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GUIDELINES

WATER QUALITY MANAGEMENT PLANS
SECTION 303(e)
FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972

ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D. C.
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CONTENTS

TABLES

I. INTRODUCTION

A. Forward.

These guidelines describe the preparation of initial plans pursuant to the State continuing planning process (section 303(e) of the Federal Water Pollution Control Act Amendments of 1972). They are intended as a general explanation of the 303(e) planning methodology, for use by State and local personnel in preparing water quality management plans and by members of the public who may wish to review and comment on the plans during their development. Additional guidelines will be issued regarding assessment of municipal investment requirements and for plan elements to be included in later plans, including guidelines on nonpoint sources, land use and clean lakes/eutrophication.

The 1972 Amendments establish a national goal of water quality suitable for fishing and swimming by mid-1983, and they call for a two-stage program for attaining that goal. The principal means of water quality control for point sources of pollution will be prescribed, uniform levels of effluent limitations. Limitations to be achieved by the first stage, mid-1977, will be based on current technology, which must be supplemented in individual cases by any higher level effluent limitations necessary to achieve applicable water quality standards. Where necessary, higher prescribed control levels are to be achieved to meet the 1983 requirements.

Section 303(e) planning (basin planning) is a major element in the State water quality management system for implementing these requirements and for defining and achieving the desired water quality. Each plan will provide for orderly water quality management by:

- Outlining a plan--organizing information and selecting a cost effective plan.

- Determining priorities--assessing water quality and abatement problems and needs throughout the basin and establishing priorities, which will be the basis for awarding grant assistance, processing permits and taking other needed steps to achieve water quality goals.

- Scheduling action--setting forth compliance schedules or target abatement dates and indicating necessary State and local activities such as timely permit processing and construction grant awards.

- Coordinating planning--establishing goals and identifying needs and priorities for other planning activities, i.e., local 201 facility decision plans and 208 areawide plans, and reflecting the results of those activities.

The basic steps to accomplish this planning are set forth in these guidelines. A summary of the basic 303(e) planning system explained in these guidelines is shown in Table I-A.

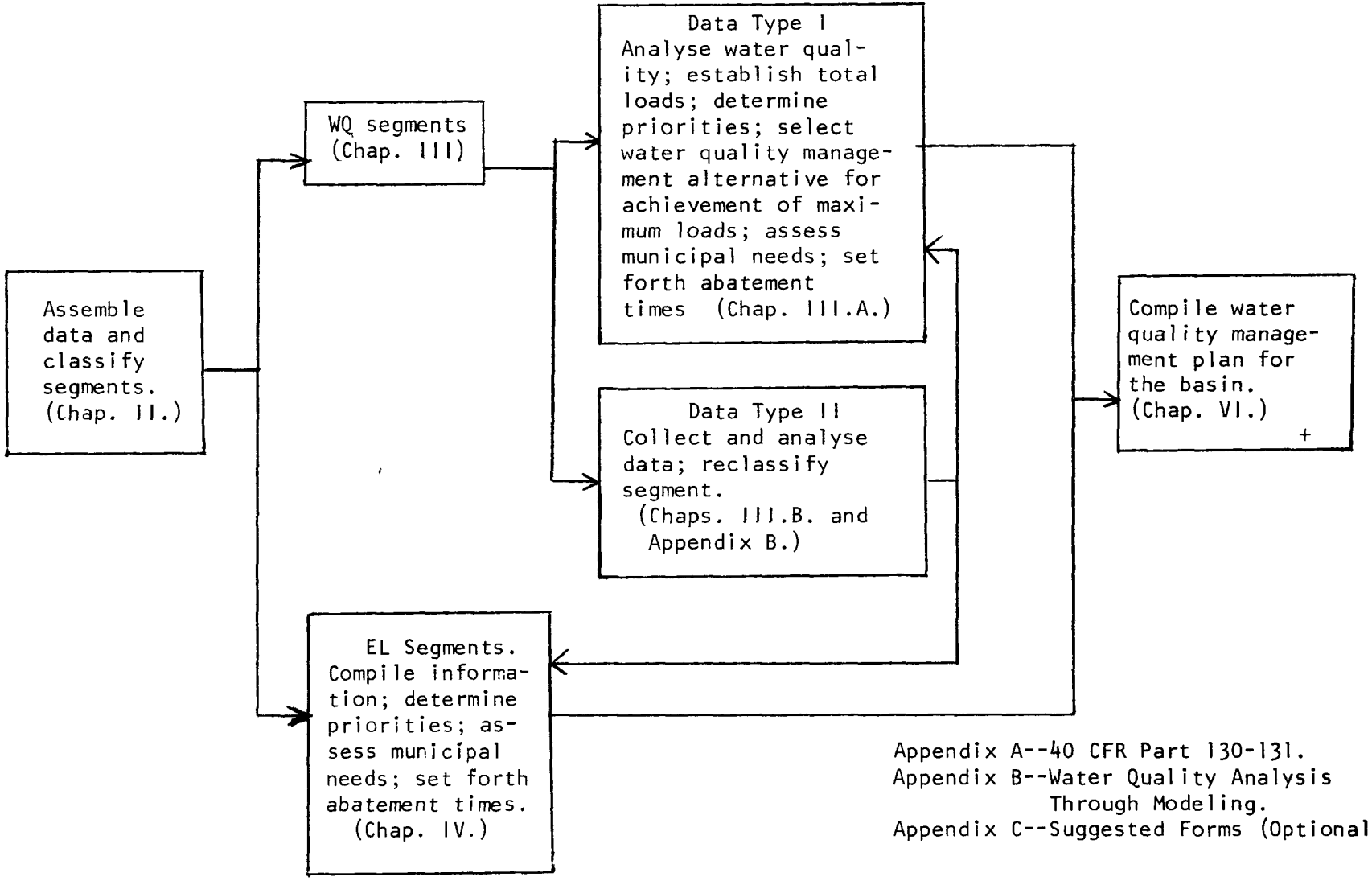
B. Scope and Purpose.

A basin plan is a five year water quality management plan for the streams, rivers, and tributaries and the total land and surface water area in one of the 267 basins defined by EPA, or any other basin unit agreed upon by the State(s) and the Regional Administrator(s). The purpose of the plan is to coordinate and direct the State's water quality decisions on a river basin scale. The plan is neither a broad water and related land resources plan nor a basinwide facilities plan; it is a document that identifies the basin's water quality problems--including a determination of existing water quality, applicable standards and significant point and nonpoint sources of pollution--and sets forth a cost effective remedial program for those problems--including effluent limitations or other control strategies; identification of 201 facility decision planning and 208 areawide planning needs; priorities for municipal facilities planning and construction grants and for industrial permit processing, and the timing of plan implementation.

Except in the simplest of situations, basin planning is conducted through the analysis of individual segments (see 40 CFR §130.2(m)) as described in Chapters II, III and IV of these guidelines. The classification of a segment determines the order and level of planning for the segment. (See Table I-B.)

303(e) basin management planning and actual water quality management in the basin are continuing, integrated processes for taking immediate program actions. Of necessity, the initial plan will be based largely on existing or readily acquired new data and will derive its courses of action from existing plans or preliminary outlines of alternatives. This initial plan will be periodically reviewed as additional or more current information and knowledge are obtained, initial objectives are accomplished, other planning is completed and available resources and capabilities increase. The initial plan will be expanded and strengthened over time to produce sounder management decisions and direct further abatement actions, such as better nonpoint source controls, as they become feasible. (See Table I-C.)

Table I-A
Basic Planning System for 303(e) Plans



Appendix A--40 CFR Part 130-131.
Appendix B--Water Quality Analysis Through Modeling.
Appendix C--Suggested Forms (Optional).

TABLE I-B

Level of Planning According to Segment Classification

Component	Type of Segment
Inventory and categorization of individual discharges.	EL, WQ.
Assessment of needs for publicly owned treatment works.	EL, WQ.
Already established schedules of compliance, and target dates of abatement for significant discharges not on a compliance schedule.	EL, WQ.
Where data exist or are readily available, an assessment of total maximum daily loads necessary to meet water quality standards for the criteria being violated.	WQ only.
Where data exist or are readily available, effluent limitations for significant discharges consisting of already established effluent limitations or, if none, target limitations, as necessary to achieve water quality standards.	WQ only.
Where existing or readily available data are insufficient for waste load analysis, the design and initiation of a data collection and waste load allocation program, including a schedule for execution of the program.	WQ only.
Assessment of nonpoint source pollution and, where applicable, establishment of needed control measures after 1-1-75.	WQ only.

Table I-C

Increases in Plan Complexity over Time

Present until July 1, 1974

- Management provisions (data assembly, discharge inventories, etc.)
- Waste load analysis in WO segments based on existing or readily obtained data.
- Compliance schedules or target abatement dates.

Present until January 1, 1975

All of the above plus:

- Data acquisition programs as necessary.
- Waste load analyses based on existing and acquired data.
- Assessment of municipal needs, to govern Federal construction grant assistance.

Plans completed after January 1, 1975

All of the above plus:

- Nonpoint source analysis and control, as feasible, including State programs under section 208.
- Land use controls, if necessary and feasible.

303(e) planning during calendar years 1973-74 will be primarily directed towards managing the abatement and control of point sources of pollution in the basin for the immediate five year period and laying the groundwork for subsequent planning. The basic objectives of initial plans are:

- To establish stringent but realistic effluent limitations and compliance schedules or target abatement dates for point sources, leading to achievement of water quality goals.
- To identify municipal needs.
- To direct construction grant awards and permit issuance on an abatement priority basis, leading to implementation of those limitations and schedules.
- To identify and schedule further needed actions, including localized planning and additional data collection.

The basin planning steps described in 40 CFR Part 131 and further discussed in these guidelines are necessary to accomplish these management objectives properly. Thus, gathering water quality and area trend information, classifying segments and constructing discharge inventories provide the basis for determining discharge load allocations and effluent limitations, where needed, assessing municipal needs, and establishing dates for the timely attainment and maintenance of water quality standards. This information will guide specific near term management actions, such as permit and construction grant processing; these actions will be further programmed on a yearly basis in the annual State strategy. (See section 106 of the Act and 40 CFR 35, Subpart B.) The information will also identify the basin's longer range planning needs. In this way, the written plan becomes a visible statement illustrating orderly analysis and a coherent program for immediate and continuing action and planning.

C. Relation with Other Plans.

Three types of water quality plans are provided by law--basin planning (section 303(e)), facilities decision planning (section 201) and areawide waste treatment management planning (section 208).

Basin plans are the water quality management plans for the waters of the State. Viewed together they provide, statewide, an analysis of water quality and waste source problems and a description of overall remedial goals. Their primary use is as a management guide for area-specific actions such as grant awards, permit processing and the identification of needed intensive local planning. However, the 303(e) planning process may also be used as the mechanism for carrying out particular statewide programs, such as areawide planning by the State (section 208(a)(6) of the Act) or certain statewide nonpoint source planning (section 208(b)(4)).

By contrast with the statewide character of 303(e) planning, facilities decision planning under section 201 of the Act and areawide waste treatment management planning under section 208 are limited to a local area within a basin. In considering particular treatment or control requirements, they confront problems of site location and plant size and design, and they study the cost effectiveness of alternative waste treatment management techniques and systems. Section 201 planning is planning directly related to a publicly owned treatment works to be constructed with Federal grant money; section 208 planning provides comprehensive planning and regulation in an area having substantial water quality control problems and must result in a management program covering all point and, if appropriate, nonpoint sources of pollution in that area.

The need for 201 and 208 planning may be identified through the 303(e) analysis, and 201/208 plan objectives must be consistent with objectives established by the plan for the basin in which they are located. Correlatively, subsequent revisions of 303(e) plans pursuant to the continuing planning process must reflect the conclusions of the more detailed subplanning within the basin. Table I-D reflects the relation between plans.

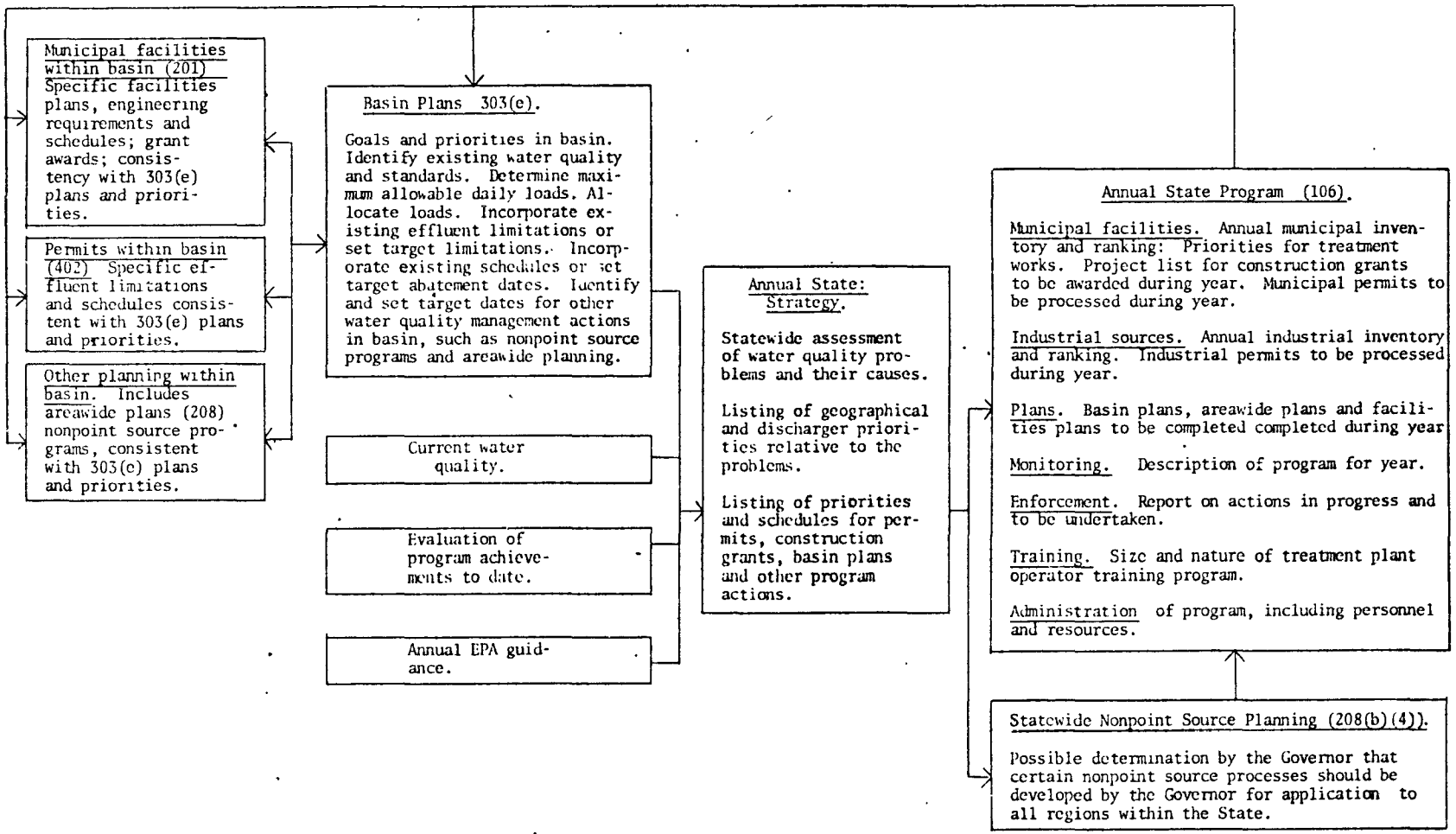
D. Timing of Planning.

1. Timing as between types of planning.

Full implementation of the planning and management provisions of the Act is sequenced over time. Elements which are postponed include complete facilities planning (FY75; §201(g)(2)), areawide planning (at least 1976; §§208(a)(1), 208(a)(2), 208(b)(1)), establishment of total loads (1975; §303(d)(2)) and liability for failure to obtain an NPDES permit (after December 31, 1974; §402(k)). In contrast, the law mandated development of the 303(e) process within 120 days after enactment and provided that no State would be authorized to participate in the permit system until it had a 303(e) planning process. Thus, the Act placed the initial planning impetus on 303(e). This allows concentration of limited current resources to achieve two immediate program needs: permit issuance including, where time allows, determination through 303(e) planning of any needed effluent limitations higher than base level; and the building of an orderly statewide framework for the increasingly complex and area-specific planning scheduled to follow.

Basin plans covering the next five years and current facilities decision plans are interdependent. Facilities decisions regarding the number, location and magnitude of waste discharges in the basin are necessarily addressed during the preparation of basin plans. By contrast, areawide planning involves a delayed start-up and additional complex planning

Table 1-D
ANNUAL STATE PLANNING AND MANAGEMENT ACTIONS



determinations. It will be directed toward the law's longer range goals, including achievement of the levels of treatment required for July 1, 1983.

2. Timing among various basin plans. (See 40 CFR §130.42.)

While all basin plans are to be completed by June 30, 1975 (see 40 CFR §130.42(a)), the timing for completion of individual basin plans will vary according to the severity of water quality problems in the planning area and such other factors as the State may deem appropriate. Factors may include plan complexity or the number of sources in an area that are high on the State's municipal and industrial priority lists. The schedule of plan preparation developed as a part of the continuing planning process will establish basin plan completion dates.

3. Timing of basin plan coverage and revision.

A basin plan should generally cover a five year period. However, completed basin plans should be revised whenever necessary, including revisions to reflect information newly developed by facilities plans, permits or permit applications or the results of additional monitoring or surveillance. (See 40 CFR §131.404.) Revised plans should be expanded to include all elements required for plans completed at the date of the revision. (See Table 1-C.) Any permit compliance schedule milestones that are required to track plan implementation should be incorporated into the appropriate basin plan at the first plan revision following issuance of the permit. (See 40 CFR §131.209(a)(ii).) Other permit information should also be taken into account in that revision.

E. Terminology.

Certain terms used frequently in these guidelines require a brief explanation. The regulations contain further definitions. (See 40 CFR §130.2.)

- "303(e) plans," "basin plans" and "water quality management plans" are the same--they all refer to the plans described in these guidelines.

- "Loads" or "loadings" are quantities of pollutants in the water. The total load is an instream amount; the total maximum daily load is the amount which may be added by all sources (without violating water quality standards); load allocation refers to the amount of the total maximum daily load which, it is determined, may be added by an individual source. The load allocations are reflected in effluent limitations (defined in §130.2) assigned to individual point sources.

- "Targets" are goals. They are not directly enforceable but become binding when incorporated into a permit or other Federal or State regulatory mechanism. For example, a target abatement

date is a single date when it is expected that needed remedial actions will have been completed. This is in contrast with a permit's schedule of compliance, which is a formal, binding sequence of dates for implementing specific actions. (See section 502(17) of the Act.)

- "Milestones" are interim dates in a schedule of compliance or other action timetable. Their inclusion allows measurement of progress towards achievement of the final objective. (Requirements for permit schedules of compliance are set forth at 40 CFR §124.44.)

II. COMMENCING THE BASIN PLAN; CLASSIFICATION OF SEGMENTS

This chapter describes the initial steps to be taken in commencing the basin plan, including the classification of segments. Planning should proceed pursuant to the approved State continuing planning process. Citations in this chapter are to relevant regulations under Part 40 of the Code of Federal Regulations. (See Appendix A.) The applicable regulations should be consulted throughout the plan's preparation.

A. Assemble existing water quality data and note applicable standards. (§§131.201, 131.202.)

Existing water quality and related hydrologic and hydraulic data may consist of outputs from ongoing State or Federal permanent monitoring stations or fields surveys, from permit applications or other discharge-related data, or from other sources. Data should be sufficiently current and accurate. Applicable water quality standards should be noted.

B. Construct an inventory of existing dischargers. (§§130.2(o), 130.27, 131.201, 131.206, 131.208, 131.211.)

The inventory of dischargers should identify and locate all significant dischargers (defined as any discharger causing serious or critical water quality problems relative to the segment to which it discharges). Existing information as to the amount, characteristics and treatment of the effluents from each significant source, including information from National Pollutant Discharge Information System ("NPDES") applications or permits, if any, should be assembled and should be described in the plan. Significant nonpoint sources should be included, although control of nonpoint sources may be deemphasized until after the first round of NPDES permits for point sources has been fully processed. Minor sources which are required to obtain permits under the NPDES should be identified. A description of their effluents is not necessary, although a notation of readily available information respecting minor sources may be helpful in order to estimate the extent of their combined, total impact on the overall water quality situation.

C. Assemble estimates of existing population, employment and land use. (§§131.206(b)(2), 131.211, 131.212.)

Estimates of the existing population, employment, and land use in the basin should be assembled as a basis for assessing existing patterns of the generation of pollutants and as a basis for projecting the amounts and spatial distribution of future waste loads. Population data are available from the Bureau of the Census; employment data are available from the Bureau of Labor Statistics (U. S. Department of Commerce). Land use data should be obtained from official planning agencies within the basin. To the extent possible, in-stream quality data assembled pursuant to Paragraphs A and B of this chapter should be combined with population, employment, and land use data to construct a materials balance for each significant pollutant to provide a basis for identifying the most significant sources of pollution within the area.

D. Assemble or construct base line projections of population, employment and land use for the next twenty years. (§§131.206(b)(2), 131.211, 131.212.)

Base line projections of population, employment and land use should be assembled if available or otherwise constructed. These projections provide a basis for making base line projections of future patterns of waste load generation. These projections should cover the next 20 years in 5-year increments. They should be consistent with demographic and economic projections developed by the Bureau of Economic Analysis (U. S. Department of Commerce) and the Economic Research Service (U. S. Department of Agriculture) and with projections used as a basis for State planning for air quality management; the use of any projections that deviate significantly from BEA should be justified. BEA projections are available at level of States, BEA economic regions, Water Resource Council regions, and for Standard Metropolitan Statistical Areas, all of which generally include more than a single county. If it is necessary to disaggregate BEA projections, the assumptions made in the disaggregation process should be made explicit. Historical trends of county population and employment data are available upon request to BEA. Land use projections should be assembled with the assistance of officially designated planning agencies in the area.

Using these projections and the best available estimates of waste load generation per unit of activity, project the incremental impact of a five year growth in waste loads from residential, commercial, industrial, and nonpoint sources. To assure that the plan is consistent with longer range development as well as providing for water quality management during the immediate five year planning period, these projections should cover the next twenty years in five year increments.

E. Identify segments and disaggregate basin data. (Preamble to 40 CFR Part 131 and §§130.2(m), 130.11, 131.203.)

Each segment (as defined in §130.2) should be identified, and the assembled data for the basin (paragraphs A-D, above) should be disaggregated by segment. Any departures from the segment identification contained in the State continuing planning process should be noted.

F. Classify segments.

An initial list of segment classifications was submitted by each State as a part of the State continuing planning process submittal. The basin plan should reevaluate and refine those initial classifications.

Each segment must be classified as either "water quality" ("WQ") or "effluent limitation" ("EL") in accordance with the following definitions (see §§130.11, 131.203):

Water quality class. Any segment where it is known that water quality does not meet applicable water quality standards and which is not expected to meet water quality standards even after the application of the effluent limitations required by sections 301(b)(1)(A) and 301(b)(1)(B) of the Act. 1/

Effluent limitation class. Any segment where water quality is meeting and will continue to meet applicable water quality standards or where there is adequate demonstration that water quality will meet applicable water quality standards after the application of the effluent limitations required by sections 301(b)(1)(A) and 301(b)(1)(B) of the Act.

WQ segments may be further classified as follows:

Data Type I: Segments for which data are sufficient to execute load allocations without additional monitoring.

Perfect and complete data on water quality and all point and nonpoint sources will never exist: Sufficiency of data is a question of judgment.

Data Type II: Segments for which additional monitoring is needed to acquire sufficient data to classify the segment with certainty or to execute waste load allocations.

The classification process involves consideration of the disaggregated basin information, including the discharger inventory, water quality data and growth trends and baseline projections of waste loads. Classification should be based on measured instream water quality if available or, if not, the estimated instream water quality in the area of maximum pollutant concentration. Segment classification should take into account the contribution of pollutants from adjoining segments by assuming that water quality standards will be met (e.g., upstream sources will comply with applicable effluent limitations), unless violations in adjoining segments are caused by nonpoint sources not expected to be abated within the classification period, in which case the estimated substandard water quality must be recognized. In areas of uncertainty, the segment is classified "WQ-II."

1/ The effluent limitations required by sections 301(b)(1)(A) and (B) are base level limitations consisting generally of best practicable control technology currently available (BPT) for industrial point sources and secondary treatment for municipal sources. BPT and secondary treatment are defined in regulations issued and to be issued by the Administrator.

G. Determine order of segment analyses.

The general order for conducting individual segment analyses should be determined. While the order of analyses is a local planning decision, it is generally appropriate, if feasible, to--

- Commence analyses of complex segments promptly, to assure their timely completion.

- Analyze adjacent or interrelated segments simultaneously, to assure coordination of interdependent decisions.

III. WATER QUALITY SEGMENT ANALYSIS

Introduction

Each water quality segment analysis should be prepared as described in this chapter. Planning should proceed pursuant to the approved State continuing planning process. Citations are to the relevant sections of 40 CFR Part 131 (see Appendix A to these guidelines), which should be consulted throughout the segment analysis.

The thrust of planning in water quality segments is to establish effluent limitations for significant sources and to indicate the time for implementing these limitations. This provides a basis for the permits, construction grant awards and other actions which lead to achievement of the limitations and consequent protection of water quality.

The limitations must be at least as stringent as required by section 301(b)(1) of the Act, which provides as follows:

"(b) In order to carry out the objective of this Act there shall be achieved--

> (1)(A) not later than July 1, 1977, effluent limitations for point sources, other than publicly owned treatment works, (i) which shall require the application of the best practicable control technology currently available as defined by the Administrator pursuant to section 304(b) of this Act, or (ii) in the case of a discharge into a publicly owned treatment works which meets the requirements of subparagraph (b) of this paragraph, which shall require compliance with any applicable pretreatment requirements and any requirements under section 307 of this Act; and
>
> (B) for publicly owned treatment works in existence on July 1, 1977, or approved pursuant to section 203 of this Act prior to June 30, 1974 (for which construction must be completed within four years of approval), effluent limitations based upon secondary treatment as defined by the Administrator pursuant to section 304(d)(1) of this Act; or

> (C) not later than July 1, 1977, any more stringent limitation, including those necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any State law or regulation (under authority preserved by section 510) or any other Federal law or regulation, or required to implement any applicable water quality standard established pursuant to this Act."

The definition of water quality segment is that it is a segment where application of the section 301(b)(1)(A) and (B) requirements by all sources would be insufficient to achieve water quality standards. It follows that in such a segment the law requires that some significant point sources must be subjected to controls beyond the best practicable treatment ("BPT")/secondary treatment effluent limitations prescribed by the Administrator, or some nonpoint sources must be controlled in order to achieve standards, or some combination of point and nonpoint source treatment or control must be implemented. It does not follow that such controls will be necessary for all sources nor for all parameters of sources requiring such controls: the base level BPT/secondary treatment limitations will be adequate for all parameters discharged by some sources, and even with sources that must achieve higher reductions in some parameters, base level limitations will be sufficient for other parameters.

The segment analysis must define the specific problems causing the water quality segment classification; identify the contributing responsible sources and consider alternative remedial measures. Separate alternatives may be derived by varying the load allocations for each discharger and thus varying the responsibility for abatement as between sources or classes of sources.

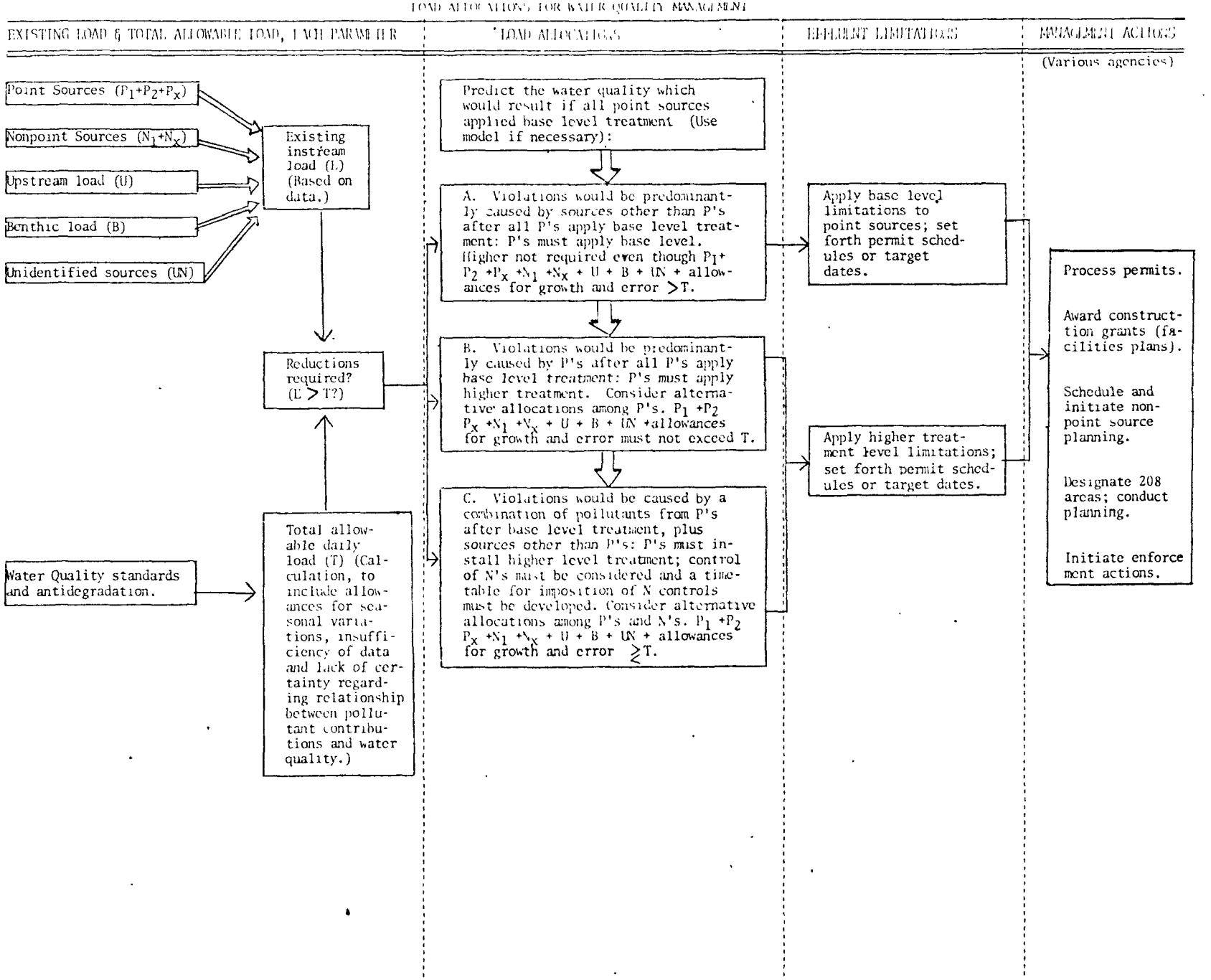
Modeling is generally the appropriate method of ascertaining total maximum daily loads and determining the effects of the proposed alternative abatement strategies. The modeling technique selected depends on the nature and complexity of the problem. The technique should represent the minimum level of sophistication needed to provide for accurate determinations. (See Appendix B.)

Following the development and analysis of alternatives, a cost effective waste treatment management strategy is to be established for implementation in the segment. Where appropriate, the detailed strategy will be developed through 201 or 208 planning.

Table III-A illustrates the method and use of the load allocation process.

Table III-A

LOAD ALLOCATIONS FOR WATER QUALITY MANAGEMENT



A. Data Type I Segments.

Data are sufficient to execute load allocations without additional monitoring.

1. Describe existing water quality and set forth applicable water quality standards. (§131.202.)

Existing water quality and related hydrologic and hydraulic data, and the water quality standards applicable to the segment or legal citation to such standards, should be disaggregated from the data and standards of the basin. (See Chapter II, Section A, of these guidelines.)

2. Determine total maximum daily loads. (§131.205)

Each water quality standards parameter being violated or expected to be violated in the segment should be identified. For all parameters, whether or not violated, the total maximum daily loads of related pollutants which may be added to the water body by all point and nonpoint sources without violating the standard must be determined.

Each total load limitation must be at least as stringent as necessary to implement the applicable standard under the low flow critical water quality conditions prescribed by the standards and any conditions which should be anticipated in the individual situation, such as seasonal waste discharges. It must include provision for seasonal variation and for a margin of safety which takes into account any lack of knowledge concerning the relationship between effluents and water quality as well as any uncertainty resulting from insufficiency of data, including data from nonpoint sources. Where thermal standards may be violated, thermal loads must be separately estimated as provided in §131.205(b). For parameters which are meeting applicable standards or which will meet applicable standards upon implementation of the July 1977 base level effluent limitations, the antidegradation principle applies. (See Chapter IV, Section B of these guidelines.)

3. Inventory, categorize and rank existing dischargers. (§131.206(a).)

The inventory and categorization of dischargers in the segment should be disaggregated from the inventory and categorization for the basin, checked for accuracy and completeness and revised if necessary. (See Chapter II, Section B, of these guidelines.) Significant dischargers should be ranked in order of abatement priority.

4. Assess nonpoint sources. (§§131.203(c)(2), 131.211.)

The segment analysis should assess the amounts and character of pollutants from nonpoint sources identified in the area of the segment. It is desirable that the segment analyses consider agricultural, silvicultural, mining related, construction activity related, salt water intrusion related and other nonpoint source pollution to the extent provided in §131.211. Specific abatement or control strategies for nonpoint sources may be suggested. Consistently with national priorities, these strategies should be developed as provided in §131.211(c) following completion of the initial planning required as a basis for permits.

5. Determine waste load allocations. (§§131.206(b), 131.209.)

i. General considerations.

A waste load allocation for a segment is the assignment of target loads to all significant point and nonpoint sources so as to achieve water quality standards in a cost-effective manner. It involves, in effect, the selection of the best practicable water quality management alternative for the segment over a five period while taking cognizance of longer range needs of the basin and of that particular segment. This alternative will contain the major water related determinations for the area and must therefore be consulted for specific management actions, including the writing of conditions for NPDES permits and construction grant awards.

The purpose of waste load allocations is three-fold: (1) to establish a basis upon which effluent limitations can be assigned and permits issued to individual dischargers to satisfy water quality standards over the next five years; (2) to provide a basis for establishing compliance schedules or target abatement dates and (3) to identify and provide a basis for ranking needs of municipalities for which planning and possible construction of Federally-assisted facilities must be initiated within the next five years. Since a basin plan is a management plan, it prescribes the abatement strategy for individual sources only generally. While the plan does not determine detailed engineering specifications for particular projects, some knowledge of alternative facilities and nonstructural alternatives and their associated costs is obviously required to develop feasible, cost effective allocations. The allocations for each industrial or municipal discharger must either result in an attainable total effluent allowance or recognize that the restriction may result in the discharger being forced to close or reduce its operation to avoid being subject to possible enforcement (through action on a permit or other enforcement mechanism under State law). To determine feasible limits, the analysis must consider generally the alternative technical and economic capabilities available to each significant discharger.

Where standards are being violated because of point source discharges, the technical requirements for some point sources must be beyond base level effluent limitations. The economic and social costs of the alternatives available to each source must be weighed. In addition, the trade-offs and total costs among combinations of alternatives for multiple sources must be reviewed in search of the mix of processes at all facilities which will result in the most efficient overall plan for achieving standards when all sources are in operation.

In developing waste load allocations, the following points must be considered:

(A) Coordination with permits. (§131.209.)

Effluent limitations established by any current permit issued prior to completion of the plan should be recognized in the plan. For each discharger subjected to the NPDES which has not been issued a permit the analysis must establish target load allocations. Target allocations will generally be incorporated into any subsequently issued permit, subject to all rights of the permit applicant and other interested persons to contest the targets. They are not enforceable until incorporated into a permit or otherwise made enforceable through State law or regulation.

(B) Coordination with facilities planning. (§131.210; 40 CFR Part 35, Subpart F.)

Facilities planning involves detailed planning directly related to the Federal assisted construction of municipal waste treatment facilities. Such planning develops plans for cost effective municipal waste treatment or control by determining the best practicable alternative waste management system over time, its geographic coverage, its service of other area sources, including industrial sources, and the nature and amount of the planned discharge (load reduction achieved). These decisions for the specific facility will affect not only the source's load allocation requirements but also the total number of industrial and municipal sources contributing to the total load. Analysis of the segment and the facility plan are interdependent: The facilities plan cannot disregard the overall segment analysis, yet that analysis must respect the realities of individual facilities needs and capabilities, with particular attention to considerations of cost effectiveness, growth trends and available financing. (See paragraph 8, below.)

(C) Relation to areawide waste treatment management.

The waste load allocation process will help identify those areas where areawide waste treatment management planning (section 208 of the Act) should be initiated. Waste load allocations and areawide planning should be coordinated: areawide plans should be consistent with total loadings planned for the segment and basin.

(D) Accommodation of future growth.

Growth trend information compiled for the segment must be considered and a determination made as to the load allotments, if any, to be reserved for future discharges. The allotment must be consistent with continuing achievement of standards and preventing any significant water quality degradation. (See Chapter IV, Section B.) The growth allotment should be separately displayed in the reported load allocation.

(E) Nonpoint sources.

In allocating pollutant loads among point sources, the additional pollutant contribution from nonpoint sources must be considered, to assure that the combined total will not exceed applicable water quality standards. Such contribution should be separately entered in the load allocation display. The long term point source load allocations may depend upon the abatement and control projections respecting nonpoint sources.

(F) Upstream contribution.

The amount of pollutants expected to be entering the segment from upstream must be added in when determining whether the total of proposed individual point and nonpoint allowances exceeds the allowable maximum. (See Chapter II, Section F.) For purposes of notation and calculation, this contribution estimate necessarily involves coordination with planning for the upstream segment. The method of coordination, level of certainty regarding the estimated future load and the time span covered is a matter of of planning judgment.

(G) Clusters.

The cluster analysis requirement (§131.60(c), §131.209(c)) may dictate that initial load allocations for clusters be formulated in advance of complete planning. It may be appropriate to accelerate the segment analysis in areas where cluster analyses

are required. In any event, subsequent load allocations should be consistent with the cluster determinations. (See paragraphs (A) and (B), above.)

(H) Treatment of uncertainty in waste load allocation.

Uncertainty in waste load allocation process may consist of: (1) uncertainty with respect to growth projections; (2) a lack of knowledge of cause-effect relationships among effluents and water quality; (3) pending decisions with respect to the construction of reservoirs, withdrawals, and other developments which could significantly alter the water quality standards applicable to the segment, and (4) uncertainty as to the data being employed.

. Growth projections.

Unanticipated growth occurring during the period covered by the plan, if not controlled, could cause water quality conditions to deteriorate to such a point that the classification of some segments would be changed from effluent limited to water quality limited, or in water quality segments higher levels of technology if not controlled, could be required to achieve standards. Since the rate of growth of waste loads is controlled by local decisions with respect to annexation, industrial expansion, sewer connection permits, etc., the plan's load projections and allocations must be reviewed with the responsible municipalities and industries. The discussion should note that because of the antidegradation principle, if future growth is underestimated and hence assigned an inadequate load allocation, projects proposed for later in time may be foreclosed or restricted by reason of an early exhaustion of the available load allowance.

. Lack of cause-effect knowledge.

Uncertainty due to a lack of knowledge of the cause-effect relationships among waste loads and water quality must be taken into account in the waste load allocation process. Experience with cause-effect modules in water quality is insufficient to provide a basis for specifying tolerance levels for prediction errors, but the use of sensitivity analysis is encouraged. Where the social cost of errors is small, factors of safety should be included; where the social cost of errors is large, research and monitoring to reduce uncertainty should be conducted or scheduled. A schedule for such activities should be included in the plan.

- Pending development.

  Where there is substantial uncertainty with respect to pending development decisions, allocations should be made under both the assumption that development will not occur and that the development will occur. Water quality implications of the proposed development should then be brought to the attention of the decision-makers concerned with the project or program.

- Uncertainty as to the data.

  The level of confidence in the data should match the significance of the dependent decisions. Additional confirmation of data should be sought where the costs of possible error so warrant.

Time periods covered by the plan should reflect the level of uncertainty that may arise from each of these source. For example, while the Act provides for the issuance of permits of up to 5 years' duration, if major uncertainties exist it may be appropriate to issue a number of permits having a shorter duration, thus assuring proper near term activities based on existing conditions but postponing a longer commitment that might be recognized as inappropriate when further information is obtained. In any event, plans should be reviewed and revised, pursuant to the State's continuing planning process and consistently with any current, issued permits, when new information is obtained, unanticipated new permit applications are received, or other significant changes occur.

ii. Varying point source allocations according to extent of nonpoint source responsibility for violations.

It will be recalled that Water Quality, Data Type I segments are those for which sufficient data are available and violations of water quality standards are anticipated within a five-year period even after the application of base level effluent limitations to all point sources. The anticipated violations must necessarily result from one of three situations: residual pollution would be primarily from nonpoint sources; residual pollution would be primarily from treatment plant effluents after the achievement of base level limitations, or residual pollution would result from treatment plant effluents and nonpoint sources of comparable magnitude. Allocations under each of these conditions should be as follows:

(A) Dominant nonpoint. Where remaining violations, after the application of BPT and secondary treatment by point sources, are predominantly caused by nonpoint sources, loads should be allocated to point sources according to those base level effluent limitations, since water quality cannot be significantly improved through the application of higher effluent limitations. The need for nonpoint controls should be noted, and where these conditions occur in complex urban-industrial or other critical areas, section 208 planning activities should be considered. Any statewide planning under section 208(b)(4) must be taken into account.

(B) Dominant point. Where remaining pollution from point sources after the application of base level effluent limitations is the dominant cause of anticipated violations, loads should be allocated so as to achieve water quality standards in a cost effective manner, including allocations requiring higher levels of treatment or control. In segments where previously developed plans are available and up to date, these plans may be sufficient to assign waste loads to individual sources. In other segments, evaluation of alternative load allocation strategies is necessary to determine the most cost effective strategy for achieving water quality standards. Waste loads should be allocated consistently with the preferred strategy.

(C) Comparable point and nonpoint. Where remaining pollution from point sources after the application of base level effluent limitations and pollution from nonpoint sources--which may include in place or accumulated pollutants--are of comparable magnitude, loads should be allocated in a manner similar to that outlined for dominant point areas, except nonpoint source controls should be considered simultaneously with more stringent point source effluent limitations. Again, evaluation of alternative strategies is necessary to determine a cost effective means of achieving standards. Point source loads should be assigned on the basis of the alternative selected. The need for nonpoint controls should be noted, and when these conditions occur in complex urban-industrial areas, section 208 planning should be considered. Any statewide planning under section 208(b)(4) must also be taken into account. In the absence of any 208 planning, a target date for defining specific nonpoint source control programs should be established. When all NPDES permits have been processed, nonpoint source programs should be addressed.

Evaluation of alternatives, where required, should be carried out only at the level of detail required to execute the waste load allocation process. The evaluation should not reach the level of engineering design, but the alternatives considered must be technically feasible and the cost estimates must be soundly based.

6. Effluent limitations for significant dischargers. (§§131.206, 131.209.)

Effluent limitations, or target limitations, must be established for each significant point source in the water quality segment. Limitations must be set forth for every pollutant discharged by the source. Effluent limitations established in any issued, current permit must be incorporated. Where no permit is in effect, target limitations must be formulated. (See §131.209.) The target limitations must be at least as stringent as necessary to meet the requirements of the Act and applicable regulations and, for parameters for which load allocations are required, the load allocations established for such source.

The Administrator is publishing effluent guidelines defining secondary treatment for municipal facilities and best practicable technology for various classes and categories of industrial point sources. Such guidelines are published in the Federal Register (see 40 CFR Parts 133,). Upon publication, copies of the guidelines and information respecting them may be obtained from the Regional Administrator. These guidelines may be used to prescribe target limitations for specific parameters if the resulting effluent will be consistent with the source's assigned load allocations. Stricter limitations must be developed where the base level restrictions would not result in achieving compliance with the source's load allocation and with water quality standards.

7. Treatment plant residuals. (§131.203(e).)

The analysis should include controls over the disposition of all residual waste from any municipal, industrial or other water or waste water treatment processing, whenever the processing or disposal occurs within the segment. Quantity estimates and specific disposal sites should be set forth. Additional guidance on this subject will be published.

8. Assess municipal facilities requirements. (§131.210.)

The segment analysis must include an assessment of investment requirements for municipal waste treatment or control in the segment. A comparison of these investment requirements with available financing will indicate generally the date when implementation will be feasible. The needs assessment is one of the elements used in determining, reviewing and revising the State municipal priorities list, which governs construction grant awards.

Pending publication of further guidance, the assessment should be conducted as follows:

i. Ascertain the effluent load reduction which will be achieved by the proposed facility and determine whether this reduction is required to attain and maintain applicable water quality standards and effluent limitations.

ii. Compile and review any available evidence concerning the cost effectiveness of the proposed treatment or control method. Employ engineering plans, specifications and detailed cost estimates if available; otherwise, cost estimates must be developed. The Administrator will issue guidelines on this subject.

iii. Determine the population or population equivalents to be served. Include the population trend forecasts developed at the commencement of the basin planning activity. (See Chapter II, sections (C) and (D) of these guidelines.) State the design lifetime period used, and indicate how the population analyses employed compare with projections used in other State and local planning activities.

9. Schedules or targets for significant dischargers. (§§131.207, 131.209, 131.210.)

A schedule of compliance or target abatement date must be determined, as explained in this section, for each significant point source which is not currently in compliance with the effluent limitations applicable to it and is not anticipated to be in compliance by January 1, 1975. If the State is participating in the NPDES, target dates for the processing of permits respecting any covered source which will not have been processed at the time of the basin plan's completion must also be set forth.

Any schedule established by a current, issued NPDES permit must be included in the segment analysis. Target final abatement dates must be developed for all other significant sources and for any permitted source having a permit with an incomplete schedule.

Each schedule or target abatement date should reflect stringent performance goals, to assure implementation of the plan's required effluent limitations in the shortest practicable time. However, all dates established by the plan must be realistic and feasible: No segment analysis should culminate in arbitrary, fictitious requirements which would be impossible to meet.

The schedules or targets should provide for timely implementation of the statutory goals of section 301 whenever the Act's deadlines can possibly be attained. Any alleged impossibility should be clearly documented by the discharger. No target date inconsistent with the Act will be approved, although inclusion of non-approvable target dates will not necessarily preclude approval of other portions of a plan. It should be noted that target dates contained in the plan are not directly enforceable, and inclusion in the plan of a target compliance date inconsistent with the requirements of law cannot guarantee the subject source any immunity from public or private actions to enforce the law's requirements or penalize violations thereof. It should also be noted that basin plans and the schedules and targets contained therein are subject to revision: Improvements in technology or financing prospects may result in shortening established target dates.

10. Monitoring program. (Part 131, Subpart C.)

Each water quality segment should be included in the State's monitoring program. (See Part 131, Subpart C, and 40 CFR Part 35, Subpart B, Appendix A.) A program to monitor total stream discharge loadings and instream water quality in each water quality segment in the basin must be included in the basin plan. Initial monitoring efforts should serve the purposes of the initial plans: they should be directed primarily towards acquisition of data needed to allocate loads and issue NPDES permits in Water Quality segments by December 31, 1974. Subsequently, monitoring may also be directed towards nonpoint source analysis and controls. The annual State program will set forth specific monitoring program for each year.

11. National priorities.

Planning in the segment should be consistent with national priorities as determined by the Administrator. Information respecting current priorities may be obtained from the Regional Administrator.

12. Relationship with other plans. (§131.204.)

Planning for the segment should take into account any other water quality or other applicable resource plan prepared or under preparation which involves all or any part of the basin. The basin plan of which the segment analysis is a part will identify and discuss such other planning activities in the basin.

B. Data Type II Segments.

Additional monitoring is needed to acquire sufficient data to classify the segment with certainty or to execute waste load allocations.

1. Procedures for Data Type II segments.

For Data Type II segments, the following steps should be employed:

i. Select a tentative model to relate source loads to water quality (unless an existing, current model is available). (See Appendix B of these guidelines.)

ii. Design, schedule and execute a data collection program. (See paragraph 2, below, and 40 CFR Part 35, Subpart B, Appendix A.)

iii. Reclassify the segment as either Effluent Limitation or Water Quality, Data Type I, and proceed according to the guidelines for those segments.

2. Data Collection.

Surveys for Water Quality, Data Type II segments should be those required as a part of each State's overall monitoring strategy. (See 40 CFR Part 35, Subpart B, Appendix A (Monitoring).) According to the regulations, the requirement for intensive surface water monitoring surveys should be met as a matter of priority, and beginning with Fiscal Year 1975, the State's intensive survey capability should be adequate to support the State's continuing planning process, including the development of data necessary to set effluent limitations.

Surveys should measure each parameter for which the applicable standard is being violated during the critical period for that parameter. Using as a guide the preliminary waste load and cause-effect estimates developed for the classification of segments, surveys should be designed to allow simultaneous estimates of loads from point and nonpoint sources and of their impacts on water quality. These impacts should be represented in the form of the least sophisticated model adequate to enable planners to predict water quality conditions under adjusted conditions of flow, temperature and load allocations. (See Appendix B to these guidelines.) The model should be properly validated.

IV. EFFLUENT LIMITATIONS SEGMENT ANALYSIS

A. Introduction.

In effluent limitations segments, either water quality is and will continue to be at least equal to applicable water quality standards or, if water quality does not meet the standards, it will do so after the application of best practicable control technology by industrial sources and secondary treatment by municipalities within the segment and compliance by upstream sources with requirements applicable to them. Effluent limitations for dischargers in EL segments are based solely on technology: it is not necessary to relate the effluent limitations of individual dischargers to water quality or permissible waste loadings, as is required in water quality segments.

Segment analysis in effluent limitations segments accomplishes a variety of important objectives:

- It establishes an orderly, visible water quality management scheme for the segment.
- It describes existing water quality as a basis for preventing significant degradation.
- It sets forth a coordinated, prioritized schedule of compliance for all significant sources in the segment.
- It produces an inventory of dischargers in the segment for use in formulating the annual State strategy, which in turn is used to schedule permit processing and construction grant awards and to set forth the State's monitoring and surveillance program for the year.

B. Antidegradation.

Water quality should not be significantly degraded. The objective of the 1972 Amendments is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." (§101(a).) The Act requires as a minimum that sources achieve effluent limitations necessary to meet water quality standards (§301(b)(1)(C)), and water quality standards must be such as to enhance the quality of water. (§303(c)(2).) Standards generally contain antidegradation statements further elaborating this policy.

To implement the rule against significant degradation, existing quality should be described in the plan, using current data regarding water quality and effluents where available and estimates where existing data are insufficient and additional data cannot be readily obtained.

The existing water quality level set forth in the plan will be the base line against which to measure future changes. The definition of significant degradation may consist of objective measurements or may be in relation to the character of the locality. (e.g., extreme stringency in an area constituting an outstanding natural resource), but in no case may water quality levels be reduced to a point where standards may be violated. The State may prevent significant degradation in a number of ways:

- Requiring installation of the effluent limitations required by sections 301, 302, 306, and 307 of the Act.
- Requiring installation of new technology as it becomes available.
- Preventing excessive concentration of sources through case by case review, development of site location alternatives, zoning or other measures.
- Establishing new source preconstruction review procedures.
- Instituting zero discharge or zero growth policies, if necessary.
- Assuring adequate opportunity for public comment and hearings on all actions involving possible degradation.

C. Steps in preparation of effluent limitations segment analysis. (Generally, §131.203(d).)

Each effluent limitations segment analysis should be prepared as described in this section. Planning should proceed pursuant to the approved State continuing planning process. Citations are the relevant Sections of 40 CFR Part 131 (see Appendix A to these guidelines), which should be consulted through the segment analysis.

1. Describe existing water quality and set forth applicable water quality standards. (§131.202.)

Existing water quality and related hydrologic and hydraulic data, and the water quality standards applicable to the segment or legal citation to such standards, should be disaggregated from the data and standards of the basin. (See Chapter II, Section A, of these guidelines.)

2. Inventory, categorize and rank existing dischargers. (§131.206(a).)

The inventory and categorization of dischargers in the segment should be disaggregated from the inventory and categorization for the basin, checked for accuracy and completeness and revised if necessary. (See Chapter II, Section B, of these guidelines.) Significant dischargers should be ranked in order of abatement priority.

3. Treatment plant residuals. (§131.203(e).)

The analysis should include controls over the disposition of all residual waste from any municipal, industrial or other water or waste water treatment processing, whenever the processing or disposal occurs within the segment. Quantity estimates and specific disposal sites should be set forth. Additional guidance on this subject will be published.

4. Assess municipal facilities requirements. (§131.210.)

The segment analysis must include an assessment of investment requirements for municipal waste treatment or control in the segment. This assessment should be developed in the same manner as employed in water quality segments. (See Chapter III, Section A.8., of these guidelines.)

5. Schedules or targets for significant dischargers. (§§131.206(c), 131.209.)

A schedule of compliance or target abatement date must be determined for each significant point source which is not currently in compliance with the effluent limitations applicable to it and is not anticipated to be in compliance by January 1, 1975. Schedules of compliance or target abatement dates for effluent limitation segments are developed under the same principles as control scheduling in water quality segments. If the State is participating in the NPDES, target dates for the processing of permits respecting covered sources must also be set forth as for water quality segments. (See Chapter III, Section A.9., of these guidelines.)

6. Assess nonpoint sources. (§§203(d)(4), 131.211.)

Consideration of agricultural, silvicultural, mining related, salt water intrusion related and other nonpoint source pollution, as provided in §131.211(a), is desirable, but generally it is not required in initial EL planning since by definition water quality in EL segments will meet applicable water quality standards without additional controls on nonpoint sources. Additional consideration should be given, however, where it is dictated by special circumstances such as the necessity to act to preserve an outstanding natural resource.

7. National priorities. (§131.203(d)(4).)

Planning for this segment should be consistent with national priorities as determined by the Administrator. Information respecting current priorities may be obtained from the Regional Administrator.

8. Relationship with other plans. (§131.204.)

Planning for the segment should take into account any other water quality or other applicable resource plan prepared or under preparation which involves all or any part of the basin. The basin plan of which the segment analysis is a part will identify and disucss such other planning activities in the basin.

V. ASSEMBLING THE BASIN PLAN

A. Introduction; Plan Submission.

The basin plan consists of two major components--the basinwide information derived from or in support of the individual segment analyses, and the individual segment analyses. These components should be assembled in a single package. Five copies of the package should be submitted by the Governor or his designee, on or before the plan's scheduled completion date, to the Regional Administrator. The Regional Administrator is required to approve or disapprove the plan within 30 days after its submission.

B. Basinwide Components.

Each basin plan must include the following basinwide components.

1. Maps.

i. A map of the State showing the basin in relation to other basins, including portions of other States as necessary to show any interstate coordination area.

ii. A map delineating the basin and identifying its segments. The classification of the segments should be indicated on this map. (See also paragraph 3, below.)

A comprehensive map identifying and locating significant dischargers and monitoring stations in the basin is not required. This information is reflected in the individual segment analyses.

2. Water quality standards.

Applicable water quality standards for the basin are identified in the individual segment analyses and need not be repeated in the basinwide statement. Standards for the basin must be reviewed at least once every three years, pursuant to section 303(c) of the Act and 40 CFR §131.202(b)-(c).

3. Segment classification.

The basin plan should contain a list showing the classification of each segment in the basin, pursuant to §131.203. (See Chapter II and paragraph 1, above.) The segments should be listed in order of abatement priority, pursuant to §131.208(b). The system for ranking segments in the basin should be consistent with the criteria for statewide ranking of segments (see §130.41) and applicable priorities.

4. Priorities.

The basin plan should identify and explain any deviation from national priorities.

5. Industrial discharge inventory.

The basin plan should contain an inventory and categorization of industrial dischargers in the basin. Significant dischargers should be ranked in order of abatement priority; the ranking should be consistent with the system for the State Industrial Discharge Inventory. (See §130.44.) The basin inventory should be aggregated from the individual segments lists and should be consistent with the priorities set forth in those lists. (See Chapter III, A.3, Chapter IV, C.2., and Appendix C, Form 2 (optional).) The basin inventory will be used by the State in developing the State Inventory. (See §131.208(a).)

6. Municipal discharge inventory.

The basin plan should contain an inventory and categorization of municipal dischargers in the basin. Significant dischargers should be ranked in order of abatement priority; the ranking should be consistent with the system for the State Municipal Discharge Inventory. (See §130.43.) The basin inventory should be aggregated from the individual segment lists and should be consistent with the priorities set forth in those lists. (See Chapter III, A.3., Chapter IV, C.2., and Appendix C, Form 2 (optional).) The basin inventory will be used by the State in developing the State Inventory. (See §131.208(a).)

The basin plan should also show the municipal facilities investment needs in the basin. (See §131.210; see also Chapter III, A.8. and Chapter IV, C.4.)

7. Permit issuance target dates.

If the State is participating in the National Pollutant Discharge Elimination System, each basin plan should include a list indicating target dates for the processing of permits respecting any covered sources which will not have been processed at the plan's completion. This list should be compiled from the individual segment analysis lists. (See Chapter III, A.9., Chapter IV, C.5., and Appendix C, Form 4-B (optional).)

8. Nonpoint sources.

It is desirable that the basin plan provide for consideration of nonpoint sources. Consistently with national priorities, if planning resources are limited, nonpoint source planning should not be pursued to an extent which would substantially curtail planning for point sources subject to the NPDES. If the Governor has determined pursuant to section 208(b)(4) of the Act that consistency with a statewide regulatory program under section 303 requires that certain nonpoint source processes should be developed by the Governor for application to all regions within the State, the basin plan should note such determination.

The plan should include target dates for the future consideration of nonpoint sources and, if feasible, imposition of controls. Full compliance with §131.211 should be initiated after January 1, 1975.

9. Land use policies and controls.

The basin plan should describe the coordination of the plan with land use policies and controls, pursuant to §131.212.

10. Relationship with other plans.

The basin plan should identify all water quality or other applicable resource plans prepared or under preparation which involve all or any part of the basin. These plans would include the plans described in §131.204(a), any major water resource planning by the Corps of Engineers or other authorities, and any cluster analyses undertaken in the absence of a completed segment analysis. The basin plan should include the information required pursuant to §131.204.

APPENDIX A

11. Legal basis of plan; Enforcement.

The basin plan should set forth briefly the legal basis of the plan, including the basis for enforcement of schedules of compliance pursuant to §131.207(b)(2).

12. Certifications.

The basin plan should include the assurances and certifications, by the Governor or his designee, required pursuant to §131.400.

C. Individual Segment Analyses.

The separate analyses of each segment in the basin plan must be included as a part of the basin plan. To aid in information management and display, Appendix C suggests optional forms which may be employed for this presentation. Use of the forms is not required. Segment and basin information may be presented in any manner adequate to enable public and governmental information and review and to serve as a guide for ongoing water quality management.

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PART II

ENVIRONMENTAL PROTECTION AGENCY

■

STATE CONTINUING PLANNING PROCESS

Interim Regulations

Title 40—Protection of Environment

CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY

PART 130—STATE CONTINUING PLANNING PROCESS

Notice of Interim Regulations

Notice is hereby given that these regulations are set forth as interim regulations by the Environmental Protection Agency (EPA).

Section 303(e) of the Federal Water Pollution Control Act, as amended (86 Stat. 816; 33 U.S.C. 1314 (1972)), requires each State to submit a continuing planning process which is consistent with the Act. These proposed regulations describe the necessary elements of a State's continuing planning process. They also set forth procedures governing planning process adoption, submission, and revision and EPA approval. These regulations also provide a mechanism for States to satisfy portions of sections 208, 303(d) (Critical waters and maximum daily loads); 305(b) (State reports on water quality and related information, including nonpoint sources); 314 (Clean lakes); after June 30, 1973, 516(b) (Federal/State estimate of publicly owned treatment works construction needs); and they provide data for 305(a) and 104(a)(5) (Federal report on water quality).

Purpose. The purpose of the continuing planning process is to provide the States the water quality assessment and program management information necessary to make centralized coordinated water quality management decisions; to provide the strategic guidance for developing the State program submittal under section 106 of the Act; and to encourage water quality objectives which take into account overall State policies and programs, including those for land use and other related natural resources.

Goals of the State process. The goals of such a State process are to:

Provide a basis upon which the State's overall program (106) will be developed. This will be accomplished by developing an annual strategy, which will be based upon basin plans where they are completed and upon available information where the plans are not completed. This annual strategy will assist the State:

In directing resources—planning, monitoring, permitting, and financial assistance against water quality problems on a priority basis.

In establishing a coordinated schedule of action.

In reporting on progress in achieving program targets and scheduled milestones.

Insure that applicable water quality standards are attained. Where water quality standards violations occur an assessment will be made whether the application of Best Practical Control Technology (BPT) for industry and secondary treatment for municipalities will correct the water quality problem. If not, a maximum pollutant load will be calculated and individual discharge allocations will be made to meet these loads.

Specify the requirements for, and schedule the completion of, section 303 basin plans for all waters.

Insure public participation in the development of the planning process and of plans.

The complexity and timing of a plan for a specific area will be tailored to the problems of the area. No process need require individual plans to be more elaborate than is necessary for sound water quality management.

Classification of waters. To establish priorities, and to assist the State in assessing water quality problems, the process provides that the waters of each State will be classified according to the severity of pollution and the anticipated difficulty of developing and implementing remedial efforts. Waters will be classified into two classes:

(1) Water quality class: Any segment where it is known that water quality does not meet applicable water quality standards and is not expected to meet water quality standards even after the application of the effluent limitations required by sections 301(b)(1)(A) and 301(b)(1)(B) of the Act.

(2) Effluent limitation class: Any segment where water quality is meeting and will continue to meet applicable water quality standards or where there is adequate demonstration that water quality will meet applicable water quality standards after the application of the effluent limitations required by sections 301(b)(1)(A) and 301(b)(1)(B) of the Act.

Content of the planning process. The State continuing planning process provides for the development of basin plans. The process will:

Delineate planning areas and identify planning agencies.

Classify waters into water quality or effluent classes.

Identify the elements to be included in the plans in accordance with provisions of Part 131 of this chapter.

Provide a phased schedule for the completion of plans.

Establish a mechanism whereby the State's priorities for construction of publicly owned treatment works, for processing waste water discharge permits and for other program priorities will be established. The program priorities will be reported in the section 106 State program.

Provide a mechanism for determining investment requirements on publicly owned treatment works.

Provide a basis for assessing achievement of interim program milestones and final ambient results to be reported as part of the section 106 State program.

Each State will prepare its plans pursuant to the approved process schedule for plan preparation. If after his approval of the process the Regional Administrator finds that the State's approved process is deficient, he will confer with the State as to his findings and may request the State to revise its process as appropriate. If the State fails to make the necessary revisions in a timely manner, the Regional Administrator may withdraw his approval of the process, after consultation with the Administrator, if he finds that the process is grossly deficient. Such findings may be based, among other things, on a substantial failure of plans developed pursuant to the process to conform with the requirements of the Act, or on a substantial failure of the State to meet the approved phasing of planning, or on a substantial failure of the State to implement plans.

Federal properties, facilities, and activities are subject to Federal, State, interstate, and local standards and effluent limitations for control and abatement of pollution. The State's planning process should include provision for Federal sources. It is contemplated that Federal agencies will provide information to the States in accordance with procedures established by the Administrator.

Plan content. Companion regulations under section 303(e), Part 131 of this chapter, describe the preparation of plans pursuant to the planning process: Part 131 should be consulted during the development of the planning process under Part 130.

In effluent limitation classes the plan should contain discharge priorities, compliance schedules for discharges with permits and target abatement dates for other dischargers and other management information as may be necessary; while in water quality classes, in addition to the above information, the plan should establish maximum daily loads and should determine the greater effluent reductions required for dischargers to attain the water quality goals. Similarly, the monitoring and surveillance program will focus primarily on those areas where water quality problems are most severe and where existing information is most deficient.

Publication of regulations governing Part 131, Preparation of Plans Pursuant to State Continuing Planning Process, has been delayed. Publication of these regulations is expected shortly.

Prior to the adoption of final regulations within 180 days from this date, consideration will be given to comments, suggestions, or objections which may be submitted in writing to: Chief, Planning and Standards Branch; Office of Air and Water Programs; Room 1007, Crystal Mall Building No. 2, Environmental Protection Agency, Washington, D.C. 20460. All comments, suggestions, or objections received on or before May 11, 1973 will be considered.

These interim continuing planning process regulations shall become effective on March 27, 1973. It is necessary that these regulations take effect prior to a 30-day period after publication because States have begun to seek EPA approval of a State operated permit program as provided under section 402(b) of the Act, and because no such approval can be made unless a State's continuing planning process under section 303(e) of the Act has been first approved. See 40 CFR 124.93. For the same reason,

notice of proposed rule making and public comment thereon, prior to the effective date of these regulations, is impracticable and contrary to the public interest.

WILLIAM D. RUCKELSHAUS,
Administrator.

MARCH 20, 1973.

Subpart A—Scope and Purpose; Definitions

Sec.
130.1 Scope and purpose.
130.2 Definitions.

Subpart B—General Requirements

130.10 Process coverage.
130.11 Classification of segments.
130.12 Planning agencies.
130.13 Legal authorities.
130.14 Public participation.
130.15 Separability.

Subpart C—Contents of Basin Plans

130.20 Level of complexity of plans.
130.21 Establishment of planning areas (basins).
130.22 Relation between plans and other planning provisions.
130.23 Water quality standards.
130.24 Total maximum daily loads.
130.25 Individual point source discharge allocation; impact on water quality.
130.26 Schedules of compliance.
130.27 Inventory of individual dischargers.
130.28 Assessment of municipal needs for publicly owned waste treatment works.
130.29 Nonpoint sources of pollutants.
130.30 Monitoring and surveillance.
130.31 Intergovernmental cooperation.
130.32 Adoption of plans.

Subpart D—Preparation of Annual State Strategy

130.40 State strategy.
130.41 Problem assessment and priorities.
130.42 Schedule for plan preparation.
130.43 State municipal discharge inventory.
130.44 State industrial discharge inventory.

Subpart E—Requirements for Approval of Planning Process; Reports

130.50 Submission of process.
130.51 Contents of process submittal.
130.52 Planning process review; approval or disapproval.
130.53 Prohibition of approval of certain planning processes.
130.54 Revisions.
130.55 Reports.

Subpart F—Relationship of Process to Permit and Construction Grant Programs

130.60 Relationship of continuing planning process with State participation in National Pollutant Discharge Elimination System.
130.61 Relationship of continuing planning process with construction grants.

AUTHORITY Secs 303 and 501, 86 Stat 816; 33 U.S.C. 1314 (1972).

Subpart A—Scope and Purpose; Definitions

§ 130.1 Scope and purpose.

(a) This part establishes regulations specifying procedural and other elements which must be present in a State continuing planning process to obtain approval of the Administrator pursuant to section 303(e) of the Federal Water Pollution Control Act, as amended, 86 Stat. 816, 33 U.S.C. 1314. This part provides that each State must achieve compliance with the requirements of this regulation not later than June 30, 1975, and includes specification of levels of compliance which shall be achieved prior to that date.

(b) The purpose of the continuing planning process is: To provide the States the water quality assessment and program management information necessary to make centralized coordinated water quality management decisions; to provide the strategic guidance for developing the State program submittal under section 106 of the Act; and to encourage water quality objectives which take into account overall State policies and programs, including those for land use and other related natural resources.

(c) The State continuing planning process is directed toward the attainment of water quality standards established pursuant to sections 301 and 302 of the Act to achieve the goals set forth in the Act. The planning process will develop an annual strategy for directing resources, establishing priorities, scheduling of actions; and reporting programs toward achievement of program objectives.

(d) The total State planning process is comprised of:

(1) The annual State strategy, which sets the State's major objectives and priorities for preparing basin plans and its annual program plan.

(2) Individual basin plans, which establish specific targets for controlling pollution in individual basins.

(3) The annual program plan (section 106), which establishes the results expected and the resources committed for the State program each year. The annual plan is developed from the objectives and priorities of the annual State strategy, and, when available, from the specific targets developed in basin plans.

(4) Reports, which measure program performance in achieving programmed results.

The "continuing planning process" is the process by which the State develops the foregoing plans and reports.

(e) This part describes:

(1) The general requirements for the planning process (Subpart B).

(2) The content of the basin plans (Subpart C).

(3) The preparation of the annual State strategy (Subpart D).

(4) The requirements for approval of the planning process (Subpart E).

(5) The relationship of the process to permit and construction grants programs (Subpart F).

§ 130.2 Definitions.

As used in this part, the following terms shall have the meanings set forth below.

(a) The term "Act" means the Federal Water Pollution Control Act, as amended, 33 U.S.C. ——, et seq.

(b) The term "EPA" means the U.S. Environmental Protection Agency.

(c) The term "Administrator" means the Administrator of the U.S. Environmental Protection Agency.

(d) The term "Regional Administrator" means the appropriate EPA Regional Administrator.

(e) The terms "continuing planning process," "planning process," and "process" mean the continuing planning process required by section 303(e) of the Act. Such process develops the State focal point for water quality management decisions. This includes phasing of plans to be prepared during fiscal years 1973, 1974, and 1975.

(f) The term "plan" means the water quality management plan for each hydrologic basin or other approved basin unit within a State. Such plan constitutes a mechanism for implementing applicable effluent limitations and water quality standards, and will consist of such components as are necessary for sound planning and program management in the basin covered by the plan.

Requirements for the preparation of such plans are described in Part 131 of this chapter.

(g) The term "effluent limitation" means any restriction established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, but does not include schedules of compliance.

(h) The terms "schedule of implementation" and "schedule of compliance" are synonymous and mean a description for each source of remedial measures to be accomplished and a sequence of actions or operations leading to compliance with applicable effluent limitations, water quality standards and other requirements of State and Federal law.

(i) The term "municipal needs" means the total capital funding required for construction of publicly owned treatment works, as defined in section 212(2) (A) and (B) of the Act, that are required to meet national water quality objectives of sections 301 and 302 of the Act.

(j) The term "National Pollutant Discharge Elimination System" means the Federal permitting system authorized under section 402 of the Act including any State or interstate program which has been approved by the Administrator, in whole or in part, pursuant to section 402 of the Act.

(k) The term "phasing of planning" means the State schedule approved by the Regional Administrator for the preparation of plans, pursuant to the continuing planning process, during the fiscal years 1973, 1974, and 1975.

(l) The term "basin" means the streams, rivers, and tributaries and the total land and surface water area contained in one of the 267 major and minor basins defined by EPA, or other basin unit as agreed upon by the State(s) and the Regional Administrator. Unless specified otherwise, "basin" shall refer only to those portions within the borders of a single State.

(m) The term "segment" means a portion of a basin the surface waters of which have common hydrologic characteristics (or flow regulation patterns); common natural physical, chemical, and biological processes, and which have common reactions to external stresses, e.g., discharge of pollutants.

(n) The term "cluster" means two or more dischargers which discharge pollutants in such a way that the combination of their effluents causes or may cause water quality standard violations.

(o) The term "significant discharger" [illegible] any discharger who is causing [illegible] or critical water quality problems related to the segment to which it discharges.

(p) The definitions of the following terms contained in section 502 of the Act shall be applicable to such terms as used in this part unless the context otherwise requires: "State," "State water pollution control agency," "navigable waters," "point source," and "discharge."

Subpart B—General Requirements

§ 130.10 Process coverage.

(a) The process shall provide for the preparation of plans for all waters within the State, as provided in Subpart C.

(b) The process shall establish phasing of plans to be accomplished during the fiscal years 1973, 1974, and 1975, as provided in Subpart D.

(c) The process shall provide for the method by which the State shall coordinate all water quality planning, programing and management.

(d) The process shall provide the method by which the State shall coordinate its water quality management planning with related State and local comprehensive, and functional and project planning activities, including land use and other natural resources planning activities.

(e) The process shall provide the method by which the State shall coordinate its water quality management planning with that of its neighboring States.

§ 130.11 Classification of segments.

(a) This section establishes a classification system which the process shall employ to categorize segments for purposes of preparing a plan. The requirements of this part and Part 131 of this chapter vary according to the classification of each segment, so that the time and resources to be expended in developing the plan for that segment, as well as the substantive content of the plan, will be commensurate with the severity of the water pollution problem.

(b) This classification of segments shall also be utilized in constructing the State Discharge Priority List developed in Subpart D of this part.

(c) The classification shall be based upon measured in-stream water quality, where available.

(d) Each segment shall be classified as follows.

(1) *Water quality class.* Any segment where it is known that water quality does not meet applicable water quality standards and which is not expected to meet water quality standards even after the application of the effluent limitations required by sections 301(b)(1)(A) and 301(b)(1)(B) of the Act.

(2) *Effluent limitation class.* Any segment where water quality is meeting and will continue to meet applicable water quality standards or where there is adequate demonstration that water quality will meet applicable water quality standards after the application of the effluent limitations required by sections 301(b)(1)(A) and 301(b)(1)(B) of the Act.

(3) Any classification shall reflect any necessary allowance for anticipated economic and demographic growth over at least a 5-year period and an additional allowance reflecting the degree of precision and validity of the analysis upon which the classifications are based. Where the analysis is less precise or there is uncertainty concerning growth projections, a greater margin of safety shall be required for the assignment of any segment to an Effluent Limitation Class. In determining the additional allowance, consideration should be given to economic and demographic projections that are utilized in other State programs. (See § 131.210.)

(e) The classification of all waters should be included in the submission of the planning process by the Governor of each State to the Regional Administrator.

(1) Submission and approval or disapproval shall also be in accordance with §§ 130.50 and 130.52.

(2) Review and revisions of such classifications shall be made in accordance with § 130.54.

§ 130.12 Planning agencies.

(a) (1) The Governor of a State shall designate a State agency responsible for conduct of the required planning. The Governor may designate a local or interstate agency to conduct all or any portion of the planning within each basin and may assign planning responsibilities under the process and Part 131 of this chapter to any such designated agency.

(2) The process shall set forth the criteria followed in designating planning agencies pursuant to paragraph (a) of this section and in determining the jurisdiction thereof. Locally elected officials of general purpose units of governments, and other pertinent local and areawide organizations within the jurisdiction of the potentially designated agency shall be consulted prior to any designation. The criteria for such determinations shall be included.

(b) (1) The initial submission shall include a specific designation of each planning agency responsible for conducting all or any portion of the planning pursuant to the process within each basin. Each designation shall include:

(i) The agency's name, address, and name of director.

(ii) The agency's jurisdiction (geographical coverage and extent of planning responsibilities).

(2) In the event that all or a portion of a plan is to be undertaken by an agency other than the State water pollution control agency, evidence from such other agency shall be supplied which shows acceptance of such designation and that agency's intent to comply within the times set forth in the process.

(3) The State may make additional assignments, as set forth in this section, [illegible] Such [illegible] [illegible] § 120.51.

§ 130.13 [illegible]

The State [illegible] will seek to [illegible] [illegible] the planning process.

§ 130.14 Public participation.

Each process or any revision thereof shall be developed with provision for public participation in accordance with section 101(e) of the Act, and any regulation issued by the Administrator thereunder. Public participation with adequate opportunity for public hearing upon proper showing shall be required on significant elements of the planning process including proposed State strategy and priority lists developed under the continuing planning process pursuant to section 106 regulations.

§ 130.15 Separability.

If any provision of this part, or the application of any provision of this part to any person or circumstances, is held invalid, the application of such provision to other persons or circumstances, and the remainder of this part, shall not be affected thereby.

Subpart C—Contents of Basin Plans

§ 130.20 Level of complexity of plans.

(a) The process shall provide that plans for water quality segments will contain all the following parts while plans for effluent limitation segments shall include items (4), (5), and (6). See § 130.11 for segment classification.

(1) An assessment of total maximum daily loads necessary to meet water quality standards for the specific criteria being violated;

(2) An assessment of nonpoint source pollution and, where applicable, needed control measures;

(3) Already established effluent limit requirements for significant dischargers and target limits, not previously established, for significant dischargers that are required to achieve water quality standards;

(4) An assessment of needs for publicly owned treatment works;

(5) An inventory and categorization of significant individual discharges;

(6) Already established schedules of compliance and target dates of abatement for significant dischargers not on a compliance schedule.

(b) The process will allow for basin plans containing one or more water quality segments and/or one or more effluent limitation segments. The level of planning shall be related to requirements of segments within the basin.

§ 130.21 Establishment of planning areas (basins).

The process shall provide for establishment of planning areas, as follows.

(a) Each planning area (basin) shall be the area within the basin boundary.

(b) Except as provided in paragraph (c) of this section, the basin boundaries

(b) Segments of the same basin need not be listed together; however, their ranking in the State list shall be consistent with their ranking in any approved plan.

(c) This ranking shall generally govern the development of plans, construction of publicly owned treatment works, issuance of permits, and other program activities.

§ 130.12 Schedule for plan preparation.

(a) The process shall establish a schedule for plan preparation. The schedule shall provide a sequence for phasing the completion of plans to assure the orderly implementation of the planning process, consistent with existing planning efforts and needs and the expanding capabilities for planning in the State. Such schedule shall determine the State's priorities for the development of plans pursuant to the process during the period covered by the schedule. It shall provide for an initial number of plans to be completed not later than June 30, 1973; an additional number of plans to be completed not later than June 30, 1974; and for remaining plans to be completed by June 30, 1975.

(b) The schedule of basin plans shall be determined following consideration of:

(1) The ranking of segments pursuant to § 130.41 and the number of water quality segments in the basin; and

(2) Any other factors that the State may deem appropriate in developing and scheduling plans for sound water quality management.

§ 130.43 State municipal discharge inventory.

(a) Each State shall establish not later than June 30, 1973, and shall thereafter maintain, a State Municipal Discharge Inventory. Such an inventory shall set forth for the State a ranking of significant muncipal dischargers. The State Municipal Discharge Inventory shall be used in establishing priorities and output estimates for municipal facilities construction and in issuing municipal permits to be developed as part of the State program submittal required under section 106 of the Act. This list shall become the list of municipalities required in § 35.915(b) of this chapter for award of construction grants.

(b) The State Muncipal Discharge Inventory shall be revised and submitted at least once each year as required pursuant to § 130.55.

(c) The State Municipal Discharge Inventory shall be prepared as follows:

(1) The State shall rank and categorize significant municipal dischargers consistent with the segment rankings contained in § 130.41.

(2) Dischargers of the same basin need not be listed together; however, their ranking and categorization in the State list shall be in accordance with their ranking and categorization in any approved plan.

§ 130.44 State industrial discharge inventory.

Each State shall establish not later than June 30, 1973, and shall thereafter maintain a State Industrial Discharge Inventory. The procedures used in § 130.43 for constructing and submitting the municipal inventory shall be used in developing the industrial discharge inventory. The State Industrial Discharge Inventory shall be used in establishing priorities and output estimates for issuing industrial permits to be developed as part of the State program submittal required under section 106 of the Act.

Subpart E—Requirements for Approval of Planning Process; Reports

§ 130.50 Submission of process.

(a) The Governor of each State shall submit to the Regional Administrator the continuing planning process pursuant to section 303(e) of the Act.

(b) Submission shall be accomplished by delivering five copies of the planning process to the Regional Administrator and a letter from the Governor notifying him of such action.

§ 130.51 Contents of process submittal.

(a) The submittal shall at a minimum contain the following:

(1) A map of the State showing basins and segments.

(2) A listing of the classifications of segments.

(3) A description of the planning method employed to formulate plans.

(4) A listing of the planning agency or agencies that will perform the planning.

(5) A schedule for plan preparation.

(6) A description of participation of the public in the development of the process, including participation of local governments.

(7) A specification that legal authorities required to prepare and adopt plans required by the planning process exist or will be obtained.

(8) A description of reports including the State strategy that will be submitted under section 106 of the Act.

§ 130.52 Planning process review; approval or disapproval.

The Regional Administrator shall approve or disapprove the planning process submitted pursuant to § 130.50 within 30 days after the date of submission, as follows:

(a) If the Regional Administrator determines that the planning process conforms with the requirements of the Act and this Part 130, he shall notify the Governor by letter.

(b) If the Regional Administrator determines that the process fails to conform with the requirements of the Act and this Part 130, he shall so notify the Governor by letter and shall state:

(1) The specific revisions necessary to obtain approval of the process; and

(2) The time period for resubmission of the revised process or portions thereof.

§ 130.53 Prohibition of approval of certain planning processes.

The Regional Administrator shall not approve any continuing planning process which will not result in timely plans, for all navigable waters within the State, that conform with the requirements of section 303(e) of the Act and Part 131 of this chapter, related water quality plans. Substantial failure of any plan or plans prepared pursuant to the process to conform with such applicable requirements may indicate that the planning process by which such plan or plans were developed was deficient and should be revised. Failure to accomplish necessary revisions of the planning process may result in withdrawal of approval of part or all of the process. The approval of the State participation in the National Pollutant Discharge Elimination System will be withheld or withdrawn if the process is not approved. (See § 130.60.)

§ 130.54 Revisions.

(a) The State shall annually review its continuing planning process and shall revise the process as may be necessary to assure the development and maintenance of current plans which will accomplish national water quality objectives in conformity with the requirements of the Act.

(b) (1) The Regional Administrator shall from time to time review each State's approved planning process for the purpose of insuring that such planning process is at all times adequate to assure the goal of paragraph (a) of this section.

(2) The State shall revise its process as necessary upon a finding by the Regional Administrator and notification by him to the State that the process is substantially inadequate to assure the goal of paragraph (a) of this section.

(3) The State shall revise its process within 60 days following notification by the Regional Administrator pursuant to subparagraph (2) of this paragraph or by such later date as may be prescribed by the Regional Administrator after consultation with the State.

(c) Revisions of the process shall be submitted in accordance with § 130.50.

(d) Review and approval or disapproval of revisions of the process shall be carried out in accordance with § 130.52.

§ 130.55 Reports.

The annual State strategy including the State Problem Assessment and Priorities described in § 130.41, the State Municipal Discharge Inventory described in § 130.43, and the State Industrial Discharge Inventory described in § 130.44, as well as any other program progress report which may be required, shall be submitted as part of the State program submission under section 106 of the Act.

Subpart F—Relationship of Process To Permit and Construction Grant Programs

§ 130.60 Relationship of continuing planning process with State participation in National Pollutant Discharge Elimination System.

(a) State participation in the National Pollutant Discharge Elimination System, other than the interim participation provided in section 402(a)(5) of the Act, shall not be approved for any State which does not have an approved continuing planning process.

(b) Approval of State participation in the National Pollutant Discharge Elimination System may be withdrawn from

shall be those identified as minor basins in the EPA water quality information system.

(c) The process may provide for the establishment of planning boundaries differing from those identified in the EPA basin system. Any such differing boundaries shall be submitted to the Regional Administrator for approval.

(d) The initial submission shall include a map of adequate scale clearly delineating the boundaries of each proposed basin within the State and an identification of the basin's segments. (See § 131.201 of this chapter.)

§ 130.22 Relation between plans and other planning provisions.

The process shall provide that each basin plan will be coordinated with each applicable water quality subplan (see § 131.204 of this chapter) and other applicable State and local plans including land use and natural resources plans for the basin.

§ 130.23 Water quality standards.

The process shall provide that each basin plan will set forth the water quality standards applicable to the navigable waters covered by the plan. (See § 131.202 of this chapter.) The process, including the basin plans developed as part of the process, shall be the one used by the States to assist in making the necessary revisions of water quality standards to bring them into conformance with the goals of the Act.

§ 130.24 Total maximum daily loads.

The process shall provide that for each water quality segment the plan will establish total maximum permissible daily loads, including consideration of nonpoint source contributions, required to meet the applicable violated water quality standard as provided in § 131.205(a) of this chapter.

§ 130.25 Individual point source discharge allocation; impact on water quality.

(a) The process shall provide that each plan will identify, locate, and describe each significant point source of pollutants and any other point source as is appropriate in accordance with § 131.206(a) of this chapter.

(b) The process shall provide that in water quality segments in each plan target pollutant discharge allocations and thermal discharge allocations for point, and nonpoint sources where feasible, will be established as provided in § 131.206 (b) of this chapter.

(c) The process shall provide that each plan will establish controls over the disposition of all residual waste from any municipal, industrial, or other water or waste water treatment processing, as prescribed in § 131.203(e) of this chapter.

§ 130.26 Schedules of compliance.

The process shall provide that each plan will develop schedules of compliance or target dates of abatement as prescribed in § 131.203 of this chapter.

§ 130.27 Inventory of individual dischargers.

(a) The process shall provide that each plan will include an inventory of significant dischargers and categorization of these dischargers by segment. Such inventory and categorization shall be used:

(1) In determining projects for construction, with Federal financial assistance, of publicly owned waste water facilities required to meet the applicable requirements of the Act.

(2) For the issuance of permits to municipal, industrial, and other point source discharges.

§ 130.28 Assessment of municipal needs for publicly owned water treatment works.

The process shall provide that each plan will assess the needs for publicly owned waste treatment works in the basin, as prescribed in § 131.210 of this chapter.

§ 130.29 Nonpoint sources of pollutants.

The process shall provide that in water quality segments each plan will identify, evaluate, and, to the extent possible, establish controls over nonpoint sources of pollutants, as prescribed in § 131.211 of this chapter.

§ 130.30 Monitoring and surveillance.

(a) The process shall provide for a monitoring and surveillance program which is designed to assure collection of data necessary to establish and review water quality goals, determine maximum daily loads, load allocations and effluent limitations, as described in §§ 130.24 and 130.25; establish the relationship between water quality and individual discharges and identify non-point sources of pollutants.

(b) Each monitoring and surveillance program shall include a program for producing the annual reports required under section 305(b), beginning with the report required by January 1, 1975. (See § 130.55.)

§ 130.31 Intergovernmental cooperation.

(a) The process shall provide that in the preparation of basin plans, areawide and local planning inputs will be reviewed and will be included in the basin plan as appropriate. (See § 130.22.)

(b) The process shall provide that local governments within the State will be encouraged to utilize existing or carry out appropriate institutional or other arrangements with other local governments, in the same State, for cooperation in the development and implementation of plans.

(c) The process shall provide for interstate cooperation whenever a plan involves the interests of more than one State. Such provision shall include the following assurances:

(1) That when a plan is under development in the State for an area affecting or affected by waters of one or more other States, the planning agency will cooperate with each such other State in the analyses and planning pertinent to such area including but not limited to problem assessment and priorities and schedule for plan preparation. (See §§ 130.41 and 130.42.)

(2) That when a plan is under development in another State for an area affecting or affected by waters of the State, the State will cooperate with such other State in the analyses and planning pertinent to such area.

(d) The use of interstate agencies in all phases of interstate cooperation in water quality management planning is encouraged.

(e) The process shall describe the mechanism for approval of water quality management plans involving interstate waters.

§ 130.32 Adoption of plans.

The process shall provide that the plans will be officially adopted, after appropriate public hearings, as the official water quality management plans of the State and that the plans may be revised, after public hearings, as appropriate. Hearings will be held on the plan except for those portions of the plan where hearings were previously held; for example, on segments where public hearings were held in conjunction with the issuance of permits. (See §§ 131.401 and 131.404 of this chapter.)

Subpart D—Preparation of Annual Strategy

§ 130.40 State strategy.

(a) The planning process shall provide for the preparation of an annual State strategy. The Governor or his designee(s) shall be provided with the opportunity for involvement in the identification and resolution of significant issues in the formulation of the State strategy. The strategy shall contain:

(1) A statewide assessment of water quality problems and the causes of these problems;

(2) A listing of the geographical or discharger priorities of these problems;

(3) A listing of the priorities and scheduling of permits, construction grants, basin plans, and other appropriate program actions;

(b) The strategy should be based upon information derived from completed plans when available and from available information in areas where plans are not complete.

(c) The strategy shall be submitted as part of the section 106 State program submittal as required pursuant to § 130.55.

§ 130.41 Problem assessment and priorities.

(a) Based on the annual statewide assessment of the water quality problems and causes of these problems developed pursuant to § 130.40(a)(1), the State shall rank each segment in priority order, taking into account:

(1) Severity of pollution problems.

(2) Population affected.

(3) Need for preservation of high quality waters.

(4) National priorities as determined by the Administrator.

any State if approval of the continuing planning process is withdrawn following approval, including withdrawal of process approval based on gross failure to comply with the schedule for plan preparation (§§ 130.40 and 130.41) or on failure of plans to conform with the process (§ 130.52).

(c) In connection with any permit issued to a significant discharger in a cluster where water quality violations occur, or are suspected to occur, and for which no plan has been approved by the Regional Administrator, the water quality impact of the discharges of all members, municipal and industrial, of the cluster to which such major discharger belongs, must be considered in connection with the issuance of such disharger's permit.

§ 130.61 Relationship of continuing planning process with construction grants.

(a) Before approving a grant for any project for any treatment works under section 201(g) of the Act after June 30, 1973, the Regional Administrator shall determine, pursuant to 40 CFR 35.925–2, that such works are in conformity with any applicable plan approved in accordance with this part and Part 131 of this chapter. Disapproval by the Regional Administrator of a plan, or relevant portion thereof, for the area where a project is to be located may constitute grounds for not approving a grant for such project.

(b) The Regional Administrator may suspend or terminate a grant for any project for any treatment works in accordance with § 35.950 of this chapter if he determines that such grant is inconsistent with a plan, for the area of the project, approved subsequent to approval of the grant.

[FR Doc.73-5641 Filed 3-26-73;8:45 am]

NOTICE OF PROPOSED RULEMAKING

Water Quality Management Plans

Preparation Guidelines for States

U. S. Environmental Protection Agency
401 "M" Street, S.W.
Washington, D.C. 20460

ENVIRONMENTAL PROTECTION AGENCY

[40 CFR Part 131]

WATER QUALITY MANAGEMENT PLANS

Preparation Guidelines for States

Notice is hereby given that the regulations set forth below are proposed by the Environmental Protection Agency. The proposed regulations are designed to assist States in the preparation of water quality management plans.

Secion 303(e) of the Federal Water Pollution Control Act, as amended (86 Stat. 816; 33 U.S.C. 1313 (1972)), requires each State to have a continuing planning process which is consistent with the Act. Plans under this part will be prepared pursuant to the State's approved planning process.

The purpose of preparing basin plans is to provide the information the States will need to make centralized coordinated water quality management decisions; to provide the strategic guidance for developing the State program submitted under section 106 of the Act; and to encourage water quality objectives which take into account overall State policies and programs, including those for land use and other related natural resources.

The regulations describe the preparation of plans and the procedures governing plan adoption, submission, and revision and EPA approval. The relationship of plans with EPA grants and the national permit system is also described. Provision is included for coordination between plans and any permit for a source located in a planning area.

The regulations are designed to assure that there may be prepared pursuant to this part basin plans which will be adequate for water quality management in areas having complex water quality problems.

Many areas of the State will present simpler water quality management concerns. Water will be classified according to the severity of pollution as follows:

(1) *Water quality class.*—Any segment where it is known that water quality does not meet applicable water quality standards, and is not expected to meet water quality standards even after the application of the effluent limitations required by sections 301(b)(1)(A) and 301(b)(1)(B) of the Act.

(2) *Effluent limitation class.*—Any segment where water quality is meeting and will continue to meet applicable water quality standards or where there is adequate demonstration that water quality will meet applicable water quality standards after the application of the effluent limitations required by sections (301(b)(1)(A) and 301(b)(1)(B) of the Act.

A basin plan can contain one or more water quality segments and/or one or more effluent limitation segments. The plan in the effluent limitation segments need employ only those elements necessary to assure proper program management in those segments; while in the water quality segments the plan needs to include such analysis as is necessary to assure that control actions taken will meet water quality standards as well as the requirements of sound program management. All plans under this part should be completed by June 30, 1975. Provision for phased accomplishment of planning prior to that date, consistent with advancing national capabilities, is included.

Federal properties, facilities, and activities are subject to Federal, State, interstate, and local standards and effluent limitations for control and abatement of pollution. The State's planning process should include provision for Federal sources. It is contemplated that Federal agencies will provide information to the States in accordance with procedures established by the administrator.

Since plans under this part must be prepared in accordance with the approved State continuing planning process, regulations pertaining to the planning process, set forth at part 130 of this chapter, should also be consulted.

Prior to the adoption of the final regulations, consideration will be given to comments, suggestions, or objections which may be submitted in writing to the Chief, Planning and Standards Branch; Office of Air and Water Programs, room 1007, Crystal Mall Building No. 2, Environmental Protection Agency, Washington, D.C. 20460. All comments, suggestions or objections received on or before July 9, 1973.

ROBERT W. FRI,
Acting Administrator.

MAY 18, 1973.

Subpart A—Scope and Purpose: Definitions

AUTHORITY.—Secs. 303, 501, 86 Stat. 816, 33 U.S.C. 1313, 1361.

Subpart A—Scope and Purpose; Definitions

§ 131.100 Scope and purpose.

(a) This part establishes regulations specifying procedural and other elements which must be present in plans prepared pursuant to a continuing planning process approved in accordance with section 303(e) of the Federal Water Pollution Control Act, as amended (86 Stat. 816, 33 U.S.C. 1313).

(b) The purpose of preparing basin plans is to provide the information the States will need to make centralized coordination water quality management decisions; to provide the strategic guidance for developing the State program submitted under section 106 of the act; and to encourage water quality objectives which take into account overall State policies and programs including those for land use and other related natural resources.

(c) The basin plans will provide the technical, economic, social, and environmental basis for the identification and the adoption of the means of achieving applicable water quality objectives. The plans will assist the State in directing

resources, establishing priorities and scheduling of actions.

§ 131.101 Definitions.

The definitions set forth in § 130.2 of this chapter shall apply to this part.

Subpart B—Plan Preparation

§ 131.200 General.

(a) Each plan under this part shall be prepared pursuant to the process developed and approved in accordance with part 130 of this chapter, relating to the continuing planning process required by section 303(e) of the act.

(b) Each plan shall include, but is not limited to, the contents described in this subpart.

(c) The detail of planning conducted for each segment in the plan will depend on the complexity of the water quality problems and the water quality decisions to be made.

(d) The information in each plan shall be presented in an equivalent basis to facilitate interbasin coordination comparison.

§ 131.201 Boundaries of planning unit.

Each plan shall contain a delineation of the boundaries of the basin on a map of appropriate scale. Such map shall include but is not limited to the following:

(a) An identification of the location of each significant discharger by river mile and/or shore location for bays, lakes, and estuaries.

(b) An identification of the location of all (Federal, State, local) monitoring stations by river mile and/or grid location.

NOTE—Such a map may omit discharger and monitoring station locations if such locations are available in the EPA water quality information system and if the plan includes the listing described in section 131.206 and a list of monitoring stations and their locations.

§ 131.202 Water quality standards.

(a) Each plan shall set forth the water quality standards applicable to each body of water or segment in the basin or shall include the legal citation of such standards.

(b) The Governor (or his designees) shall from time to time, but at least once every 3 years hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modify and adopt standards as set forth in section 303(e) of the act.

(c) Modification and adoptions of standards shall consider the objectives of the act specified in section 101(a) of the act and the social, economic and technical, including natural, considerations to achieving these objectives.

§ 131.203 Plan content-segment classification.

(a) Based on the following analysis, each plan shall classify all waters within the planning basin as water quality class segments and/or effluent class segments as follows:

(1) *Effluent class segment analysis.*—(i) An identification of those waters by segment where water quality is better than applicable water quality standards and will continue to be better after the application of best practicable control technology for industry and secondary treatment for municipalities;

(ii) An identification of those waters by segment where water quality does not meet applicable standards, but will after the application of best practicable control technology for industry and secondary treatment for municipalities;

(2) *Water quality class segment analysis.*—(i) An identification of those waters by segment where water quality is not expected to meet applicable water quality standards even after the application of the effluent limitations required by sections 301(b)(1)(A) and (B) of the act.

(b) This analysis shall be used to reclassify as appropriate the current State classification of segments pursuant to § 130.11.

(c) For all water quality segments within the basin, each plan shall contain the following:

(1) An assessment of total maximum daily loads necessary to meet water quality standards for the specific criteria being violated

(2) An assessment of nonpoint source pollution and, where applicable, needed control measures.

(3) Already established effluent limit requirements for significant dischargers and target limits, previously not established, for significant dischargers that are required to achieve water quality standards.

(4) An assessment of municipal facility requirements

(5) An inventory and categorization of significant individual discharges.

(5) Already established schedules of compliance and target dates of abatement for significant dischargers not on a compliance schedule.

(d) For all effluent class segments within the basin, each plan shall contain as a minimum the following:

(1) An assessment of municipal facility requirements.

(2) An inventory and categorization of significant individual discharges.

(3) Already established schedules of compliance and target dates of abatement for significant dischargers not on a compliance schedule.

(4) National priorities as determined by the Administrator.

(e) Each plan shall establish controls over the disposition of all residual waste from any municipal, industrial, or other water or waste water treatment processing, whenever the processing or disposal occurs within the basin.

(f) Each plan shall be revised as necessary to reflect revisions of the applicable water quality standards.

§ 131.204 Identification of relationship of other plans.

(a) Each basin plan shall identify the relationship and indicate the current status of any other water quality or other applicable resource plan prepared or under preparation which involves all or any part of the basin, including:

(1) Each areawide waste treatment management plan under section 208 of the act.

(2) Each facilities plan for a proposed project for the construction of treatment works under section 201 of the act.

(3) Each level B basin plan pursuant to section 209 of the act or Public Law 89–90.

(4) Applicable portions of each water quality standards implementation plan under section 303 (a) and (b) of the act.

(5) Applicable portions of 40 CFR 150.1 and 150.2 plans (former 18 CFR 601.32 and 601.33, 1971 ed.).

(6) Other applicable resource planning including:

(i) State land use programs.

(ii) Activities stemming from the Coastal Zone Management Act (Public Law 92–583).

(iii) Activities stemming from the Rural Development Act of 1972 (Public Law 92–419).

(iv) Other federally assisted planning and management programs.

(b) Each basin plan shall separately identify each plan which has been integrated with the basin plan.

§ 131.205 Total maximum daily loads.

(a) Each plan should include, for each water quality class segment identified pursuant to § 131.202, the total maximum daily loads of pollutants, including thermal loads, allowable for a specific criteria being violated or expected to be violated. Such loads shall be at a level at least as stringent as necessary to implement the applicable water quality standards, including

(1) Provisions for seasonal variation, and

(2) Provision of a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality, including any uncertainty resulting from insufficiency of data, including data from nonpoint sources of pollutants.

(b) (1) Each plan shall estimate, for each water quality segment where thermal standards may be violated, the total daily thermal load allowable in such segment. Such load shall be at a level at least as stringent as necessary to assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife. Such loads shall take into account:

(i) Normal water temperatures.

(ii) Flow rates.

(iii) Seasonal variations.

(iv) Existing sources of heat input

(v) The dissipative capacity of the identified segment.

(2) Each estimate shall include an estimate of the maximum heat input that can be made into each water quality segment where temperature is one of

the criteria being violated and shall include a margin of safety which takes into account lack of knowledge concerning the development of thermal water quality criteria for protection and propagation of indigenous biota in the identified segment.

(c) Where predictive mathematical models are used in the determination of maximum daily loads, each model shall be identified and briefly described, and the specific use of the model shall be cited.

§ 131.206 Individual point source discharges; impact on water quality.

(a) Each plan shall identify each significant point source of pollutants, set forth the location of each source, and describe, by parameter, its waste discharge characteristics. The identification, location, and description shall include procedures for utilizing data from the national pollutant discharge elimination system.

(b) Each plan shall establish discharge load and thermal load allocations or target allocations for significant point and nonpoint sources in each water quality segment as follows:

(1) The plan shall establish a discharge load allocation or target load allocation for significant point and, to the degree feasible, nonpoint sources in each water quality segment identified pursuant to § 131.203 and shall where required establish a load allocation for each thermal source. The total of such discharge load allocations for each source in the segment shall not exceed the total maximum daily load or thermal load allocation established or estimated for such segment pursuant to § 131.205.

(2) Each discharge load allocation and thermal allocation established or estimated pursuant to this paragraph shall incorporate an allowance for anticipated economic and demographic growth over at least a 5-year period and an additional allowance reflecting the precision and validity of the method used in determining such allowance.

(3) Establishment of discharge load allocations and thermal load allocations shall be coordinated with the development of terms and conditions of permits under the national discharge elimination system in the manner prescribed by § 131.209.

(4) Where permits have been issued, the relationship of the allocations and the schedules of compliance to the permits shall be governed by § 131.209.

(c) (1) Each plan shall contain effluent limitations, or target limitations, consistent with the requirements of the act, applicable to significant point sources identified in paragraph (a) of this section.

(2) Effluent limitations for each source in water quality segments shall be at least as stringent as necessary to meet the load allocations established for such sources pursuant to paragraph (b) (1) of this section.

(3) Establishment of effluent limitations shall be coordinated with the development of terms and conditions of permits under the national Pollutant discharge elimination system in the manner prescribed by § 131.209.

§ 131.207 Schedules of compliance; coordination with permits.

(a) Each plan shall include schedules of compliance or target dates of abatement for significant point sources identified in § 131.206 which are not currently in compliance with the effluent limitations established in paragraph (c) of such section and are not anticipated to be in compliance by January 1, 1975.

(b) (1) Each schedule shall contain realistically established milestone dates pursuant to this subsection.

(i) If the State or the regional administrator has issued a permit to the source under the national pollutant discharge elimination system, the schedule shall contain the major interim and final dates included as terms or conditions of the permit, if any, that are necessary to assure an adequate tracking of progress towards compliance. For purposes of plan preparation the permit issued could be attached to the plan submitted.

(ii) If the source is required to obtain a permit under the national pollutant discharge elimination system but no permit has been issued as of the date that the plan is submitted, the schedule shall set forth a tentative or target date when the source must obtain a permit, as well as other target abatement dates that will enable an adequate tracking of progress toward completion of the facility.

(2) The plan shall set forth the legal basis for enforcement of the schedule of compliance (e.g., was adopted as State law; was promulgated as State regulations; is or will be incorporated in waste discharge permit).

(3) Establishment of schedules of compliance shall be coordinated with the development of terms and conditions of permits under the national pollutant discharge elimination system in the manner prescribed by § 131.209.

§ 131.208 Ranking of segments and inventory of point source discharges.

(a) Each plan shall include an inventory and categorization of sources which shall be used by the State in the development of the State strategy. This strategy is described in part 130, subpart D of this chapter.

(b) Each plan shall include a ranking of its segments in order of abatement priority using, as a minimum, the criteria specified in § 130.41 of this chapter.

§ 131.209 Coordination of certain planning components and terms of permits.

(a) If the State is participating in the national pollutant discharge elimination system, or if the permit program is administered by EPA, individual discharge allocations, effluent limitations, and schedules of compliance shall be developed as provided in this paragraph.

(1) (i) The State will use its best efforts to incorporate in permit terms and conditions the applicable target individual effluent limitations and target schedules of abatement established by any approved plan, subject, however to all the rights that the permit applicant and other interested persons may have under State or Federal law to [illegible] such effluent limitations and schedules of compliance in the [illegible]

(ii) The milestones [illegible] plan implementation [illegible] schedule of compliance establish[illegible] a permit shall be incorporated into [illegible] plan at the first revision of the plan to take place following issuance of the permit.

(2) In a planning area where a plan is under development, permit terms and conditions proposed for any source and plan preparation shall be coordinated, to assure that the plan reflects information developed in connection with the permit application and conditions for effluent limitations and a schedule of compliance proposed for the permit.

(3) Where, pursuant to the approved phasing of planning, no plan has been approved or is under development, the State shall not be precluded by such lack of planning from processing any permit (consistent with established priorities). In such case, permit terms and conditions proposed in a cluster shall be developed following the State's consideration of all discharges in the cluster. (See § 130.60 of this chapter.) The State shall retain the documentation of any cluster analysis for use in the subsequent preparation of the discharge load allocations, effluent limitations, and compliance schedules for the area.

§ 131.210 Municipal facility investment requirements.

(a) Each plan shall include an assessment of municipal waste treatment investment requirements. Such assessment shall be based upon the criteria set forth in paragraph (b) of this section.

(b) Municipal facility investment requirements shall be determined according to the following criteria:

(1) Load reduction achieved by the identified facility, and whether this reduction is required to attain and maintain applicable water quality standards and effluent limitations.

(2) Evidence concerning the cost effectiveness of proposed treatment, where available.

(3) Population or population equivalents to be served, including forecast growth or decline of such population over the design life of the needed facility. The time period used shall be stated. These analyses shall take into account projections used in other State and local planning activities.

(c) Cost estimates for facilities meeting the above criteria shall be based on engineering plans, specifications, and detailed cost estimates where available. For any facility for which detailed estimates do not exist, cost estimates shall be made based on guidelines prepared by the Administrator.

§ 131.211 Individual nonpoint source discharges; impact on water quality.

(a) To the extent feasible and dependent upon issuance of appropriate guidelines under section 304(e) of the act, plans shall provide for the consideration of agricultural silvicultural, mining-related, construction activity related, salt water intrusion related and other nonpoint source pollution.

(b) Each plan for each water quality segment shall identify and evaluate nonpoint source discharges including as a minimum a description of the type of problem and an identification of the waters affected, including an evaluation of the effects.

(c) Where feasible, each plan for each water quality segment shall include the following:

(1) Description of present and proposed abatement or control strategy;

(2) Determination of priority for abatement or control;

(3) Establishment of schedule of compliance;

(4) An estimate of the costs of implementation; and

(5) Assignment of responsibility of abatement control.

Data obtained from the plan monitoring program established pursuant to subpart C of this part shall be employed in making the identifications and analyses required by this section.

§ 131.212 Coordination with land use policies and controls.

The plan should describe the extent to which land use decisions can be influenced to complement and reinforce the control actions required to meet water quality goals. Each plan shall set forth any procedures established to assure land use relationships have been given adequate consideration in the development of the plan.

Subpart C—Monitoring and Surveillance

§ 131.300 Relationship of monitoring and surveillance to plans.

(a) Each plan shall be based upon adequate monitoring and surveillance data, as set forth in this subpart, from which to determine the relationship between instream water quality and individual discharges. Such data will facilitate implementation of the plan.

(b) Each plan shall contain for each water quality segment:

(1) A program to monitor the total stream discharge loadings, including contributions from significant dischargers, which shall be related to the maximum daily loads established by the plan pursuant to § 131.205, and

(2) A continuing program for monitoring instream water quality standards and goals.

§ 131.301 Coverage of monitoring and surveillance program.

In establishing the monitoring and surveillance program for discrete water segments consideration shall be given to the severity of the pollution and applicable water quality standards and goals including the use to be made of the waters.

§ 131.302 Use of monitoring surveys for plan development.

Each plan shall incorporate the results of any monitoring survey completed prior to the date of adoption of the plan which provides current data for the area covered by the plan. If current data are not available the State should conduct an adequate monitoring survey to obtain the necessary data before completion of the plan.

§ 131.303 Frequency of monitoring surveys.

Each plan shall provide that the monitoring survey for the area within water quality classified segments covered by the plan will be repeated at appropriately defined intervals, depending on the variability of conditions and changes in hydrologic or effluent regimes. The survey intervals shall be stated in the plan.

§ 131.304 Output of monitoring surveys.

The monitoring survey shall produce sufficient information to support the planning for the area. Output shall include, but is not limited to, the following:

(a) A listing of all surface waters by stream segment or water zone, which do not comply with applicable water quality standards and goals.

(b) In water quality segments, a description of pollutant mass balances, including estimates of the total pollutant loads to be controlled in the segment.

(c) Input to the EPA water quality information system of basic data collected during the monitoring survey, and validation and correction of data available prior to the survey.

(d) A listing of stations, parameters, and frequencies to be monitored to provide compliance, progress measurement, and trend information required by this chapter.

(e) A proposed schedule, based on variability of stream quality, expected changes in flow and effluent regimes, or other information, for the subsequent monitoring survey to be undertaken in the same basin.

§ 131.305 Water quality data from fixed stations; input to information system.

(a) Each plan shall provide for the maintenance of a small number of permanent in-stream water quality trend evaluation stations at key locations in each basin to measure progress toward applicable water quality standards and goals, trends in water quality, and compliance with approved plans, and shall be used as a basis for completing the section 305(b) reports.

(b) The operation of these stations shall continue after the completion of applicable monitoring surveys required by this subpart.

(c) The State shall input data from such stations to the EPA information system in such manner as the State and the Regional Administrator shall agree.

§ 131.306 Provision and use of point source discharge information; input to information system.

(a) Data from the National Pollutant Discharge Elimination System shall be made available for use in developing the plans required in this part, including data concerning the location, identification, and characterization of each discharge supplied by applicants for permits.

(b) Other information on point sources developed by monitoring surveys shall be assembled for use in developing the plans required by this part.

(c) The State shall input such point source data to the EPA information system in such manner as the State and the Regional Administrator shall agree.

Subpart D—Completion and Review of Plans; Relation to Permits and Grants

§ 131.400 Certifications.

Each plan shall include the following assurances and certification by the Governor or his designee:

(a) That the plan is the official State water pollution abatement plan for the hydrologic unit covered by such plan.

(b) That the plan was adopted after public hearings as prescribed in § 131.401 and that public participation was afforded in accordance with regulations promulgated for section 101(e) of the act.

(c) That the plan is compatible with all plans established pursuant to section 303(e) of the act, or pursuant to other sections of the act for other waters within the State and in any other State (except that if the plan is not wholly compatible with any plan for waters in another State, a description and explanation of such incompatibility shall be supplied).

(d) That the plan has incorporated the relevant features of each plan for the construction of publicly owned treatment works under section 201 of the act and each areawide water quality management plan under section 208 of the act, involving all or a portion of the hydrologic unit covered by the basin plan, if such plans have been approved by the Regional Administrator.

(e) That the inventory of needs for construction of publicly owned waste treatment works included in the plan will be used by the State in determining the priority for Federal and State assistance for such construction as provided in § 130.43 of this chapter.

§ 131.401 Public hearings.

(a) There shall be conducted at least one the adoption or any substantive revision of the plan and after reasonable notice thereof, one or more public hearings on the proposed plan or on parts of the plan, in accordance with the regulations promulgated pursuant to section 101(e) of the act. The number and location of hearings shall reflect the size of the

planning area and its population and population distribution. Public participation and contribution shall be encouraged commencing with the earliest possible stages of plan development and continuing throughout the period of plan preparation, including revisions thereof. The State may conduct its public hearing on the plan simultaneously with the public hearing on permits in the area covered by the plan. If the public hearing was conducted on a segment or cluster of the plan for the purpose of facilitating the issuance of permits, then this portion of the plan need not be subject to additional public hearings requirements.

(b) For purposes of this section:

(1) The term "substantive" includes but is not limited to any significant revision of water quality standards, maximum daily loads for water quality segments, load allocations for individual dischargers, effluent limitations, or schedules of compliance.

(2) "Reasonable notice" includes, at least 30 days prior to the date of each hearing:

(i) Notice given to the public by prominent advertisement announcing the date, time, and place of each such hearing and the availability of the proposed plan for public inspection; and

(ii) Notification to the Regional Administrator.

(c) There shall be prepared and retained for submission to the Regional Administrator upon his request a record of each hearing. The record shall contain at a minimum a list of witnesses together with the text of each written presentation.

(d) There shall be submitted with the plan a description of any major controversy raised by the hearing and the disposition thereof.

§ 131.402 Submission.

Plan submission shall be accomplished by delivering five copies of the plan to the Regional Administrator, together with a letter from the Governor (or his designee) notifying the Regional Administrator of such action.

§ 131.403 *Plan review; approval or disapproval.*

The Regional Administrator shall approve or disapprove the plan submitted pursuant to § 131.402 within 30 days after the date of submission, as follows:

(a) If the Regional Administrator determines that the plan conforms with the requirements of the act, this part, the continuing planning process and contiguous plans including neighboring States' plans, he shall so notify the Governor or his designee by letter.

(b) If the Regional Administrator determines that the plan fails to conform with the requirements of the act, this part, the continuing planning process or contiguous plans including those of neighboring States, he shall notify the Governor or his designee by letter and shall state:

(1) The specific revisions necessary to obtain approval of the plans, and

(2) The time period for resubmission of the plan.

(c) Where plans involving interstate waters are found to be incompatible, he shall notify the Governors, or their designees, of the concerned States of the specific areas of incompatibility.

§ 131.404 Revisions.

(a) The plan shall be revised from time to time as necessary to accomplish national water quality objectives in conformity with the requirements of the act and the continuing planning process. Procedures for revision shall be set forth in the plan.

(b)(1) The Regional Administrator shall from time to time review each approved plan for the purpose of insuring that such plan is at all times adequate to assure the goal of paragraph (a) of this section.

(2) The plan shall be revised as necessary upon finding by the Regional Administrator and notification to the Governor (or his designee) that the plan is substantially inadequate to assure the goal of paragraph (a) of this section.

(3) The plan shall be revised within 90 days following notification by the Regional Administrator pursuant to subparagraph (2) of this paragraph, or by such later date as may be prescribed by the Regional Administrator after consultation with the State.

(c) Revisions of the process shall be adopted after reasonable notice and public hearings as prescribed in § 131.401.

(d) Revisions shall be submitted in accordance with § 131.402.

(e) Plan review and approval or disapproval shall be carried out in accordance with § 131.403.

§ 131.405 Prohibition of approval of certain plans.

The Regional Administrator shall not approve any plan that does not conform with the requirements of section 303(e) of the act, the continuing planning process, and this part. Substantial failure of any plan to conform with the applicable requirements of section 303(e) of the act and of this part may indicate that the planning process by which such plan was developed was deficient and may result in withdrawal of approval of the planning process or portions thereof relating to such plan. Approval of the State's participation in the national pollutant discharge elimination system may be withheld or withdrawn if the process is not fully approved.

§ 131.406 Prohibition of certain construction grants.

(a) Before approving a grant for any project for any treatment works under section 201(g) of the act after June 30, 1973, the Regional Administrator shall determine, pursuant to 40 CFR 35.925-2, that such works are in conformity with any applicable plan approved in accordance with this part and part 130 of this chapter. Disapproval by the Regional Administrator of a plan, or relevant portion thereof, for the area where a project is to be located may constitute grounds for not approving a grant for such project.

(b) The Regional Administrator may suspend or terminate a grant for any project for any treatment works in accordance with § 35.950 of this chapter if he determines that such grant is inconsistent with a plan, for the area of the project, approved subsequent to approval of the grant.

§ 131.407 Discharge permit terms and conditions.

Each permit issued under the national pollutant discharge elimination system to any source covered by the plan shall be prepared in accordance with the plan as provided in § 131.209, shall be processed pursuant to the State priority permit issuance procedures set forth in § 130.44 of this chapter, and shall contain such terms and conditions as may be necessary to meet the applicable requirements of the plan; subject, however, to all the rights that the permit applicant and other interested persons may have under State or Federal law to contest the terms and conditions of the permit in the permit issuance proceeding. Failure of any permit to conform with the requirements of this section may constitute grounds for the Administrator to object to the issuance of such permit.

§ 131.408 Separability.

If any provision of this part, or the application of any provision of this part to any person or circumstance, is held invalid, the application of such provision to other person or circumstances, and the remainder of this part, shall not be affected thereby.

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APPENDIX B

WATER QUALITY ANALYSIS THROUGH MODELING

Water quality analysis through modeling enables planners to predict water quality under adjusted conditions of flow, temperature and pollutant loads. Hence, it provides a basis for load allocation and effluent reduction determinations.

Water quality analysis is conducted by the following steps:

- Categorize the water body.
- Conceptualize the phenomena.
- Consider alternative appropriate modeling techniques.
- Select the least sophisticated adequate modeling technique.
- Calibrate the selected model.
- Validate the model.
- Predict water quality.

These steps are discussed in further detail below. It is expected that in the actual development of the model, additional sources will be consulted to supplement this general information.

A. Categorize the water body.

Water bodies may be categorized in one of three categories: Flowing streams, estuaries, and lakes and impoundments. Dominant transport mechanisms differ in each category; hence, varying modeling techniques are appropriate for differing categories. Further, the degree of sophistication of technique within each water body category may also vary according to conditions in the water. A combination of techniques should probably be employed for analyses where more than one category of water body is involved.

B. Conceptualize the Phenomena.

The phenomena and interactions that occur in the water body must be conceptualized for use in a model. Conceptualization consists of reducing these phenomena to mathematical formulations or equations which will describe variations of the phenomena in response to changes in conditions. The selected model must reflect all major, relevant phenomena.

C. Consider Alternative Appropriate Modeling Techniques.

1. Alternative modeling techniques.

The model to be used depends on the category(ies) of the water body(ies) being analyzed (see paragraph A), the type of water quality problem and the complexity of the problem.

A preliminary investigation of the area to be modeled will indicate the water body category(ies) and problem type(s). This investigation normally will include review of maps and existing water quality and hydrologic data. (See Chapter II, Section A.) Existing data obtained in the preliminary investigation should be used to aid in the determination of the level of sophistication of the study. The object of the selection process should be to utilize the minimum level of sophistication which will provide sufficient detail to justify the selection of water quality management strategies that will result in achieving water quality standards during critical conditions.

For model selection purposes, the techniques may be broken into four general types--A through D. These techniques are identified in Table B-1, below. It should be noted that Types A, B, C and D represent arbitrary points on a scale of techniques that range from simple to very complex, and shadings, variations and combinations of techniques may be appropriate in a given case. The most complex techniques, Type D, should be reserved for research efforts into the most intricate water quality situations.

2. Data considerations in selecting technique.

While model selection is based ultimately on identifying the least complicated adequate technique, the extent of data available or to be acquired must also be considered.

Table B-1

Water Quality Simulation Techniques A-C

Receiving Water Category	Type	Sophistication
Flowing streams	A	Simplified steady state
	B	Steady state
	C	Transient state
	D	Complex
Estuaries	A	Simplified steady state (one dimensional)
	B	Steady state (one or two dimensional)
	C	Transient (two dimensional)
	D	Complex
Lakes and impoundments	A	Completely mixed
	B	One dimensional vertically mixed
	C	Stratified
	D	Complex

The Type A simplified steady state analysis should be a first try, unless clearly inadequate. If consistent data exist or will be collected, Type B steady state models can be validated and applied to a low flow analysis. The accuracy of the study is tied to the amount and completeness of the data.

For Type C studies, detailed data sets are required to capture the variations in water quality.

3. The risk factor as an element in selecting technique.

The water quality analysis and prediction developed by any model can only approximate the actual water quality which will occur under the various suggested hypotheses. The simpler models assume many coefficients based on previous modeling experience. These assumptions will never be entirely correct for the distinct water body being analyzed; hence, remedial measures (effluent reductions) based on the model predictions will not result in water quality exactly as predicted by the model. Since unnecessarily stringent measures may result in costly overbuilding and inadequate measures may fail to protect the aquatic ecosystem and achieve established water quality goals, model selection must consider the degree of risk to be accepted. Risks should be minimized where large construction fund outlays are required or where a particularly frail or valuable aquatic system is at stake. Conversely, complex models which create a need for high cost, lengthy data collection are not justified where, on balance, the consequences of the probable degree of error would be relatively minor.

D. Select least sophisticated adequate modeling technique.

The least sophisticated modeling technique adequate for water quality analysis and prediction should be selected and used where needed in water quality segments to allocate waste loads and establish effluent reduction needs based on critical conditions for each parameter.

Table B-II below summarizes the criteria for the selection of an analytical technique. The table lists criteria for each of the four levels of complexity (A, B, C and D). As has been noted, level D studies should not generally be used. For each level of complexity, the table presents the type of problems and water bodies for which the level is appropriate, the planning characteristics (complexity and risk) associated with that level and the time required for a study.

This table only serves as starting place in the selection process. Each of the criteria should be broken down and studied in more detail before making the final actual technique selection.

TABLE B-II

CRITERIA FOR SELECTION OF TECHNIQUES

Model Complexity	Water Quality Problems and Variable	Water Body	Planning Characteristics	Time Required for Study
Simplified Analysis (Type A)	D.O. (carbon and nitrogen)	One-dimensional streams and estuaries (completely mixed).	a. Low risk of capital and/or environmental quality degradation. b. No alternate strategies and control options available.	Days to weeks
Steady state linear kinetics (Type B)	a. D.O. (carbon and nitrogen) temperature and nonpoint source. b. Anticipated or existing water quality problems.	One or two-dimensional streams, estuaries, rivers, lakes.	a. Low to moderate risk of capital and environmental quality degradation. b. Alternative strategies and control options must be available.	2 to 9 months
Transient linear kinetics analysis (Type C)	a. Time varying D.O. nonpoint source analysis, and temperature. Simple eutrophication analysis. Full storm water overflow analysis. b. Water quality problems.	Rivers, lakes, and estuaries. One or two-dimensional.	a. Moderate to high risk of capital and environmental quality degradation. b. Alternative strategies and control options must be available.	6 to 24 months

TABLE B-11

Model Complexity	Water Quality Problems and Variable	Water Body	Planning Characteristics	Time Required for Study
Time variable non-linear kinetics analysis. (Type D*)	a. Detailed eutrophication analysis et. al. b. Water quality problems. c. High growth of area projected.	All bodies of water.	a. High risk of capital and/or environmental quality degradation. b. Alternative strategies and control must be available.	12 to 36 months

*Type D studies are to be performed only in very complex situations and should be regarded as research efforts.

E. Calibrate the selected model.

After a model is selected its reaction coefficient and other parameters should be calculated and adjusted for the particular water body being analyzed.

F. Validate the model.

Once a model is calibrated its validity should be tested so that a measure of its reliability is obtained. Validation should be done using an independent set of observations. The calibrated model is then used to predict water quality for conditions at the time of the validation set sampling. The errors of estimate are then an indication of how well the model replicates a particular state of the system. An analysis of errors permits scaling the model reliability.

G. Predict water quality.

The model should be used to predict water quality for each parameter, under the critical conditions for the parameter, using 5 year projected waste loads. The first prediction should use effluent limitations based on the best practicable technology ("BPT") and secondary treatment pursuant to sections 301(b)(1)(A) and (B) of the Act, unless those limitations are clearly inadequate for the parameter. If BPT/secondary treatment is inadequate, varying alternative load allocation/effluent reduction combinations should be tried. A cost effective alternative calculated to achieve all applicable water quality standards should be selected.

Appendix C

Suggested Forms (Optional)

This appendix suggests forms which may be used in 303(e) planning. Use of these forms is optional. Any method of presenting the necessary planning information that will enable public and governmental information and review and guide ongoing water quality management is acceptable.

The suggested forms show existing water quality, identify required actions and describe the water quality expected to result from these actions. Thus in combination they provide the desired plan product: a quick-reference guide and supporting rationale for making coordinated water quality management decisions in the basin.

These forms may be used to present the following information:

Form 1--Instream Water Quality; Identification of Standards Violations.

Form 2--Waste Source Inventories and Rankings.

Form 3--Load Allocations and Abatement Dates.

Form 4--Abatement Program.

Forms 1 and 2 provide part of the data base needed to determine the load allocations presented in Form 3.

It is desirable that the information presented on each form be as complete as possible, but extensive data collection is not recommended in low priority areas or wherever the marginal usefulness of the resulting data would not warrant the time and expense of its collection. Where data are insignificant or unavailable, the following symbols may be employed:

NA--"Not applicable" indicates that amounts of the parameter are insignificant.

UK--"Unknown" indicates that the parameter has not been measured and cannot be validly estimated.

While the forms are largely self-explanatory, the following discussion may be helpful.

Instream Water Quality; Identification of Standards Violations. (Form 1)

Form 1 describes existing water quality. It is helpful for water quality assessment to present information for each month. At a minimum, the information should illustrate the critical period for each parameter.

In completing this form, the following specific points are recommended:

1. Monitoring stations should be entered starting at the uppermost point and moving downstream. Location should be entered by grid map coordinate and/or river mile. If no monitoring station exists at either end of the segment, measurements should be made and entered.

2. All constituents necessary to describe instream conditions caused by known sources should be included. The instream water quality data should be compared with the criteria, and any constituent which is in violation should be circled. The period of time of the violation should be estimated.

FORM 1

INSTREAM WATER QUALITY; IDENTIFICATION OF STANDARDS VIOLATIONS

STATE		BASIN		SEGMENT		UNIT-
TYPE OF RECEIVING WATER BODY				DATE		PAGE OF

DESCRIPTION		FLOW (CFS)		TEMP. (°C)		DO (mg/l)		NH_3 (mg/l)		NO_3 (mg/l)		TOTAL P (mg/l)		COLIFORM (MPN/100 ml)		TDS (mg/l)		pH --		TURBIDITY (JTU)		METAL (mg/l)				
Water Quality Standard in this segment. (Use range when required.)																										
Monitoring Stations and their location.		Q Ave	Q Min	Ave	Max	Ave	Min	Ave	Max	Ave	Max	Ave	Max	Ave	Max	Ave	Max	Ave	Max	Ave	Max	Ave	Max			
1	Station at Up-stream End																									
2																										
3																										

Waste Source Inventories and Rankings. (Form 2)

Form 2 is suggested for use in constructing waste source inventories which the regulations require to be presented, in some form, for all segments. The inventory should include all point sources of pollutants which will require a permit and/or construction grant, but analysis of non-significant sources is not needed. Significant non-point sources, if any, should be estimated and noted on this form, together with their characteristics and location. Separate inventories should be constructed for municipal (M); industrial (I); and non-point (N) sources. Federal facilities should be entered on the inventory which best characterizes the discharge (municipal or industrial) and should be identified (e.g., "FM" or "FI").

The form is designed to be used as follows:

1. Significant sources should be entered in order of abatement priority.

2. Each source (significant and other) should be identifed and located by grid map corrdinate and river mile and/or shore location (for bays, lakes, or oceans).

3. The type of sample is indicated as:

   "c" - composite.

   "g" - grab.

   "ci" - composite (industry supplied).

   "gi" - grab (industry supplied)

4. The flow should be the discharge flow at which the constituent is sampled. Note those cases where constituents are at different flows.

5. The applicable constituents for each source should be tabulated by maximum discharge during the critical season for the parameter involved. Sum multiple outfalls of the same source, including drainage from all areas served by the source, and enter the aggregated load for the parameter.

FORM 2

WASTE SOURCE INVENTORIES AND RANKINGS

STATE			BASIN					SEGMENT						DATE				PAGE	OF	
WASTE SOURCES		MIN	Type of Sample (c,g,cl,gi)	Flow (CFS)																
CODE	DESCRIPTION	LOCATION																		
TOTAL SOURCE LOAD Table 2							(DAILY DISCHARGE RATE)													
SUM OF ALL MUNICIPAL SOURCES																				
SUM OF ALL INDUSTRIAL SOURCES																				
SUM OF ALL NON-POINT SOURCES																				

Load Allocations and Abatement Dates. (Form 3-A and 3-B)

These Series 3 forms are suggested for use in displaying the selected waste load allocations. Form 3-A presents the allowable load for all significant waste sources. Form 3-B summarizes abatement timetables.

Form 3-A

Form 3-A displays a load allocation alternative for waste sources in water quality segments. In the course of planning, one such form may be completed for each load allocation alternative being considered, but rejected alternatives need not be displayed in the completed plan if water quality standards will be achieved by the alternative which is selected. The alternative which is selected should be included in the completed basin plan. Form 3-A may be used for this purpose. Loads should be allocated to all existing, significant point sources, non-point sources where applicable, and to foreseeable new sources to be added in the near future.

Form 3-B

Form 3-B summarizes compliance schedules and target abatement dates. The information reflected on Form 3-B must be displayed, in some form, for both water quality and effluent limitations segments.

FORM 3-A

SELECTED WASTE SOURCE LOAD ALLOCATION ALTERNATIVE

STATE			BASIN				SEGMENT				DATE			PAGE		OF
WASTE SOURCES			MAX. DAILY LOAD (DAILY DISCHARGE RATE)													
SIC CODE	DESCRIPTION	BOD_5 (lb/day)	COD (lb/day)	HEAT (BTU/day)	NH_3 (lb/day)	NO_3 (lb/day)	TOTAL P (lb/day)									

FORM 3-B

WASTE SOURCE ABATEMENT SUMMARY

State	Basin	Segment	Classification
Prepared By	Summary of: Municipal Industrial Non-Point	Date	Page__of___

Source	1973				1974				1975				1976				1977			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
TOTAL																				

Abatement Program (Form 4-A to 4-C)

The Series 4 forms may be used to identify needed actions, provide a management schedule for their implementation and display the expected results.

Form 4-A

Form 4-A identifies State or local agency actions provided for more than one source, such as obtaining new legislation for initiating detailed non-point source analysis. All significant multi-source actions, including those requiring State, regional or national decisions, should be set forth.

Form 4-B

Form 4-B identifies agency actions required in connection with specific sources, such as obtaining an abatement commitment through a permit, a construction grant award or an enforcement action. Specific problems which might hinder abatement (for example, socio-economic, financial, institutional or technical issues) should be noted, accompanied by a brief explanation of the planned resolution of the issue. Single source agency action schedules should be coordinated with the abatement targets for the source. (See Form 3-B.) Under "Resources to Accomplish Task," the estimated cost and man years should be separately stated for each agency involved in each task.

Form 4-C

Form 4-C relates WQ segment load reductions with water quality improvements over time. A separate form should be used for each parameter for which load reductions are required. The information necessary to develop this abatement summary form can be derived from previous detailed forms as follows:

Total load in segment. - Form 2.

Total allowable load. - Form 3A.

Reductions planned. - Form 3B.

FORM 4-A

AGENCY MULTI-SOURCE ACTION AND TARGET DATES

State	Basin	Segment	Classification
Prepared By	REDUCTION LEVEL ALTERNATIVE	Date	Page of

BASIN OR SEGMENT SITUATION ON WHICH PROGRESS IS CONTINGENT AND WHICH COVER MORE THAN ONE TASK	INTEGRATED PROGRAM ABATEMENT ACTIONS TO BE TAKEN (ASTERISK THOSE TASKS WHICH MEET ESTABLISHED COMPLIANCE SCHEDULE). INCLUDE NATIONAL & STATEWIDE SITUATIONS AFFECTING ALL SOURCES OR TYPES OF SOURCES IN SAME WAY.	AGENCY RESPONSIBLE	MILESTONE DATES		RESOURCES TO ACCOMPLISH TASK	
			START	END	MY	$000

TABLE 4-B

AGENCY STAGE SOURCE
ACTIONS AND TARGET DATES

State	Basin	Segment	Classification

Prepared By	REDUCTION LEVEL ALTERNATIVE	DATE	Page __ of __

Ranked Sources	SIGNIFICANT SOURCES IN PRIORITY ORDER	INCLUDE FOR EACH SOURCE AT LEAST. COMMITMENT, PLNS & SPECS, CONST. START. OPERS BEGUN AND REDUCTION MILESTONES.	AGENCY RESPONSIBLE	TARGET DATES		RESOURCES TO ACCOMPLISH TASK	
				START	END	MY	$000

FORM 4-C

SUMMARY OF REDUCTIONS AND WQS ACCOMPLISHMENTS

State	Basin	Segment	Classification

Prepared By	Parameter	Date	Page__of__

ACCOMPLISHMENTS	SOURCE TYPES	1973 Q1	1973 Q2	1973 Q3	1973 Q4	1974 Q1	1974 Q2	1974 Q3	1974 Q4	1975 Q1	1975 Q2	1975 Q3	1975 Q4	1976 Q1	1976 Q2	1976 Q3	1976 Q4	1977 Q1	1977 Q2	1977 Q3	1977 Q4
TOTAL LOAD IN THE SEGMENT (From Form 2)	T M I N																				
TOTAL ALLOWABLE LOAD (From Form 3A)	T M I N																				
REDUCTIONS PLANNED (From Form 3B)	T M I N																				
QUARTER PARAMETER WILL MELT WQS [Designated Uses _____] [_____] [_____]																					

IF, DUE TO INTERACTIVE EFFECTS, ACHIEVEMENT OF WQS FOR THIS PARAMETER WILL NOT BE ACHIEVED SIMULTANEOUSLY WITH ACHIEVEMENT OF REQUIRED REDUCTIONS, EXPLAIN: _____

Comparison of the allowable load with the planned reductions over time will illustrate the quarter when the applicable water quality standards for the parameter will be met in the segment or, in the exceptional instance, it will indicate where reductions beyond those currently planned are required. The need for such additional planning should be reflected on Form 4-A and/or Form 4-B.