, municipal representatives advocated the inclusion of language that would clarify that use of educational materials from outside groups, such as trade associations and environmental groups, would be subject to the approval of the municipality. Also, the above-referenced language addressing environmental justice concerns was in response to input from Storm Water Phase II FACA Subcommittee members.

Municipalities would be encouraged to enter into partnerships with their States in fulfilling the public education requirement. It may be much more cost-effective to utilize a State education program instead of numerous municipalities developing their own. Municipalities would also be encouraged to work with other organizations (e.g., environmental and nonprofit groups and industry) that might be able to assist in fulfilling this requirement. Many of these kinds of organizations already have educational materials, and the groups could work together to educate the public.

EPA requests comment on the appropriateness of the specified requirements for public education and outreach.

ii. Public Involvement/Participation. Public involvement is an integral part of the municipal storm water program. The Agency believes that the public can provide valuable input and assistance to the municipality's storm water program. The Agency, therefore, is proposing that the public play an active role in the development and implementation of the municipality's storm water management program.

The municipal storm water management program would need to include a public participation program that complies with applicable State and local public notice requirements. The public should participate as a partner in developing, implementing, and reviewing the storm water management program. Opportunities for members of the public to participate in program development and implementation could include serving as citizen representatives on a local storm water management panel, attending public hearings, working as citizen volunteers to educate other individuals about the program, assisting in program coordination with other pre-existing programs, or participating in volunteer monitoring efforts. The public participation process should engage all economic and ethnic groups.

Early and frequent public involvement can shorten implementation schedules and broaden public support for a program. One challenge associated with public involvement is addressing conflicting viewpoints. Another challenge is in engaging the public in the public meeting and program design process. Nevertheless, EPA strongly believes that the overall benefits of an aggressive and inclusive program, including involvement of low-income and minority communities, is an essential component of a State, Tribal, Federal, and municipal storm water management program.

Public participation ensures a more successful storm water program by providing valuable expertise and a conduit to other programs and governments, which would be of primary importance if the municipal storm water program is to be implemented on a watershed basis. The public could act as volunteers in all aspects of the program, thus saving municipal resources. Another recognized benefit is that members of the public are less likely to raise legal challenges to a municipality's storm water program if they have been involved in the decisionmaking process and program development and, therefore, are partially responsible for the program themselves. Section II.K. provides further discussion on public involvement.

EPA requests comment on the appropriateness of the specified requirements for public involvement/participation.

iii. Illicit Discharge Detection and Elimination. Discharges from storm water drainage systems often include wastes and wastewater from non-storm water sources. EPA's Nationwide Urban Runoff Program (NURP) indicated that many storm water outfalls still discharge during substantial dry periods. Pollutant levels in these dry weather flows were shown to be high enough to significantly degrade receiving water quality. Results from a 1987 study conducted in Sacramento, California, revealed that slightly less than one-half of the water discharged from a municipal separate storm sewer system was not directly attributable to precipitation runoff (U.S. Environmental Protection Agency, Office of Research and Development. 1993. *Investigation of Inappropriate Pollutant Entries Into Storm Drainage Systems—A User's Guide.* Washington, D.C. EPA 600/R–92/238.) A significant portion of these dry weather flows results from illicit and/or inappropriate discharges and connections to the municipal separate storm sewer system. Illicit discharges enter the system through either direct connections (e.g., wastewater piping either mistakenly or deliberately connected to the storm drains) or indirect connections (e.g., infiltration into the storm drain system or spills collected by drain inlets). Under the existing NPDES program for storm water, permits for large and medium municipal separate storm sewer systems are to include an effective prohibition against non-storm water discharges into their storm sewers (see CWA section 402(p)(3)(B)(ii)). Further, EPA believes that in implementing municipal storm water management plans under these permits, large and medium municipalities generally found their illicit discharge detection and elimination programs to be cost-effective.

In today's proposal, any NPDES permit issued to an owner or operator of a regulated small municipal separate storm sewer system would, at a minimum, require that owner or operator to develop and implement an illicit discharge detection and elimination program. Inclusion of this measure for municipal storm water programs for regulated small municipalities would be consistent with the ''effective prohibition'' requirement for large and medium municipal separate storm sewer systems. Under such a program, the owner or operator would be required to demonstrate awareness of the system using maps or other existing documents. The owner or operator would also be required to develop (if not already completed) a storm sewer system map (or equivalent) showing the location of major pipes, outfalls, and topography. The map should identify areas of concentrated activities likely to be a source of storm water pollution, if the data already exist. To ensure the effectiveness of this measure, the owner or operator would be required to effectively prohibit through ordinance, order, or similar means (for nongovernmental owners or operators of municipal separate storm sewer systems), to the extent allowable under State or Tribal law, illicit discharges into the separate storm sewer system and implement appropriate enforcement procedures and actions as needed. This measure would also require the owner or operator to develop

and implement a plan to detect and address illicit discharges (including illegal dumping) to the system. Finally, the measure would require the owner or operator to inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste. These informational actions could include storm drain stenciling; a program to promote, publicize, and facilitate public reporting of illicit connections or discharges; and distribution of outreach materials. Recycling and other public outreach programs could be developed to address potential sources of illicit discharges, including used motor oil, antifreeze, pesticides, herbicides, and fertilizers.

EPA seeks comment regarding the prohibition and enforcement provision for this minimum measure and specifically requests comment regarding the implications of specifying that the owner or operator would have to implement the appropriate prohibition and enforcement procedures ''to the extent allowable under State or Tribal law.'' Concerns have been raised that by qualifying prohibition and enforcement procedures in this manner, the owner or operator could altogether ignore this minimum measure where appropriate authority did not exist. Municipalities have pointed out, however, that they cannot legally exceed the authority granted them under State law, which varies considerably from one state to another.

The illicit discharge detection and elimination program would not necessarily need to address all types of non-storm water discharges. As with the existing municipal application requirements, the following categories of non-storm water discharges or flows would only need to be addressed in the municipal storm water program where such discharges are identified as significant contributors of pollutants: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water. The program should address discharges or flows from fire fighting where such discharges or flows are identified as significant sources of pollutants.

The existing storm water permit application requirements at § 122.26(d), contain two sets of application requirements regarding illicit discharges that EPA does not propose to require of regulated small municipal separate storm sewer systems. Specifically, EPA does not propose to require regulated small system owners or operators to describe procedures to prevent, contain, and respond to spills that could discharge into the municipal separate storm sewer and controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems where necessary. This is pursuant to comments received from municipal representatives on the Storm Water Phase II FACA Subcommittee. EPA anticipates that these procedures are already effectuated through the implementation of existing municipal programs, such as emergency response teams and operation of the wastewater treatment system.

EPA requests comment on the appropriateness of the specified requirements for illicit discharge detection and elimination.

iv. Construction Site Storm Water Runoff Control. Over a short period of time, storm water discharges from construction site activity can contribute more pollutants, including sediment, to a receiving stream than had been deposited over several decades. Storm water runoff from construction sites can include pollutants other than sediment, such as phosphorus and nitrogen from fertilizer, pesticides, petroleum derivatives, construction chemicals, and solid wastes that may become mobilized when land surfaces are disturbed. Generally, properly implemented construction site ordinances are effective in reducing these pollutants. In many areas, however, the effectiveness of ordinances in reducing pollutants is limited due to inadequate enforcement or incomplete compliance with such local ordinances by construction site discharges of storm water. Not all construction site owners or operators properly maintain BMPs. For example, sediment traps and sediment basins may fill up and silt fencing may break or be overtopped.

Today's proposed rule would require owners or operators of regulated small municipal separate storm sewer systems to develop, implement, and enforce a pollutant control program to reduce pollutants in storm water runoff from construction activities that result in land disturbance of 1 or more acres to their municipal separate storm sewer systems as a part of their storm water management program. The owner or operator would need to use an ordinance or other regulatory mechanism that controls erosion and sediment to the maximum extent practicable and allowable under State, Tribal, or local law. The program also would need to ensure control of other waste at construction sites that could adversely impact water quality. This waste could include discarded building materials, concrete truck washout, and sanitary waste. The program would need to include, at a minimum, requirements for construction site owners or operators to implement appropriate BMPs, such as silt fences, temporary detention ponds and hay bales; provisions for pre-construction review of site management plans; procedures for receipt and consideration of information provided by the public; regular inspections during construction; and penalties to ensure compliance.

Today's proposal includes the program requirement to establish procedures for the receipt and consideration of information provided by the public in response to stakeholder concerns regarding public involvement and public access to information. This requirement further reinforces the public participation component of the municipal program by establishing a formal process for considering and responding to public inquiries regarding construction activities. Some stakeholders have expressed concern regarding the proposed site management plan provision, which would establish requirements for review but not for approval of such plans. EPA requests comment on expanding this provision to require both review and approval of construction site storm water plans. EPA also invites comment on the basic program components.

In conjunction with these requirements, EPA is also proposing to add § 122.44(s) which would allow the NPDES permit issued to regulated construction sites (described under § 122.26(b)(15)(i)) to incorporate by reference qualifying State, Tribal, or local erosion and sediment control program requirements. A qualifying State, Tribal, or local erosion and sediment control program would be one that meets the requirements of a municipal NPDES separate storm sewer permit or a program otherwise approved by the NPDES permitting authority for programs operating outside geographic boundaries of a permitted municipal separate storm sewer system. The NPDES permitting authority's approval of such programs would need to assure compliance with the minimum construction site control program requirements described above. The permitting authority could also include,

by reference in a general permit, those State, Tribal, or local requirements that meet the standard of best available technology (BAT) for those construction site storm water discharges identified at § 122.26(b)(14)(x) (i.e., sites disturbing more than 5 acres of land), including clearing, grading, and excavation activities. As a result of this provision, such local requirements would, in effect, provide the construction site erosion and sediment control requirements of the NPDES permit. Construction site owners and operators would be subject to only one set of erosion and sediment control requirements, thereby eliminating duplication. At the same time, noncompliance with the referenced local requirements would be considered noncompliance with the NPDES permit and would be federally enforceable.

EPA developed the ''incorporation by reference'' approach, which is similar to implementation efforts designed by the State of Michigan, to avoid duplication of effort in the development of regulatory requirements by different levels of government. Michigan relies on localities to develop substantive controls for storm water discharges associated with construction activities on a localized basis. The State agency, as the NPDES permitting authority, receives an NOI (termed ''notice of coverage'' by Michigan) under the general permit and tracks and exercises oversight, as appropriate, over the activity causing the storm water discharge. Michigan's goal under these procedures is to utilize the existing erosion and sediment control program infrastructure authorized under State law for storm water discharge regulation. (See U.S. Environmental Protection Agency, Office of Water. January 7, 1994. Memo: From Michael B. Cook, Director OWEC, to Water Management Division Directors, Regarding the ''Approach Taken by Michigan to Regulate Storm Water Discharges from Construction Activities.'')

EPA acknowledges that many owners or operators of small municipal separate storm sewer systems already administer local erosion and sediment control programs. EPA believes that today's proposed approach would recognize a municipality's flexibility in developing practical procedures to control construction site discharges from within its jurisdiction, while still requiring an NPDES permit to ensure an appropriate base level of water quality protection. Moreover, the Agency also believes that there is an appropriate role for the permitting authority as well as citizens groups in ensuring that construction site owners/operators comply with the requirements of an NPDES permit. Finally, EPA contemplates that there would be some permit provisions, such as requirements for site management plans, that are not typically required by local erosion and sediment control programs which would be required as one of the requirements of a construction general permit. Therefore, the Agency believes that the proposed dual approach of local controls and NPDES permitting most effectively ensures implementation of appropriate storm water control measures at construction sites while minimizing redundant controls. EPA solicits comment on this ''incorporation by reference'' approach.

Today's proposal for permit requirements for regulated construction sites (described under § 122.26(b)(15)(i)) would include developing a storm water pollution prevention plan (SWPPP). However, the current proposal for the municipal program minimum measure for construction site storm water control runoff does not contain an equivalent requirement—leaving a gap between the two areas of the proposal that address regulation of construction. EPA asks for comment as to the effect of this potential regulatory gap and whether the municipal program for construction should be made to include a requirement for developing a SWPPP. Specifically, EPA asks for comment on the effect this may have on the applicability of the provision allowing for an NPDES permit to incorporate by reference a qualifying local erosion and sediment control program. Currently, the proposal defines a local program as ''qualifying'' if it meets the minimum program requirements established in § 122.34(b)(4). EPA is concerned as to whether this raises a potential inequitable regulatory scheme where certain construction sites would need to be covered under a SWPPP because they are outside a covered municipality while nearby construction sites would not need SWPPP coverage because they are within a municipality that has a construction program that meets § 122.34(b)(4) requirements. EPA intends to facilitate the broadest application of the § 122.44(s) provision to avoid duplication of programmatic requirements and paperwork redundancy and seeks comment on a means to best achieve this goal.

In discussions with the Storm Water Phase II FACA Subcommittee, EPA considered structuring the permit requirements for the municipal construction program around five control principles that were to underlie the development of eight program elements to be implemented by the owner or operators of the municipal separate storm sewer system. The five principles were use of good site planning, minimization of soil movement, capture of sediment to the greatest degree possible, good housekeeping practices, and mitigation of the impacts of post-construction storm water discharges. The eight elements include a program description; coordination mechanisms with existing programs; requirements for nonstructural and structural BMPs; priorities for site inspections; educational and training measures; exemption of some construction activities due to limited impact; incentives, awards, or streamlining mechanisms available to developers; and description of staff and resources. Under this approach, any local program that incorporated these principles and elements into its storm water program would have been considered a ''qualifying'' local program that met Federal requirements. The elements suggested were modified from current requirements found at 40 CFR 122.26(d)(2)(iv)(D).

After in-depth discussion with all stakeholders, many of these elements were considered to be more appropriate as guidance than as regulatory requirements for small municipal systems. Some stakeholders expressed concerns about the applicability and interpretation of the five control principles and eight program elements on a national level, specifically that a single, national specification would be unworkable. Therefore, EPA is proposing regulatory text intended to build on the fundamental aspects of the existing NPDES program for municipal storm water, while streamlining and improving certain aspects of the program applicable to owners or operators of regulated small municipal separate storm sewer systems.

EPA requests comment on the appropriateness of the specified requirements for construction site control.

v. Post-Construction Storm Water Management in New Development and Redevelopment. The Nationwide Urban Runoff Program study and more recent investigations indicate that prior planning and designing for the minimization of pollutants in storm water discharges is the most cost-effective approach to storm water quality management. Reducing the discharge of pollutants after the discharge enters a storm sewer system is often more expensive and less efficient than preventing or reducing the discharge of pollutants at the source.

Increased human activity associated with development often results in increased discharges of pollutants. In addition, sediment and debris transport and deposition can directly impair aquatic life. If the involved parties consider water quality impacts from the beginning stages of projects, new development and possibly redevelopment allow opportunities for more water quality sensitive projects. For example, minimization of impervious areas, maintenance or restoration of natural infiltration, wetland protection, use of vegetated drainage ways, and use of riparian buffers have been shown to reduce pollutant loadings in storm water runoff from developed areas. EPA encourages local governments to identify specific problem areas within their jurisdictions and initiate innovative solutions and designs to focus attention on those areas through local planning.

In today's rule, EPA is proposing that owners or operators of regulated small municipal separate storm sewer systems develop, implement, and enforce a program that includes a plan to address storm water runoff from new development and redevelopment projects to their municipal separate storm sewer systems using site-appropriate and cost-effective structural and non-structural BMPs, as appropriate. The program would need to ensure that controls are in place that would prevent or minimize water quality impacts. The program should ensure adequate long-term operation and maintenance of BMPs. EPA would address questions regarding responsibility for long-term BMP operation and maintenance in guidance materials. EPA intends the term ''redevelopment'' to refer to alterations of a property that change the ''footprint'' of a site or building in such a way that results in the disturbance of equal to or greater than 1 acre of land. The term is not intended to include such activities as exterior remodeling, which would not be expected to cause adverse storm water quality impacts and offer no new opportunity for storm water controls.

EPA intends to provide guidance to owners or operators of municipal systems and permitting authorities on appropriate planning considerations, structural and non-structural controls, and post-construction operation and maintenance of BMPs. Guidance materials would also address questions regarding responsibility for long-term operation and maintenance of storm water controls. EPA also intends to present a broad menu of options as guidance allowing for flexibility to accommodate local conditions. EPA proposes to recommend that municipalities establish requirements for the use of cost-effective BMPs that minimize water quality impacts and attempt to maintain pre-development runoff conditions. In other words, post-development conditions should not be different from pre-development conditions in a way that adversely affects water quality. The municipal program should include structural and/or non-structural BMPs. EPA encourages locally-based watershed planning and the use of preventative measures, including non-structural BMPs, which are generally lower in cost than structural BMPs, to minimize water quality impacts. Non-structural BMPs are preventative actions that involve management and source controls. Examples of non-structural BMPs include policies and ordinances that result in protection of natural resources and prevention of runoff. These include requirements to limit growth to identified areas, protect sensitive areas such as wetlands and riparian areas, minimize imperviousness, maintain open space, and minimize disturbance of soils and vegetation.

Examples of structural BMPs include storage practices (wet ponds and extended-detention outlet structures), filtration practices (grassed swales, sand filters and filter strips), and infiltration practices (infiltration basins, infiltration trenches, and porous pavement). System owners or operators have significant flexibility both to develop this measure as appropriate to address local concerns and to apply new control technologies as they become available. Since storm water technologies are constantly being improved, EPA recommends that municipal requirements be responsive to these changes.

EPA requests comment on the appropriateness of the specified requirements for post-construction storm water management in new development and redevelopment.

vi. Pollution Prevention/Good Housekeeping for Municipal Operations. In today's proposal, any NPDES permit issued to an owner or operator of a regulated small municipal separate storm sewer system must, at a minimum, require the owner or operator to develop and implement a cost-effective operation and maintenance/training program with the ultimate goal of preventing or reducing pollutant runoff from municipal operations. EPA would encourage the owner or operator to consider the following in developing such a program: (1) Maintenance activities, maintenance schedules, and long-term inspection procedures for structural and other storm water controls to reduce floatables and other pollutants discharged from the separate storm sewers; (2) controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, and waste transfer stations—including programs that promote recycling and pesticide use minimization; (3) procedures for the proper disposal of waste removed from the separate storm sewer systems and areas listed above in (2), including dredge spoil, accumulated sediments, floatables, and other debris; and (4) ways to ensure that new flood management projects assess the impacts on water quality and examine existing projects for incorporation of additional water quality protection devices or practices. In general, the requirement to develop and implement an operation and maintenance program, including local government employee training, is meant to ensure that municipal activities are performed in the most appropriate way to minimize contamination of storm water discharges, rather than requiring the municipality to undertake new activities.

Proper operation and maintenance of the municipal separate storm sewer system and the storm water pollution control structures is essential to the success of the management program overall. The effective performance of this program measure would hinge on the proper maintenance of the BMPs utilized. Without proper maintenance, BMP performance declines significantly over time, with rates of decline varying by BMP type and site conditions. Additionally, BMP neglect may produce health and safety threats, such as structural failure leading to flooding, undesirable animal and insect breeding, and odors. Maintenance of structural BMPs could include activities to restore the integrity of infiltration control BMPs such as replacing upper levels of gravel; dredging of detention ponds; and repair of outlet structure integrity. Non-structural BMPs could also require maintenance over time. For example, educational materials might need to be updated periodically.

EPA intends that controls for discharges from maintenance and storage yards listed above include controls for discharges from salt/sand storage locations and snow disposal areas operated by the municipality. EPA encourages coordination with flood control managers for the purpose of identifying and addressing the environmental impacts of existing and proposed flood management activities.

Using existing storm water pollution prevention training materials that could be available from the NPDES authorities or from other organizations whose materials are approved by the local government, the program would need to include local government employee training addressing these prevention measures in government operations (such as park, golf course and open space maintenance; fleet maintenance; planning, building oversight and storm water system maintenance). In developing this minimum program element, the Agency sought to identify existing practices and training as a means to avoid duplication of efforts and reduce overall costs. EPA also sought to emphasize those practices or programs designed and undertaken by municipalities to address non-storm water problems but also that have storm water pollution prevention benefits. In addition, EPA designed this municipal program measure intending to create a streamlined version of the permit application requirements for medium and large municipal separate storm sewer systems described at 40 CFR 122.26(d)(2)(iv). The streamlined approach is intended to provide more flexibility for these smaller municipalities. Today's proposed requirements provide for a consistent approach to control pollutants from operation and maintenance among medium, large, and regulated small municipal separate storm sewer systems.

By implementing a cost-effective operation and maintenance program, the municipal storm system owner or operator would serve as a model for the regulated community. Furthermore, the establishment of a long-term training and maintenance program could result in cost savings for the owner or operator by minimizing possible damage to the system from floatables and other debris and, consequently, reducing the need for repairs.

The proposed minimum measure, which originated with members of the Storm Water Phase II FACA Subcommittee, is similar to the requirements of the existing storm water program. EPA requests comment on the appropriateness of the specified requirements for pollution prevention/ good housekeeping for municipal operations.

vii. Satisfaction of Minimum Measure Obligations. Today's proposal would allow regulated small system owners or operators to satisfy their NPDES permit obligations for a minimum control measure by having another governmental or other entity perform the measure under the following circumstances: The other entity is implementing the control measure; the particular control measure (or component thereof) is at least as stringent as the corresponding NPDES permit requirements; and the owner or operator has requested, and the other entity has agreed to accept responsibility for, implementation of a particular control measure (or measures) on behalf of, and to satisfy, the owner or operator's municipal permit obligations. The owner or operator would need to specify in the § 122.34(f)(3) reports submitted to the NPDES permitting authority when the owner or operator relies on another person to satisfy the permit obligations. The owner or operator would remain responsible for compliance with the permit obligations if the entity fails to implement the control measure (or component thereof). Therefore, EPA would encourage the owner or operator to enter into a legally binding agreement with that entity to minimize any uncertainty regarding compliance with the NPDES permit.

In addition to the permittee-coordinated arrangement, today's proposal also includes a provision that would allow the NPDES permitting authority to recognize existing responsibilities among governmental entities for the control measures in an NPDES permit. For example, a State may have an existing erosion and sediment control program that adequately addresses construction site discharges to regulated small municipal separate storm sewer systems. The NPDES permitting authority in that State could draft the NPDES permit conditions such that the State is responsible for the construction site storm water discharge control minimum measure. Assuming that no other existing programs meet the requirements of the other minimum control measures, the municipality would be responsible for implementing those remaining minimum measures. Where the NPDES permitting authority recognizes existing responsibilities for one or more of the minimum control measures in an NPDES permit, these responsibilities would be waived from a regulated small system's storm water management plan and would remain waived as long as the other governmental entity implements the measure consistent with the proposed municipal program permit requirements at § 122.34(b). When the NPDES permitting authority recognizes an existing responsibility in an NPDES permit, the permittee would not be obligated to notify the other governmental entity about the arrangement. Instead, EPA anticipates it would be the responsibility of the NPDES permitting authority to do so.

b. Application Requirements, Including Notice of Intent

As part of the municipal program, the owner or operator of a regulated small municipal separate storm sewer system would be required to identify and submit to the NPDES permitting authority, either in a notice of intent (NOI) to be covered under a general permit or in an individual permit application, the BMPs that the owner or operator would implement and the measurable goals for the minimum control measures discussed previously. In reviewing NOIs submitted by the owners or operators of municipal systems, the NPDES permitting authority would need to pay particular attention to the BMPs and measurable goals identified for municipal separate storm sewer systems that are located in impaired watersheds. Where specific measurable goals to satisfy minimum control measures in paragraphs (b)(3) through (b)(6) of § 122.34 (illicit discharges detection and elimination, construction site storm water runoff control, post-construction storm water management in new development and redevelopment, pollution prevention/ good housekeeping for municipal operations) are identified in an NOI, these goals would not constitute a condition of the NPDES permit, unless EPA or the State has provided or issued a menu of regionally appropriate, field-tested BMPs that it believes to be cost-effective. EPA has limited this provision to only four of the minimum control measures because the Agency does not believe that municipalities need the kind of technical assistance in developing measurable goals for public education and outreach or public involvement that might be essential in determining measurable goals for the other four minimum control measures. Measurable goals for the two minimum control measures of public education and outreach and public involvement would be required and would be enforceable permit conditions even without the issuance of the menu of BMPs. In the general permit NOI or individual permit application, the owner or operator would also be required to identify the month and year in which the owner or operator would start and would aim to complete each of the minimum control measures or indicate the frequency of the action.

The NPDES permitting authority would specify a time period (of up to five years) for the owner or operator to

fully develop and implement the program. The owner or operator would also be required to identify in the general permit NOI or individual permit application the person or persons responsible for implementing or coordinating the municipal storm water program. EPA intends to provide guidance on the development of BMPs and measurable goals. EPA would later modify, update, and supplement this guidance based on the assessments of the municipal storm water program and research conducted over the next 13 years.

EPA seeks comment on certain permit application provisions identified in today's proposed rule. First, EPA seeks comment on the potential implications of linking the enforceability of measurable goals identified in an NOI to EPA/State issuance of a menu of regionally appropriate BMPs. EPA also requests comment on the procedure for issuing a regionally appropriate menu of BMPs. For example, the menu could be developed and published concurrently with the general permit or prior to or after issuance of the general permit. Furthermore, commenters have raised concerns that if measurable goals become enforceable permit conditions without a menu of BMPs first being issued, the owner or operator of the municipal system would only propose easily attainable goals that might not achieve higher levels of water quality protection. Conversely, municipalities are concerned that measurable goals not become enforceable permit requirements until the permitting authority determines that they are, in fact, achievable through the use of cost-effective BMPs. EPA seeks comment on these concerns. Finally, EPA seeks comment on how an NOI form might best be formatted to allow for measurable goal information (e.g., through the use of check boxes or narrative descriptions) while taking into account the need to facilitate computer tracking.

c. Evaluation and Assessment

Under today's approach, owners or operators would be required to evaluate the appropriateness of their identified BMPs and progress toward achieving their identified measurable goals. The purpose of this evaluation is to determine whether or not the owner or operator is meeting the requirements of the minimum control measures identified in today's proposal. The NPDES permitting authority would be responsible for determining whether any monitoring needs to be conducted and could require monitoring in accordance with State/Tribe monitoring plans appropriate to the watershed. EPA does not encourage requirements for ''end-of-pipe'' monitoring for regulated small municipal storm sewer systems. Rather, EPA encourages permitting authorities to carefully examine existing ambient water quality and assess data needs. Permitting authorities should consider a combination of physical, chemical, and biological monitoring or the use of other environmental indicators such as exceedance frequencies of water quality standards, impacted dry weather flows, increased flooding frequency, and fish assemblage. (Claytor, R. and W. Brown. 1996. *Environmental Indicators to Assess Storm Water Control Programs and Practices.* Center for Watershed Protection, Silver Spring, MD.) Section II.L., Water Quality Issues, discusses monitoring in greater detail.

As recommended by the Intergovernmental Task Force on Monitoring Water Quality (ITFM), the NPDES permitting authority would be encouraged to consider the following watershed objectives in determining monitoring requirements: (1) to characterize water quality and ecosystem health in a watershed over time, (2) to determine causes of existing and future water quality and ecosystem health problems in a watershed and develop a watershed management program, (3) to assess progress of watershed management program or effectiveness of pollution prevention and control practices, and (4) to support documentation of compliance with permit conditions and/or water quality standards. With these objectives in mind, the Agency encourages participation in group monitoring programs that would take advantage of existing monitoring programs undertaken by a variety of governmental and nongovernmental entities. Many States may already have a monitoring program in effect on a watershed basis. The ITFM report is included in the docket for this proposal (Intergovernmental Task Force on Monitoring Water Quality. 1995. *The Strategy for Improving Water-Quality Monitoring in the United States: Final Report of the Intergovernmental Task Force on Monitoring Water Quality.* Copies can be obtained from: U.S. Geological Survey, Reston, VA.).

EPA expects that many types of entities would have a role in supporting group monitoring activities—including federal agencies, State agencies, the public, and various classes or categories of point source dischargers. It is possible that some regulated small municipal separate storm sewer systems would need to contribute to such monitoring efforts. EPA expects, however, that their participation in monitoring activities would be relatively limited. For purposes of today's proposal, EPA recommends that, in general, small municipalities not be required to conduct in the first permit term any additional monitoring beyond any they may be already performing. In the second and subsequent permit terms, EPA expects that some limited ambient monitoring might be appropriately required for perhaps half of the regulated small municipal separate storm sewer systems. EPA expects that such monitoring would only be done in several discrete locations for relatively few pollutants of concern. EPA does not anticipate ''end-of-pipe'' monitoring requirements for regulated small municipal separate storm sewer systems. EPA seeks comment on this approach, particularly from the perspective of dischargers other than small municipalities, on the sharing of responsibility for the support of monitoring activities.

i. Recordkeeping. The NPDES permitting authority would be required to include at least the minimum appropriate recordkeeping conditions in each permit. Additionally, the NPDES permitting authority could specify that permittees develop, maintain, and/or submit other records to determine compliance with permit conditions. The owner or operator would need to keep these records for at least 3 years but would not be required to submit records to the NPDES permitting authority unless specifically directed to do so. The owner or operator would be required to make the records, including the storm water management program, available to the public at reasonable times during regular business hours (see 40 CFR 122.7 for confidentiality provision). The owner or operator would also be able to assess a reasonable charge for copying and to establish advance notice requirements, not to exceed 2 business days, for members of the public.

ii. Reporting. Under today's proposal, the owner or operator of a regulated small municipal separate storm sewer system would be required to submit annual reports to the NPDES permitting authority for the first permit term. For subsequent permit terms, the owner or operator would need to submit reports in years 2 and 4 unless the NPDES permitting authority required more frequent reports. EPA determined that annual reports would be needed during the first 5-year permit term to help permitting authorities in track and assess the development of municipal programs, which should be well

established by the end of the initial term. Information contained in these reports could be used to respond to public inquiries.

The report would need to include (1) the status of compliance with permit conditions, an assessment of the appropriateness of identified BMPs and progress toward achieving measurable goals for each of the minimum control measures, (2) results of information collected and analyzed, including monitoring data, if any, during the reporting period, (3) a summary of what storm water activities the permittee plans to undertake during the next reporting cycle, and (4) a change in any identified measurable goal or goals that apply to the program elements.

The NPDES permitting authority would be encouraged to use a brief (e.g., two-page) reporting format to facilitate compiling and analyzing the data from submitted reports. The permitting authority would use the reports in evaluating compliance with permit conditions and, where necessary, would modify the permit conditions to address changed conditions. EPA requests comment on the appropriate content of the reports and the timing of the submittal.

iii. Permit-As-A-Shield. Section 122.36 describes the NPDES ''permit-as-a-shield'' coverage offered by section 402(k) of the CWA. Section 402(k) provides that compliance with an NPDES permit would be deemed compliance, for purposes of enforcement under CWA sections 309 and 505, with CWA sections 301, 302, 306, 307, and 403, except for any standard imposed under section 307 for toxic pollutants injurious to human health.

EPA's Policy Statement on Scope of Discharge Authorization and Shield Associated with NPDES Permits, issued on July 1, 1994, and revised by EPA's policy memorandum on the same subject issued on April 11,1995, provides additional information on this matter.

d. Other Applicable NPDES Requirements

Any NPDES permit issued to an owner or operator of a regulated small municipal separate storm sewer system would also need to include other applicable NPDES permit requirements and standard conditions, specifically those requirements and conditions at 40 CFR 122.41 through 122.49 (EPA recognizes that reporting requirements for regulated small municipal separate storm sewer systems would be governed by proposed § 122.34 and not the existing requirements for medium and large municipal separate storm sewer systems at § 122.42(c)). In addition, the NPDES permitting authority is encouraged to consult the Interim Permitting Approach, issued on August 1, 1996. The discussion on the Interim Permitting Approach in Section II.L.1, Water Quality Standards, provides more information. Members of the municipal caucus expressed considerable concern that imposing these conditions would, in effect, undermine the intent of the program developed in consultation with the Storm Water Phase II FACA Subcommittee—to develop a program with a simplified set of permit requirements based on the implementation of BMPs. EPA does not believe that this is a concern. The provisions of §§ 122.41 through 122.49 establish permit conditions and limitations that are broadly applicable to the entire range of NPDES permits. These provisions should be interpreted in a manner that is consistent with provisions that address specific classes or categories of discharges. For example, § 122.44(d) is a general requirement that each NPDES permit shall include conditions to meet water quality standards. This requirement would be met by the specific approach outlined in today's proposal for the implementation of BMPs as the most appropriate form of effluent limitations to satisfy technology requirements and water quality-based requirements (see the introduction to Section II.H.3, Municipal Permit Requirements, Section II.H.3.g, Reevaluation of Rule, and the discussion of the Interim Permitting Policy in Section II.L.1.a. below).

e. Enforceability

NPDES permits are federally enforceable. Violators may be subject to the enforcement actions and penalties described in CWA sections 309, 504, and 505 or under appropriate State or local law. Compliance with a permit issued pursuant to section 402 of the Clean Water Act would be deemed compliance, for purposes of sections 309 and 505, with sections 301, 302, 306, 307, and 403 (except any standard imposed under section 307 for toxic pollutants injurious to human health).

f. Deadlines

Under § 122.32(a)(1) of today's proposed rule, which automatically designates all small municipal separate storm sewers located in an ''urbanized area,'' owners or operators of regulated small municipal separate storm sewer systems would need to seek coverage under an NPDES permit within 3 years and 90 days from the date of publication of the final rule. Assuming a March 1, 1999, final rule, the resulting deadline would be May 31, 2002—this allows 90 days after the issuance of a general permit to submit the NOI. Owners or operators of regulated small municipal separate storm sewer systems that choose to be a co-permittee with an adjoining municipality or other governmental entity with an existing NPDES storm water permit would need to apply for a modification of that permit by May 31, 2002—allowing for 90 days as well. EPA recognizes that the use of the ''latest'' Decennial Census by the Bureau of the Census as a basis for nationwide designation raises an issue regarding applicable deadlines for municipalities brought into the program due to 2000 Census calculations. EPA proposes that small municipal separate storm sewer systems that are automatically designated as of the 2000 Census would need to seek coverage under an NPDES permit within 3 years and 90 days from the date of publication of the final rule. Since the official Bureau of the Census urbanized area calculation for the 2000 Census is expected to be published by August 2001, this proposed deadline would allow the affected municipalities to have approximately 9 months notice to prepare for compliance under the applicable permit. EPA invites comment on this proposed deadline for municipalities affected by the 2000 Census. EPA also seeks comment on the appropriateness of the range of time allowed for regulated small municipal separate storm sewer systems to prepare an NOI or permit application, which varies from 3 years and 90 days (if automatically designated by the 1990 Census) to 60 days (if designated by the NPDES permitting authority under proposed § 122.32(a)(2)), with 9 months in between (if automatically designated by the 2000 Census).

As stated above, owners or operators of regulated small municipal separate storm sewer systems designated by the NPDES permitting authority on a local basis under § 122.32(a)(2) would need to seek coverage under an NPDES permit within 60 days of notice, unless the NPDES permitting authority specifies a later date. EPA seeks comment specifically on whether 60 days provides adequate time for the preparation of an NOI or permit application or if a 90 day time period would be more appropriate.

g. Reevaluation of Rule

The municipal caucus of the Storm Water Phase II FACA Subcommittee asked EPA to demonstrate its commitment to revisit today's proposed rule as it applies to municipal separate

storm sewer systems and make changes where necessary after evaluating the storm water program and researching the effectiveness of municipal BMPs. Today, EPA is proposing § 122.37 to commit the Agency to revisit the regulations for the municipal storm water program, at §§ 122.32 through 122.26 and 123.35, after completion of the first two permit terms. The Agency intends to use this time to work closely with stakeholders on research efforts. Gathering and analyzing data related to the storm water program, including data regarding the effectiveness of BMPs, during this time would be critical to EPA's storm water program evaluation. The Agency does not intend to change today's proposed NPDES municipal storm water program until the end of this period, except under the following circumstances: a court decision requires changes; a technical change is necessary for implementation; or the CWA is modified, thereby requiring changes. After careful analysis, the Agency might also consider changes from consensus-based stakeholder requests for newly regulated municipal systems. EPA would apply the August 1, 1996, Interim Permitting Approach to today's proposed program during this interim period and would encourage all permitting authorities to use this approach in storm water permits for newly regulated municipal systems and in determining municipal requirements under a TMDL approach. After careful consideration of the data, EPA would make modifications as necessary. EPA is seeking comment on the proposal to re-evaluate the rule after 13 years from the date of publication of the final rule (i.e., following the completion of the first two permit terms).

In addition, proposed § 122.37 states that EPA strongly recommends that no additional requirements beyond the minimum control measures be imposed on regulated municipal separate storm water systems without the agreement of the affected municipal separate storm water system, except where adequate information exists in approved TMDLs or equivalents of TMDLs to develop more specific measures to protect water quality or until EPA's comprehensive evaluation is completed. The wasteload allocations that form part of approved TMDLs or equivalents of TMDLs would constitute ''adequate information to develop more specific conditions or limitations to meet water quality standards.'' EPA regulations at 40 CFR 122.44(d)(1)(vii) currently require that effluent limits in NPDES permits be consistent with assumptions and requirements of any available wasteload allocations for the discharge contained in EPA-approved TMDLs. Consequently, where wasteload allocations have been established for a municipal storm water source in approved TMDLs, the permit would need to include terms and conditions consistent with the assumptions and requirements of the wasteload allocations. These terms and conditions might include non-numeric requirements, such as implementation of BMPs coupled with some means to monitor effectiveness, if they are consistent with the assumptions and requirements of the conditions of the wasteload allocations.

I. Other Designated Storm Water Discharges

1. Background

Under section 402(p)(6), EPA is proposing to regulate categories of storm water discharges in addition to the municipal separate storm sewer systems described earlier. The proposal would designate certain construction activities for regulation as ''storm water discharges associated with other activity.'' Specifically, such discharges would include storm water discharges from construction sites disturbing equal to or greater than 1 acre and less than 5 acres, unless the NPDES permitting authority waives the application requirements.

Today's action also would maintain the existing application deadline from the August 7, 1995, rule for municipally owned or operated sources of industrial storm water exempted from the October 1, 1994, compliance deadline by the Intermodal Surface Transportation and Efficiency Act of 1991 (and the Water Resources Development Act of 1992). The proposed regulation, including application deadlines, for each of these classes is further explained below.

2. Construction

Today's proposal to regulate certain storm water discharges from construction sites disturbing less than 5 acres is consistent with the 9th Circuit remand in NRDC v. EPA, 966 F.2d 1292 (9th Cir. 1992). In that case, the court remanded portions of the existing storm water regulations related to discharges from construction sites. The existing regulations define ''storm water discharges associated with industrial activity'' to include only those storm water discharges from construction sites disturbing 5 acres or more of total land area (see 40 CFR 122.26(b)(14)(x)). In its decision, the court concluded that the 5-acre threshold was improper because the Agency had failed to identify information ''to support its perception that construction activities on less than 5 acres are non-industrial in nature'' (966 F.2d at 1306). The court remanded the exemption to EPA for further proceedings (966 F.2d at 1310). EPA's objectives in today's proposal include an effort to (1) address the 9th Circuit remand, (2) address water quality concerns associated with construction activities that disturb less than 5 acres of land, and (3) balance conflicting recommendations and concerns of stakeholders.

EPA responded to the 9th Circuit's request for further proceedings by consulting with the Storm Water Phase II FACA Subcommittee regarding possible approaches for addressing the remanded provision. Although the Subcommittee was not able to reach consensus on any of the issues relating to the construction remand, Subcommittee members provided considerable feedback concerning a variety of possible approaches. Today's proposal represents the Agency's effort to balance the concerns raised by various subcommittee representatives. This proposal would designate discharges from construction activities that disturb between 1 and 5 acres as ''discharges associated with other activity'' under section 402(p)(6), rather than as ''discharges associated with industrial activity'' under section 402(p)(2)(B). Although a size criterion alone may be an indicator of whether runoff from construction sites between 1 and 5 acres is ''associated with industrial activity,'' the Agency is instead proposing to rely on a size threshold in tandem with provisions that allow for designations and waivers based on potential for ''predicted water quality impairments'' to regulate such construction sites under section 402(p)(6) for the sake of simplicity and certainty and, most importantly, to protect water quality consistent with the mandate of section 402(p)(6). The proposal would include extended application deadlines for this new category of dischargers under the authority of section 402(p)(6) (see * 122.26(e)(1)(iii)). The proposed designation would also be consistent with EPA's earlier proposal to regulate this category of discharges as ''discharges associated with industrial activity'' (55 FR 48035–36).

Today's proposal would designate storm water discharges from certain construction sites under 5 acres for regulation based on the authorities of section 402(p)(6) because such sources should be regulated to protect water quality. Section I.A.1., under Construction Site Runoff, provides a detailed discussion of water quality

impacts resulting from construction site storm water runoff. Under section 402(p)(6), such designation also carries with it ''expeditious deadlines,'' which are important to ensure a nationally consistent timeperiod for the development and implementation of a program to regulate these sources. EPA invites comment on how the Agency should codify this proposed designation, as well as the statutory basis upon which EPA should rely for regulation of storm water discharges from construction sites less than 5 acres.

The proposed regulatory changes for storm water construction activities are not proposed in the same ''question and answer'' format as the other regulations proposed because ''storm water discharges associated with other activity'' would be included as a new category of dischargers in the NPDES regulations for storm water.

a. Scope

The definition of ''storm water discharges associated with other activity'' would include construction activities, including clearing, grading, and excavating activities, that result in the disturbance of equal to or greater than 1 acre and less than 5 acres (see new language at § 122.26(b)(15)). Such activities might include road building; construction of residential houses, office buildings, or industrial buildings; or demolition activity. Sites disturbing less than 1 acre would be included if they were part of a ''larger common plan of development or sale'' with a planned disturbance of equal to or greater than 1 and 5 acres. A ''larger common plan of development or sale'' would mean a contiguous area where multiple separate and distinct construction activities might be occurring at different times on different schedules under one plan (e.g., a housing development of five ¼ acre lots) (§ 122.26(b)(15)(i)(A)). Such sites would be required to seek coverage under an NPDES permit regardless of the number of lots in the larger plan because designation for permit coverage would be based on the total amount of disturbed land area. This proposed designation attempts to address the potential cumulative effects of numerous construction activities concentrated in a given area. These requirements would not apply to agricultural or silvicultural activities, which are exempt from NPDES permit requirements under 40 CFR 122.3.

Although all construction sites less than 5 acres could have a significant water quality impact cumulatively, EPA today is proposing to require that only construction sites that disturb land equal to or greater than 1 acre seek coverage under an NPDES permit. Categorical regulation of construction below this 1-acre threshold would overwhelm the resources of permitting authorities. The NPDES permitting authority could, however, designate for regulation those construction activities that disturb below 1 acre of land if a watershed or other local assessment indicated the need to do so. Furthermore, the permitting authority could designate any other construction activity ''based on the potential for adverse impact on water quality or for significant contribution of pollutants'' (see new § 122.26(a)(9)(i)(D) and § 122.26(b)(15)(i)(B)).

The proposed 1-acre threshold is based on a balanced consideration of recommendations from numerous stakeholders participating in the Storm Water Phase II FACA Subcommittee process. In today's proposed rule, EPA is attempting to regulate additional construction sites to better protect the nation's waters, while remaining sensitive to a concern that the Agency not regulate construction sites that might not have adverse water quality impacts. EPA believes that today's proposal would successfully accomplish this objective by coupling a 1-acre threshold that includes waiver options for sites that have been determined not to impact water quality with the provision that allows the designation authority to include sites below 1 acre that do impact water quality. Specifically, construction activity equal to or greater than 1 acre and less than 5 acres would be automatically designated except in those circumstances where owner or operator certifies that any of three specific waiver circumstances (described below) would apply. As mentioned previously, construction activity that disturbs less than 1 acre would not be automatically designated, but the NPDES permitting authority could designate such areas for permitting where there is reason to believe that impacts to water quality are likely to occur from activity on these sites. For example, if a trout hatchery area is located downstream from the proposed less than 1-acre site, the permitting authority would likely want to control the construction activity's impact on trout egg survival. EPA believes that coupling categorical designations with waivers would be necessary to address the challenge of providing a technical justification for a nationwide size threshold considering the hydrologic, climatologic, geographic, and geologic variations nationwide. EPA invites comment regarding this approach.

EPA also examined alternative size thresholds, including 0.5 acre, 1 acre, and 2 acres. EPA had difficulty evaluating the alternative size thresholds because, while directly proportional to the size of the disturbed site, the water quality threat posed by construction sites of differing sizes varies nationwide, depending on the local climatological, geological, geographical, and hydrological influences. In the interest of nationwide consistency, EPA does not propose to allow permitting authorities to set their own size thresholds. By selecting the 1 acre size threshold coupled with waivers and designation, EPA sought to make the regulation consistent on a national basis and to also provide permitting authorities with the opportunity to further designate those activities causing water quality impairments regardless of site size. Thus, oversight of discharges from construction site activities less than 5 acres would be consistent on a national basis and would ultimately allow local authorities to address those activities causing water quality impairment regardless of any cutoff or threshold acreage.

b. Waivers

Under the proposal, NPDES permitting authorities would have the option of providing a waiver to construction site owners or operators from permit requirements in three circumstances. The first waiver would be based on ''low predicted rainfall potential.'' The permitting authority would determine which times of year, if any, the waiver opportunity would be available for construction sites based on a table of R values published in the U.S. Department of Agriculture (USDA) Agricultural Handbook 703 (Renard, K.G., Foster, G.R., Weesies, G.A., McCool, D.K., and D.C. Yoder. 1997. *Predicting Soil Erosion by Water: A Guide to Conservation Planning with the Revised Universal Soil Loss Equation (RUSLE)*. U.S. Department of Agriculture Handbook 703. Copies may be obtained from USDA-ARS, Southwest Watershed Research Center, 2000 East Allen Road, Tucson, AZ 85719.). These tables summarize average periodic rainfall data on a geographic basis throughout the United States. The second waiver would be based on ''low predicted soil loss.'' Under this waiver, the permittee would apply the Revised Universal Soil Loss Equation (RUSLE) to determine whether or not the second waiver would be available. The third waiver would be based on a consideration of ambient water quality. This waiver would be available after

development and implementation of TMDLs for the pollutants of concern from storm water discharges associated with construction site storm water runoff. This waiver would also be available after development and implementation of a TMDL-like allocation process in water bodies that are not impaired. Note that TMDLs are only required for water bodies listed under CWA section 303(d).

The first waiver would be time-sensitive and would be dependent on when during the year a construction activity takes place, how long it lasts, and the expected rainfall during that time. The waiver is intended to exempt the requirements for a permit when and where the permitting authority expects negligible rainfall. EPA anticipates that this waiver opportunity would respond to concerns about the requirement for a permit when it does not rain, especially in the arid western States. Under this waiver provision, the permitting authority could identify timeperiods when construction activity could be waived from permitting requirements where the rainfall erosivity factor (''R'' in the Revised Universal Soil Loss Equation (RUSLE)) is less than two during the period of construction activity for specific areas of the State. EPA believes that those areas receiving negligible rainfall during certain times of the year are unlikely to have storm water events that would adversely impact receiving streams and, consequently, BMPs would not be necessary on those smaller sites. This waiver would be most applicable to the arid regions of the country where the occurrence of rainfall follows a cyclic pattern—between no rain and extremely heavy rain. Review of rainfall records for these areas indicates that there are periods (up to 6 months) during which the number of events and quantity of rain are low enough that storm water runoff from small sites is predicted to be minimal. Default conditions that were included in this examination consisted of slope length (300 feet), slope steepness (3%), soil type (silt), no natural cover material, and no erosion control practices in place.

The second option for a waiver would be based on ''low predicted soil loss'' and would be available where application of the RUSLE by the permittee indicated negligible predicted soil loss. Developed initially by the USDA as a predictive tool to evaluate the potential for soil loss from agricultural lands at various times of the year and on a regional basis, the Universal Soil Loss Equation (USLE) was identified as a technique which could be useful in predicting construction site soil losses in the early 1970s (Wischmeir and Meyer, 1973). USLE is a widely used and easily accessible equation which predicts soil loss from four variables; rainfall erosivity, soil erodibility, length of slope, and steepness of slope. A refinement of USLE is reflected in the Revised Universal Soil Loss Equation (RUSLE), which provides a broader range of data within the individual variable. Several permitting authorities have recommended the utilization of the USLE or RUSLE for predicting construction site soil losses in their guidance documents that support implementation of the existing storm water program.

Today, EPA is proposing a modified use of the equation for purposes of predicting soil erosion rates from small construction sites using the RUSLE. The equation comprises the variables rainfall erosivity (R), soil erodibility (K), slope length (L), slope steepness (S), cover-management factor (C), and the support practice factor (P). The equation is:

A-RKLSCP

where A is the average soil erosion rate in tons per acre per year. This waiver provision would be applicable on a case-by-case basis where the annual soil loss rate for the period of construction for a site would be less than 2 tons/acre/year. The annual soil loss rate of less than 2 tons/acre/year would be calculated through the use of the equation, assuming the constants of no ground cover and no runoff controls in place. For the purposes of today's proposal, RUSLE would be used to predict where storm water discharges associated with construction activity (i.e., soil disturbance through clearing, grading, and excavating would not be expected to adversely affect water quality.)

The third waiver would be available where the State (or EPA) has completed either wasteload allocations that are part of TMDLs that address the pollutants of concern or a comprehensive watershed plan, implemented for the water body, in which the equivalents of TMDLs have been done as part of the watershed plan addressing the pollutants of concern from construction activities. The permitting authority would need to reflect relevant components of the comprehensive watershed plan or TMDLs in NPDES permits. The watershed plan, or TMDLs, would need to demonstrate with reasonable assurance that load reductions take place pursuant to CWA section 303(d) and that such discharge does not cause or have a potential to cause water quality impacts. In determining this waiver, EPA (if the NPDES permitting authority) might rely on a State's wasteload allocations that are part of TMDLs or a State's comprehensive watershed plan in which the equivalents of TMDLs has been done as part of the watershed plan. To qualify for this waiver option, the owner or operator would need to certify that the construction activity will take place, and storm water discharges will occur, within an area covered either by the TMDLs or comprehensive watershed plan. By using the term ''comprehensive watershed plan,'' EPA recognizes that TMDLs address ''impaired waters'' and that there may be TMDL-like activities on waters that are not found to be ''impaired.'' It is expected that when TMDLs are done there may be a determination, in some cases, that certain classes of sources such as small construction sites would not have to control their contribution of pollutants of concern to the waterbody in order for it to be in attainment (i.e., these sources are not assigned wasteload allocations) and, therefore, implementation of storm water controls would not be necessary under today's proposed storm water program.

EPA is continuing to review technical information to determine whether the waiver thresholds for rainfall erosivity and annual soil loss are the appropriate thresholds. The agency is also interested in comment regarding the feasibility of these waiver provisions. For example, concerns have been raised that application of the second waiver (case-by-case basis where the annual soil loss rate for the period of construction for a site would be less than 2 tons/acre/year) might not sufficiently protect sensitive ecosystems or species. Impacts from fine sediment could be heightened for coral reef systems or for extremely oligotrophic systems, such as Lake Tahoe in Nevada or Crater Lake in Oregon (see the general discussion of construction impacts in Section I.A.1., Construction Site Runoff). In addition, concerns have been raised that the second waiver provision would be too complicated and, thus, misapplied because the variables and assumptions in the RUSLE would be misinterpreted or misrepresented. EPA encourages the submission of data and other information that could ensure a waiver process that is fair and easily applied while providing sufficient protection for sensitive ecosystems.

Preliminary comments on the proposed waiver provisions also raised a process issue regarding how a permittee would qualify for a waiver. Today's proposal includes a certification process whereby the