UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

DEC 22 1992

Dear Colleague:

Enclosed is a Draft Combined Sewer Overflow Control Policy. A Notice of Availability, providing for a 60-day public comment period, will be published in the Federal Register in the near future.

The main purposes of the Policy are to elaborate on the Environmental Protection Agency's (EPA's) National Combined Sewer Overflow Control Strategy published on September 8, 1989, at 54 FR 37370, and to expedite compliance with the requirements of the Clean Water Act (CWA). While implementation of the 1989 Strategy has resulted in progress toward controlling combined sewer overflows (CSOs), significant public health and water quality risks remain.

The Policy is being developed to provide guidance to permittees with CSOs, National Pollutant Discharge Elimination System (NPDES) authorities and State water quality standards authorities, on coordinating the planning, selection, sizing and construction of CSO controls that meet the requirements of the CWA and allow for public involvement during the decision-making process.

Contained in the Policy are provisions for developing appropriate, site-specific NPDES permit requirements for all combined sewer systems that overflow as a result of wet weather events and enforcement initiatives to require the immediate elimination of overflows that occur during dry weather, and to ensure that the remaining CWA requirements are complied with as soon as practicable.

The permitting provisions of the Policy were developed as a result of extensive input received during a negotiated policy dialogue. The negotiated dialogue was conducted by the Office of Water and the Office of Water's Management Advisory Group. Representatives from State, environmental and municipal organizations participated in the negotiated dialogue.

The enforcement initiatives, including one to be initiated in 1993 on CSOs during dry weather, were developed by EPA's Office of Water and Office of Enforcement.

The major provisions of the Policy are:

CSO permittees should immediately undertake a process to accurately characterize their combined sewer system, demonstrate implementation of nine minimum controls, and develop a long-term CSO control plan. Once the long-term CSO control plan is completed, the permittee will be responsible to implement the plan's recommendations as soon as practicable;

State water quality standard (WQS) authorities should be involved in the long-term CSO control planning effort to coordinate the review and possible revision of WQS and implementation procedures on CSO-impacted waters with the development of the long-term CSO control plan;

NPDES authorities should issue/reissue permits to require immediate compliance with the technology-based and water quality-based requirements of the CWA, and after completion of the long-term CSO control plan, incorporate the following additional permit requirements -- performance standards for the selected controls based on average design conditions, a post construction water quality assessment program, monitoring for compliance with WQS, and a reopener clause authorizing the NPDES authority to reopen and modify the permit if it is determined that the CSO controls fail to meet WQS or protect designated uses; and

NPDES authorities should also, as noted above, commence enforcement actions in 1993, against all CSO permittees which have CWA violations due to CSO discharges during dry weather. In addition, NPDES authorities should ensure the implementation of the nine minimum controls, noted above, and incorporate a schedule, with appropriate milestone dates, to implement the required long-term CSO control plan into a civil judicial action or administrative order. Schedules for implementation of the long-term CSO control plan may be phased based on the relative importance of adverse impacts upon WQS and designated uses, and on a permittee's financial capability.

Notwithstanding the permitting and enforcement provisions of the Policy, permittees are expected to comply with any CSO-related requirements in NPDES permits, consent decrees or court orders which predate the Policy.

Comments on the draft Policy should be submitted to:

Richard Kuhlman (WH-546)
Office of Wastewater Enforcement and Compliance
US EPA
401 M Street, S.W.
Washington, D.C. 20460

If additional information is necessary, please contact Richard Kuhlman at (202) 260-5828.

Sincerely yours,

LaJuana S. Wilcher
Assistant Administrator
for Water

Herbert H. Tate, Jr.
Assistant Administrator
for Enforcement

Enclosure

DRAFT COMBINED SEWER OVERFLOW CONTROL POLICY

12/18/92

I. INTRODUCTION

A. Purpose

The main purposes of this Policy are to elaborate on EPA's National Combined Sewer Overflow Control Strategy published on September 8, 1989 at 54 FR 37370 (1989 Strategy) and to expedite compliance with the requirements of the Clean Water Act (CWA). While implementation of the 1989 Strategy has resulted in progress toward controlling combined sewer overflows (CSOs), significant water quality risks remain. CSOs consist of mixtures of sanitary sewage, industrial wastewater, and storm water runoff. CSO discharges often contain high levels of suspended solids, bacteria, heavy metals, floatables, nutrients, oxygen-demanding organic compounds, oil and grease, and other pollutants. CSO discharges can cause exceedances of water quality standards (WQS). Such exceedances may pose risks to human health, threaten aquatic life and its habitat, and impair the use and enjoyment of the Nation's waterways.

This Policy is intended to provide guidance to permittees with CSOs, National Pollutant Discharge Elimination System (NPDES) permitting authorities, State water quality standards authorities and enforcement authorities, in order to coordinate the planning, selection, sizing and construction of CSO controls

to meet the requirements of the CWA and to involve the public fully during the decision making process.

This Policy reiterates the objectives of the 1989 Strategy:

1. To ensure that if CSO discharges occur, they are only as a result of wet weather;

2. To bring all wet weather CSO discharge points into compliance with the requirements of the CWA; and

3. To minimize water quality, aquatic biota, and human health impacts from wet weather overflows.

This Policy is being issued in support of EPA's regulations and policy initiatives. This document is Agency guidance only. It does not establish or affect legal rights or obligations. It does not establish a binding norm and is not finally determinative of the issues addressed. Agency decisions in any particular case will be made by applying the law and regulations on the basis of specific facts when permits are issued.

B. Application of Policy

The permitting provisions of this Policy apply to all combined sewer systems that overflow as a result of storm water

flow, including snow melt runoff (40 CFR Section 122.26(b)(13)). CSO discharges during dry weather are prohibited by the CWA. Accordingly, the permitting provisions of this Policy do not apply to discharges during dry weather from combined sewer systems. Dry weather flow is the flow in a combined sewer that results solely from domestic sewage, groundwater infiltration and industrial wastes. In addition to the permitting provisions, the Enforcement and Compliance section of this Policy describes an enforcement initiative being developed for overflows that occur during dry weather.

Consistent with the 1989 Strategy, all 30 States that need CSO permitting strategies have received EPA approval or, in the case of two States, conditional approval of their strategies. States and EPA Regional Offices should review the State strategies and negotiate appropriate revisions to them to implement this Policy.

C. Effect on Current CSO Control Efforts

Portions of this Policy may already have been addressed by permittees' previous efforts to control CSOs. Therefore, portions of this Policy may not apply, as determined on a case by case basis, under the following circumstances:

1. When this Policy is issued, any permittee which has completed or substantially completed construction of CSO control facilities that are designed to meet WQS and protect designated uses, and where it has been determined that water quality standards are being or will be attained, is not covered by the initial planning and construction provisions in this Policy; however, the operation and maintenance and monitoring provisions continue to apply. If, after monitoring, it is determined that WQS are not being attained, the permittee should be required to submit a revised CSO control plan that once implemented, will attain WQS.

2. When this Policy is issued, any permittee which has substantially developed or is implementing a CSO control program pursuant to an existing permit or enforcement order, and such program is considered by the NPDES permitting authority to be adequate to meet WQS and protect designated uses and is reasonably equivalent to the treatment objectives of this Policy, should complete those facilities without further planning activities otherwise expected by this Policy. Such programs, however, should be reviewed and modified to be consistent with the sensitive area and financial capability provisions of this Policy; the permittee should be subject to an enforceable, fixed-date compliance schedule and should be required to develop and

implement a post construction water quality monitoring program; and its permit should contain reopener provisions as discussed in this Policy.

3. When this Policy is issued, any permittee which has previously constructed CSO facilities in an effort to comply with WQS but has failed to meet such applicable standards or to protect designated uses due to remaining CSO discharges may receive consideration for such efforts in future enforceable orders for long-term CSO control planning, design and implementation.

D. Small System Considerations

The scope of the long-term CSO control plan, including the characterization, monitoring and modeling, and evaluation of alternatives portions of this Policy may be difficult for small combined sewer systems. Jurisdictions responsible for combined sewer systems serving populations under 75,000 may not need to complete each of the formal steps outlined in this Policy, but should be required through their permits to comply with the nine minimum controls, sensitive areas and public participation portions of this Policy. In addition, they may propose to implement any of the criteria contained in this Policy for evaluation of alternative controls. Following approval of the proposed project, such jurisdictions should construct the control

projects and propose a cost-effective monitoring program sufficient to determine whether WQS are attained and designated uses are protected. States should consider providing assistance with monitoring in communities where the average per capita income is 90 percent or less of the per capita income in the State.

In developing long-term CSO control plans based on the above small system considerations discussed in the preceding paragraph, permittees are encouraged to discuss the scope of their long-term CSO control plan with the WQS authority and the NPDES authority to ensure that the plan includes sufficient information to enable the permitting authority to identify the appropriate CSO controls.

E. Implementation Responsibilities

NPDES authorities (authorized States or EPA Regional Offices, as appropriate) are responsible for implementing this Policy. It is their responsibility to assure that CSO permittees develop long-term CSO control plans and that NPDES permits meet the requirements of the CWA. Further, they are responsible for coordinating the review of the long-term CSO control plan and the development of the permit with the WQS authority to determine if revisions to the WQS are appropriate. In addition, they should determine the appropriate vehicle (i.e., permit reissuance,

information request under CWA section 308 or enforcement action) to ensure that compliance with the CWA is achieved as soon as practicable.

Permittees are responsible for documenting the implementation of the nine minimum controls and developing and implementing a long-term CSO control plan, as described in this Policy. EPA recognizes that financial considerations are a major factor affecting the implementation of CSO controls. For that reason, this Policy allows consideration of a permittee's financial capability in connection with the long-term CSO control planning effort, WQS review, and negotiation of enforceable orders. However, each permittee is ultimately responsible for aggressively pursuing financial arrangements for the implementation of its long-term CSO control plan. As part of this effort, communities should apply to their State Revolving Fund program, as appropriate, for financial assistance.

EPA and the States will undertake to assure that all permittees with combined sewer systems are subject to a consistent review in the permit development process, have permit requirements that will achieve compliance with the CWA, and have compliance schedules that require the earliest practicable compliance date considering physical and financial feasibility.

F. Policy Development

This Policy devotes a separate section to each aspect involved in developing or implementing CSO controls. This is not to imply that each function occurs separately. Rather, the entire process surrounding CSO controls, community planning, WQS and permit development/revision, enforcement/compliance actions and public participation must be coordinated to control CSOs effectively.

In developing this Policy, EPA has included information on what responsible parties are expected to accomplish. Subsequent documents are under development that will provide additional guidance on how the objectives of this Policy should be met. These documents will provide guidance on: CSO permit writing; definitions of the nine minimum controls; long-term CSO control plans; financial capability; combined sewer system and receiving water monitoring and modeling; and application of WQS to CSO impacted waters. For most CSO control efforts however, sufficient detail has been included in this Policy to begin immediate implementation of its provisions.

II. EPA OBJECTIVES FOR PERMITTEES

A. Overview

Permittees with combined sewer systems that have CSOs should immediately undertake a process to accurately characterize their combined sewer systems, to demonstrate implementation of the nine minimum controls, and to develop a long-term CSO control plan.

B. Implementation of the Nine Minimum Controls

Permittees with CSOs should submit appropriate documentation demonstrating implementation of the nine minimum controls, including any suggested schedules for completing minor construction activities. The nine minimum controls are:

1. proper operation and regular maintenance programs for the sewer system and the combined sewer overflow points;

2. maximum use of the collection system for storage;

3. review and modification of pretreatment programs to assure CSO impacts are minimized;

4. maximization of flow to the POTW for treatment;

5. prohibition of CSO discharges during dry weather;

6. control of solid and floatable materials in CSO discharges;

7. pollution prevention programs that focus on contaminant reduction activities;

8. public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts; and

9. monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.

Attachment 1 provides examples of specific measures that may be implemented by permittees to achieve each of the nine minimum controls. Selection and implementation of actual control measures should be based, however, on consideration of the specific combined sewer system's characteristics discussed under the sewer system characterization and monitoring portions of this Policy. Documentation of the nine minimum controls may include operation and maintenance plans, revised sewer use ordinances for industrial users, sewer system inspection reports, infiltration/inflow studies, pollution prevention programs, public notification plans, and facility plans for maximizing the

capacities of the existing collection and treatment systems, as well as contracts and schedules for minor construction programs for improving the existing system's operation. The permittee should also submit any information or data on the degree to which the nine minimum controls achieve compliance with water quality standards. These data and information should include results made available through monitoring and modeling activities done in conjunction with the long-term CSO control plan described in this Policy.

This documentation should be submitted as soon as practicable, but no later than two years after the requirement to submit such documentation in an NPDES permit or enforceable mechanism. Implementation of the nine minimum controls should be completed as soon as practicable but no later than the dates established in the Enforcement and Compliance section of this Policy. These dates should be included in an appropriate enforceable mechanism.

Because the CWA requires immediate compliance with technology-based controls (Section 301 (b)), which on a Best Professional Judgement basis should include the nine minimum controls, a compliance schedule for implementing the nine minimum controls, if necessary, should be included in an enforceable mechanism.

C. Long-Term CSO Control Plan

Permittees with CSOs are responsible for developing a long-term CSO control plan that will ultimately result in compliance with the requirements of the Clean Water Act. Permittees will be expected to evaluate a range of control options/strategies and to coordinate the development of the long-term CSO control plan and its subsequent implementation with the NPDES authority and the State authority responsible for reviewing and revising the State's WQS. The selected controls should be designed to allow cost effective expansion or cost effective retrofitting if additional controls are determined to be necessary to meet WQS or to protect designated uses.

This policy identifies EPA's major objectives for the long-term CSO control plan. Permittees should develop this long-term CSO control plan as soon as practicable, but generally within two years after the effective date of the permit provision, Section 308 information request, or enforcement action requiring the permittee to develop the plan. NPDES authorities may establish a longer timetable for completion of the long-term CSO control plan on a case-by-case basis to account for site specific factors which may influence the complexity of the planning process. Once agreed upon, these dates should be included in the community's NPDES permit or in an appropriate enforcement mechanism.

EPA expects each long-term CSO control plan to utilize appropriate information to address the following minimum elements. It should also include both fixed-date project implementation schedules (which may be phased) and a finance plan to design and construct the project as soon as practicable. The minimum elements of the long-term CSO control plan are described below.

1. Characterization, Monitoring, and Modeling of the Combined Sewer System

In order to design a CSO control plan adequate to meet the requirements of the CWA, a permittee should have a thorough understanding of its combined sewer system, the response of the system to various rain events, the characteristics of the overflows, and the water quality impacts that result from the CSO discharges. The permittee should adequately characterize through monitoring, modeling, and other means as appropriate, for a range of storm events, the response of its combined sewer system to wet weather events including the number, location and frequency of CSOs, and the impacts of the CSOs and other pollution sources on the receiving waters and their designated uses.

The purpose of the system characterization, monitoring and modeling program initially is to assist the permittee in

developing appropriate measures to implement the nine minimum controls and, if necessary, to support development of the long-term CSO control plan. The monitoring and modeling data also will be used to evaluate the expected effectiveness of both the nine minimum controls and, if necessary, the long-term CSO controls, to meet WQS.

The major elements of a sewer system characterization are described below.

a. Rainfall Records - The permittee should examine the complete rainfall record for the geographic area of its existing combined sewer system using sound statistical procedures and best available data. The permittee should evaluate flow variations in the receiving water body to correlate between CSOs and receiving water conditions.

b. Combined Sewer System Characterization - The permittee should evaluate the nature and extent of its combined sewer system through evaluation of available sewer system records, field inspections and other activities necessary to understand the number, location and frequency of overflows and their location relative to sensitive areas and up-stream pollution sources.

c. CSO Monitoring - The permittee should develop a comprehensive, representative monitoring program that measures the frequency, duration, volume and pollutant concentration of CSO discharges and assesses the impact of the CSOs on the receiving waters. The monitoring program should include necessary CSO effluent and ambient in-stream monitoring and, where appropriate, other monitoring protocols such as biological assessment, toxicity testing and sediment sampling. Monitoring parameters should include, for example, oxygen demanding pollutants, nutrients, toxic pollutants, sediment contaminants, bacteriological indicators, and toxicity. A representative sample of overflow points can be selected that is sufficient to allow characterization of CSO discharges and their water quality impacts and to facilitate evaluation of control plan alternatives. Permittees should take appropriate precautions to ensure the safety of staff when monitoring CSOs during storm events including the use of mechanized monitoring equipment.

d. Modeling - Modeling of a combined sewer system is recognized as a valuable tool for predicting sewer system response to various storm events and assessing water quality impacts when evaluating different control strategies and alternatives. EPA supports the proper

and effective use of models, where appropriate, in the evaluation of the nine minimum controls and the development of the long-term CSO control plan. It is also recognized that there are many models which may be used to do this. These models range from the simple to the complex. Having decided to use a model, the permittee should base its choice of a model on the characteristics of its combined sewer system, the number and location of overflow points, and the sensitivity of the receiving water body to the CSO discharges. The sophistication of the model should relate to the complexity of the system to be modeled. EPA expects that continuous simulation models, using historical rainfall data, may be the best way to model CSO systems and their impacts. Because of the iterative nature of modeling CSO systems and their impacts, monitoring and modeling efforts are complementary and should be coordinated.

2. Consideration of Sensitive Areas

EPA expects a permittee's long-term CSO control plan to give the highest priority to controlling overflows to sensitive areas, including designated Outstanding National Resource Waters, National Marine Sanctuaries, waters with threatened and endangered species and their habitat, waters with

1 contact recreation, public drinking water intakes or their
2 designated protection areas, and shellfish beds. For such
3 areas, the long-term CSO control plan should:

4 a. prohibit new or significantly increased overflows;

5 b. i. eliminate or relocate overflows that discharge
6 to sensitive areas wherever physically and
7 economically achievable, except where elimination
8 or relocation would provide less environmental
9 protection than additional treatment; or

10 ii. where elimination or relocation is not
11 physically and economically achievable, or would
12 provide less environmental protection than
13 additional treatment, provide the level of
14 treatment for remaining overflows deemed necessary
15 to meet WQS for full protection of existing and
16 designated uses. In any event the control shall
17 not be less than those described in Evaluation of
18 Alternatives below; and

19 c. Where elimination or relocation has been proven
20 not to be physically possible or economically
21 achievable, permitting authorities should require, for
22 each subsequent permit term, a reassessment based on

new or improved technologies to eliminate or relocate, or on changed circumstances that influence economic achievability.

3. Evaluation of Alternatives

EPA expects the long-term CSO control plan to consider a reasonable range of alternatives. The plan should, for example, evaluate controls that would be necessary to achieve an average of zero overflows per year, one to three, four to seven, and eight to twelve overflows per year. Because the final long-term CSO control plan will become the basis for NPDES permit limits and requirements, the selected controls should be sufficient to meet CWA requirements.

In addition to considering sensitive areas, the long-term CSO control plan should adopt one of the following approaches:

a. "Presumption" Approach

A program that meets any of the criteria listed below would be presumed to provide an adequate level of control to meet CWA requirements, provided the permitting authority determines that such presumption is reasonable in light of the data and analysis conducted in the characterization,

monitoring, and modeling of the system and the consideration of sensitive areas described above. However, this presumption will not apply if the permitting authority determines that the long-term CSO control plan will not result in attainment of CWA requirements.

i. no more than an average of four overflow events per year for urban areas, provided that the permitting authority may allow up to two additional overflow events per year; and no more than an average of five overflow events per year for rural areas, provided that the permitting authority may allow up to two additional overflow events per year. For the purpose of this criterion, an overflow is the discharge of combined sewage that does not receive the minimum treatment specified below and an overflow event is one or more overflows from a combined sewer system as the result of a single rain event; or

ii. the elimination or the capture for treatment of no less than 85% by volume of the combined sewage collected in the combined sewer system during rainfall events on a system-wide annual average basis; or

iii. the elimination or reduction of no less than the mass of the pollutants identified as causing water

quality impairment through the sewer system characterization, monitoring, and modeling effort for the volumes which would be eliminated or captured for treatment under paragraph ii. above.

These criteria are provided because data and modeling of wet weather events often do not give a clear picture of the level of CSO controls necessary to protect WQS. In the absence of such certainty, that permittees should develop programs to meet at least one of these criteria because aggregate national data suggest that the incremental pollution control benefits at this level of control are substantial compared to incremental costs for most CSO systems.

All combined sewer flows resulting from wet weather events, except those in excess of the criteria specified above, should receive a minimum of:

- Treatment for removal of floatables and settleable solids equivalent to that achieved by primary clarification as described in the "Design of Municipal Wastewater Treatment Plants" prepared and published by the Water Environment Federation;

- solids and floatables disposal; and

- disinfection of effluent, if necessary to meet WQS, protect designated uses and protect human health, including removal of harmful disinfection chemical residuals where necessary.

b. "Demonstration" Approach

A permittee may demonstrate that a selected control program, though not meeting the criteria specified in II.C.3.a. above is adequate to meet CWA requirements. To be a successful demonstration, the permittee should demonstrate each of the following:

i. the controls are clearly adequate to meet WQS and protect designated uses, unless WQS or uses cannot be met as a result of natural background conditions or pollution sources other than CSO discharges;

ii. the CSO discharges remaining after implementation of the proposed control program will not cause or contribute to the contravention of WQS or the receiving waters' designated uses, where WQS or designated uses are not met in part because of natural background conditions or pollution sources other than CSO discharges, using

a wasteload allocation or other means of apportioning pollutant loads; and

iii. the selected controls will provide the maximum pollution reduction benefits reasonably attainable; and

iv. the selected control program is designed to allow cost effective expansion or cost effective retrofitting if additional controls are determined to be necessary to meet WQS or designated uses.

4. Cost/Performance Considerations

The permittee should develop appropriate cost/performance curves to demonstrate the relationships among a comprehensive set of reasonable control alternatives that correspond to the different overflow ranges specified in Section II.C.3. This should include an analysis to determine where the increment of pollution reduction achieved in the receiving water diminishes compared to the increased costs. These analyses, often known as knee of the curve, should be used to help guide selection of controls.

5. Operational Plan

After agreement between the permittee and NPDES authority on the necessary CSO controls to be implemented under the long-term CSO control plan, the permittee should revise the operation and maintenance program developed as part of the nine minimum controls to include the agreed upon long-term CSO controls. The revised operation and maintenance program should maximize the removal of pollutants during and after each rain event using all available facilities within the collection and treatment system.

6. Maximizing Treatment at the POTW Treatment Plant

In some communities, POTW treatment plants may have primary treatment capacity in excess of its secondary treatment capacity. One effective strategy to abate pollution resulting from CSOs is to maximize the delivery of flows to the POTW treatment plant for treatment. Delivering these flows can have two significant water quality benefits: first, increased flows to the POTW treatment plant may enable the permittee to eliminate or minimize overflows to sensitive areas; second, by reaching the POTW treatment plant, combined sewer flows will receive at least primary treatment prior to discharge.

1 If there is support in the permit record to meet the
2 requirements in 40 CFR Section 122.41(m)(4) as discussed
3 below, the permitting authority may grant the permittee a
4 generic bypass for the five-year term of the permit and
5 would define in the permit the parameters within which a
6 particular bypass may be allowed. If the generic bypass is
7 granted, the permit should also provide that it will be
8 terminated if there is a substantial change in the volume or
9 character of pollutants being introduced to the POTW. The
10 generic bypass provision in the permit should also make it
11 clear that all wet weather flows passing the headworks of
12 the POTW treatment plant will receive at least primary
13 clarification, solids and floatables disposal and
14 disinfection consistent with the treatment requirements in
15 Section II.C.3.a. and any other treatment that can
16 reasonably be provided.

17 Under EPA regulations, the intentional diversion of waste
18 streams from any portion of a treatment facility, including
19 secondary treatment, is a bypass. For a POTW a bypass does
20 not refer to flows or portions of flows that are diverted
21 from portions of the treatment system but that meet all
22 effluent limits for the treatment plant upon recombining
23 with non-diverted flows prior to discharge.

1 EPA interprets its bypass regulation, at 40 CFR Section
2 122.41(m)(4), to allow a permit to authorize a generic
3 bypass of the secondary treatment portion of the POTW
4 treatment plant for combined sewer flows in certain limited
5 circumstances. This provision would apply only to those
6 situations where the POTW would ordinarily qualify for
7 bypass approval on a case-by-case basis. Therefore, there
8 must be sufficient data in the administrative record
9 (reflected in the permit fact sheet or statement of basis)
10 supporting all the requirements in Section 122.41 (m)(4) for
11 approval of an anticipated bypass. Under the regulation,
12 data must show that the bypass was unavoidable to prevent
13 loss of life, personal injury or severe property damage;
14 that there was no feasible alternative to the bypass; and
15 that the permittee submitted the required notices. In
16 addition, the regulation provides that a bypass may be
17 approved only after consideration of adverse effects.

18 For the purposes of applying this regulation to CSO
19 permittees, "severe property damage" could include
20 situations where flows above a certain level wash out the
21 POTW's secondary treatment system. EPA further believes
22 that the feasible alternatives requirement of the regulation
23 can be met if the record shows that the secondary treatment
24 system is properly operated and maintained, that the system
25 has been designed to meet secondary limits for flows greater

than the average dry weather flow, and that it would not be feasible to operate the secondary treatment system to accommodate the higher wet weather flows. The feasible alternative analysis should include, for example, consideration of advanced chemical primary treatment and non-biological secondary treatment. Other bases supporting a finding of no feasible alternative may also be available on a case-by-case basis. As part of its consideration of possible adverse effects resulting from the bypass, the permitting authority should also ensure that the bypass will not cause exceedances of WQS.

7. Implementation Schedule

The permittee should include all pertinent information necessary to develop the construction and finance schedule for implementation of CSO controls. Schedules for implementation of the CSO controls may be phased based on the relative importance of adverse impacts upon WQS and designated uses and on a permittee's financial capability.

Construction phasing should consider:

a. Eliminating overflows that discharge to sensitive areas as the highest priority;

1 b. Use impairment;

2 c. Permittees financial capability including
3 consideration of such factors as:

4 i. Median household income/total project cost per
5 household;

6 ii. Per capita debt as a percent of full market
7 property value;

8 iii. Property tax revenues as a percent of full
9 market property value;

10 iv. Property tax collection rate;

11 v. Unemployment;

12 vi. Bond rating;

13 vii. Grant and loan availability;

14 viii. Residential, commercial and industrial user
15 fees; and

ix. Other viable funding mechanisms and sources of financing.

8. Post-Construction Compliance Monitoring Program

The selected CSO controls should include a post-construction water quality monitoring program adequate to verify compliance with water quality standards and protection of designated uses. This water quality compliance monitoring program should include a plan to be approved by the NPDES authority that details the monitoring protocols to be followed, including the necessary effluent and ambient monitoring and, where appropriate, other monitoring protocols such as biological assessments, whole effluent toxicity testing, and sediment sampling.

9. Public Participation

EPA expects that the permittee, in developing its long-term CSO control plan, will employ a public participation process that actively involves the affected public in the decision-making to select the long-term CSO controls. The affected public, includes rate payers, industrial users of the sewer system, persons down-stream from the CSO discharges, and any other interested persons.

III. COORDINATION WITH STATE WATER QUALITY STANDARDS

A. Overview

Water quality standards are State adopted, or Federally promulgated rules which serve as the goals for the water body and the legal basis for the water quality-based NPDES permit requirements under the CWA. Long-term CSO control plans are developed to reduce risk to human health and the environment by restoring and protecting the designated uses and quality of the affected waters.

State WQS authorities, NPDES authorities, EPA regional offices and permittees should meet early and frequently throughout the long-term CSO control planning process to coordinate the development of the long-term plan with the review and possible revision of WQS and implementation procedures on CSO-impacted waters. As part of these meetings, participants should agree on the data, information and analyses needed to support the development of the long-term CSO control plan and the review of applicable WQS, if appropriate. Agreements should be reached on the monitoring protocols and models that will be used to evaluate the water quality impacts of the overflows, to analyze the attainability of the WQS and to determine the water quality-based requirements for the permit. Many opportunities exist for permittees and States to share information as control programs are developed and as WQS are reviewed. Such information

should assist States in determining the need for revisions to WQS and implementation procedures to better reflect wet weather events. Coordinating the development of the long-term CSO control plan and the review of the WQS enables the NPDES authority to develop a permit that complies with WQS consistent with Sections 301(b)(1)(C) and 402(a)(2) of the CWA.

EPA encourages States and permittees to sponsor workshops to involve the affected public in the development of the long-term CSO control plan and in the review and potential revision of the WQS on CSO-impacted waters. Workshops provide a forum for including the public in discussions of the implications of the proposed long-term CSO control plan on the water quality and uses for the receiving water.

B. WQS Reviews

Agency regulations and guidance provide States with the flexibility to adapt their WQS and implementation procedures to reflect wet weather events. For example, a State may adopt site-specific criteria for a particular pollutant if the State determines that the site-specific criteria still protects the designated use (40 CFR Section 131.11). In addition, the regulations at 40 CFR Section 131.10(g), (h), and (j) specify when and how a designated use may be modified. For example, a State may remove a designated use from their water quality standards if the designated use is not an existing use. An

1 existing use is a use actually attained in the water body on or
2 after November 28, 1975. A State also may not remove a
3 designated use that will be attained by implementing the
4 technology-based effluent limits required under Sections 301(b)
5 and 306 of the CWA and by implementing cost-effective and
6 reasonable best management practices for nonpoint source
7 controls. Thus, if a State had reason to believe that the
8 current designated use could be protected after implementation of
9 the technology-based controls of the CWA, then the use could not
10 be removed.

11 In reviewing the applicability of their WQS and
12 implementation procedures to CSO-impacted waters, States could
13 define more explicitly their recreational and aquatic life uses
14 and then revise the criteria accordingly to protect the revised
15 uses. For example, a State may be able to designate boating
16 rather than swimming as a use, if swimming is not an existing
17 use; thereby justifying a less stringent bacteriological
18 criterion. Another option is for States to adopt partial uses by
19 defining when swimming does not exist, such as during certain
20 seasons of the year or during a particular type of storm event.
21 In making such adjustments to their uses, States must ensure that
22 downstream uses are protected, and that during other seasons or
23 after the storm event has passed the use is fully protected.

24 In addition to defining recreational uses with greater
25 specificity, States can also define more precisely the aquatic

uses to be protected. Explicitly defining the type of fishery to be protected may assist the permittee in enlisting the support of its citizens for a control plan. For example, rather than defining the use as aquatic life protection, the State, with input from the permittee and local citizens, may designate waters as a full warm water fishery characterized by blue gill, crappy, and large mouth bass or a limited warm water fishery characterized by less environmentally sensitive species such as carp. The State may adjust criteria such as dissolved oxygen levels to reflect the use so designated. Prior to designating different uses, States should evaluate whether more environmentally sensitive species could return if CSO controls were implemented. For example, States should examine if sediment loadings from CSOs could be reduced so as not to bury spawning beds; or if biochemical oxygen demanding material in the effluent or the toxicity of the effluent were corrected so as to reduce the acute or chronic physiological stress on or bioaccumulation potential of aquatic organisms.

IV. EXPECTATIONS FOR PERMITTING AUTHORITIES

A. Overview

CSOs are point sources subject to NPDES permit requirements including both technology-based and water quality-based requirements of the CWA. CSOs are not subject to secondary treatment regulations applicable to publicly owned treatment

1 works (Montgomery Environmental Coalition vs. Costle, 646 F.2d
2 568 (D.C. Cir. 1980)).

3 All permits for CSO discharges should require the nine
4 minimum controls as a minimum best available technology
5 economically achievable and best conventional technology
6 (BAT/BCT) established on a best professional judgment (BPJ) basis
7 (40 CFR Section 125.3). Water quality-based requirements are to
8 be established based on applicable water quality standards.

9 This policy establishes a uniform, nationally consistent
10 approach to developing and issuing NPDES permits to permittees
11 with CSOs. Permits for CSOs should be developed expeditiously to
12 minimize, if not eliminate water quality impacts. A single,
13 system-wide permit generally should be issued for all discharges,
14 including CSOs, from a combined sewer system operated by a single
15 authority. When different parts of a single combined sewer
16 system are operated by more than one authority, permits issued to
17 each authority should generally require joint preparation and
18 implementation of the elements of this Policy and should
19 specifically define the responsibilities and duties of each
20 authority. Permittees should be required to coordinate system-
21 wide implementation of the nine minimum controls and the
22 development and implementation of the long-term CSO control plan.
23 The individual authorities are responsible for their own
24 discharges and should cooperate with the permittee for the POTW
25 receiving the flows from the combined sewer system. When a CSO

is permitted separately from the POTW, both permits should be cross-referenced for informational purposes.

Regions and States should review the CSO permitting priorities established in the State CSO Permitting Strategies developed in response to the 1989 Strategy. Regions and States may elect to revise these previous priorities. In setting permitting priorities, Regions and States should not just focus on those permittees that have initiated monitoring programs. When setting priorities, Regions and States should consider, for example, the known or potential impact of CSO discharges on sensitive areas, and the extent of upstream industrial user dischargers to the combined sewer system.

During the permittee's development of the long-term CSO control plan, the permit writer should promote coordination between the permittee and State WQS authority in connection with possible WQS revisions. Once the permittee has completed development of the long-term CSO control plan and has coordinated with the permitting authority the selection of the controls necessary to meet the requirements of the CWA, the permit writer should reissue/modify the permit to include enforceable requirements for implementation of the long-term CSO control plan, including conditions for water quality monitoring and operation and maintenance.

B. NPDES Permit Requirements

Following are the major elements of NPDES permits to implement this Policy and ensure protection of water quality.

1. Phase I permits - Requirements for Demonstration of Implementation of the Nine Minimum Controls and Development of the Long-Term CSO Control Plan

In the Phase I permit issued/modified to reflect this Policy, the NPDES authority should at least require permittees to:

a. immediately implement BAT/BCT, which at a minimum includes the nine minimum controls on a BPJ basis;

b. develop and submit a report documenting the implementation of the nine minimum controls within two years of permit issuance/modification;

c. immediately comply with applicable WQS expressed in the form of a narrative limitation; and

d. develop and submit, consistent with this Policy and based on a schedule in the permit, a long-term CSO control plan as soon as practicable, but generally within two years after the effective date of the permit

issuance/modification. However, permitting authorities may establish a longer timetable for completion of the long-term CSO control plan on a case-by-case basis to account for site specific factors that may influence the complexity of the planning process.

The NPDES authority should include separate compliance dates on the fastest practicable schedule for each of the nine minimum controls in an enforceable order issued in conjunction with the Phase I permit. The use of enforceable orders is necessary unless Congress amends the CWA to extend the compliance dates for meeting technology-based and water quality-based requirements. All orders should require compliance with the nine minimum controls no later than January 1, 1997.

2. Phase II permit - Requirements for Implementation of a Long-Term CSO Control Plan

Once the permittee has completed development of the long-term CSO control plan and the selection of the controls necessary to meet CWA requirements has been coordinated with the permitting and WQS setting authorities, the NPDES authority should modify/reissue the Phase II permit to include enforceable requirements for implementation of the long-term CSO control plan. Proper implementation of the approved long-term CSO control plan will be deemed to be

compliance with the Phase II permit. The Phase II permit should contain:

a. Requirements to implement the technology-based controls determined on a BPJ basis (e.g., the nine minimum controls);

b. Narrative requirements which insure that the selected controls are implemented, operated and maintained as described in the long-term CSO control plan;

c. Water quality-based effluent limits under 40 CFR Sections 122.44(d)(1) and 122.44(k), requiring at a minimum immediate compliance with the numeric performance standards for the selected controls, based on average design conditions specifying at least one of the following:

i. A maximum number of discharges per year for specified design conditions; or

ii. A minimum percentage capture of discharges by volume for specified design conditions; or

iii. A minimum percentage reduction of the mass of pollutants discharged for specified design conditions;

d. A requirement to implement, with an established schedule, the approved post construction water quality assessment program;

e. A requirement to re-assess overflows to sensitive areas in those cases where elimination or relocation of the overflows were proven not to be physically possible or economically achievable. The reassessment should be based on consideration of new or improved technologies to eliminate or relocate overflows or changed circumstances that influence economic achievability.

f. Provisions establishing generic bypass requirements, as appropriate, consistent with Section II.C.6. of this Policy;

g. A requirement to monitor to collect sufficient information to evaluate compliance with WQS; and

h. A reopener clause authorizing the NPDES authority to reopen and modify the permit upon determination that the CSO controls fail to meet WQS or protect designated uses. Upon such determination, the NPDES authority

should promptly notify the permit holder and proceed to modify or reissue the permit to require the submittal of a revised CSO control plan as soon as practicable. If the initial CSO control plan was approved under the demonstration provision of Section II.C.3.b., the revised plan, at a minimum, should provide for controls that satisfy one of the criteria in Section II.C.3.a.

Unless the permittee can comply with all of the requirements of the Phase II permit, within the term of the Phase II permit, the NPDES authority should include in an enforceable order compliance dates on the fastest practicable schedule for those activities directly related to meeting the requirements of the CWA. For major permittees, the compliance schedule should be placed in a judicial order. Proper compliance with the schedule for implementing the controls contained in the long-term CSO control plan constitutes compliance with the Phase II permit.

3. Phasing Considerations

Implementation of CSO controls may be phased based on the relative importance of and adverse impacts upon WQS and designated uses, as well as the permittee's financial capability and its previous efforts to control CSOs. The NPDES authority should evaluate the proposed implementation schedule and construction phasing discussed in Section

II.C.7. of this Policy. The permit should require immediate compliance with the controls proposed in the long-term CSO control plan. If immediate compliance with the Phase II permit is not possible, an enforcement order, consistent with the Enforcement and Compliance Section of this Policy, should be issued in conjunction with the Phase II permit which specifies the schedule and milestones for implementation of the long-term CSO control plan.

V. ENFORCEMENT AND COMPLIANCE

A. Overview

It is important that permittees act immediately to take the necessary steps to comply with the CWA. The CSO enforcement effort will commence with an initiative to address CSOs that discharge during dry weather, followed by an enforcement effort in conjunction with permitting CSOs discussed earlier in this Policy.

Success of the enforcement effort will depend in large part upon expeditious action by NPDES authorities in issuing enforceable permits that include requirements both for the nine minimum controls and compliance with all other requirements of the CWA.

As a further inducement for permittees to cooperate with this process, EPA is prepared to exercise its enforcement discretion in determining whether to seek civil penalties for past CSO violations if permittees meet the objectives and schedules of this Policy and do not have any discharges during dry weather.

B. Enforcement of CSO Dry Weather Discharge Prohibition

EPA intends to commence (during the second half of 1993) an enforcement initiative against all CSO permittees which have CWA violations due to CSO discharges during dry weather. Discharges during dry weather have always been prohibited by the NPDES program. Such discharges create serious public health and water quality problems. EPA will use its CWA Section 308 monitoring, reporting, and inspection authorities, together with NPDES State authorities, to locate these violations, and to determine their causes. Appropriate remedies and penalties will be sought for CSO discharges during dry weather. EPA will provide NPDES authorities more specific guidance on this enforcement initiative separately.

C. Enforcement of Wet Weather CSO Requirements

Under the CWA, EPA can use several enforcement options to address permittees with wet weather discharges. Those options directly applicable to this Policy are Section 308 Information

1 Requests, Section 309 (a) Administrative Orders, Section 309 (g)
2 Administrative Penalty Orders, Section 309 (b) and (d) Civil
3 Judicial Actions, and Section 504 Emergency Powers. NPDES States
4 should use comparable means.

5 NPDES authorities should set priorities for enforcement
6 based on environmental impacts or sensitive areas affected by CSO
7 discharges. Permittees that have voluntarily initiated
8 monitoring and are progressing expeditiously toward appropriate
9 CSO controls should be given due consideration for their efforts.

10 1. Enforcement for Compliance with Phase I Permits

11 Enforcement for compliance with Phase I permits will focus
12 on requirements to implement at least the nine minimum
13 controls, and develop the long-term CSO control plan leading
14 to compliance with the requirements of the CWA. Where
15 immediate compliance with the Phase I permit is infeasible,
16 the NPDES authority should issue enforceable orders, in
17 concert with the Phase I permit, requiring compliance with
18 the CWA and imposing compliance schedules with dates for
19 each of the nine minimum controls as soon as practicable.
20 All enforcement authorities should require compliance with
21 the nine minimum controls no later than January 1, 1997.
22 Where the NPDES authority is issuing an order with a
23 compliance schedule for the nine minimum controls, this
24 order should also include a schedule for development of the

long-term CSO control plan.

If a CSO permittee fails to meet the final compliance date of the enforceable order, the NPDES authority should initiate appropriate judicial action.

2. Enforcement for Compliance with Phase II Permits

The main focus for enforcing compliance with Phase II permits will be to incorporate the long-term CSO control plan through a civil judicial action or an administrative order requiring compliance with the CWA and imposing a compliance schedule with appropriate milestone dates necessary to implement the plan. Priority for enforcement actions should be set based on environmental impacts or sensitive areas affected by CSO discharges.

In general, a judicial order is the appropriate mechanism for incorporating the above provisions. Administrative orders, however, may be appropriate for permittees whose long-term control plans will take less than five years to complete, and for minors that have complied with the final date of the enforceable order for compliance with their Phase I permit. If necessary, any of the nine minimum controls that have not been implemented by this time should be included in the terms of the judicial order.

1 D. Penalties

2 EPA is prepared not to seek civil penalties for past CSO
3 violations, if permittees have no discharges during dry weather
4 and meet the objectives and schedules of this Policy.
5 Notwithstanding this, where a permittee has other significant CWA
6 violations for which EPA or the State is taking judicial action,
7 penalties may be considered as part of that action for the
8 following:

9 1. CSO discharges during dry weather;

10 2. Violations of CSO-related requirements in NPDES permits,
11 consent decrees or court orders which predate this policy;
12 or

13 3. Other CWA violations.

14 EPA will not seek penalties for past CSO violations from
15 permittees that fully comply with the enforceable order requiring
16 compliance with the Phase I permit. For permittees that fail to
17 comply with the above enforceable order, EPA will exercise its
18 enforcement discretion in determining whether to seek penalties
19 for the time period for which the compliance schedule was
20 violated. If the milestone dates of the enforceable schedule
21 are not achieved and penalties are sought, penalties should be
22 calculated from the last milestone date that was met.

At the time of the judicial settlement imposing a compliance schedule implementing the Phase II permit requirements, EPA will not seek penalties for past CSO violations from permittees that fully comply with the enforceable order requiring compliance with the Phase I permit and if the terms of the judicial order are expeditiously agreed to on consent. However, stipulated penalties for violation of the judicial order generally should be included in the order, consistent with existing Agency policies. Additional guidance on stipulated penalties concerning long-term CSO controls and attainment of WQS will be issued.

Attachment 1

COMBINED SEWER OVERFLOWS
EXAMPLES OF ACTIVITIES TO MEET THE NINE MINIMUM CONTROLS

1.	Proper O&M	o	Develop procedures to ensure routine inspection and maintenance of the collection system and CSO structures
		o	Allocate earmarked funds for O&M
		o	Provide training programs for the inspection and maintenance staff
		o	Develop a documentation program for O&M activities
2.	Maximize Collection System Storage	o	Develop a program to limit industrial and commercial discharges during wet weather periods
		o	Initiate a program to disconnect roof leaders
		o	Install inflatable dams
		o	Install a computer controlled flow routing system
3.	Pretreatment Program Review	o	Identify and evaluate industrial user discharges up-stream of all CSOs
		o	Enact local sewer use ordinances or revise individual control mechanisms to

			control industrial discharges during wet weather as appropriate
		o	Review CSO monitoring results to identify and eliminate industrial pollutants discharged from CSOs
4.	Maximize Flow to POTW	o	Evaluate possible modifications to existing POTW to increase treatment capacity during wet weather
		o	Evaluate use of abandoned units during wet weather periods
5.	Dry Weather Overflow Prohibition	o	Develop an inspection program to identify dry weather overflow locations and causes
		o	Develop and implement a plan to immediately eliminate all DWOs
6.	Floatables Control	o	Install bar screens and booms at CSO outfalls
		o	Use skimmer boats to collect floatables in the receiving water
7.	Pollution Prevention	o	Institute a public education program
		o	Promote water conservation
		o	Institute contaminant control programs such as regular street cleaning, anti-litter campaign, recycle program, and

		product bans
8. Public Notification	o	Announce use restrictions on TV and radio.
	o	Initiate a public information system where all major CSO issues are identified, possible solutions and associated costs are explained.
	o	Post notices at affected areas.
9. Monitoring	o	Maintain records of overflow occurrences and impacts
	o	Monitor and report overflow characteristics
	o	Monitor and report water quality impacts from CSOs to the receiving waters
	o	Monitor and report beach and shellfish bed closures and swimming restrictions due to CSOs