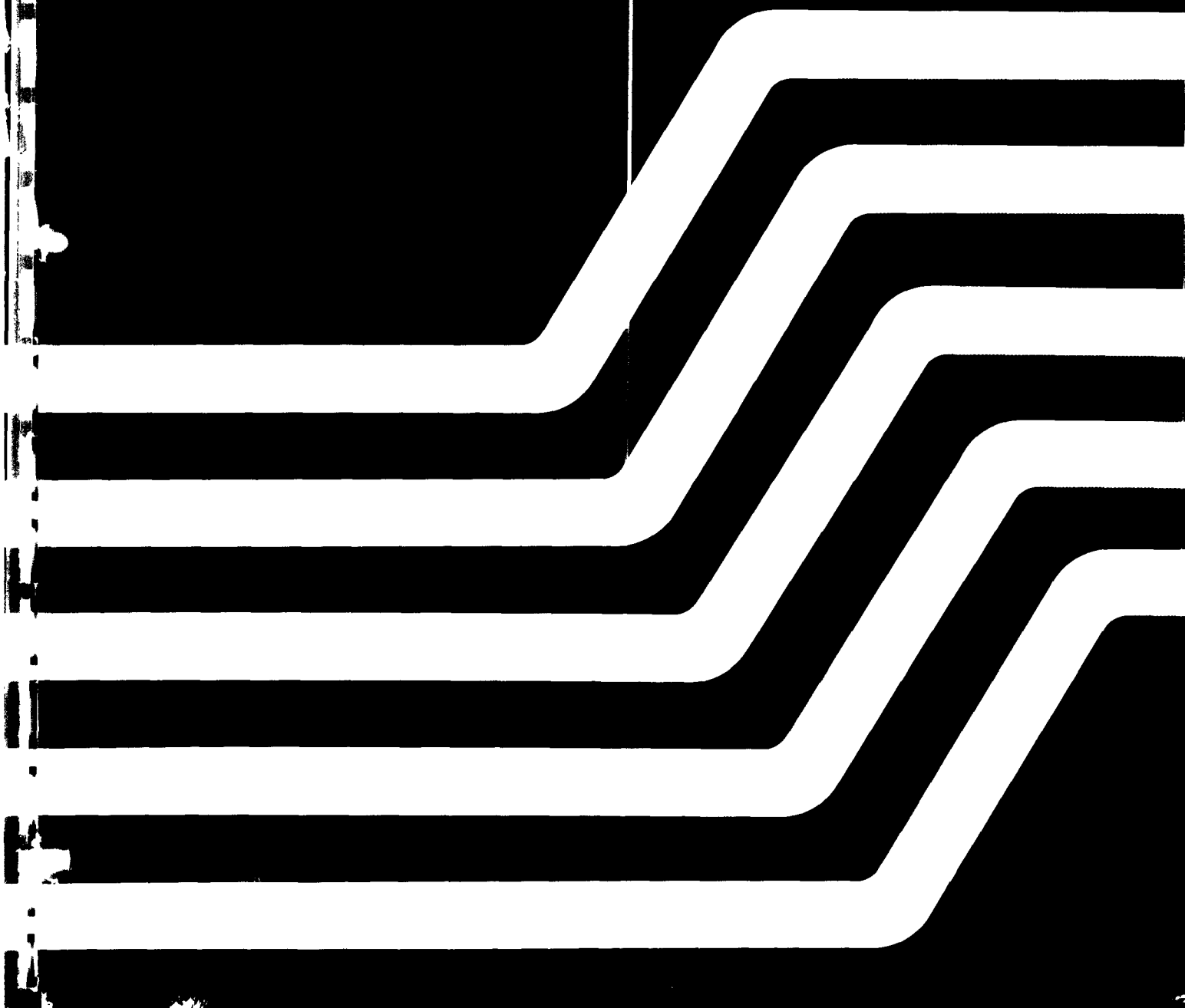



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1976

Construction  
Grants Program  
for Municipal  
Wastewater  
Treatment  
Works

# Handbook of Procedures

000R76015





# **Handbook of Procedures**

## **Construction Grants Program for Municipal Wastewater Treatment Works**

February 1976



**Municipal Construction Division  
Water Program Operations  
Office of Water and Hazardous Materials**

**U.S. Environmental Protection Agency  
Washington, D.C. 20460**

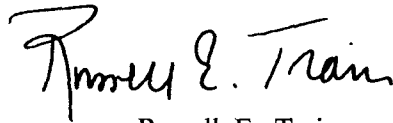
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## Foreword

*This Handbook, like its predecessor which was prepared in 1967 following the enactment of the 1966 amendments to PL 84-660, identifies and explains in sequence the many procedures to be followed by those in the Regional Offices and the States responsible for bringing municipal wastewater treatment projects from their conception to completion.*

*By setting forth in clear, logical terms the specific tasks to be carried out in processing applications and monitoring grantee efforts, the Handbook establishes uniform national operating standards which can be readily adopted. Of equal importance to this dynamic program is that it provides for dealing with the endless numbers of emerging issues in terms which are readily recognized by all concerned.*

*The Handbook is a welcome addition to our ever expanding guidance on implementing the construction grant program. Through the regular, thoughtful application of its procedures, I am confident that the program goals to which our Agency is dedicated can be achieved.*

A handwritten signature in black ink, reading "Russell E. Train". The signature is written in a cursive, flowing style with a large initial "R".

Russell E. Train

# Acknowledgement

The Handbook was prepared by the Municipal Construction Division, Water Program Operations, Office of Water and Hazardous Materials.

The basic organization of the Handbook and the initial drafts of the text materials were prepared, under contract, by Ecol Sciences Inc., Vienna, Virginia. The reviewing and editing of the Handbook, to validate its accuracy and ensure that it properly and effectively conveyed current Agency policy, were performed by the Construction Grants Handbook Review Committee,\* which met with the contractor's project officer, Albert T. Bowyer, after the drafting of each chapter. Albert L. Pelmoter, Chief, Policy and Procedural Guidance Staff, Construction Operations Branch, served as project manager for the development of the Handbook.

\* Members of the standing committee were: Stuart Peterson, Region I; Richard Salkie, Region II; Dave Olson, Region IV; Ronald Ritter, Region VII; Roy Ellerman, Region X; Evelyn Thornton, Headquarters; Thomas Ferry, EPA (retired); and Albert L. Pelmoter, Headquarters.

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Appendix C	Checklist for Plans and Specifications Review
Appendix D	Transmittal Memoranda

CHAPTER I  
INTRODUCTION

- A. General
- B. Legislative History
- C. Handbook Organization and Use

## A. GENERAL

This chapter describes the organization of the handbook and its use in administration of the construction grants program. Background information is presented as a foundation for later chapters.

## B. LEGISLATIVE HISTORY

Federal financial aid in the construction of municipal sewage treatment works was first authorized in 1948. This was a loan program which was never implemented because necessary funds were not appropriated by Congress.

The Federal Water Pollution Control Act of 1956, Public Law 84-660 (PL 84-660), included the first authorization for Federal grants to assist in the construction of waste treatment works. Selection of projects to be funded was made the responsibility of the States, reflecting the policy of Congress to ... *recognize, preserve and protect the primary responsibilities of the States in preventing and controlling water pollution...* The Act authorized an appropriation of fifty million dollars a year for such grants to be allocated to the States on the basis of relative population and per capita income. Grants from the State allocations were made directly to applicants for projects certified by the State as entitled to priority for a grant over other eligible projects in the State on the basis of water pollution control and financial needs. The grants were limited to 30% of the eligible project cost to a maximum of \$250,000.

Appropriations were increased during the early 1960's, and major amendments to PL 84-660 occurred in 1966. At that time appropriation authorizations were increased, the maximum dollar limitation on grants was dropped, the Federal share was increased to a maximum of 55%, and provision was made for future reimbursement of State or local funds used in lieu of Federal funds in construction of projects when Federal funds were inadequate to provide grants for all eligible projects within a State.

The 1966 Amendments were the last major legislative changes prior to the passage of PL 92-500 in 1972. There were, however, other legislative actions which occurred in that period which had a major impact upon the program. Most important of these were enactment of the National Environmental Policy Act (NEPA) in 1969, and creation of the U.S. Environmental Protection Agency (EPA) in 1970.

Enactment of PL 92-500 in 1972 resulted in extensive changes in the construction grants program. The Federal share was increased to 75% of eligible costs and projects involving sewage collection system construction, sewer system rehabilitation, and (under certain conditions) combined sewer system separation became eligible for grants. In addition, funds were included to reimburse those projects which had proceeded under the reimbursement provisions of the earlier statutes. Also, a strong enforcement program was called for which would encompass the statewide planning process, areawide planning, facilities planning, the construction grants program, and discharge permits.

This handbook describes actions necessary to the administration of the construction grants program under PL 92-500 and other pertinent laws, rules and regulations.

## C. HANDBOOK ORGANIZATION AND USE

### 1. Purpose

This Handbook is intended to serve as a guide in processing grant applications for Step 1, Step 2 and Step 3 projects. For consistency, the Handbook is organized for the processing of grants as of July 1, 1975. All new projects must begin at the Step 1 stage as of this date. Portions of the Handbook can also be applied to the review of pre-July 1, 1975 applications by referring to appropriate chapters.

The Handbook pertains to processing procedures for both administrative and technical functions, and these functions are presented in sequence throughout all steps. However, the review of administrative and technical functions should be done concurrently whenever possible.

While the administrative procedures to be followed in processing of construction grant applications are summarized in this Handbook, a more comprehensive statement of the administrative and management requirements is described in the Grants Administration Manual prepared by the Grants Administration Division, Office of Resources Management, Office of Planning and Management, EPA.

### 2. Structure

The processing of grant applications for Step 1, Step 2 and Step 3 projects is described in Chapters IV, V, and VI respectively. These Chapters are preceded by background and general information in Chapters I, II and III and followed by the Financial Considerations of Chapter VII. The latter Chapter contains information common to the processing of each category of grant, including eligible costs and the processing of payment requests.

The Handbook begins functionally with recommendations for the preapplication conference and proceeds through the completion of construction, including start-up and operation and maintenance requirements. Review procedures are separated into administrative and technical requirements and grouped together wherever possible. Some technical requirements which are either complex or time consuming have been treated separately. This separation is not meant to elevate their importance over other requirements but rather to emphasize the need for careful review of such complex requirements.

The construction grant program is concerned with three types of projects:

- Step 1 Projects - Planning
- Step 2 Projects - Design
- Step 3 Projects - Construction

When the applicant receives a grant for a Step 1 project, he prepares a facility plan. The facility plan is a part of the application requirement for a Step 2 project grant. However, the review of the facility plan is described in Chapter IV as a part of the Step 1 project grant processing procedures. Once the facility plan is approved by EPA, the applicant need only submit the additional administrative and technical requirements for a Step 2 project grant as described in Chapter V. Similarly, the review of plans and specifications is described in Chapter V as part of the Step 2 project grant processing procedures although it is a requirement for a Step 3 project grant.

### 3. Format

Each review function is necessary to insure compliance with statutory or program requirements. The review procedure usually is presented in the following format:

#### Purpose:

A brief explanation of the need for the review is given.

#### Discussion:

The program requirement is placed in program perspective and information is given on such things as general operating policy, important underlying issues, key considerations in approaching the topic under review and how the topic relates to the greater problem of which it is a part.

#### Procedures:

The procedures in the review process are briefly described. Where specific program items are required, they are listed. Other more general review items are included as a reminder. However, the review procedures listed here are not substitutions for nor do they supersede requirements as described in greater detail in the appropriate references. Check lists may be utilized as reminders of review requirements.



#### References:

Appropriate laws, regulations, Program Guidance Memorandums (PG), guidelines, technical bulletins, etc. are cited. Copies of such reference material can generally be found in the Manual of References, issued by the Municipal Construction Division, Office of Water Programs, in October 1975.

Some of the review procedures are self-explanatory or do not lend themselves to the above format. In these cases, the program requirements are briefly described.

#### 4. Related Material

Laws, regulations, guidelines, technical bulletins, program guidance memoranda, executive and administrative orders are referenced whenever applicable. Generally, references concerning technical matters have been limited to EPA publications. The review procedures in this Handbook describe the essence or minimum requirements necessary in processing of construction grants. More detailed descriptions, as necessary, may be obtained by reading the reference material.

Italics are used wherever law or regulations are quoted directly. Requirements of law or regulations may be changed only through legislative or rule making action, whereas policies may be changed (under special circumstances) by Headquarters.

An understanding of related laws, regulations and guidelines for use in conjunction with the Handbook is necessary. The Handbook describes the requirements for processing construction grant applications. However, differences in structure of Regional Office staffs may require some adjustment in the time and place of review activities.

#### 5. Updating

The Handbook will be updated as changes in laws, regulations, or policy guidance occur. The responsibility for revisions and updating of the Handbook is centered in the Construction Operations Branch, Municipal Construction Division, HQ EPA. All changes will be routed through established lines of authority, but the final issuance to the Regional Offices will be from the Deputy Assistant Administrator for Water Program Operations.

Revisions will be forwarded by a Transmittal Memorandum (TM). Each Transmittal Memorandum will be designated with a sequential number (e.g., TM: 76-1) indicating the fiscal year and number of the issuance. Each TM will provide specific instructions for removal of obsolete pages and exhibits and insertion of new material.

The TM may be detached from the material transmitted and inserted in the appendix, "Transmittal Memoranda". On a yearly basis, a list of the preceding year's TM's will be sent to the Regional Offices. This will provide a check list for verifying the accuracy of the Handbook. Revised material being inserted in the Handbook will show a revision month and year in the bottom right hand corner of each new page.

## 6. Appendices

This Handbook contains the following appendices:

Appendix A: contains a schematic flow diagram for the processing of construction grants.

Appendix B: includes exhibits of frequently used OMB and EPA forms.

Appendix C: contains the sample checklist: "Program Checklist for Engineering Drawings, Specifications, and Engineering Reports".

Appendix D: is labeled "Transmittal Memoranda" and is to be used to keep the Headquarters issuances on Handbook changes (TM's).

## A. PLANNING PROCESSES

### 1. General

This Chapter is designed to provide a general working knowledge of those planning portions of PL 92-500 which directly affect the construction grants program.

PL 92-500 contains the most complex and far reaching pollution control amendments to date and firmly commits the Federal Government to eliminate pollution of the Nation's waterways. Even though there is a firm Federal commitment, the States still retain primary responsibility for the establishment of water quality standards, the control of waste discharges, and the enforcement of these standards. However, to insure a sound basis of control, PL 92-500 expanded existing and created new planning processes to be carried out by the States.

### 2. State Continuing Planning Process

Section 303(e) of PL 92-500 requires each State to establish and maintain a continuing planning process which must be reviewed and approved periodically by the Administrator. The continuous planning process must be consistent with the Act and include, as a minimum, the following:

- (a) effluent limitations and schedules of compliance to achieve water quality standards;
- (b) an areawide waste treatment management plan or basin plan under sections 208 and 209 of the Act;
- (c) total maximum daily waste load allocations;
- (d) procedures for revisions of the plans;
- (e) adequate authority for intergovernmental cooperation;
- (f) adequate implementation procedures and schedules of compliance for new or revised water quality standards;

- (g) methods of obtaining control over the disposal of all residual waste from any water treatment processing;
- (h) an inventory and ranking, in order of priority, of waste treatment works necessary to be constructed to meet water quality standards.

Three of these items are of particular concern to the construction grants program, namely:

- (b) areawide waste treatment management plans (more commonly known as 208 plans);
- (c) section 303(e) plans (more commonly known as basin plans or waste load allocation plans);
- (h) the State priority list (discussed in section B of this Chapter).

Each of these items is discussed more completely below. The three items have as their common objective the achievement of water quality standards which have been established by the States and approved by EPA, under PL 92-500 or earlier legislation.

Re: 40 CFR Part 130 and Part 131

### 3. Basin Plans

As an integral part of the State Continuing Planning Process and as a first step in achieving the established water quality standards, the State must prepare "basin plans" which classify segments of its waters as either "water quality limited" or "effluent limited". To make this classification, the State generally employs mathematical modeling of the river basin and notes all point and non-point sources of wastes, low flows and other physical conditions. Using the assumption that all point sources achieve at least secondary treatment, the model is able to predict whether the water quality standards are met. If the standards are met, the stream segment is classified as "effluent limited" and need only achieve secondary treatment (unless a more stringent degree of treatment is established by the State) to satisfy Federal requirements and to be eligible for a construction grant.

If the model of the basin predicts that water quality standards will not be met when all point sources achieve secondary treatment, the segment is classified as "water quality limited". The inputs to the model are varied with the result that waste load allocations are established for this segment and represent the minimum of treatment to be achieved by any future publicly owned wastewater treatment works.

It should be noted that in the 303 planning no direct controls are exercised to limit the non-point sources. In all cases, however, applicants for construction grants must comply with applicable basin plans.

Re: 40 CFR Part 130 and Part 131

#### 4. Areawide Waste Treatment Management Plans

Section 208, Areawide Waste Treatment Management Plan, is another integral part of the State Continuing Planning Process. These plans are prepared for areas having substantial water quality control problems caused by urban-industrial concentration or other factors. The stream segments in these areas require comprehensive areawide planning to meet the water quality standards. Not only do these plans place limitations upon municipal and industrial point sources, they also address land use policies to control non-point sources, stormwater discharges, water supply and other limiting factors which may be controlled to achieve water quality standards.

The 208 planning is broad based and geared toward the more complex cases. EPA is authorized to provide grants to agencies having jurisdiction under State law to carry out such planning. The completed plan must designate one or more agencies to implement its recommendations. Smaller geographical areas within the 208 area may be designated as Section 201 facility planning areas.

EPA policy concerning coordination between applicants and 208 agencies is explained in Guidance for Preparing a Facility Plan Revised - May 1975, pp. 2 and 3.

Re: 40 CFR Part 126 and Part 131  
Program Guidance Memorandum, PG-47, 3/11/75

## 5. Facility Plans

Facility plans are required by Section 201 of PL 92-500. They may be considered as the implementation part of the States Continuing Planning Process. Facility plans are the first stage of the three part construction grant process. The facility planning area is designated by the State agency and may include one or more political jurisdictions. Overlapping may exist between 208 areawide planning areas and 201 facility planning areas. Coordination and cooperation are essential to avoid duplication, but the completion of 201 plans should not be delayed or postponed pending completion of 208 plans. Rather, the 208 plans, when completed, should incorporate the provisions of the completed 201 plans.

Ideally, the 303(e) plan establishes the waste loads, the 208 plan designates the 201 area and the implementing agency, and the 201 plan develops a specific project which is the most environmentally sound and cost effective for achieving the stated water quality standards. In the case where a 208 area has not been designated, the State agency will designate the boundaries of the 201 facility planning area, subject to the approval of EPA. If a 303(e) basin plan has not been completed, the waste load allocations, where necessary, are to be established on a case by case basis by the State jointly with the applicant.

The objectives of the 201 facility plan are specific and include the treatment plant site, size, type of process, method of effluent and sludge disposal, interceptor sewer routings and other steps necessary for constructing the project. The facility plan is prepared by the grantee with funds from a Step 1 project grant.

Facility planning is discussed in greater detail in Chapter IV and is the subject of the Publication, Guidance for Preparing a Facility Plan, Revised - May 1975.

Re: 40 CFR 35.917  
40 CFR 130.31  
Program Guidance Memorandum, PG-47, 3/11/75

## 6. Municipal Permits

PL 92-500 established the National Pollution Discharge Elimination System (NPDES) as the enforcement mechanism for achieving water quality standards. The discharge permit issued under the system is applicable to all municipal and industrial discharges. Where 303(e), 208 or 201 plans have been established, the permits will require compliance with such plans. In the case of existing sewage treatment facilities which, because of present or anticipated future inadequate treatment, will not achieve the water quality standards, the NPDES permit may contain limitations, conditions or schedules which will prompt the municipality to apply for a construction grant. The State agency will designate the boundaries (if not previously designated) of the 201 facility planning area and the construction grant process will begin. An applicant for a construction grant must comply, at a minimum, with an applicable existing permit.

Re: 40 CFR Part 125

## B. STATE STRATEGY AND PROGRAM

### 1. Program Submittal

As a part of the State Continuing Planning Process, each State is required to submit to EPA a program for the coming fiscal year. This annual program also satisfies the requirements of Section 106 of PL 92-500, which provides for grants to the State agencies to carry out the planning processes. The key element of the annual plan is the State strategy which must:

- (a) identify water quality problems and their causes;
- (b) list these problems by geographical location;
- (c) describe the State's approach to solving the problems, including the extent to which non-point sources will be addressed;
- (d) provide a listing of the priorities and scheduling of permits, construction grants, areawide plans and other program actions;
- (e) describe the level of detail and the schedule for preparation of basin plans;
- (f) describe how the State will satisfy the reporting requirements under Section 305(b) of PL 92-500.

The construction grants reviewer is primarily concerned with item (d) above, namely the listing of State priorities for construction grants projects.

Re: 40 CFR 130.40

### 2. State Priority System and List

As a part of its program strategy, the State must prepare a municipal discharge inventory which ranks all of the significant municipal discharges within the State. This inventory must be consistent with the stream segment priority rankings also prepared as a part of the overall State strategy. The State then develops a system of ranking projects for funding, which gives consideration to:

- (a) the severity of pollution problems;
- (b) the population affected;



- (c) the need for preservation of high quality waters;
- (d) national priorities;
- (e) total funds available;
- (f) treatment works sequence;
- (g) any additional factors considered pertinent by the State.

The resulting project priority list is a State management tool and represents the projects which are anticipated to be funded with the State's allocation.

The priority list of projects which are to receive construction grant funds within the State must include, as a minimum, the name of each municipality, a State-assigned EPA project number, a description of the type and scope of the project, total estimated cost and estimated Federal assistance. Each project must be certified by the State as being entitled to priority for Federal assistance from available funds over other eligible projects in the State.

In reviewing the State priority list, it is necessary to insure that:

- (a) the above information is included for each project;
- (b) the grant funds involved equal or exceed the State allotments available;
- (c) known problem areas in the State have been properly considered;
- (d) cost estimates appear to be reasonable;
- (e) previously approved Step 1 and Step 2 projects are properly reflected and realistically scheduled for funding.

While the project priority list must be developed in accordance with the criteria listed above, the criteria is not to be construed as removing all flexibility in the establishment of the list. For example, large city projects should be precluded from using all or almost all of a State's allocation. This may be accomplished by the State reserving funds for projects of smaller communities (as defined by the State and approved by the Regional Office), or by dividing the work into several segments or smaller projects. In the first case, the State must consider the severity of the pollution problem in ranking projects of both the larger communities category and the smaller communities group and in consolidating the projects of each group into the priority list. In the second case, both the State and the applicant must recognize that:

- (a) all grants must be awarded at the 75% level;
- (b) the project must be comprised of a discrete and meaningful part of the treatment system;
- (c) the awarding of the grant does not bind EPA to fund the remaining parts of the treatment system;
- (d) the acceptance of the grant commits the grantee to the completion of both an operable treatment works and the complete sewage treatment system of which the assisted project is a part.

The project priority list may also contain reserve funds as explained below under Funding.

The State's priority list is submitted annually as part of the State's program. The list is not approved by the Regional Administrator unless it has been the subject of a public hearing. During the year, certain amendments may have to be made to the list. These amendments do not require a public hearing if the Regional Administrator does not consider them significant.

Re: 40 CFR 35.915, .930-4, .935-1  
 40 CFR 130.41  
 Program Guidance Memorandum, PG-33, 5/10/74;  
 PG-46, 1/17/75

### 3. Funding

The State allocation of construction grant funds will vary from year to year. The initial State allotments are available for 30 months. In developing the priority list funding requirements, the State must reserve a reasonable portion, but not less than five percent of its annual allocation, for grant increases. While every effort must be made by the grantee and State to insure accurate and up-to-date cost estimates for the projects, cost overruns do occur and grant increases may be made from these reserves. Where cost overruns exceed the reserves, the State may:

- (a) use recovered PL 92-500 funds; or
- (b) use funds from the succeeding year's allotment; or
- (c) if the succeeding year's allotment has not been allocated, defer fundable projects on the lowest end of the priority list to free up funds; or
- (d) negotiate with the applicant to consider dividing the work as explained above.

If option (c) is employed, the deferred projects are automatically placed at the top of the succeeding year's project priority list.

Also, the State has the option to reserve funds for Step 1 and Step 2 projects which may be selected by the State subsequent to the approval of its project priority list. However, this reserve may not exceed ten percent of the State's annual allocation and may be reserved for up to eighteen months only. Any funds remaining at the end of that period are to be used for additional projects. The funding of additional Step 1 and Step 2 projects from reserve funds must be consistent with the approved State strategy.

Re: 40 CFR 35.915, .930-4, .935-1  
Program Guidance Memorandum, PG-35, 6/3/74;  
PG-41, 10/16/74

#### 4. Delegation of Authority

Delegation to the States of various review functions of the construction grants application processing is intended to eliminate duplication of effort between States and regional offices, improve program efficiency and speed the processing of grants. While PL 92-500 does not specifically address the authority of States to approve various aspects of an application (except project priority lists), it has been interpreted as allowing the States to perform the review function.

The regulations encourage the Regional Administrators to enter into written agreements with the State agencies under which the State will carry out the review and certification of the technical and/or administrative adequacy of specified documents. Certification by the State of particular documents, such as plans and specifications, operation and maintenance manuals, etc., is considered by EPA to have resulted from an in-depth review by the State. In such cases, EPA must continue to exercise its statutory grant approval and grant commitment responsibilities.

The reviewer must be aware of existing agreements and their provisions and any specific limitations which may affect his review. Agreements will vary from State to State, depending on the State's capabilities, and will be reviewed periodically and amended or terminated as appropriate.

Re: 40 CFR 35.912

CHAPTER III  
PREAPPLICATION INFORMATION

- A. General
- B. Applicant Eligibility
- C. Preapplication Conference

#### A. GENERAL

An applicant is often unfamiliar with the requirements and/or limitations of the construction grants program. Lack of knowledge of all key aspects of the grants program can be costly and time-consuming for the applicant, the State and EPA. The Region, in conjunction with the State, should insure that applications being submitted are responsive to all technical, administrative and legal requirements of the program.

Guidance to applicants is presently provided through a variety of sources, including State and Federal forms, instruction booklets, EPA guidance publications, and copies of Federal regulations. However, this information is not always clear to applicants and emphasis is often incorrectly placed on less important matters. To avoid such occurrences, a preapplication conference between the applicant, the State and EPA to jointly review both program requirements and applicant needs, is strongly urged.

## B. APPLICANT ELIGIBILITY

An eligible applicant is: A city, town, borough, county, parish, district, association, or other public body (including an inter-municipal agency of two or more of the foregoing entities) created by or pursuant to State law, or an Indian tribe or an authorized Indian tribal organization, having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or a designated and approved management agency under Section 208 of the Act. This definition excludes a special district, such as a school district, which does not have as one of its principal responsibilities the treatment, transport, or disposal of liquid wastes.

Under earlier legislation, construction grants were available to municipal water treatment utilities for sludge handling, pretreatment and/or overall treatment facilities. Under PL 92-500, however, an eligible project must have as its principal purpose the treatment of domestic wastes of the entire community or region. The treatment of water for human consumption is considered an industrial undertaking. Whether publicly or privately owned, it is in the same category as any other industrial service, such as power plants, airports, and mass transportation, and not eligible for a construction grant under PL 92-500.

Re: 40 CFR 35.905-14, .920-1, .925-15  
Program Guidance Memorandum, PG-36, 6/5/74;  
PG-36-A, 9/17/74

### C. PREAPPLICATION CONFERENCE

The regulations encourage preapplication assistance, including a preapplication conference for each project on the State's priority list. The importance of the preapplication conference cannot be overly stressed. A meeting where the applicant, the State and the Region sit down together to discuss the approaching work has the potential of setting the stage for a well coordinated work program which is void of major misunderstandings and time delays.

The preapplication conferences may be with one applicant or a group of applicants and will generally involve only those applicants included on the State project priority list.

While the entire three step grant process should be discussed at the preapplication conference, the primary emphasis should be on the administrative and technical requirements of a Step 1 project grant application and the preparation of the facility plan. Applicant conferences throughout the three step grant processing procedures are encouraged, with emphasis to be placed on specific aspects of the program at the appropriate time.

The Regions should develop outlines of points to be covered in the preapplication conferences which may be tailored to the individual State's and applicant's needs and capabilities. Several important matters which should be discussed in the conference are as follows:

Re: 40 CFR 35.920-2

#### 1. Important Dates

October 18, 1972 - Passage of PL 92-500. In those States in which sewage collection systems are federally funded, the bulk of the design flow (generally two-thirds) of such collection system must be attributable to a community in existence as of date of passage of PL 92-500.

June 30, 1975 - After this date the applicant must not initiate planning work until a Step 1 project grant has been awarded, or unless a plan of study has been approved and is accompanied by a request from the State agency to reserve funds for Step 1 project.

July 1, 1975 - Costs incurred for project planning prior to this date may or may not be eligible for grant assistance depending on the specific date and nature of the work conducted. The regulations set forth limitations.

Re: 40 CFR 35.925-13, .925-18

## 2. Contracts for Personal and Professional Services

The EPA has established rules and regulations concerning applicant/grantee procurement of architectural and engineering services. A contract which includes fees based on a percentage of the construction cost shall not be used since such contracts penalize the engineer for designing the most economical facility. Multiplier contracts, with profit as a part of the multiplier, are also prohibited. It is the intent of the agency that simple, clearcut contracts, which leave no room for future disagreement, be negotiated. These contracts should be such that the engineer receives a fair fee with a reasonable profit for his work, and the municipality receives competent, complete professional services at a fair cost.

In all A&E contracts, a maximum fee should be fixed. As in all A&E contracts, should the scope of the project change during the prosecution of the work, the contract would be open for renegotiation.

The employment of any fee arrangement requires a careful analysis of the scope of the work to be performed and a detailed estimate by the engineer of his costs for performing the work. This procedure should assure a clear understanding of exactly what is to be done, by whom, and should produce a better end product.

In the actual procurement of A&E services, the procedures detailed in the regulations must be followed (a copy of the regulations should be given to the applicant). The regulations require that any contracts include an "access" clause, allowing the State and EPA access to project work and records.

Re: 40 CFR 35.935-7, .936, .937  
40 CFR 30.605

Program Guidance Memorandum, PG-53, 7/8/75



### 3. Administrative Requirements

The administrative requirements to be fulfilled by the applicant are extensive. All necessary forms, authorizations, timing requirements, and legal requirements should be discussed. The application form (5700-32) should be reviewed line by line. In addition, recommended formats for submittal of technical data should be reviewed. Payment procedures and policy should be fully explained. Finally, the entire application procedure for Step 1, 2 and 3 projects should be discussed. Special emphasis should be placed upon the coordination required between the applicant, the State and EPA to insure accuracy and timeliness in processing grant applications. Specific points to be covered include:

- (a) that after June 30, 1975, a Step 1 project must be approved for a grant before any work is started if the costs of such work are to be eligible for grant assistance;

Re: 40 CFR 35.925-18

- (b) that prior costs, if any, must be claimed in the initial application for grant assistance;

Re: 40 CFR 35.925-18

- (c) that project work may not be accomplished by force account (municipal or public service employees) unless the applicant can demonstrate that:

- (i) he possesses the necessary competence to accomplish the work

- (ii) it is more economical to use the force account method;

Re: 40 CFR 35.935-2(a)  
Program Guidance Memorandum, PG-34, 5/7/74

- (d) the institutional arrangements and agreements between jurisdictions;

Re: 40 CFR 35.917-6

- (e) payment of non-federal share of project costs;

Re: 40 CFR 35.925-5

- (f) priority lists;  
Re: 40 CFR 35.925-3
- (g) the procurement of professional services and contracts;  
Re: 40 CFR 35.936, .937
- (h) record keeping;  
Re: 40 CFR 30.800, .805
- (i) limitations on collection systems;  
Re: 40 CFR 35.925-13
- (j) user charges and industrial cost recovery;  
Re: 40 CFR 35.925-11, -12
- (k) public participation.  
Re: 40 CFR 35.915(f), 917-5

#### 4. Technical Requirements

All technical aspects of the Step 1, 2 and 3 work should be reviewed with the applicant with special attention to the requirements for a plan of study and the preparation of a facility plan. At a minimum, the following items should be discussed:

- (a) the degree of technical detail required in both the plan of study and the facility plan;
- (b) specific problems associated with the project in question and how they should be addressed in item (a);
- (c) cost effectiveness in its broadest sense and the trade-off between engineering, environmental, monetary costs, and institutional arrangements;

Re: Guidance for Preparing a Facility Plan  
Revised - May 1975

- (d) infiltration/inflow analysis, sewer system evaluation survey;

Re: Guidance for Sewer System Evaluation March 1974  
40 CFR 35.927

- (e) environmental assessment integration in the facility plan and possible environmental impact statement proceedings, with emphasis on secondary impacts;

Re: Guidance for Preparing a Facility Plan  
Revised - May 1975  
40 CFR 35.917. .925-8  
Program Guidance Memorandum, PG-50, 6/6/75

- (f) pretreatment and treatment of incompatible pollutants;

Re: 40 CFR 35.925-15

- (g) BPWTT, including secondary treatment and waste stabilization ponds;

Re: Alternative Waste Management Techniques for Best  
Practicable Waste Treatment 6/75  
40 CFR 35.917-1  
Program Guidance Memorandum, PG-16, 9/11/73

- (h) other Federal requirements, such as historical preservation, archeological investigations, flood insurance, etc.

Re: 40 CFR Part 30 Subpart C  
Program Guidance Memorandum, PG-52, 7/2/75  
PG-54, 7/8/75

CHAPTER IV  
STEP 1 GRANT PROCESSING

- A. INTRODUCTION
- B. SCHEMATIC FLOW DIAGRAM
- C. APPLICATION CONTENTS
- D. PLAN OF STUDY REVIEW
- E. ADMINISTRATIVE REVIEW
- F. GRANT AWARD PROCEDURES
- G. FACILITY PLAN (ADMINISTRATIVE REVIEW)
- H. FACILITY PLAN REVIEW

## A. INTRODUCTION

This chapter described the contents of, and review procedures for, the processing of a Step 1 project grant application. It begins with the receipt of the application package and concludes with the review and approval of the facility plan.

Section B, Schematic Flow Diagram, visually places this chapter in the proper sequence and indicates its relationship to previous chapters.

Section C, Application Contents, provides a quick ready listing of the materials which are contained in an application package.

Section D, Plan of Study Review, is given individual attention because it is the major technical requirement of the application and includes discussions prepared by the applicant. This section also includes a discussion of the 303(e) and 208 plans as they relate to the plan of study. Costs incurred before filing the application are briefly discussed.

Section E, Administrative Review, describes the procedures involved in reviewing clearinghouse comments, priority list compliance and certification, application form, and contracts and subagreements.

Section F, Grant Award Procedures, describes the action required on the part of EPA in making the grant offer.

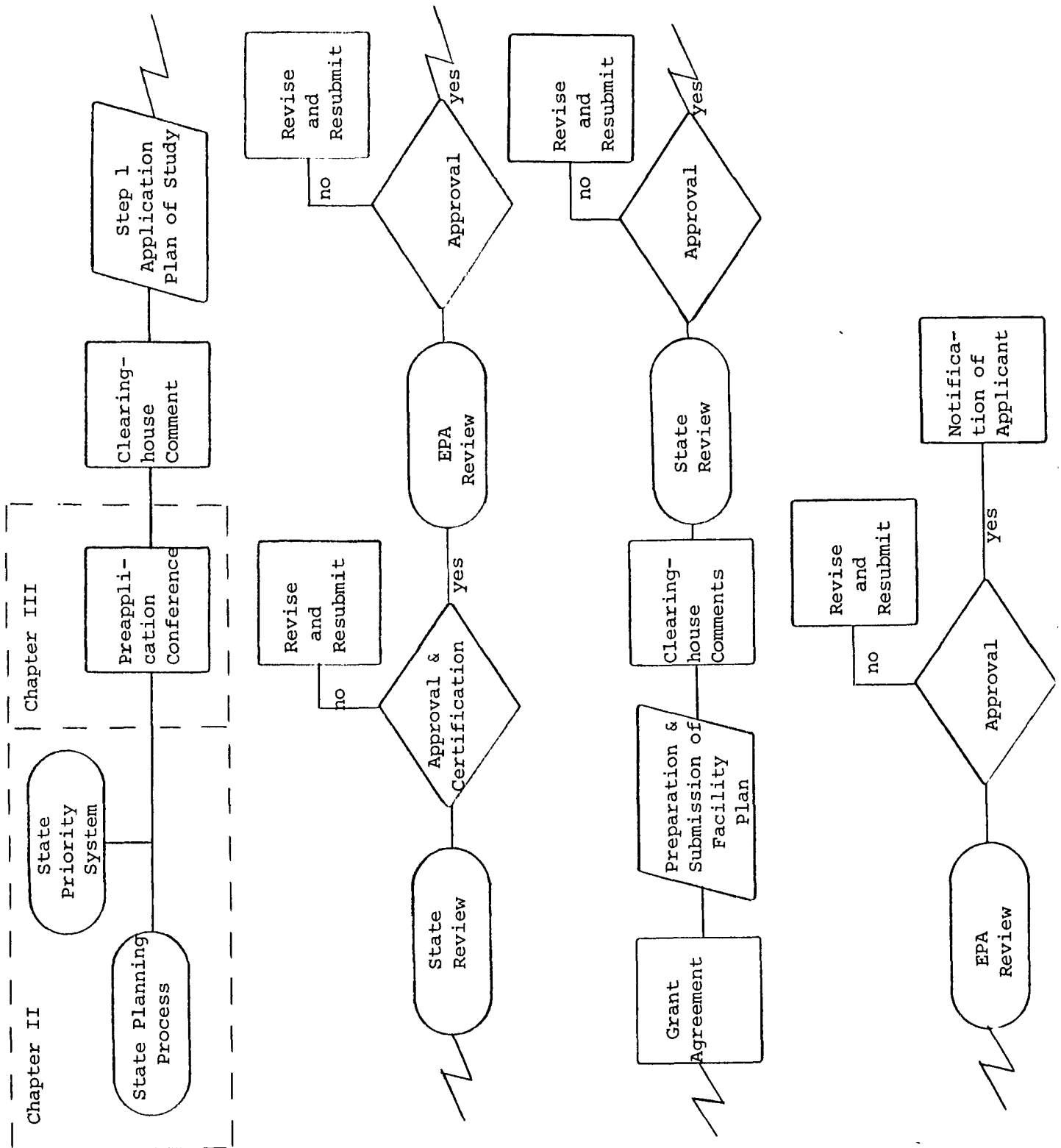
Section G, Facility Plan (Administrative Review), describes the procedures for approaching the undertaking of the facility plan, the review of clearinghouse comments and State approval.

Section H, Facility Plan Review, describes the review of the facility plan according to the contents required by regulation and in the format recommended by the guidance.

The technical and administrative reviews are to be performed concurrently whenever possible. When items are missing or explanations are necessary, the review is to proceed as far as possible to insure quick action once the deficiencies are corrected.

## B. SCHEMATIC FLOW DIAGRAM

The flow diagram below visually places this chapter in the proper sequence and indicates its relationship to other chapters. The diagram includes the general functions of the Step 1 project process as performed by the applicant, State and EPA.



### C. APPLICATION CONTENTS

Below are listed the basic materials to be included in an application package. The items are listed here for quick reference, while the review procedures for each item are described later. Initially, the reviewer is to make a cursory review of the package to insure that all items are included, that all applicable portions of the forms are completed and that the documents are signed by the appropriate officials. If items are missing or explanations are necessary, the State is to be informed but the review is to proceed as far as possible to insure quick action once the corrections are made.

1. Plan of Study
2. Comments of State and/or Regional Clearinghouse (A-95 process)
3. State Priority Certification, EPA Form 5700-28
4. Application, EPA Form 5700-32, including authorizing resolution
5. Proposed subagreements (generally engineering contracts) or explanation of method of awarding proposed subagreements

Re: 40 CFR 35.920-3(a), .925-3  
40 CFR 30.315

## D. REVIEW OF THE PLAN OF STUDY

### 1. Contents

#### Purpose:

A plan of study is submitted by the applicant to show his understanding of the work to be done in preparing a facility plan. The plan must include the key issues to be addressed, a time schedule, and itemized costs for the completion of the specific tasks.

#### Discussion:

The plan of study is the first element of the grant request to be submitted by the applicant. It sets out concisely the scope of the work to be undertaken in preparing a facility plan. It must be critically reviewed to insure that all statutory requirements are met and that the project begins on the proper course.

While the plan of study should be brief and generally follow the format suggested in the Guidance for Preparing a Facility Plan in terms of subject matter to be included, it should also address unique features of the project which will require special attention. Such unique features might include water-short areas, recreational areas, economically depressed areas, etc.

The plan of study must be reviewed by both the State and EPA to insure compliance with previously approved wastewater management plans, interstate agreements or other applicable plans.

The plan of study, once approved and incorporated into the grant agreement, is to include a time schedule for the completion of specific tasks, and itemized costs for each of these tasks. This schedule of tasks and accompanying costs are used to develop a payment schedule, which in turn is used in preparing projections of cash disbursements. Once the grant payment schedule has been established, the grantee may submit requests for payment of work that has been completed, in accordance with the grant payment schedule. Payments may not be accelerated beyond those specified on the schedule. (See Chapter VII Grant Payments).

#### Review Procedures:

Regulations require that the plan of study contain four items as follows:



- (i) *the proposed planning area;*
- (ii) *an identification of the entity or entities that will be conducting the planning;*
- (iii) *the nature and scope of the proposed Step 1 project, including a schedule for the completion of specific tasks; and*
- (iv) *an itemized description of the estimated costs for the project.*

The boundaries of the proposed planning area, item (i) above, are to be checked with those designated by the State and approved by EPA as described in Chapter II. In cases where the State has not previously designated the boundaries of the facilities planning area, they will be designated by the Regional Administrator.

Additionally, the Guidance for Preparing a Facility Plan suggests items which should be included in the plan of study. These include maps of the planning area with streams, lakes, ponds, etc., identified; maps of the existing sewerage systems including treatment plants; need for project because of State or Federal enforcement orders, public health hazard or water quality problems; and previously prepared documents which will be used in developing the facility plan.

The plan of study must be reviewed for completeness and must include those items necessary for development of an approvable facility plan. Also, the applicant must satisfy the statutory requirements described in later chapters of this handbook. The plan of study must demonstrate that the applicant understands these requirements and is able to proceed in a manner which will satisfy them.

The applicant must complete the facility plan in a reasonable period of time and at a reasonable cost. To test for reasonableness, the time and cost should be compared with other projects of a similar nature and scope.

Re: 40 CFR 35.920-3(a), .945  
Guidance for Preparing a Facility Plan,  
Revised - May 1975, p. 4

## 2. Planning Considerations

Prior to awarding a grant, EPA must determine that the proposed project is in conformity with applicable basin plans approved in accordance with Section 303(e) of FWPCA and areawide waste treatment management plans approved in accordance with Section 208 of FWPCA (see Chapter II). The reviewer must be familiar with the planning area and be aware of the status of applicable plans.

In cases where a 303(e) basin plan has not been completed, the plan of study must indicate that the resulting project will comply with the National Pollution Discharge Elimination System (NPDES) permit (see Appendix B) if one has been issued.

In cases where a 208 areawide waste treatment management plan has been completed and approved, the applicant must be the agency designated in the plan and the project must be in conformity with that plan. Where 208 planning has been initiated, the 208 agency must be afforded the opportunity to review and comment upon the proposed plan of study. Where a 208 area has not been designated, no further action is required.

Re: 40 CFR 35.925-2, .925-19  
Guidance for Preparing a Facility Plan,  
Revised - May 1975, pp. 1-4

## 3. Prior Costs

The application form requires the applicant to provide a breakdown of the costs for preparing a facility plan. The plan of study also requires a breakdown of these costs by specific task. These costs are to be reviewed to insure that they are allowable costs as defined in Chapter VII. This section is concerned only with the timing of when these costs were incurred.

If the costs to prepare the facility plan will be incurred after the grant award, no special review procedures are required.

Costs for the preparation of the application, plan of study and other supporting documents are not allowable for EPA grant assistance.

If the applicant has incurred costs prior to the award of a grant, and requests EPA grant assistance in these costs, certain dates are of significance:

June 30, 1975 - Costs incurred for work initiated after this date for Step 1 and Step 2 projects are eligible for EPA grant assistance only when a grant award has been made or where the State has requested that funds be reserved (a plan of study must have been approved).

October 31, 1974 - Costs incurred for work initiated after this date for Step 1 and Step 2 projects are eligible for EPA grant assistance provided a plan of study was approved by EPA.

November 1, 1974 - Costs incurred before this date for Step 1 and Step 2 projects are eligible for EPA grant assistance.

In all cases, the applicant must request grant assistance for prior costs in his first application.

Where prior costs are incurred, the applicant must submit a breakdown of these costs, identifying the dates the costs were incurred and the nature of the work which was performed.

Re: 40 CFR 35.925-18, .917(e), .945

## E. ADMINISTRATIVE REVIEW

### 1. Clearinghouse Comments

#### Purpose:

Applicants for construction grants for wastewater treatment facilities are required to comply with the Office of Management and Budget (OMB) Project Notification and Review System (Circular A-95). This procedure is established to provide for the early contact between applicants and governmental agencies, and to insure coordination between related projects.

#### Discussion:

Prior to submission of a Step 1 project application, the applicant is required to obtain the comments of the State and/or regional clearinghouses in accordance with OMB Circular A-95. A copy of the clearinghouse(s) comments is to be included with the application package.

The clearinghouse comments will indicate the degree of interest of other governmental agencies in the project. If these comments are adverse, the applicant is to submit a statement explaining how the comments were considered. If a clearinghouse recommends that the application be rejected but EPA approves it, the clearinghouse must be notified and given an explanation of the reasons for approval.

#### Review Procedures:

The reviewer must make particular note of any adverse clearinghouse comments. These comments may require further explanation from the applicant, State or clearinghouse. More serious adverse comments may dictate that the application be returned to the State agency.

The reviewer must determine if the comments warrant a special condition in the grant agreement (see section F below).

Re: 40 CFR 35.920-3(a)(3)  
40 CFR 30.305  
OMB Circular A-95, 38 FR 32874, 11/28/73

## 2. Priority List Compliance and Certification

### Purpose:

The State agency is required to certify each project as entitled to priority for grant funds in accordance with the State priority system and the project priority list.

### Discussion:

Chapter II discusses the State priority system and list. Once the system and annual list have been approved by EPA, each project is certified by the State as being entitled to priority for a grant over all other projects below it on the priority list (EPA Form 5700-28, see Appendix B).

A State may elect to set aside up to ten percent of its yearly allotment to fund Step 1 and Step 2 projects not on the current priority list. When such projects are certified, the certification must signify that the grant is to be made from that reserve allotment.

Only projects which have been certified by the State as entitled to priority for Federal assistance may receive a grant.

### Review Procedures:

Review State Priority Certification to determine that:

- a. the name, project number and description of the project agree with the application, form 5700-32, and the approved State priority list;
- b. the form includes the signature of the authorized State official;
- c. the award of grant assistance for the project will not exceed the State's allotment, including reallocations;
- d. the award of grant assistance will not jeopardize the funding of any projects of higher priority;

- e. the State has included a statement to the effect that all jurisdictions within the facility planning area have been notified of their inclusion in such planning.

Re: 40 CFR 35.915, .917-2, .920-2, .925-3, .925-4  
Program Guidance Memorandum, PG-33, 5/10/74;  
PG-35, 6/3/75;  
PG-46, 1/17/75

### 3. Application Form

#### Purpose

EPA Form 5700-32 is the formal application document and sets forth the information necessary to qualify for a construction grant. Additionally, the application contains "assurances" from the applicant which are necessary to satisfy statutory requirements.

#### Discussion:

The designation of a facility planning area is a State responsibility and should include that area deemed necessary to prepare an environmental assessment and to assure that the most cost-effective means of achieving the established water quality goals can be planned for and implemented. The applicant for the designated area may be a joint authority representing the multiple jurisdictions, one or more of the eligible jurisdictions or one lead agency representing all jurisdictions. In all cases, the applicant must have the legal authority to plan, design, finance, construct, operate and maintain any resulting wastewater treatment facilities.

The application form is used for an initial grant request, amendments, or supplemental grants. The form (see Appendix B) contains instructions for completion of each of the five parts. Part II, Section B requires information on the project site to be submitted with the application. Since a facility plan resulting from the award of a Step 1 project grant will conclude which is the most cost effective and environmentally sound project site, the information contained in this section is not necessary for a Step 1 project grant award.

Part III, Section D concerns the applicant's proposed method of financing the non-federal share of the project. The applicant may not use revenue sharing funds obtained under the State and Local Fiscal Assistance Act of 1972 to finance his portion of the eligible project costs. However, such items as cost overruns (not otherwise funded by EPA), cost of sewage collection systems, or land acquisition costs, for example, which are found by the State or EPA not to be allowable for participation in the grant program, may be funded with revenue sharing funds.

The statutes require that the applicant comply with related laws and regulations and give other assurances. These requirements are satisfied for a Step 1 project grant when the applicant signs the application and thereby assures and certifies that he will comply with the requirements.

The applicant must attach to his application a copy of the resolution authorizing the person to act as the official representative of the applicant (Part V, item 1). Any subsequent changes in the authorized official must also be substantiated by a copy of the resolution authorizing the change.

Review Procedures:

Review application form and determine that:

- a. the name, project number and description of the project and amount of grant request agree with the State Priority Certification, Form 5700-32, and the approved State Priority List;
- b. the form is signed by the authorized representative and a copy of the authorizing resolution is attached;
- c. information regarding project location, entities involved and cost data corresponds to that in the plan of study;
- d. all items in the application are complete or marked not applicable (NA);
- e. Part V, assurances, is part of application. If not, a properly signed form must be obtained.

NOTE: Particular emphasis is to be placed upon review of Part III, Section D, Proposed Method of Financing Non-Federal Share, to insure that applicant can successfully fund his share of the project costs and that revenue sharing funds will not be used to meet those costs eligible for EPA grant assistance.

Re: 40 CFR 30.315  
40 CFR 35.917-2, .917-3  
Program Guidance Memorandum, PG-3, 6/25/73  
81 CFR Part 51, Department of Treasury

#### 4. Contracts and Subagreements

##### Purpose:

Contracts or subagreements for personal or professional services are submitted by the applicant and reviewed by both the State and EPA to insure that the scope and nature of the proposed services are sufficient to result in an approvable facility plan and that the fees and schedules are reasonable.

##### Discussion:

The personal and professional services covered by the subagreements at the time of Step 1 application submission are generally the consulting engineering services, although separate agreements may also exist for environmental consultants, financial consultants, etc. The regulations state that the application shall include *proposed sub-agreements or an explanation of the intended method of awarding sub-agreements for performance of any substantial portion of the project work.*

Also, the regulations require that any such subagreements or lower tier subagreements include an "access" clause allowing the State or EPA access, at reasonable times and places, to the work or records. The "access" clause is applicable to subagreements or lower tier subagreements in excess of \$10,000.

The detailed requirements of and procedures for procuring personal or professional services appear in 40 CFR 35.936, .937. Sub-agreements in which the fee is a percentage of construction costs are not acceptable, nor are cost multiplier contracts where profit is included in the multiplier.



Review Procedures:

Review the agreement(s) and determine that:

- a. the grantee has complied with 40 CFR 35.936 and .937;
- b. the scope of work is sufficient to prepare an approvable facility plan;
- c. completion schedules are reasonable and in agreement with the plan of study.

Re: 40 CFR 35.920-3(a)(2), .935-7, .936, .937  
40 CFR 30.605  
Program Guidance Memorandum, PG-53, 7/8/75

## F. GRANT AWARD PROCEDURES

The administrative procedures required in awarding a grant are summarized below. A detailed line-by-line explanation of the administrative steps necessary in preparing EPA forms and notifications is described in the Grants Administration Manual prepared by the Grants Administration Division, Office of Planning and Management, EPA.

Item 1 below describes the actions for which the regional office may establish procedures. Item 2 through 5 describe uniform actions prescribed by Headquarters.

### 1. Regionalized Procedures

- a. Notification to financial management branch;
- b. Preparation of transmittal letters to the applicant and State agency (include instructions for predesign conference, as appropriate);
- c. Other regional procedures which have been worked out with the States, interstate agencies, etc.

### 2. Notification of Grant Award Action

The Notification of Grant Award Action, EPA Form 5700-1B, (see Appendix B) is completed and transmitted to Grants Information Branch, Headquarters, by Communicating Magnetic Card Selectric Typewriter on the date of award or no later than the following working day.

The Grant Information Branch immediately forwards a copy of the 5700-1B to the Office of Legislation which notifies appropriate congressional offices.

EPA Form 5700-1D is used in the case of a decrease, declination, or withdrawal of a grant.

### 3. Grants Information and Control System (GICS)

The Grants Information and Control System (GICS) is a computer based management system in which information concerning the construction grants program is stored. This information is used for analyzing the grant program, manpower requirements, answering congressional inquiries and other purposes. The information must be current and available for quick retrieval.

Information concerning the award of each construction grant is entered into the system using prescribed coding sheets (see Appendix B).

Re: Grants Information and Control System, GICS,  
WWT Construction Grants Information Data Base,  
Operators' Manual, 2nd Printing 2/22/74

### 4. Clearinghouse Notification

#### Purpose:

Notification of clearinghouse is made in order that the clearinghouse may inform interested agencies or other entities of the award of a grant in accordance with Treasury Department Circular No. 1082.

#### Procedures:

The notification, Standard Form 240 (see Appendix B), is completed by the regional office and copies are mailed to the State, regional and local clearinghouse and the U.S. Department of the Treasury.

Re: U.S. Treasury Department Circular No. 1082 8/8/73

## 5. Grant Agreement/Amendment

### Purpose:

The Grant Agreement/Amendment (EPA Form 5700-20) serves as a formal document of agreement between the U.S. Government and the grantee, and constitutes a legally binding contract once executed.

### Procedures:

EPA Form 5700-20 (see Appendix B) is completed by the Regional Office based upon the information submitted in the application package. The agreement must define the scope of the project. Modifications to grant amounts, scope of work or other items are made on the basis of the review process, and special conditions of the grant are included in Part III b. These special conditions may be based upon clearinghouse comments, requests from the State agency or conditions unique to the project.

In order to better forecast future funding requirements, each applicant for a grant is required to submit cost estimates in the format shown in the form, Summary of Costs of Planned Treatment Works Scheduled by Project and Category (see Appendix B). This requirement is to be incorporated as a special condition in the grant agreement/amendment.

The grant agreement/amendment is not sent to the applicant until five working days after the signing by the Regional Administrator to allow for necessary Congressional notification. The applicant is given three weeks to accept the grant offer and to return the signed grant agreement/amendment to EPA.

The individual signing the grant agreement/amendment on behalf of the applicant should be the same individual who signed the application. Differences must be explained and a new authorizing resolution submitted (see Application Form item E.3 of this chapter) if such occur.

Re: Program Guidance Memorandum, PG-55, 5/5/75

## G. PREPARATION OF THE FACILITY PLAN

### Purpose and Discussion:

Program responsibility for the progress of a project does not end with the grant offer. The reviewer must be continually aware of the status of the project to insure that the facility plan is completed in accordance with special requirements and the approved schedule submitted with the plan of study.

The reviewer should work closely with the grantee in preparation of the facility plan and should review portions of the plan as they are developed. This will insure that all regulatory requirements are satisfied and that additional information and necessary changes are incorporated into the plan in the most expeditious manner.

The detail of facilities planning will vary depending on the complexity and scope of the project and *shall be conducted only to the extent that the Regional Administrator determines to be necessary to insure that facilities for which grants are awarded will be cost effective and environmentally sound.....* This allows the reviewer to exercise flexibility in advising the grantee as to plan requirements.

### Procedures:

Shortly after award of a Step 1 grant, the reviewer should:

1. contact the grantee and his consultant and make known the kinds of advice and assistance available from the State and EPA during the preparation of the facilities plan;
2. advise the grantee as to progress reports which must be submitted, depending on the size and complexity of the project;
3. advise the grantee (normally on large complex projects) that periodic inspections or audits will be made by either the State or EPA;

NOTE: During preparation of the plan, conduct inspections and reviews as necessary.

Re: 40 CFR 35.917-3(d), .917-4(b)

## H. ADMINISTRATIVE REVIEW (FACILITY PLAN)

### 1. Clearinghouse Comments

#### Purpose:

The grantee must submit the completed facility plan to the appropriate clearinghouse to allow for review and comment by interested agencies in accordance with the procedures of the Project Notification and Review System (OMB Circular A-95).

#### Discussion:

Before submitting the completed facility plan to the State agency, the grantee is required to obtain comments from the appropriate State and Regional clearinghouses. The clearinghouses are to review the plan, circulate it to interested agencies, and return their comments to the grantee within 30 days. If the comments are adverse, the grantee must submit, with the completed plan, a statement explaining how the comments were considered.

If, as a result of the facility plan review by the State or EPA, the proposed project is modified, in accordance with A-95 procedures, it may be necessary to obtain clearinghouse comments on the facility plan again.

#### Review Procedures:

The reviewer must consider all adverse clearinghouse comments. The comments may require further explanation from the applicant, State or clearinghouse. If the reviewer finds that any adverse comments are justified, the completed facility plan must be returned to the State agency.

Re: 40 CFR 30.305  
40 CFR 35.917-1(f)  
OMB Circular A-95, 38 FR 32874, 11/28/73  
Guidance for Preparing A Facility Plan, Revised -  
May 1975, p. 30

## 2. State Review and Certification

### Purpose:

The State agency is responsible for the review and coordination of each facility plan and must provide certification to EPA that these responsibilities have been met.

### Discussion:

After obtaining clearinghouse comments, the grantee must submit the completed facility plan and the clearinghouse comments to the State agency for review. The State is to insure that the facility plan is in compliance with plans developed under the State's Continuing Planning Process. Any problems between the State and grantee should be resolved prior to review by EPA. A formal facility plan review and approval by EPA is not to be conducted without State certification.

### Review Procedures:

The State is to certify that the completed facility plan:

- a. conforms with the regulatory requirements for a facility plan;
- b. conforms with any completed basin plan (303(e));
- c. has been submitted to any concerned 208 planning agency for comment;
- d. conforms with any approved waste treatment management plan (208(b)).

Re: 40 CFR 35.917-7  
Guidance for Preparing A Facility Plan, Revised -  
May 1975, p. 30

## I. FACILITY PLAN REVIEW

### Introduction:

For convenience, the regulatory requirements of a facility plan are summarized below using the lettering system from 40 CFR 35.917-1. The plan must encompass the following:

- (a) a description of the treatment works for which plans and specifications will be prepared including:
  - engineering data
  - cost estimates
  - schedules for completion of design and construction;
- (b) a description of the complete treatment system of which (a) is a part;
- (c) infiltration/inflow documentation;
- (d) a cost-effectiveness analysis of (a), (b), and alternatives including evaluation of:
  - (1) the relationship of capacity to needs and reserve
  - (2) flow and waste reduction measures
  - (3) optimum performance of existing system
  - (4) ability to meet effluent limitations
  - (5) application of best practicable waste treatment technology
  - (6) ultimate disposal of effluent and sludge
  - (7) the environmental impacts as contained in an adequate assessment;
- (e) effluent limitations or NPDES permit;
- (f) clearinghouse comments;
- (g) a summary of public hearings;
- (h) a statement that grantee has resources to construct, operate and maintain the treatment works;
- (i) a statement of compliance with Civil Rights Act of 1964.



Item (d)(7) above is further defined in 40 CFR 6.512 and requires that *an adequate environmental assessment must be an integral, though identifiable, part of any facilities....plan submitted to EPA*, and include:

- (1) a description of the existing environment without the project;
- (2) a description of the future environment without the project;
- (3) documentation;
- (4) an evaluation of alternatives;
- (5) the environmental impact of the proposed action;
- (6) the steps necessary to minimize adverse effect.

These requirements overlap in many areas and may not always be understood by the applicant or his consultants. To assist the grantee in understanding and satisfying these requirements, EPA prepared a publication entitled, "Guidance for Facilities Planning", dated January 1974. This publication was later revised in May 1975 and entitled, "Guidance for Preparing A Facility Plan". The revision is an abbreviated version of the earlier guidance and reflects program experiences and provides more flexibility. The guidance, however, is *....for advisory information only*. A grantee may select his own method or format for preparing a facility plan as long as he meets the regulatory requirements above. The grantee does not have to follow the suggested format in the guidance.

The "Guidance for Preparing A Facility Plan" (GPFP), revised May 1975, contains a suggested format or outline for the plan on pages 28 and 29. The same format is used in the publication "Model Facility Plan for a Small Community." The review procedures in this handbook are based on a facility plan prepared in the suggested format. Some of the suggested chapters or subparts are self-explanatory and do not require explanations. Others are more complex and Purpose, Discussion and Review Procedures are provided. The references at the end of each part refer to the regulations, program guidance memoranda, or pages in the guidance which apply to the matters covered therein.

Re: 40 CFR 35.917-1  
40 CFR 6.512

## 1. Summary, Conclusions and Recommendations

(Self-explanatory)

## 2. Introduction

### 2.1 Study Purpose and Scope

(Note: The proposed project may include only sewage collection systems, trunk or intercepting sewers, or treatment plant expansions or additions. The review procedure which follows assumes a complete treatment system including all of the above. For projects of lesser scope, some items will not be applicable and can be omitted.)

### 2.2 Planning Area (Map)

(Self-explanatory)

## 3. Effluent Limitations

### Purpose:

The limitations placed upon the effluent from the proposed treatment works establishes quantitative parameters which must be achieved in order to meet water quality standards.

### Discussion:

The facility plan is prepared and the treatment works are constructed to meet the effluent limitations for the segment of receiving waters into which the effluent will be discharged. These limitations, as a minimum, require secondary treatment (as defined in the regulations) except for storm water discharges from combined systems. Combined (storm and sanitary sewage) sewer systems present a special case and may require mathematical modeling or a monitoring program for the receiving waters in order to establish effluent limitations (refer to infiltration/inflow analysis report for discussion of combined sewer systems).

Secondary treatment for sanitary sewage discharges is the minimum acceptable level of treatment for those segments of the receiving waters which the State has classified as effluent limited, but the State may require higher levels of treatment in order to achieve water quality standards. The State (or EPA) requirements may involve nutrient removals (nitrates and phosphates), higher BOD and suspended solids removal, reoxygenation of the effluent, etc. The segments of receiving waters, in which these higher levels of treatment are required, are water quality limited segments (see Chapter II A.3).

The facility plan must evaluate alternative solutions to the water pollution problem, and the effluent limitations may vary from one alternative to the other. The effluent limitations for existing discharges are contained in the discharge permit issued under the National Pollutant Discharge Elimination System (NPDES). For completely new systems, the State will establish the effluent limitations based on approved plan and water quality standards.

In preparing the facility plan, the grantee is required to evaluate the following waste treatment management techniques:

- ( i) *Biological or physical-chemical treatment and discharge to receiving waters;*
- ( ii) *Treatment and reuse; and*
- (iii) *Land application techniques.*

In all cases, it is the State's responsibility to establish the effluent limitations for all alternatives and to furnish them to the grantee.

#### Review Procedures:

The reviewer must establish that the correct set of effluent limitations has been used by comparing the stated limitations with:

- a. the discharge permit in the case of existing discharges;
- b. limitations established in 303(e) basin plan;
- c. the reuse or groundwater recharge requirements if this alternative has been selected.

Errors, inconsistencies, or other irregularities are to be corrected with the State agency.

Re: 40 CFR Part 133  
40 CFR 35.917, .925-2, .925-7  
GPFP pp. 1, 2, 5

#### 4. Current Situation

##### 4.1 Conditions in the Planning Area

###### Purpose and Discussion:

The existing conditions in the project area are described in order to form a basis of comparison between alternatives. If the topics listed below are described in detail, they will provide a clear distinction between the "before" and "after" conditions. The "after" conditions are described in later chapters.

Sources of information should be cited or referenced.

###### Review Procedures:

Suggested topics which describe the existing conditions may include:

- a. A description of the planning area - planning area boundaries, political jurisdictions, and physical characteristics (climate, geology, soils, topography, hydrology, etc.);
- b. Organizational context - the role and relationship between all existing organizations involved in planning, financing, and operating publicly owned treatment works;
- c. Demographic data - the most current population estimates and the latest decennial census; population growth patterns and densities; number and types of major industries and other employment generating entities; existing land-use patterns and controls including comprehensive planning and zoning regulations;
- d. Water quality - identify quality and quantity of existing surface and groundwaters;

- e. Other existing environmental conditions - this section is an environmental inventory and may include, to the extent appropriate, descriptions of air quality, noise levels, energy production and consumption, wetlands, flood plains, coastal zones, wild and scenic rivers and other environmentally sensitive areas, historic, architectural and archaeological sites, plant and animal communities which may be effected, especially those on the threatened or endangered species list, and related Federal or State projects in the area.

The reviewer is to take special note of the items underlined in e. above and included in the inventory since the impact of the proposed project on these items may require the grantee or EPA to follow special review procedures (see section 10). Also, the reviewer should note major industrial contributors to insure that they provide pretreatment, as necessary, in the proposed project.

Re: 40 CFR 6.512(a)(1)  
GPFP pp. 5,6

#### 4.2 Existing Wastewater Flows and Treatment Systems

##### Purpose and Discussion:

The inventory of existing wastewater treatment facilities furnishes information as to the extent of the existing systems, their interrelationships, and the base line flow information by which future flows will be determined. The data may indicate conditions which limit the number of feasible alternatives and give an indication of the severity of the pollution problems. Later sections address the performance of existing systems and methods of achieving optimum performance.

##### Review Procedures:

The inventory should, to the extent appropriate:

- a. show the location of all treatment plants, sludge management areas and facilities, pretreatment plants, pumping stations and collection systems;
- b. describe the facilities identified in a., including design capacity, existing flows and characteristics of wastes, overloaded conditions, if any;
- c. show the location of, and describe, major industrial discharges;

- d. include a discussion and analysis of average, peak, dry, and wet-weather flows (also discussed in I/I analysis);
- e. show the locations of all bypasses and overflows;
- f. describe the extent of any combined sewer system;
- g. describe any flow reduction program.

Re: GPFP p. 6

#### 4.3 Infiltration and Inflow

##### Infiltration/Inflow Analysis

##### Purpose:

The infiltration/inflow analysis is conducted to identify the existence, or possible existence, of excessive infiltration/inflow within each sewer system emptying into the proposed treatment facilities when the State has inadequate information upon which to base a certification of such conditions.

##### Discussion:

As a part of the facility plan, a sewer system evaluation is begun, consisting of:

an infiltration/inflow analysis conducted in accordance with the "Guidance for Sewer System Evaluation".

The purpose of the sewer system evaluation is to identify infiltration and inflow which may be economically removed from the system. The results of the sewer system evaluation are used in sizing the proposed project.

Program experience gained during the initial years indicates the following procedures can be used to accelerate infiltration/inflow:

- a. Only the minimum information needed by the Regional Administrator upon which to base a decision need be submitted with the I/I analysis. Conclusions reached must be supported by flow data. Where need for a sewer system evaluation survey is indicated, preliminary cost estimates should be included. The analysis must be approved by the State.

- b. For purposes of screening projects and focusing review effort, it has been found that where the maximum extraneous flow observed annually from both infiltration and inflow from foundation drainage is less than 1,000 gallons per day per inch of pipe diameter per mile of sewer, such flow is generally nonexcessive.
- c. Where possible excessive I/I is identified, the applicant is to be encouraged to use the exception clause in the regulations (see 40 CFR 35.927-5(c)). This clause allows the grantee to complete the facility plan and conduct the sewer system evaluation survey concurrently with project design. To accomplish this, the grantee needs to estimate the nonexcessive flows or demonstrate that the proposed treatment works will be a part of the rehabilitated sewer system.

The prudent application of these policies will allow the grantee to conduct the sewer system evaluation survey, if required, concurrently with the treatment works design. However, the grantee may conduct or EPA may require the sewer system evaluation survey as an extension of the facility plan. Such work may be funded by increasing the Step 1 grant.

The I/I analysis may be submitted by the grantee to EPA through the State agency at any time prior to the submission of a completed facility plan.

In lieu of an I/I analysis, the State agency may certify that excessive I/I does or does not exist. In cases where this procedure has been established and is still in effect, the grantee need not submit an I/I analysis.

#### Review Procedures:

If the State agency has submitted certification for excessive or nonexcessive I/I, determine that:

- a. the State agency continues to have approval of the Regional Administrator to make such certification;

- b. the certification form is signed by the authorized State official and contains language as shown in the sample certification (see Appendix B).

that: If the grantee submits an I/I analysis, determine

- a. the analysis contains a conclusion as to the quantity of excessive I/I or that excessive I/I does not exist;
- b. the data analyzed is sufficient to support the conclusions in a.;
- c. the cost estimates and schedules for a sewer system evaluation survey have been included as appropriate (these estimates are not necessary for the award of a Step 2 grant but must be approved prior to initiation of the survey).

Re: 40 CFR 35.927  
Program Guidance Memorandum, PG-24, 2/7/74

Guidance for Sewer System Evaluation, March 1974

#### Sewer System Evaluation Survey

##### Purpose:

The sewer system evaluation survey is conducted to quantify and locate sources of infiltration/inflow and to determine those which can be cost-effectively eliminated.

##### Discussion:

The evaluation survey must be performed by the grantee in all cases where excessive I/I has been identified. It may be performed either under a Step 1 or Step 2 grant. These options are discussed in the Infiltration/Inflow Analysis section.

The survey is performed to determine *location, estimated flow rate, method of rehabilitation and cost of rehabilitation versus cost of transportation and treatment for each defined source of infiltration/inflow*. The guidance recommends a five phase survey, to insure a systematic and efficient investigation, composed of:



1. A Physical Survey
2. Rainfall Simulation
3. Preparatory Cleaning
4. Internal Inspection
5. A Survey Report

In some cases, however, the survey may be abbreviated by combining or eliminating one or more of these phases. For example, the use of T. V. inspection equipment accompanied by preparatory cleaning may be considered overly expensive in a survey to identify sources of inflow when the quantity of infiltration is not excessive. Conversely, the use of rainfall simulation would not be justifiable where there was no inflow. The omission of any phase other than the required survey report should be carefully reviewed and adequately justified by the grantee.

#### Review Procedures:

Review the sewer system evaluation survey report to determine that:

- a. the survey report presents the results of each phase and supports the conclusions concerning sources of I/I;
- b. a cost-effective analysis is presented for sources of infiltration/inflow based on a comparison of cost of transportation and treatment versus cost of rehabilitation;
- c. the survey report identifies by location and method of rehabilitation sources of infiltration/inflow which can be cost-effectively eliminated;
- d. the net savings to be realized through rehabilitation are identified both in terms of capacity and total cost;
- e. the quantities of allowable infiltration and inflow are identified (those which will not be rehabilitated) and included in the design capacity of the proposed treatment facilities (coordinate with review of design);

- f. where the evaluation survey is extensive, the work carried out is not a part of the grantee's normal operation and maintenance responsibilities (costs for preparatory cleaning and internal T. V. inspection must be adequately documented and justified by the grantee);
- g. the appendices contain additional documentation of the results, including raw data, illustrations, inspection forms, photographs and other information, where appropriate.

Re: 40 CFR 35.927

Program Guidance Memorandum, PG-24, 2/7/74;

Guidance for Sewer System Evaluation, March 1974

#### 4.4 Performance of Existing Systems

##### Purpose:

Each major component of the existing system is to be evaluated to determine if it can be used in the new project.

##### Discussion:

Many existing sewage treatment facilities are not operated at their optimum efficiency. The reasons for poor performance are numerous, but it has been found that generally it is more cost-effective and environmentally sound to bring existing facilities up to optimum performance rather than to abandon them. Even if optimum performance of existing facilities cannot achieve effluent limitations, additional facilities necessary to do so should be less costly. Operating problems affecting performance should be described in this section.

In reviewing the grantee's evaluation of the existing system, the reviewer may wish to compare the evaluation with the operation and maintenance reports (EPA Form 7500) for the project.

##### Review Procedures:

Items which might be considered in evaluating the performance of existing systems include:

- a. the adequacy of the treatment plant design for the type and amount of flow being treated (compare with NPDES permit);
- b. the adequacy of the operation and maintenance program (compare with EPA Form 7500);

- c. the effects of infiltration/inflow;
- d. the effects of industrial discharges.

Re: 40 CFR 917-1(d) (3)  
GPFP p. 7

## 5. Future Situation

### 5.1 Land Use

#### Purpose:

The ability of the land to support various uses is analyzed to aid in determining future wastewater flows.

#### Discussion:

The planning period for wastewater treatment facilities should be 20 years. Construction of the treatment plant may be phased over this period with the initial capacity less than the 20 year flows. Intercepting and trunk sewers may be designed for longer periods.

The projected land uses may be a limiting factor in determining the size, phasing, and location of the proposed facilities. Undevelopable lands, such as steep slopes, highway rights-of-way, power line easements, water bodies, environmentally sensitive areas, parks, etc., are not to be included when estimating future flows based upon the land uses. The land uses considered by the grantee in his study must not contravene State or local land use plans.

In the absence of future land use plans, the grantee should consult with agencies responsible for planning in the area.

#### Review Procedures:

Points which might be covered in the land use analysis include:

- a. present land uses to determine patterns of development;
- b. development patterns and zoning ordinances to see that they are in basic agreement;
- c. future land use plans which have been adopted and are being implemented through the use and enforcement of zoning ordinances;

- d. use of undevelopable lands in estimating future flows;
- e. consultations with responsible planning agencies in projecting land use where future land use plans are lacking.

Re: 40 CFR 6.304(c)  
GPFP pp. 7, 8

## 5.2 Demographic and Economic Projections

### Purpose and Discussion:

Increases in future waste loads and flows result from population increases and industrial growth. Some parts of the U. S. are included in standard metropolitan statistical areas (SMSA's). Population projections for these areas have been prepared by the Bureau of Economic Analysis, Dept. of Commerce, and should be used. Also, if the planning area includes industrial development boards or other agencies concerned with the economic development of the area, these agencies should be consulted for assistance in estimating future industrial needs.

### Review Procedures:

Review future projections to determine that:

- a. Bureau of Economic Analysis projections of population have been used for SMSA's;
- b. any departures from such projections are justified and documented;
- c. non SMSA's population forecasts are based on extension of past trends supported by economic forecasts;
- d. industrial growth trends are based on valid economic projections;
- e. future growth trends have considered the limitations imposed by land use, air or water quality restrictions, development controls, or other constraints.

Re: 40 CFR 6.304(a)  
GPFP p. 8

### 5.3 Forecasts of Flow and Waste Load

#### Purpose and Discussion:

The forecasting of future flows and wasteloads in the planning area ties in several topics which have been considered earlier in the facility plan. The future flows and loads will be directly related to the future population and industrial activity (i.e., industries likely to use municipal plants), subject to the limitations of land use, air quality maintenance plans or other limiting constraints and the quantities of nonexcessive infiltration/inflow. The future flows and loads are added to the existing wastewater flows (section 4.2).

#### Review Procedures:

The reviewer should focus on the methods used in estimating future wasteloads and flows to insure that the following considerations have been incorporated where appropriate:

- a. projections of economic and population growth;
- b. estimates of nonexcessive infiltration/inflow;
- c. analysis of pollutant content (characteristics) and flows in the existing system;
- d. analysis of combined sewer overflows;
- e. industrial waste flows and loads, considering possible reductions due to imposition of user charges, industrial cost recovery, or pretreatment costs;
- f. projections of possible reductions in flow resulting from measures to reduce water use and waste production (installation of water meters or ban on garbage grinders, for example);
- g. limitations upon flows due to land use, air quality maintenance plans or other constraints.

Re: 40 CFR 35.917, .927, .935-13  
40 CFR Part 128  
GPFP pp. 8, 9

#### 5.4 Future Environment of the Planning Area Without the Project

##### Purpose and Discussion:

The statutes require that "no action" be considered as an alternative to any proposed project. In order to evaluate and compare "no action" or "do nothing", the future environment without the project must be visualized. The items used in this process should be the same as those used in Section 4.1 to the extent that they include changes to the environment.

Re: 40 CFR 6.512(a) (2)  
GFPF p. 9

#### 6. Alternatives

##### 6.1 Optimum Operation of Existing Facilities

##### Purpose:

The alternative of optimum operation of the existing facilities is investigated as a first step in the search for a cost-effective solution to the water quality problem.

##### Discussion:

An investigation of existing facilities may reveal that they can be operated more efficiently with the addition of new equipment, operational changes or the addition and training of operating personnel, or that the facilities have been operating at their optimum efficiency. Whatever the results of the investigation, the optimum operation of the existing facilities will determine what additions, expansions or replacements must be made and the extent to which existing facilities can be converted and/or used in the new system. Any improvements expected as a result of future pretreatment by industrial contributors or removal of excessive infiltration/inflow should be evaluated and discussed.

##### Review Procedures:

In considering the alternative of optimum performance of the existing facilities, one or more of the following items may be appropriate:

- a. the maximum performance levels possible with the existing process design;

- b. the age and reliability of existing equipment and its remaining useful life;
- c. the qualification and number of additional operating personnel needed;
- d. the additional operating controls and laboratory facilities needed;
- e. the process modifications possible (e.g., convert conventional activated sludge to contact stabilization; add aeration to stabilization ponds);
- f. the impact of requiring industrial pretreatment;
- g. the impact of removing excessive infiltration/inflow.

Re: 40 CFR 35.917-1(d)(3)  
GPFP pp. 9, 10

## 6.2 Regional Solutions

### Purpose and Discussion:

The possibility of a regional solution to wastewater treatment problems should be explored early in the planning process to reduce the number of options to a more manageable level. If the question has been resolved by previous studies (e.g., 208 areawide waste treatment management plans), the result may be incorporated into the facility plan by reference. If not, the grantee must consider various alternatives, such as, interconnection of facilities, construction of one or more larger facilities in lieu of a greater number of small facilities, joint management, etc. This process should resolve the question as to the feasibility of regionalization as a viable alternative.

Re: GPFP pp. 9, 10

## 6.3 Waste Treatment Systems

### Purpose:

For each service area identified under the regional solution analysis, the "no action" alternative and other waste treatment management techniques must be investigated to determine which systems are most feasible and which may be eliminated from further consideration.

### Discussion:

The combinations of alternative waste treatment systems could be astronomical and, therefore, a process must be developed which eliminates those which are not feasible and identifies those which should be investigated further. The statutes require that certain systems be investigated for every project. Beyond these, the application of basic engineering, environmental, and economic principles will be sufficient to reduce the alternatives to a reasonable number.

The grantee is to present his reasons for eliminating each alternative investigated. Where the reasons for elimination are apparent, they should be briefly stated (e.g., "waste treatment flows cannot be reduced by I/I rehabilitation or other water saving controls", "sludge incineration cannot be utilized as it would contravene existing air quality plans", "no action" is not feasible as the present discharge does not meet effluent limitations and State has issued a cease and desist order").

When the reason for eliminating an alternative is not readily apparent, the grantee is to present evidence or discussion in sufficient detail to support his conclusion.

This analysis will identify the most feasible alternatives which will then be evaluated in greater detail.

### Review Procedures:

Review the facility plan and determine that the following topics have been adequately addressed.

#### a. No Action

Generally, the "no action" alternative can be eliminated from consideration because of the need for the project as presented in the preceding chapters. However, where the "no action" alternative may be feasible, the facility plan should address this concept.

Re: GPFP p. 10

#### b. Flow and Waste Reduction

The plan should address the feasibility of reducing flows. Possible methods include:

- sewer system rehabilitation to reduce or eliminate excessive infiltration/inflow;
- implementation of household water-saving devices;



- installation of water meters (proven to reduce water consumption);
- initiating industrial pretreatment requirements, reuse or recycling.

Re: 40 CFR 35.917-1 (d)(2)  
GPFP p. 13

c. Configuration of Sewers and Interceptors

When service areas have been established, the configuration of the collection sewers is pretty well prescribed with regard to routings and size (minimum size in most States is 8 inches). Attention should be directed toward trunk and intercepting sewer alternatives to insure that they conform to existing and future land use plans. Preliminary pipe sizes and costs may have to be estimated to reduce the alternatives to a manageable number.

Re: GPFP p. 13

d. Sludge Disposal

Of the four generally accepted methods of sludge disposal, one or more may possibly be eliminated from further consideration based on physical constraints or regulatory considerations. The plan should address each of the following alternative sludge disposal methods:

- land application (agricultural, soil conditioner, etc.);
- sanitary landfill;
- sludge incineration;
- ocean dumping (only under very special circumstances).

(NOTE: Criteria for determining eligibility of land for use in sludge disposal is discussed in Chapter VI.)

Re: 40 CFR 35.917-1(d)(6)  
GPFP pp. 13, 14

e. Best Practicable Waste Treatment Technology (BPWTT)

The statute requires that each project evaluate, as a minimum, the following three waste treatment management techniques:

- biological or physical-chemical treatment and discharge to receiving waters;
- treatment and reuse; and
- land application techniques.

As the "state-of-the-art" develops for each of these techniques, EPA will publish technical bulletins describing the application and evaluation of each. In selecting which of these alternate waste treatment management techniques is most cost-effective for the proposed project, the grantee must consider the application of the best practicable waste treatment technology (BPWTT).

EPA has established that the BPWTT for "treatment and discharge to receiving waters", requires a minimum of secondary treatment (see Section 3) or such advanced waste treatment methods as is necessary to achieve the effluent limitations required to meet applicable water quality standards. Since "reused" wastewater and run off of "land application" techniques eventually enter receiving waters, the same level of treatment is required for these techniques. In addition, where discharges to groundwaters from "land application" may occur, the level of treatment must be consistent with the existing or potential uses of such groundwaters.

As each of these three techniques is evaluated, the grantee must also consider how well the system lends itself to the application of future technology for reclaiming or recycling the effluent.

Re: 40 CFR 35.917-1(d)(5)  
Program Guidance Memorandum, PG-27A, 9/10/75  
Alternative Waste Management Techniques for  
Best Practicable Waste Treatment, June 1975

f. Industrial Service

The joint treatment of industrial and domestic wastes should be considered and encouraged where possible. In considering industrial discharges, the grantee should evaluate to the extent appropriate:

- the compatability of industrial wastes with domestic wastes;
- the requirements for pretreatment;
- the volume, strength and method of discharge (batch or uniform);
- the cost of industrial pretreatment and joint treatment versus separate industrial treatment;
- the method of implementing and enforcing limitations on industrial discharges.

Re: 40 CFR 35.928-15  
40 CFR Part 128  
GPFP p. 13

#### 6.4 Evaluation (Monetary, Environmental, Implementation)

##### Purpose:

An evaluation of the most feasible alternatives is performed in order to select the most cost-effective and environmentally sound project.

##### Discussion:

The preceding sections of this chapter provided a systematic guide for reducing the possible alternatives to a manageable number. The alternatives to be evaluated in this section are the most feasible and will be subjected to a more detailed evaluation under the broad categories of monetary, environmental and implementation considerations.

The results of the evaluation will be a display and ranking of the final alternatives in preparation for public review and the eventual selection of the most cost-effective and environmentally sound project. During this evaluation some of the alternatives may be eliminated from further consideration based upon adverse environmental impacts, high costs, legal complications or other reasons. The reasons for elimination must be stated. The data used in the evaluations must be supported in other sections of the facility plan. Each alternative should be evaluated in sufficient detail and in a similar format to facilitate its display and ranking.

Detailed assistance and instructions for preparing monetary evaluations is given in the Guidance and in Appendix A, 40 CFR Part 35. The environmental impact evaluation must consider both primary and secondary impacts. The secondary impacts (indirect or induced by the project) must be presented and carefully evaluated as they could form the basis for the preparation of an environmental impact statement (see Section 10). The review procedures below highlight the key factors to be considered in the evaluation.

##### Review Procedures:

Each alternative should be analyzed and evaluated with regard to its relationship or impact upon the subjects below:

- a. monetary cost analysis based upon:
  - present worth or equivalent annual cost over planning period;

- interest rate as published by U. S. Water Resources Council at the time of initiation of the facility plan;
- capital and operation and maintenance costs;
- existing facilities-considered as sunk costs;
- inflation-not considered unless justified;
- interest on capital equipment during construction-uniform unless longer than 3 years;
- service life - land 50 years  
structures 30-50 years  
process equipment 15-30 years  
auxiliary equipment 10-15 years;
- salvage value included;

Re: 40 CFR Part 35 Appendix A  
PG-60, 8/11/75  
GPFP pp. 18-24

b. environmental impacts (see Section 10)

- both primary and secondary;
- beneficial and adverse;
- irreversible and irretrievable commitments of resources;
- long-term and short-term;
- mitigating measures;

Re: 40 CFR Part 6  
PG-50, 6/6/75  
GPFP pp. 11, 12

c. institutional arrangements

- identify responsible organization for each alternative;
- estimated costs to each jurisdiction;

Re: GPFP p. 12

d. significant industrial service

- costs of separate treatment;
- costs of pretreatment followed by municipal treatment;

Re: 40 CFR 35.928-15, Part 128  
GPFP p. 13

e. flow and waste reduction measures;

Re: 40 CFR 35.917-1 (d)(2)  
GPFP p. 13

f. sewer system arrangements

- pipe sizes and useful life;
- excess or reserve capacity;
- alternate routings;

Re: 40 CFR 35.917-1(d)(1)  
GPFP p. 13

g. method of sludge disposal;

Re: 40 CFR 35.917(d)(6)  
GPFP p. 13

h. location of facilities

- odors and aesthetics;
- cultural or environmentally sensitive resources (see Section 10);
- relationship to flood plains;

Re: 40 CFR Part 6  
GPFP p. 14

i. revision of waste load allocations;

Re: GPFP p. 14

- j. phased construction
  - excess or reserve capacity;
  - modular designs;

Re: GPFP p. 14

- k. project segmenting (see Chapter II B.2. of Handbook);

- l. flexibility

- future land requirements for treatment plant expansion or upgrading;
  - easements and rights-of-way for sewers;

Re: GPFP p. 15

- m. reliability

- treatment processes;
  - equipment and personnel.

Re: GPFP p. 15

## 7. Plan Selection

### 7.1 Views of Public and Concerned Interests on Alternatives

#### Purpose:

Public participation is required to aid the grantee in selecting a plan which will be cost-effective and have the widest possible public acceptance.

#### Discussion:

Issues surrounding water quality problems and the large amounts of money needed to solve them often come under attack from varied interests. Although the primary responsibility for water pollution control and abatement rests in governmental agencies, public involvement in the decisions and implementation is necessary and desirable. The intent of public participation is to foster a spirit of openness and a sense of mutual trust between the public and governmental agencies and to give the

public a role in decision making in efforts to restore and maintain the integrity of the Nation's waters. The facility plan must contain a summary of the measures taken to provide for, encourage, and assist public participation in the plan selection. The summary must also disclose the public response to the alternatives presented and how significant responses were incorporated into the plan.

In addition to any informal meetings or other forms of public participation, a formal public hearing must be held prior to plan selection unless the hearing requirement has been waived by the Regional Administrator.

#### Review Procedures:

Review the hearing summary and supporting documents to determine that:

- a. at least one formal public hearing was held, unless waived;
- b. reports, documents or other data to be discussed at hearing were available to the public at convenient times and places approximately 15 days prior to the hearing;
- c. thirty days notice of the hearing was announced through the press or other news media;
- d. notification was made to interested governmental agencies and interested groups (see clearinghouse comments);
- e. all interested parties were afforded an opportunity to express their views;
- f. adverse or significant views are addressed and incorporated into the facility plan.

Re: 40 CFR 35.917-1(g), .917-5  
40 CFR Part 105  
GPFP pp. 17, 18

## 7.2 Evaluation and Ranking of Proposals

### Purpose and Discussion:

Evaluation of alternatives, ranking, and plan selection involve making choices based on costs, environmental impacts and feasibility of implementation. The grantee may select any number of methods to display costs and effects of the alternative proposals. Regardless of the display method, the effects should be listed, wherever possible, in quantitative

terms based on the supporting analysis elsewhere in the plan. Where quantification is not possible, the comparison should be made by brief narrative descriptions.

The end result of the evaluation is the assignment of a value judgement to each alternative, ranking them from most acceptable to least acceptable.

Re: GPFP p. 25

### 7.3 Selected Plan (major feature summary) and Reasons for Selection

#### Purpose and Discussion:

The selected plan, its major features, and reasons for selection are presented in summary form for clarity and the convenience of reviewers.

#### Review Procedures:

Review the summary for inclusion of:

- a. major features;
- b. clear explanation of the reasons for plan selection.

Re: GPFP p. 25

### 7.4 Environmental Impacts of Selected Plan

#### Purpose:

The primary and secondary environmental impacts of the selected plan are presented in summary form and specific issues are addressed as required by the National Environmental Policy Act of 1969 (NEPA).

#### Discussion:

The same issues and review procedures covered in Section 6, alternatives, are addressed in the selected plan. However, in review of the selected plan, they are analyzed in greater detail. Special note should be made by the reviewer of impacts upon cultural or environmentally sensitive resources as these require special procedures and considerations (see Section 10).



The grantee should discuss in this or other sections the mitigating measures which will be employed in the design and construction phases of the project to minimize adverse effects. If the adverse impacts are unacceptable, the reviewer should contact the grantee through the State agency and discuss mitigating measures which will make the selected plan acceptable.

#### Review Procedures:

The summary should include adequate discussions of:

- a. any unavoidable adverse impacts resulting from the proposed project (special note of cultural or environmentally sensitive resources);
- b. the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity including:
  - tradeoffs between short-term environmental gains at the expense of long-term gains, and vice versa;
  - the possibility of proposed action foreclosing future options;
  - the effects which narrow the range of future uses of land and water resources or pose long-term risks to health or safety;
- c. irreversible and irretrievable commitments of resources, including an evaluation of the extent to which the proposed project requires commitment of construction materials, man hours, energy and other resources, and curtails the range of future uses of land and water resources;
- d. steps to minimize adverse effects.

Re: 40 CFR 6.512  
GPFP p. 16

### 8. Cost Estimates, Preliminary Designs

#### 8.1 Description of Design

##### Purpose and Discussion:

The preliminary design of the selected plan is presented to demonstrate that sound engineering principles have been employed and that

all major components of the system have been included. The detail for the preliminary design may vary from project to project depending on the complexity of the project. For example, standard package plants will not require the same degree of detail as a pure oxygen system with phosphate removal and sludge incineration.

Review Procedures:

Items in a preliminary design might include:

- a. a schematic flow diagram;
- b. unit processes and sizes;
- c. plant site plans;
- d. interceptor and trunk sewer routings;
- e. design criteria, including:
  - detention times;
  - overflow rates;
  - other.

Re: 40 CFR 35.917-1(a) and (b)  
GPFP p. 16

8.2 Summary of Cost Estimates

Purpose:

Cost estimates for final design, preparation of plans and specification, and construction of the treatment facilities are included to insure that Step 2 and Step 3 grant requests are based upon inclusion of major components of the selected plan.

Discussion:

As a part of its program responsibility, EPA is required to forecast future funding requirements for the design and construction of wastewater treatment facilities. The cost estimates and schedules of completion provided in this section help fulfill those responsibilities. The reviewer should be aware of these requirements and of the procedures for recording the estimated costs into the GICS process. The grantee is required to submit these estimates in an appropriate format entitled "Summary of Costs of Planned Treatment Works Scheduled by Project and Category" (refer to Appendix B) as a special condition of the Step 1 grant agreement.

### Review Procedures:

Review cost estimates to determine that:

- a. costs for the construction of the facilities are reasonable and include both capital and operation and maintenance costs;
- b. costs are presented in the required format;
- c. schedules for the completion of related work have been included.

Re: Program Guidance Memorandum, PG-55, 5/5/75  
40 CFR 35.917-1(a)  
GPFP p. 16

## 9. Arrangements for Implementation

### 9.1 Institutional Responsibilities

#### Purpose:

The agency and its responsibilities for plan implementation are identified to demonstrate recognition of the steps necessary for initiation and completion of the project.

#### Discussion:

The responsibility for the implementation of the selected plan may rest with one or more agencies. In the case of a single agency, it must have the authority under State law (or the ability to obtain such authority) to finance, design, construct, operate and maintain the proposed facilities. For regional solutions, several agencies may share the responsibility for plan implementation and each must have the authority and ability to carry out its functions. A common example of this is where one agency constructs the treatment plant and interceptor sewers to serve the entire planning area, and the smaller jurisdictions construct the trunk and lateral sewers.

In regional solutions, one or more jurisdictions in the planning area may either oppose or fail to approve the plan. The grantee should discuss the appropriate measures required to reach agreement among the jurisdictions. While final agreement is desirable prior to the submission of the facility plan for review, the State and EPA may approve it even in the absence of such agreement.

### Review Procedures:

For implementation, the plan should:

- a. identify each agency or jurisdiction and its responsibility;
- b. show that each agency has ability and authority (or reasonable expectation to obtain such authority) under State law to finance, design, construct, operate and maintain the proposed facilities;
- c. identify any referendums or public elections necessary for plan implementation;
- d. include adopted resolutions of plan acceptance agreements between jurisdictions;
- e. include financial arrangements and obligate each jurisdiction to enforce the requirements for user charges, industrial cost recovery, sewer system rehabilitation and sewer use ordinances;
- f. identify jurisdictions which oppose or have failed to approve the plan and describe steps necessary to reach agreement.

Re: 40 CFR 35.917-6

### 9.2 Implementation Steps

Note: To demonstrate recognition of the proposed project and an orderly program for implementing it, the grantee is to present a step by step schedule of each specific action. The time schedule should correspond with schedules in the NPDES permit. Differences must be resolved.

Re: 40 CFR 35.917-1(a)

### 9.3 Operation and Maintenance

#### Purpose and Discussion:

As a part of the Step 3 grant application, a detailed Plan of Operation must be submitted. The preliminary O&M plan described in the facility plan should include the minimum information needed to perform cost-effectiveness computations, e.g., discussions of staffing, management, training, sampling, laboratory facilities, etc.

Re: GPFP p. 17

## 9.4 Financial Requirements

### Purpose:

A financial program is described to identify the sources of funds for implementing the proposed project.

### Discussion:

The proposed project funding will generally consist of three parts, namely the Federal grant, the State grant and the local share. When a State grant is shown as a source of funding, the reviewer should confirm that the State grant program remains in effect. Generally, the local funding will be derived from the sale of bonds or industrial contributions. Funds must be made available to retire these bonds over a period of years and to provide for operation and maintenance of the facility. The customary method of obtaining these funds is to proportion charges to the various classes of users and to recover capital costs from industrial users. Ad valorem taxes may not be applied as a user charge system.

As a requirement for a Step 2 grant, the grantee must furnish evidence of compliance with the user charge and industrial cost recovery (UC/ICR) provisions of the regulations. Satisfactory evidence of compliance for a Step 2 grant are letters from the grantee and major industrial users expressing intent to comply with these provisions. A detailed UC/ICR program must be submitted and approved by EPA during the construction (Step 3) of the facilities and no more than 80 percent of the grant amount may be paid prior to such approval.

### Review Procedures:

Review the financial program to determine that:

- a. all project costs including engineering, construction, legal and fixed costs have been estimated;
- b. sources of funds are identified and sufficient;
- c. State grants programs are applicable;
- d. grantee's share of eligible costs do not include revenue sharing funds (see Chapter IV, E.);
- e. the grantee has reasonable expectation of obtaining letters of intent to comply with user charge and industrial cost recovery programs as required for a Step 2 grant (see Chapter V, E.4. of this Handbook).

Re: 40 CFR 35.920-3(b), .925-11, .925-12, .935-13, Appendix B  
Program Guidance Memorandum, PG- 3, 6/25/73;  
PG-37, 7/9/74

## 10. Summary of Environmental Considerations

### Purpose:

The summary of environmental considerations is for those plan reviewers primarily concerned with the environmental impacts of the proposed project. (It should reference other pages of the facility plan which provide the detailed environmental analysis.) The summary, combined with the more detailed discussion so referenced, are necessary to satisfy regulatory requirements for an adequate identifiable environmental assessment.

### Discussion:

The facility plan must evaluate environmental as well as engineering, monetary and institutional impacts. Adverse impacts in any of these categories may be reason for plan revision, the selection of another alternative, or the incorporation into the design and construction phases of measures which will minimize the adverse impacts or problems.

Throughout the entire facility plan preparation, the reviewer should work with the grantee in satisfying all the regulatory requirements and selecting the most acceptable plan. The facility plan may be reviewed informally or in sections by the reviewer as an aid to the grantee, and suggested changes may be incorporated with minimum delay and formality.

After all discussions and revisions are completed, the reviewer conducts a formal "environmental review". Based upon a review of the information presented in the facility plan, EPA must make one of three decisions:

- approve the project;
- disapprove the project;
- prepare an environmental impact statement (EIS).

The discussion and review procedures below provide guidance to the reviewer in reaching one of these decisions.

The first decision (approval) requires that EPA prepare a negative declaration supported by an environmental appraisal (contents to be discussed later) and make these documents and the approval decision public information.

The second decision (disapproval) is rarely invoked for an entire project (although segments of a project may be disapproved) because of the public involvement during the preparation of the facility plan and the many levels of review by governmental agencies. The public involvement and governmental reviews assist in changing the scope of the project, if necessary, and provide guidance in the selection of the most cost-effective and environmentally sound project.

The third decision (preparation of an EIS) is really a method of arriving at either the approval or disapproval decision.

In order to arrive at one of the three decisions described above, many reviewers within EPA and outside of EPA must evaluate the proposed project and make their recommendations for approval or disapproval of the project. The summary of environmental considerations presents the pertinent environmental information to assist in that decision.

The review procedures below are intended to assist the reviewer in arriving at the decision and, once made, the necessary actions to carry out the decision.

#### Review Procedures:

##### a. Criteria for Determining When to Prepare an Environmental Impact Statement

The regulations implementing the NEPA requirements for the construction grants program are quite specific, resulting in reviews and recommendations by several branches in EPA as well as recommendations from outside the agency. The construction grants reviewer must prepare his recommendation in a manner that permits the Regional Administrator to make a decision as to whether or not an EIS is to be prepared.

The NEPA procedures involve an "environmental review" which evaluates the project on the basis of two broad criteria; namely, will the project have significant environmental effects, or have environmental impacts which are likely to be highly controversial.

For certain projects involving (a) historical and archaeological sites; and (b) wetlands, flood plain, coastal zones, wild and scenic rivers, fish and wildlife; additional investigations are required on the part of either EPA or the grantee which, when evaluated along with the NEPA criteria, will assist in deciding when an EIS is to be prepared.

These additional procedures are described below and should be evaluated in conjunction with the review of the NEPA criteria.

(1) Historical and Archaeological Sites

EPA has the responsibility under the procedures of the Advisory Council on Historic Preservation to insure that archaeological and cultural resources are identified in the primary impact areas of the project. The investigation to identify resources is carried out by the grantee. The exact procedures may vary from State to State, and the reviewer should be familiar with the requirements of his particular State.

Generally, however, the grantee should contact the State Historic Preservation Officer (SHPO) as soon as the project scope and general location is known. The SHPO may be able to identify cultural or historic sites in the area which may aid in selecting the best alternative. The SHPO may also indicate that the area is quite sensitive and that a professionally qualified archaeologist should be employed to identify the resources. In the event that the project is limited to previously disturbed areas, the SHPO may advise that the project will not effect any cultural resources and that no further investigations are required.

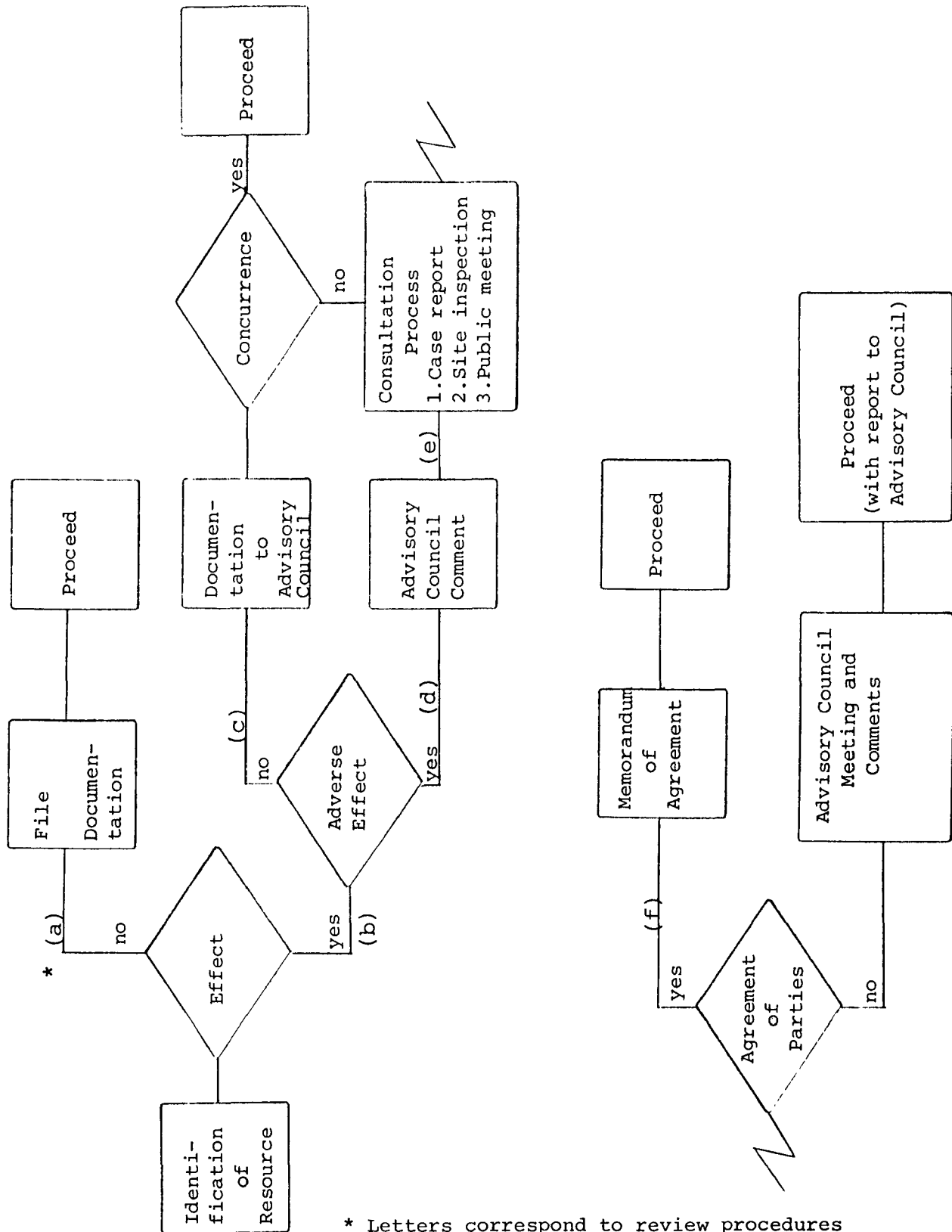
In many cases the SHPO or grantee may be able to review the National Register of Historic Places and identify resources in the project area. A professional in this field may need to be employed to identify resources which are eligible for inclusion in the National Register. The grantee and his professional representative must prepare a report in consultation with the SHPO stating whether the project will have any effect upon the cultural resources identified.

Upon receiving this report, and in the case of a resource eligible for listing in the National Register, EPA should immediately contact the Department of the Interior to determine if the resource is, in fact, eligible for inclusion.

For all cultural resources identified, the grantee, his professional representative, and the SHPO must prepare a report for review and decision by EPA concerning the effect the project may have on that resource. Specifically, the following procedures should be followed, as applicable:

- (a) project has no effect on identified resources - applicant to include views of SHPO showing concurrence; exchange of correspondence to be appended to report;
- (b) project has effect on identified resources - apply Advisory Council Criteria of adverse effect;
- (c) if the application of adverse criteria results in the conclusion by the grantee's professional expert, and is agreed to by the SHPO, that the effect is not adverse, the documentation supporting that conclusion must be forwarded to the Advisory





\* Letters correspond to review procedures described on preceding pages.

Council for concurrence. If Advisory Council concurrence is received, the project may proceed as proposed with the application of any mitigating criteria which may have been recommended;

- (d) if the application of the adverse criteria results in the conclusion that the project will have an adverse effect, the comments of the Advisory Council must be obtained and a consultation process is set up;
- (e) the consultation process involves:
  - on-site inspections;
  - public information meetings;
  - considerations of alternatives;
  - avoidance of adverse effects;
  - mitigation of adverse effects;
- (f) generally, the above procedures will be sufficient to resolve adverse effects; specific conditions of resolution are contained in a Memorandum of Agreement between EPA, the Advisory Council, and the SHPO.

It is the responsibility of the construction grants reviewer to insure that the above procedures are, or have been, carried out. Letters, reports, or other documents in support of the above procedures are to be appended to the facility plan. The final decision as to the affect of a project on historic and archaeological resources rests with EPA under the Advisory Council Procedures.

Re: Federal Register, 2/4/75, Department of the Interior  
National Register of Historic Places  
40 CFR 30.405-7  
40 CFR 6.510(e)  
36 CFR 800 (Advisory Council Procedures)

(2) Wetlands, Flood Plains, Coastal Zones, Wild and Scenic Rivers, Fish and Wildlife

Whenever a selected project will effect any of these environmentally sensitive resources, the consultations below must be carried out. The impact of the project upon these resources should be discussed by the applicant in his environmental assessment statement.

EPA has the responsibility for carrying out these procedures, but the applicant may be encouraged to do so in preparing the facility plan. Whether the project will have a harmful affect on these resources requires prudent judgement on the part of the reviewer.

The consultations below, as applicable, must be carried out before the facility plan may be approved.

- Wetlands

Consult with:

- Department of the Interior
- Department of Commerce
- U.S. Army Corp of Engineers

Document consultation and obtain written comments from each of these agencies whenever possible.

- Flood Plains

Refer to Flood Hazard Boundary Maps or Flood Insurance Rate Maps prepared by DHUD and determine if grantee is or must be participating in the flood insurance program; determine if proposed project satisfies applicable flood plain statutes and regulations and EPA guidance with regard to location, elevation or protection of structures.

- Coastal Zones

Consult with:

- Appropriate State office
- Department of Commerce

Document consultation and obtain written comments from each of these agencies whenever possible.

- Wild and Scenic Rivers

Consult with:

- Appropriate State office, and
- Department of the Interior, or

- Department of Agriculture where National forest lands are involved.

Document consultation and obtain written comments from each of these agencies whenever possible.

- Fish and Wildlife

If the project will result in the control or structural modification of any stream or body of water, consult with:

- U.S. Fish and Wildlife Service, Department of the Interior
- National Marine Fisheries Service of the National Oceanic and Atmospheric Administration, Department of Commerce
- U.S. Army Corp of Engineers
- Appropriate State agency

Document consultation and obtain written comments from each of these agencies whenever possible.

- Threatened or Endangered Species

Consult with:

- Secretary of the Interior, or
- Secretary of Commerce where marine species are involved.

Re: 40 CFR 6.214, 6.510 (a)(3)

(3) NEPA Criteria for Determining When to Prepare an EIS

In addition to evaluating the effects of the proposed project upon the cultural and environmentally sensitive resources as required by the regulations, the reviewer must evaluate the environmental assessment contained within the facility plan and, by applying the NEPA criteria, determine if an EIS should be prepared.

Environmental impacts are classified as:

- adverse/beneficial
- long-term/short-term
- primary/secondary

Grantees are required to classify the impacts of the proposed project into these categories. The most difficult of these impacts to evaluate are the secondary impacts. Secondary impacts are distinguished from primary impacts as follows:

- Primary impacts are those that can be attributed directly to the project; for example, construction and operation of the treatment works. They may be beneficial (improved effluent) or adverse (soil erosion during construction) etc. Often, the adverse primary impacts can be minimized by small changes in the project design or by construction techniques, both of which are to be discussed in the facility plan.

- Secondary impacts are indirect or induced growth related changes resulting from the project. They include induced changes in the pattern of land use, population density, and related effects on air and water quality or other natural resources, and increased growth at a faster rate than planned for, or above the total level planned by, the existing community. The grantee must address the secondary impacts in the facility plan and, where adverse, propose actions which will minimize or mitigate these effects.

In evaluating the primary and secondary impacts, the reviewer must determine if they are significant or controversial. After all of the applicable procedures listed above are carried out and all possible mitigative measures have been explored with the grantee and State, a decision is made to prepare or not to prepare an EIS.

b. No EIS Required

(1) Negative Declaration

Upon deciding not to prepare an EIS, EPA will prepare a negative declaration which summarizes the purpose of the project, its location, extent and nature of land use changes, and major primary and secondary impacts. The negative declaration must also describe how the more detailed "environmental appraisal" may be obtained. Copies of the negative declaration are to be distributed in accordance with the regulations (Appendix C Federal Register Vol. 40 No. 72 - Monday, April 14, 1975, page 16827). Press releases or other public notices are also to be made and must include copies of the negative declaration. The public notices must state that interested persons disagreeing with the decision may

submit comments for consideration by EPA. Fifteen working days after the public notice, and upon consideration of any comments or objections received, EPA will decide to proceed with the project or prepare an EIS. In the former case, the grantee is advised to submit the additional documents of plan approval and that he may proceed with the submission of other documents for a Step 2 grant (see Chapter V). If an EIS is to be prepared, the procedures described later are followed.

## (2) Environmental Impact Appraisal

Concurrently with the preparation of a negative declaration, EPA will prepare an environmental impact appraisal. This appraisal shall be brief but contain more information and explanations than the negative declaration, including: description of the proposed project and the most feasible alternatives, its environmental impacts, adverse unavoidable impacts, relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity, mitigating measures, resource commitments, summary of comments and consultations on the project, and reasons for concluding there will be no significant impacts. Copies of the appraisal are to be sent to the EIS coordinator at Headquarters, and copies are to be made available (at cost) to the public upon request.

Re: 40 CFR 6.212, 6.512(g)

## (3) Facility Plan Approval

Upon approval, the grantee and State should receive a letter from EPA notifying them of facility plan approval and setting forth any special conditions resulting from a review of the facility plan which might be imposed on the grantee upon application for a Step 2 grant. The approval letter must contain language to the effect that approval of the facility plan does not constitute an obligation of the United States for any Step 2 or Step 3 grant.

## (4) Grants Information and Control System (GICS)

Project cost information was entered in the GICS system at the time the applicant applied for his Step 1 grant (see Chapter IV, F.3.). Upon approval of the facility plan, the GICS information is to be updated using the coding sheets (see Appendix B).

### c. Prepare EIS

#### (1) Notice of Intent

Upon deciding to prepare a draft EIS, EPA will issue a "notice of intent". The purpose of the notice of intent is to advise the public and other interested agencies of the decision to prepare an EIS and

seek their input and involvement at the earliest possible stages. Press releases and other forms of public notification are to be used.

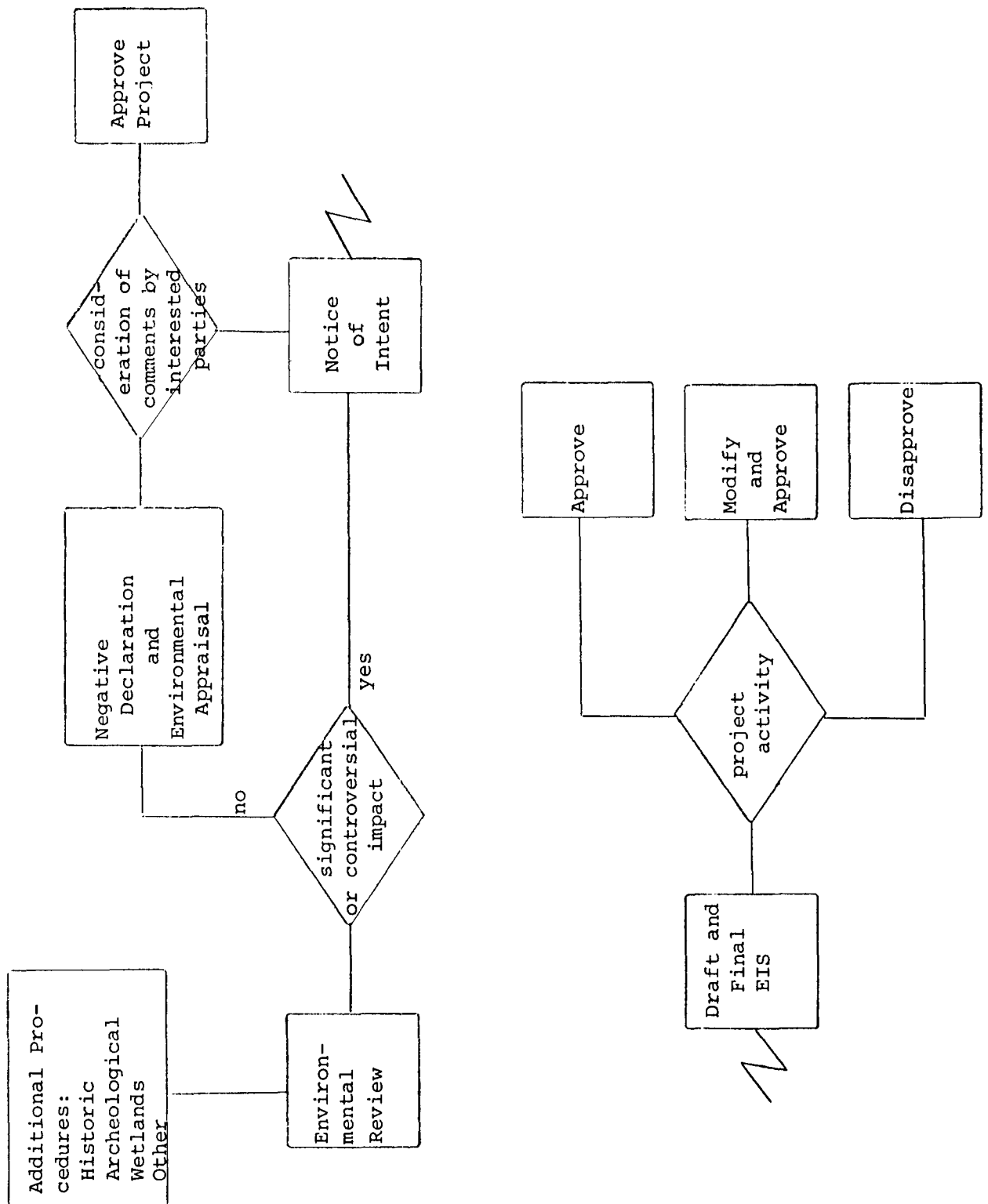
(2) Draft EIS

As soon as possible after the notice of intent, EPA will prepare the draft EIS in accordance with the procedures outlined in EPA regulations entitled "Preparation of Environmental Impact Statements" (issued 4/14/75). In some cases, a consultant will prepare the EIS under the direction and close supervision of EPA. During the preparation of the EIS, the grantee may be requested to submit additional information concerning the project. The Regional Administrator is to decide the scope of the EIS and which environmental issues will be discussed in greatest detail.

A Step 2 grant may not be awarded until a final EIS has been prepared and all regulatory requirements have been met. The resulting modified project will have to be rereviewed at the appropriate stage of the facility planning process. Additionally, a Step 2 grant award may contain special conditions resulting from the preparation of an EIS.

Re: 40 CFR 6.206, 6.208, 6.512(e)

FIGURE IV-2 PROCEDURES FOR NEPA REVIEW





CHAPTER V

STEP 2 GRANT PROCESSING

- A. Introduction
- B. Schematic Flow Diagram
- C. Application Contents
- D. Facility Plan Approval
- E. Administrative Review
- F. Grant Award Procedures
- G. Preparation of Plans and Specifications
- H. Predesign Conference
- I. Review of Plans and Specifications

## A. INTRODUCTION

This chapter describes the contents of and review procedures for processing of a Step 2 grant application. It begins with the receipt of the application package and concludes with the review and approval of the plans and specifications.

Section B, Schematic Flow Diagram, visually places this chapter in the proper sequence and indicates the major activities of the Step 2 application and review.

Section C, Application Contents, provides a quick ready listing of the materials which are contained in an application package.

Section D, Facility Plan Approval, restates the requirements for an approved facility plan as a part of the Step 2 application.

Section E, Administrative Review, describes the procedures involved in reviewing priority list compliance and certification, application form, contracts and subagreements and assurances.

Section F, Grant Award Procedures, describes the action required on the part of EPA in making the grant offer.

Section G, Preparation of Plans and Specifications, discusses the need to work with the grantee during the preparation of P & S.

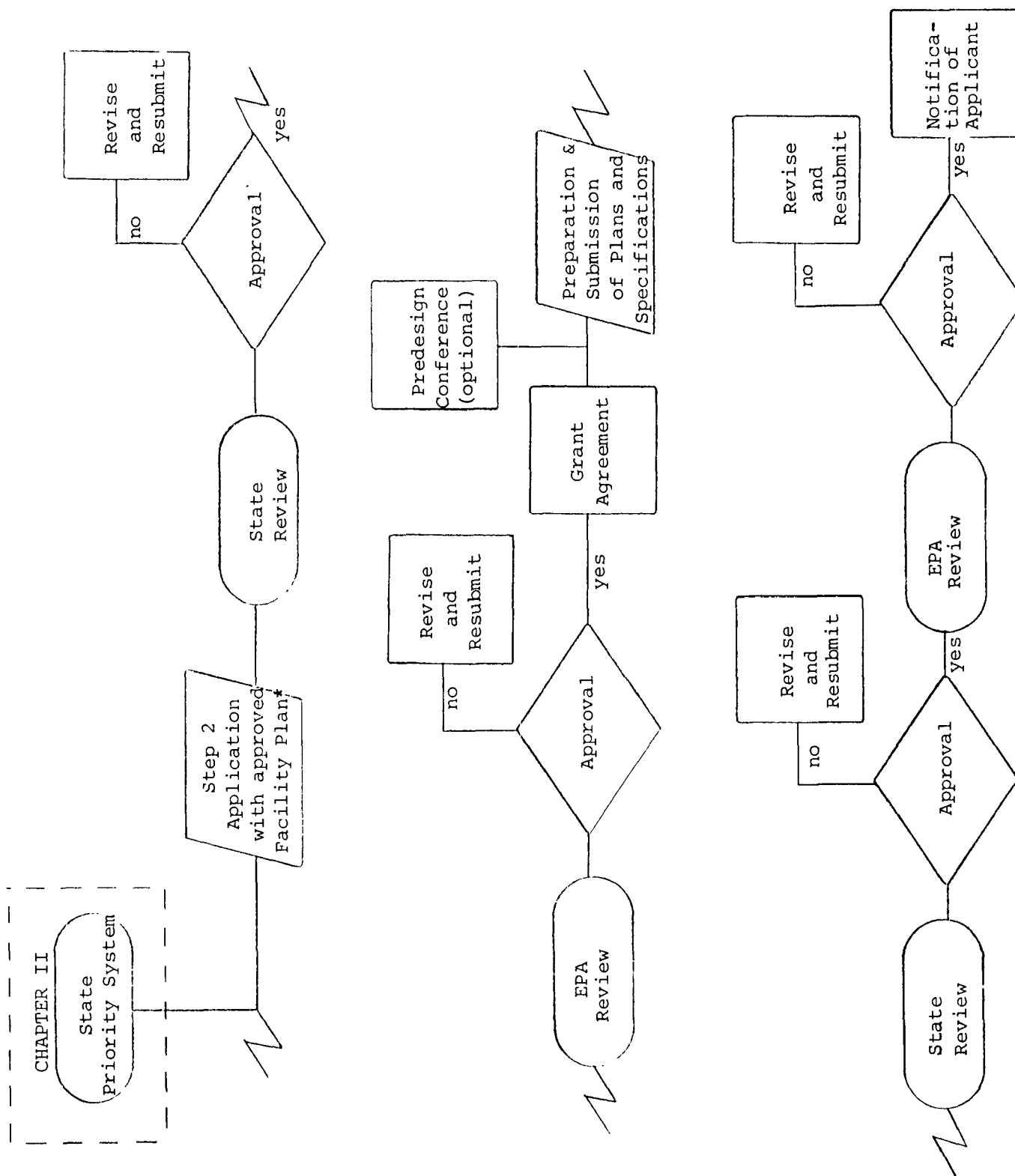
Section H, Predesign Conference, describes the administrative and technical considerations to be discussed with the grantee at the conference prior to the preparation of plans and specifications.

Section I, Review of Plans and Specifications, describes the specific information to be reviewed in the plans and specifications. Technical considerations are included to enable the reviewer to adequately evaluate the Step 2 treatment works design.

The technical and administrative reviews are to be performed simultaneously wherever possible. When items are missing or explanations are necessary, the review is to proceed as far as possible to insure quick action once the items are corrected.

## B. SCHEMATIC FLOW DIAGRAM

The flow diagram below visually places this chapter in the proper sequence and indicates its relationship to other chapters. The diagram includes the general functions of the Step 2 grant process as performed by the applicant, State and EPA.



\* Review and Approval of Facility Plan covered in Chapter IV

### C. APPLICATION CONTENTS

Below are listed the basic items to be included in an application package. The items are listed here for quick reference, while the review procedures for each item are described later. The reviewer is to make a cursory review to insure that all items are included, that all applicable portions of the forms are completed, and that the documents are signed by the appropriate officials. If items are missing or explanations are necessary, the State is to be contacted but the review is to proceed as far as possible to insure quick action when the required material or information is received.

1. Facility Plan (complete and approved)
2. State Priority Certification, EPA Form 5700-28
3. Application, EPA Form 5700-32, including authorizing resolution and statement regarding availability of the proposed site
4. Proposed subagreements (generally engineering contracts) or explanation of method of awarding proposed subagreements
5. Evidence of compliance with user charge and industrial cost recovery provision of the regulations
6. Completed or substantially completed service agreements
7. Civil Right compliance, Form 4700-1 and 4700-4
8. Statement of compliance with Relocation and Land Acquisition Policies Act of 1970, if applicable

Re: 40 CFR 35.917-6, .920-3(b), .925-3, .925-9, .925-11, .925-12  
40 CFR 30.315, .405-2, .405-3

### D. FACILITY PLAN APPROVAL

The technical review of a facility plan is described in Chapter IV of this Handbook. The grantee was notified in writing of his facility plan approval and need not resubmit it. The reviewer need only confirm in the project files that the facility plan was approved by EPA.

## E. ADMINISTRATIVE REVIEW

### 1. Priority List Compliance and Certification

#### Purpose:

The State agency is required to certify each project as entitled to priority for grant funds in accordance with the State priority system and the project priority list.

#### Discussion:

Chapter II discusses the State priority system and list. Once the system and annual list have been approved by EPA, each project is certified by the State as being entitled to priority for a grant over all other projects below it on the priority list (EPA Form 5700-28, see Appendix B).

A State may elect to set aside up to ten percent of its yearly allotment to fund Step 1 and Step 2 projects not on the current priority list. When such projects are certified, the certification must signify that the grant is to be made from that reserve allotment.

Only projects which have been certified by the State as entitled to priority for Federal assistance may receive a grant.

#### Review Procedures:

Review State Priority Certification to determine that:

- a. the name, project number and description of the project agree with the application, form 5700-32, and the approved State priority list;
- b. the form includes the signature of the authorized State official;
- c. the award of grant assistance for the project will not exceed the State's allotment, including reallocations;
- d. the award of grant assistance will not jeopardize the funding of any projects of higher priority;

- e. the State has included a statement to the effect that all jurisdictions within the facility planning area have been notified of State and EPA approval of the facility plan.

Re: 40 CFR 35.915, .917-2, .920-2, .925-3, .925-4  
Program Guidance Memorandum, PG-33, 5/10/74;  
PG-35, 6/3/75;  
PG-46, 1/17/75

## 2. Application Form

### Purpose:

EPA Form 5700-32 is the formal application document and sets forth the information necessary to obtain a construction grant. Additionally, the application contains "assurances" from the applicant which satisfy several statutory requirements.

### Discussion:

The application for a Step 2 grant is submitted by the authorized representative of the jurisdictions included in the approved facility plan. In all cases, the applicant must have the legal authority to design, finance, construct, operate, and maintain any resulting wastewater treatment facilities.

The application form is used to request an initial grant, make amendments, and to request supplemental grants. The form (see Appendix B) contains instructions for completion of each of the five parts. Part II, Section B, requires information concerning the project site. For a Step 2 application, a statement regarding availability of the proposed site must be included. Other site information (plot plan, soil survey, etc.) may be included where necessary.

Part III, Section D, concerns the applicant's proposed method of financing the non-federal share of the project. The applicant may not use revenue sharing funds obtained under the State and Local Fiscal Assistance Act of 1972 to finance his portion of the eligible project costs. In certain cases involving sewage collection systems (not treatment plants nor intercepting sewers), the applicant may use Community Development Block Grant Funds as the community's local share.

In these cases the reveiwer should contact the regional DHUD office for specific limitations. However, such items as cost overruns (not otherwise funded by EPA), sewage collection systems, or land acquisition, for example, which are not included within the scope of the EPA grant as allowable costs, may be funded with revenue sharing funds.

The statutes require that the applicant comply with related laws and regulations and give other assurances. Many of these requirements are satisfied for a Step 2 grant when the applicant signs the application and thereby assures and certifies that he will comply with the requirements. However, additional evidence of compliance with some of these assurances is required from the applicant (see Section E.4.). A copy of the authorizing resolution designating the official to act as the official representative of the applicant (Part V, item 1 of application Form 5700-32) must be included with the application. Any subsequent changes in the authorized official must also be documented by a copy of the resolution authorizing the change.

#### Review Procedures:

Review application form to determine that:

- a. the name, the project number, and the description of project and amount of grant request agree with the State Priority Certification, Form 5700-28, and the approved State priority list;
- b. the form is signed by the authorized representative and a copy of the authorizing resolution is attached;
- c. a statement regarding availability of the proposed site is attached;
- d. information regarding project location, entities involved and cost data corresponds to that in the facility plan and Summary of Costs of Planned Treatment Works Scheduled by Project and Category;
- e. all items in the application are complete or marked not applicable (NA);
- f. Part III, Section D, Proposed Method of Financing Non-Federal Share, assures that the applicant successfully fund his share of the project costs and that revenue sharing finds will not be used to match those costs eligible for EPA grant assistance; if Community Development Block Grant Funds are to be used, contact DHUD; (Particular emphasis should be placed on review of this section)

- g. Part V. Assurances, is included with the application: if not the application must be returned to the applicant for inclusion of a signed copy of the Assurances.

Re: 40 CFR 30.315  
40 CFR 35.920-2, .920-3(b)(4)  
Program Guidance Memorandum, PG- 3, 6/25/73; PG-55, 5/5/75  
81 CFR Part 51, Department of Treasury

### 3. Contracts and Subagreements

#### Purpose:

Contracts or subagreements for personal or professional services are submitted by the applicant and reviewed by both the State and EPA to insure that the scope and nature of the proposed services are sufficient to result in approvable plans and specifications and that the fees and schedules are reasonable.

#### Discussion:

The personal and professional services covered by the subagreements at the time of Step 2 application submission are generally the consulting engineering services. The regulations state that the application shall include *proposed subagreements or an explanation of the intended method of awarding subagreements for performance of any substantial portion of the project work.*

Also, the regulations require that any such subagreements or lower tier subagreements include an "access" clause allowing the State or EPA access, at reasonable times and places, to the work or records. The "access" clause is applicable to subagreements or lower tier subagreements in excess of \$10,000.

The detailed requirements of and procedures for procuring personal or professional services are contained in the regulations, 40 CFR 35.936, .937. Subagreements in which the fee is a percentage of construction costs are not acceptable, nor are cost multiplier contracts where profit is included in the multiplier.

#### Review Procedures:

Review the agreement(s) to determine that:

- a. the applicant has complied with 40 CFR 35.936 and .937;
- b. the scope of the work is sufficient to prepare approvable plans and specifications;
- c. completion schedules are reasonable and in agreement with the facility plan.



Re: 40 CFR 35.920-3(b)(7), .935-7, .936, .937;  
40 CFR 30.605; Program Guidance Memorandum, PG-53, 7/8/75

#### 4. Assurances and Program Requirements

The regulations require that the applicant furnish evidence of meeting program requisites and assurances made in the Step 1 and Step 2 grant application as well as requirements prescribed in other Federal statutes. Evidence of compliance with the following is of particular importance:

- a. user charges - the applicant must submit an approvable plan and schedule for the implementation of a user charge system in accordance with the guidelines in the regulations (40 CFR - Part 35, Appendix B);
- b. industrial cost recovery - the applicant must agree to require all industrial users to pay that portion of the grant amount allocable to the treatment of wastes from their use of the system; also the applicant must furnish letters from the major (10% or more of waste flow or strength) industrial users indicating that they will pay their portion of the grant amount allocable to the treatment of wastes from their use of the system and their intended period of use.
- c. service agreements - where the project involves more than one political jurisdiction, the applicant must submit completed or substantially completed service agreements. These agreements will include financial arrangements and will obligate each jurisdiction to enforce the requirements for user charges, industrial cost recovery, sewer system rehabilitation and sewer use ordinances.
- d. Civil Rights Act of 1964 - the applicant must complete two forms: Assurance of Compliance, EPA Form 4700-1, and Compliance Report, EPA Form 4700-4;
- e. Relocation and Land Acquisition Policies Act of 1970 - if the project will result in the acquisition of private property or the displacement of persons, the applicant must submit a statement that he will prepare a program for compliance with the provisions of the Act.

Re: 40 CFR 35.917-6, .920-3(b)(5)(6), .925-9, .925-11, .925-12,  
40 CFR 30.405-2, .405-3

## F. GRANT AWARD PROCEDURES

(Note: See Step 1 award procedures, Chapter IV, pp.14 and 15 for notification procedures and data regarding items 1 through 4)

### 5. Grant Agreement/Amendment

#### Purpose:

The Grant Agreement/Amendment (EPA Form 5700-20) serves as a formal document of agreement between the U.S. Government and the applicant and constitutes a legally binding contract once executed.

#### Procedures:

EPA Form 5700-20 (see Appendix B) is completed by the Regional Office based upon the information submitted in the application package. The agreement must define the scope of the project. Modification to grant amounts, scope of work, or other items are made on the basis of the review process, and special conditions of the grant are included in Part III b. These special conditions may be based upon clearing-house comments, request from the State agency, or conditions unique to the project. Such unique conditions may include consideration of mitigating measures identified in the review of the facility plan, EIS where prepared, sewer system evaluation survey requirements, or other considerations.

In order to better forecast future funding requirements, each applicant for a grant is required to submit cost estimates in the format shown in the form Summary of Costs of Planned Treatment Works Scheduled by Project and Category (see Appendix B). This requirement is to be incorporated as a special condition in the grant/agreement amendment.

The grant agreement/amendment is not sent to the applicant until five working days after the signing by the Regional Administrator in order to allow for necessary congressional notification. The applicant is given three weeks to accept the grant offer and to return the signed grant agreement/amendment to EPA.

The individual signing the grant agreement/amendment on behalf of the applicant should be the same individual who signed the application. Differences must be explained and a new authorizing resolution submitted (see Application Form item E.3 of this chapter).

Re: Program Guidance Memorandum, PG-55, 5/5/75

## G. PREPARATION OF PLANS AND SPECIFICATIONS

### Purpose and Discussion:

Program responsibility for the progress of a project does not end with the grant offer. Rather, the reviewer must know the day-to-day status of the project to insure that it is completed in accordance with the approved schedule. Also, he must insure that the applicant is aware of the administrative and technical considerations to be included in the plans and specifications.

### Procedures:

Shortly after acceptance of a Step 2 grant, the reviewer should:

1. contact the grantee and his consultant to make known the kinds of advice and assistance available from the State and EPA during the preparation of the plans and specifications;
2. forward to the grantee and his consultant the administrative and technical considerations to be incorporated into the plans and specifications, including 40 CFR 35.936, .938, .939 and Appendix C-2;
3. arrange for a predesign conference.

## H. PREDESIGN CONFERENCE

### Purpose and Discussion:

EPA, in conjunction with the State agency, should assume responsibility for insuring that the plans and specifications are prepared in accordance with sound engineering practice and regulatory requirements. Because of the complexity of these requirements, a predesign conference between the grantee, his consultant, the State and EPA is strongly urged, whenever practicable.

The predesign conference, which may be held with one or more grantees, promotes careful planning and coordination and insures the timely completion of the various phases of a project. In some cases, the review of plans and specifications may be delegated to a State. In such cases, the State is responsible for the predesign conference arrangements. For the other cases, the regions are encouraged to develop formats for the predesign conferences. The formats may then be tailored to the individual staffing resources of the States and the needs of the applicants.

### Procedures:

Shortly after acceptance of a Step 2 grant, but prior to the preparation of plans and specifications, the reviewer should arrange a predesign conference with the grantee, grantee's consultant and State agency. Suggested subjects to be discussed include:

1. the legal requirement for inclusion of and provisions for carrying out the bidding procedures described in 40 CFR 35.936, .938, .939 and Appendix C-2;
2. the technical requirements of the design to insure that the project will meet effluent limitations per NPDES permit and will be designed in accordance with sound engineering practice;

Re: 40 CFR 35.925-7

3. additional requirements, as applicable, for detailed design reports beyond that submitted with the facility plan. Possible examples are:
  - loading rates and sizes of various components of the plant;
  - design computations for sewers, including slopes and capacities;
  - system head curves for pumping stations, indicating number and capacity of pumps;
  - other detailed design reports which the particular project may require;
4. pretreatment design requirements and scheduling, as applicable, for industrial dischargers;  
Re: 40 CFR 35.925-15
5. design considerations or investigations resulting from the environmental assessment or environmental impact statement. Possible examples are:
  - a soil erosion plan;
  - a traffic control plan;
  - archaeological investigations;Re: 40 CFR 35.925-8
6. design requirements arising from executed agreements between jurisdictions;  
Re: 40 CFR 35.917-6
7. force account requirements, as applicable;  
Re: Program Guidance Memorandum, PG-34, 5/7/74
8. phasing of contracts;  
Re: Program Guidance Memorandum, PG-33, 5/10/74

9. flood protection insurance requirements, as applicable;  
Re: 40 CFR 30.405-10  
Program Guidance Memorandum, PG-54, 7/8/75
10. records to be maintained during design and construction, separating eligible and ineligible items;  
Re: 40 CFR 30.805, 35.940
11. site certification requirements, if not previously satisfied;  
Re: 40 CFR 35.920-3 (b)(4)
12. future requirements for
  - the user charge and industrial cost recovery systems;
  - a sewer use ordinance;
  - an evaluation/rehabilitation program, as applicable;
  - an operation and maintenance program, including O&M manual, staffing and training;Re: 40 CFR 35.935-12, -13, -16
13. requirements for submission of project status reports and requirements for periodic inspections and audits, as necessary, for large or complex projects;  
Re: 40 CFR 30.635, .820
14. requirements for construction contracts to conform with the standardized format, "Contract Documents for Construction of Federally Assisted Water and Sewer Projects";  
Re: Program Guidance Memorandum, PG-17A, 4/15/75

15. use of value engineering in the design phases of the project;

Re: Program Guidance Memorandum, PG-45, 12/11/74

16. possible benefits from the use of construction management.

The reviewer should provide the grantee with guidelines, instructions, booklets, or other publications which describe specific requirements in detail.

## I. REVIEW OF PLANS AND SPECIFICATIONS

### Purpose:

To insure that the project to be built will satisfy effluent and statutory requirements.

### Discussion:

Depending upon the complexity of the project, periodic reviews and inspections will have been carried out during the preparation of the plans and specifications and changes or modifications, if required, will have been made. The set of plans and specifications submitted for final review should reflect all changes and be suitable for bidding purposes.

The review procedures are both administrative and technical. The technical review procedures are broad in scope and each region is encouraged to pattern its own review procedures to account for State or local design practices and requirements. Although not specifically required, the use of a checklist such as the "Program Checklist for Engineering Drawings, Specifications, and Engineering Reports", Appendix C, is recommended.

## Review Procedures:

### a. Administrative Review

The following six items must be included in the bidding documents:

- (1) a statement of work, including drawings and specifications, and the required completion schedule;
- (2) the terms and conditions of the contract (40 CFR 35.938-8);
- (3) an explanation of the method of bidding; the method of evaluating the bid prices, and the basis for the award of the contract;
- (4) the criteria for evaluating bidders;
- (5) the standard statement concerning the funding of the project by EPA;
- (6) a copy of 40 CFR 35.936, 35.938 and 35.939.

In addition to the above six items, the reviewer is to insure that the specifications include the following provisions:

#### (1) Supplemental General Provisions

Appendix C-2 of 40 CFR Part 35 which includes requirements for:

- audit: access to records
- price reduction for defective cost or pricing data
- contract work hours and safety standards
- equal employment opportunity
- utilization of small and minority business
- covenant against contingent fees



- anti-kickback
- gratuities
- patents
- copyrights and rights in data
- clean air and water clause

(2) Equal Employment Opportunity

The EEO provisions must be followed where contracts are greater than \$10,000. In areas having a home-town or an imposed plan, the contract specifications must contain the specific provisions of the plan as published by the Secretary of Labor in the Federal Register. Home-town plans are agreements reached among the local contractors, trade unions, minority groups and governmental agencies, which are approved by the Secretary of Labor, and contain the goals for the hiring and training of minority groups. Imposed plans likewise set forth minority hiring and training goals; however, such goals are not reached by agreement, but imposed by the Department of Labor.

In either instance, the reviewer should insure that the applicable plan is contained in the specifications.

In non-plan areas, contractors will be required to comply with the provision of Executive Order 11246 and engage in affirmative action directed at promoting and insuring EEO in the work force used under the contracts.

When the cost of the construction is estimated to exceed a ceiling amount specified by the Regional Administrator, the contracts may require special provisions. The reviewer, in such cases, should contact the Civil Rights and Urban Affairs Office within the EPA regional office for specific instructions.

Re: 40 CFR 35.935-6  
40 CFR Part 8

### (3) Davis-Bacon Act

The provisions of the Davis-Bacon Act must be included in contracts exceeding \$2,000. These provisions require the payment of prevailing wages for the various trades as determined by the Secretary of Labor.

Prevailing area-wide rates are published weekly in the Federal Register. For individual projects not included in areas with area-wide wage rate determinations, the Regional Office will obtain a wage rate for inclusion in the specifications.

Modifications to area-wide wage rate determinations are to be included in the bidding documents provided they have been published 10 days prior to the bid opening date. Modifications to individual project determinations are to be included provided they are received in the Regional Office 10 days prior to bid opening.

The reviewer is to insure that the current wage rate determination is included in the bidding documents or that provisions for inclusion have been made.

Re: 40 CFR 30.403, .415

### (4) Flood Insurance

For projects requiring flood insurance (see Chapter VI E.4.a. of this Handbook) make certain that the contractor is required to obtain the necessary flood insurance during construction.

### (5) Bonding

For contracts in excess of \$100,000, the following minimum bonding and insurance requirements must be met:

- 5% bid bond;
- 100% performance and payment bond;
- fire and extended coverage, workmen's compensation, public liability and property damage, and "all risk", as required by local or State law;
- flood insurance, as applicable, during construction.

For contracts less than \$100,000, bonding and insurance requirements shall be in accordance with local or State practices.

b. Technical Review:

The technical review of the plans and specifications is carried out to insure that the proposed facilities, if constructed in accordance with the plans and specifications, will achieve the effluent limitations or water quality standards required by the NPDES permit. The review is also to insure that sound engineering design principles are employed, primarily regarding process considerations. Structural, electrical, and mechanical details of the design are not critically reviewed because they are the responsibility of the engineer whose seal appears on the drawings. However, obvious irregularities should be noted.

The technical review should evaluate the plans and specifications according to the criteria in "Program Checklist for Engineering Drawings, Specifications, and Engineering Reports" (see Appendix C) to the extent appropriate for the particular project and State requirements. The following are examples of items which should be reviewed.

(1) Safety Precautions

The requirements of the Occupation Safety and Health Act (OSHA) must be fulfilled;

(2) Mitigative Measures

Plans and specifications must be compared with mitigative measures required by the environmental assessment or impact statement. Examples might be soil erosion control, hours of operation, backfilling and seeding, structural design for buildings in a flood plain, etc.

(3) Bypassing

Construction is to be carried out so as to prevent bypassing of flows during construction, where possible.

(4) Project Sign

Contractor is required to provide a project sign in accordance with the drawing shown in Appendix B.

(5) Reliability and Flexibility

The proposed facilities must be reliable and provide for flexibility in operation. This may be accomplished, for example, by requiring standby power, by providing for bypass of individual plant units, by providing pumping capacity sufficient to operate the plant with the largest pump out of service, etc.

(6) Operation and Maintenance

All equipment, piping, switches, instruments, etc. are to be clearly marked for ease of identification and location for operation and maintenance.

(7) Public Water Supply

All public water supplies are to be protected by adequate backflow preventors (for example, double check valves, air gap).

(8) Chemical Storage

All chemicals are to be properly stored and curbed to hold the entire volume in the event of an accidental spill. Also, adequate safety protection gear is to be provided, with proper storage, for plant personnel.

Re: Technical Bulletin No. D-71-1, 10/15/71

(9) Ventilation

Adequate ventilation is to be provided in all areas where necessary (for example wet well, dry well, chlorine room, chemical storage area, etc.).

(10) Laboratory Facilities

The laboratory facilities must be adequate to conduct the type of sampling and testing required by the NPDES permit or by the State agency.

(11) Emergency Alarms

Adequate alarms are to be provided to warn of failures or dangers.

(12) Use of Mercury

Mercury is not to be used for trickling filter seals. Other uses of mercury require special review and approval.

Re: Technical Bulletin No. D-71-2, 10/15/71

(13) Sewers

Acceptable levels of infiltration and test therefor are included; sewers should maintain minimum scouring velocities and have adequate capacity, including peaking factors.

(14) Equipment

Except where based upon performance specifications at least two trade names must be specified for all major items of equipment.

Re: Program Guidance Memorandum, PG-19A  
40 CFR 35.936-13(a)

(15) Shellfish Waters

Where discharges will come into contact with shellfish waters, appropriate measures must be included to protect the shellfish.

Re: Technical Bulletin, Protection of Shellfish Waters, EPA 430/9-74-010, July 1974

(16) Pretreatment

Where applicable the design must be in accordance with the requirements for pretreatment of incompatible industrial wastes.

Re: 40 CFR 35.925-15

c. Plan and Specification Approval

Upon approval by EPA of the plans and specifications, the grantee and State agency are to be so notified. The notification will generally be in the form of a letter and should contain any special conditions resulting from the review which would be imposed on the applicant upon application for a Step 3 grant. The approval notice should specifically remind the applicant not to advertise for bids until after applying for and receiving a Step 3 grant. He should also be reminded that the EPA is not obligated to award a Step 3 grant for the project.

## CHAPTER VI

### STEP 3 GRANT PROCESSING

- A. Introduction
- B. Schematic Flow Diagram
- C. Application Contents
- D. Plans and Specifications Approval
- E. Administrative Review
- F. Grant Award Procedures
- G. Procurement of Construction Contracts
- H. Preconstruction Conference
- I. Monitoring of Construction Activities

## A. INTRODUCTION

This chapter describes the contents of and review procedures for processing of a Step 3 grant application. It begins with the receipt of the application and concludes with the start-up of the completed facilities.

Section B, Schematic Flow Diagram, visually places this chapter in the proper sequence and indicates the major activities of the Step 3 application and review.

Section C, Application Contents, provides a quick ready listing of the materials which are contained in an application package for a Step 3 grant.

Section D, Plans and Specifications Approval, restates the requirement for approved plans and specifications as a part of the Step 3 application.

Section E, Administrative Review, describes the procedures involved in reviewing priority list compliance and certification, application form, contracts and subagreements, assurances, and institutional arrangements.

Section F, Grant Award Procedures, describes the action required on the part of EPA in making the grant offer.

Section G, Procurement of Construction Contracts, describes the procedures involved in the authorization to advertise for bids, review of bids, grant increase/decrease, protests, and authorization to award contracts.

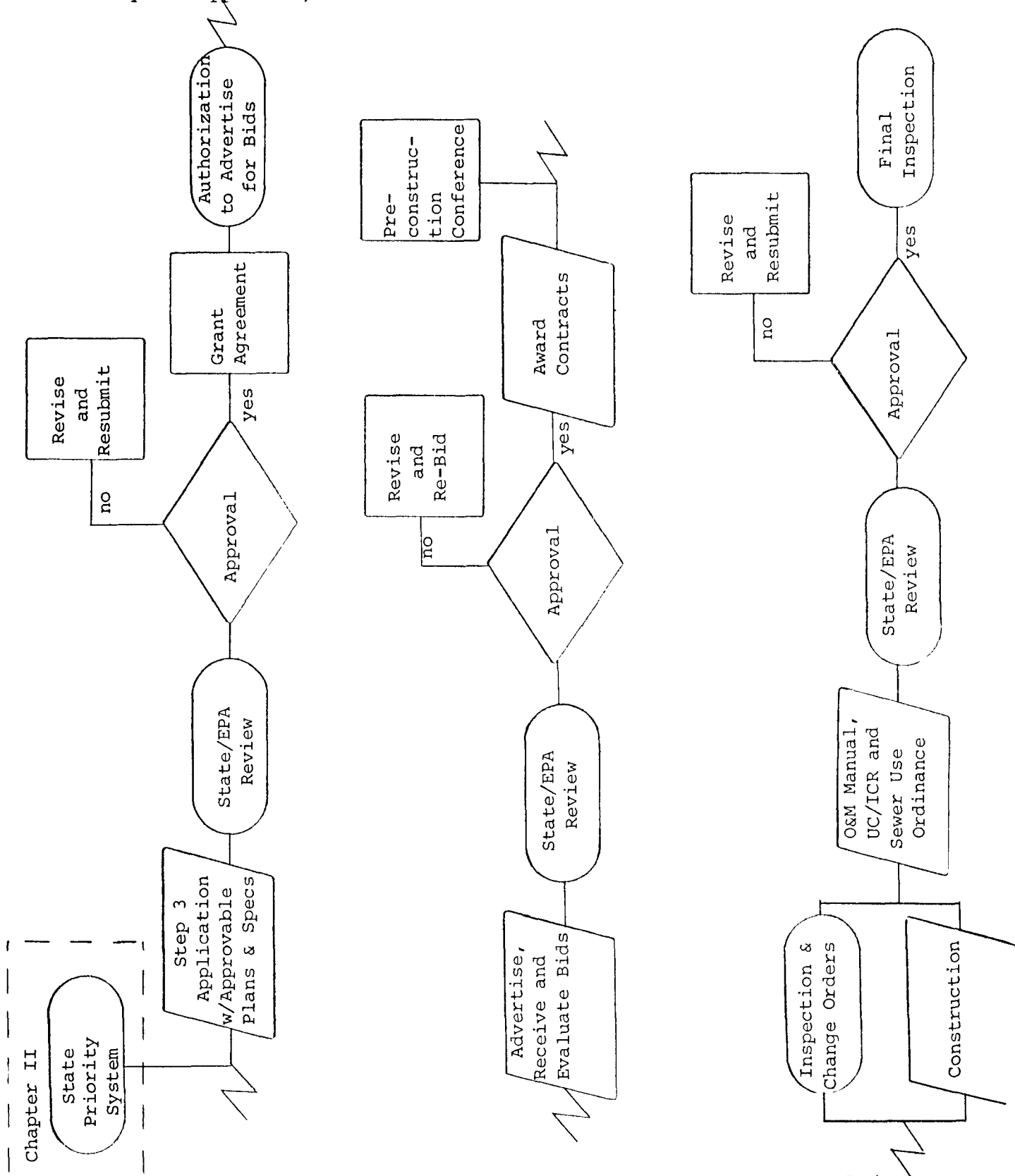
Section H, Preconstruction Conference, describes the administrative and technical considerations to be discussed with the grantee relative to construction activities.

Section I, Monitoring of Construction Activities, describes the procedures involved in the execution of change orders and on-site inspections, and the review of the user charge, industrial cost recovery and operation and maintenance programs.



## B. SCHEMATIC FLOW DIAGRAM

The flow diagram below visually places this chapter in the proper sequence and indicates its relationship to other chapters. The diagram includes the general functions of the Step 3 grant process as performed by the applicant, State and EPA.



### C. APPLICATION CONTENTS

Below are listed the basic items to be included in an application package. The items are listed here for quick reference, while the review procedures for each item are described later. The reviewer is to make a cursory review to insure that all items are included, that all applicable portions of the forms are completed and that the documents are signed by the appropriate officials. If items are missing or explanations are necessary, the State is to be contacted but the reviewer is to proceed as far as possible to insure quick action once the corrections are made.

1. Plans and Specifications (2 sets)
2. State Priority Certification, EPA Form 5700-28
3. Application, EPA Form 5700-32, including authorizing resolution and site certificates.
4. Proposed subagreements or explanation of method of awarding proposed subagreements.
5. Evidence of compliance with the Flood Disaster Protection Act and the Sewer Use Ordinance requirements.
6. Sewer System Rehabilitation Scheduling, where applicable.
7. Institutional Arrangements (service agreements in multijurisdictions).
8. Schedule for compliance with Operation and Maintenance requirements.
9. Payment Schedule (refer to Chapter VII).
10. Evidence of progress in developing user charge system.

Re: 40 CFR 35.920-3(c), .925-3, -10, .927-2, -4  
40 CFR 30.315, .405-10

#### D. PLANS AND SPECIFICATIONS APPROVAL

The review of plans and specifications is described in Chapter V of this Handbook. The applicant has been notified that the plans and specifications are approvable, and should have been informed of any missing forms or documents which must be included in the final bidding documents. The reviewer should confirm this by examining the project file. The applicant is responsible for submitting 2 sets of the plans and specifications, including all required documents, as a part of the Step 3 application. In particular the applicant should be informed of the requirement for inclusion of the latest wage rate determination in accordance with the Davis-Bacon Act.

#### E. ADMINISTRATIVE REVIEW

##### 1. Priority List Compliance and Certification

###### Purpose:

The State agency is required to certify each project as entitled to priority for a grant in accordance with the State priority system and resulting project priority list.

###### Discussion:

Chapter II discusses the State priority system and list. Once the system and annual list have been approved by EPA, each project is certified by the State as being entitled to priority for a grant over all other projects below it on the priority list (EPA Form 5700-28, see Appendix B).

If the project being certified is for a grant increase due to cost overruns, the applicant and State are subject to special conditions described in Chapter II, B-2 State Priority System and List, and B-3 Funding.

Only projects which have been certified by the State as entitled to priority for Federal assistance may receive grants.

### Review Procedures:

Review State Priority Certification and determine that:

- a. the name, project number and description of project agree with the application, form 5700-32, and the approved State priority list;
- b. the form includes the signature of the authorized State official;
- c. the award of grant assistance for the project will not exceed the State's allotment, including reallocations;
- d. the award of grant assistance will not jeopardize the funding of any projects of higher priority.

Re: 40 CFR 35.915, .917-2, .920-2, .925-3, .925-4  
Program Guidance Memorandum, PG-33, 5/10/74;  
PG-46, 1/17/75

## 2. Application Form

### Purpose:

EPA Form 5700-32 serves as the formal application document and sets forth the information necessary to qualify for a construction grant. Additionally, the application contains "assurances" from the applicant which are necessary to satisfy statutory requirements.

### Discussion:

The application for a Step 3 grant is submitted by the authorized representative of the jurisdictions included in the approved facility plan. The applicant must have the legal authority to finance, construct, operate and maintain the proposed wastewater treatment facilities.

The application form is used to request initial grants, amendments, and supplemental grants. The form (see Appendix B) contains instructions for completion of each of the five parts. Part II, Section B must be completed for a Step 3 grant and must be accompanied by site certification from legal counsel indicating the applicant's interest in the project site and ability to obtain any required easements or rights-of-way.

Part III, Section D, concerns the applicant's proposed method of financing the non-federal share of the project. The applicant may not use revenue sharing funds obtained under the State and Local Fiscal Assistance Act of 1972 to finance his portion of the eligible project costs. However, items which are not included within the scope of the EPA grant as allowable costs may be funded with revenue sharing funds. The grant request should not include costs for pretreatment of incompatible industrial wastes, nor costs for treatment of wastes originating from Federal installations (excluded from allowable costs).

In certain cases involving sewage collection systems (not treatment plant nor intercepting sewers), the applicant may use Community Development Block Grant Funds as the community's local share. In these cases the reviewer should contact the regional DHUD office for specific limitations.

The statutes require that the applicant comply with related laws and regulations and give other assurances. Many of these requirements are satisfied for a Step 3 grant when the applicant signs the application and thereby assures and certifies that he will comply with the requirements. However, additional evidence of compliance with some of these assurances is required from the applicant (see Section E.4). A copy of the authorizing resolution designating the official to act as the representative of the applicant (Part V, item 1 of the application form) must be included with the application. Any subsequent changes in the authorized official must also be documented by a copy of the resolution authorizing the change.

#### Review Procedures:

Review the application form and determine that:

- a. the name, project number, and description of the project and the amount of the grant request agree with the State Priority Certification Form 5700-28 and the approved State Priority List;
- b. the form is signed by the authorized representative and a copy of the authorizing resolution is attached;
- c. the certification of project site interest and the status of easements and rights-of-way is included;

- d. information regarding the project location, entities involved and cost data corresponds to that in the Summary of Costs of Planned Treatment Works Scheduled by Project and Category;
- e. all items in the application are complete or marked not applicable (NA);
- f. Part V, Assurances is included with the application. If not, properly signed form must be obtained.
- g. force account work must be properly identified.

NOTE: Particular emphasis is placed upon review of Part III, Section D, Proposed Method of Financing Non-Federal Share, to insure that the applicant can fully fund his share of the project costs and that revenue sharing funds will not be used to match those costs eligible for EPA grant assistance (if Community Development Block Grant Funds are to be used, contact DHUD);

Re: 40 CFR 30.315  
40 CFR 35.920-2, .920-3(c), .925-15, .925-16  
Program Guidance Memorandum, PG-3, 6/25/73;  
PG-55, 5/5/75  
31 CFR Part 51, Department of Treasury

### 3. Contracts and Subagreements

#### Purpose:

Contracts or subagreements for personal or professional services are submitted by the applicant and reviewed by both the State and EPA to insure that the scope and nature of the proposed services are sufficient to result in approvable facilities and that the fees and schedules are reasonable.

### Discussion:

The personal and professional services covered by the subagreements at the time of Step 3 application submission are generally the consulting engineering services. The regulations state that the application shall include *proposed subagreements or an explanation of the intended method of awarding subagreements for performance of any substantial portion of the project work.*

Also, the regulations require that any such subagreements or lower tier subagreements include an "access" clause allowing the State or EPA access, at reasonable times and places, to the work or records. The "access" clause is applicable to subagreements or lower tier subagreements in excess of \$10,000.

The detailed requirements of and procedures for procuring personal or professional services appear in 40 CFR 35.946, .937. Subagreements in which the fee is a percentage of construction costs are not acceptable nor are cost multiplier contracts where profit is included in the multiplier.

### Review Procedures:

Review the agreement(s) and determine that:

- a. the grantee has complied with 40 CFR 35.936 and .937;
- b. the scope of work is sufficient to construct approvable facilities;
- c. completion schedules are reasonable and in agreement with the plans and specifications.

Re: 40 CFR 35.920-3(c), .935-7, .936, .937, Appendix D.  
40 CFR 30.605

### 4. Assurances

In addition to the assurances contained in Part V of the application form, the applicant is to comply with the additional procedures listed below:

- a. Flood Disaster Protection Act of 1973 - To determine if a community is required to participate in the flood insurance program, consult the Federal Register of June 25, 1975, pages 26740-26756, and the weekly updates thereto as published in the Register, or consult the regional DHUD office. If the community is eligible for participation and if the project exceeds \$10,000 in value and contains structures requiring such insurance, the applicant is to furnish evidence that it is participating in the program and a letter of intent that it will obtain the required insurance both during construction and for the useful life of the project.

Structures that must be insured are those containing four walls and a roof (control building or pumping station for example). Items which need not be insured are sewers or other facilities not likely to be damaged in the event of flooding.

Projects outside the flood hazard areas or in areas not yet delineated by DHUD need not obtain flood insurance. Communities have until one year after notification of identification as a flood-prone area to meet the flood insurance requirement.

Re: 40 CFR 30.405-10  
Program Guidance Memorandum, PG-25, 3/1/74;  
PG-25A, 11/4/74;  
PG-54, 7/8/75

- b. Sewer Use Ordinance - The applicant must submit a current sewer use ordinance or a letter of intent that such ordinance will be enacted before completion of the project. The sewer use ordinance must prohibit new sources of inflow (illegal connections from sump pumps, foundation drains, roof leaders, etc.) from being connected to the sewer system and require proper design and construction techniques for new connections. It must also require pretreatment of toxic or incompatible industrial wastes prior to discharge into the system.

Re: 40 CFR 35.927-4, .925-15



## 5. Operation and Maintenance Scheduling

The applicant must provide evidence that he will comply with the requirements for the efficient operation and maintenance of the proposed facilities. This involves the submission of an O&M manual, development of emergency procedures, use of properly trained staff, and provision of adequate budget, operational reports and adequate laboratory testing. Grant payments will be limited until these items are submitted by the applicant for review and approval by EPA.

At the time of the Step 3 application, a schedule which shows the time of submission of the required documents to EPA is satisfactory evidence that the applicant will comply with the O&M requirements. The schedule may also show when the operating personnel will be hired. Many states have adopted specific programs for O&M and the reviewer should be familiar with the requirements of the particular state.

Re: 40 CFR 35.920-3(a), .925-10, .935-12

## 6. Sewer System Rehabilitation Scheduling

Where the scope of the Step 3 grant includes sewer system rehabilitation, the applicant must submit a schedule for completing the rehabilitation program. Because the applicant is required to comply with the schedule for sewer system rehabilitation in order to receive full grant payment, the schedule must be reasonable for the work involved. It is desirable that the rehabilitation program be completed prior to completion of the plant. However, the rehabilitation program may continue beyond the scheduled start-up provided that the unfinished rehabilitation work will not have an adverse affect on the operation of the plant.

Re: 40 CFR 35.927-5(c), .935-16, .927-3

## 7. Institutional Arrangements

The applicant must have proper jurisdictional control over all political entities within the service area to insure the adoption of user charges, cost recovery systems, and sewer use ordinances and to insure full implementation of the sewer system rehabilitation program (where applicable). The control will normally be in the form of signed service agreements between the applicant and each contributing municipality specifying the obligations of all parties for compliance with the applicable statutory and regulatory requirements.

Re: 40 CFR 35.917-6

F. GRANT AWARD PROCEDURES

Procedures for a Step 3 grant award are identical with those for a Step 1 award, as shown in Chapter IV, pages 14 and 15, insofar as items 1 through 4 are concerned. Item 5 for a Step 3 grant follows:

5. Grant Agreement/Amendment

Purpose:

The Grant Agreement/Amendment (EPA Form 5700-20) serves as a formal document of agreement between the U.S. Government and the applicant, and constitutes a legally binding contract when executed.

Procedures:

EPA Form 5700-20 (see Appendix B) is completed by the Regional Office based upon the information submitted in the application package, including any subsequent changes. The agreement must define the scope of the project. Modifications to grant amounts, scope of work or other items are made on the basis of the review process. Special conditions of the grant are included in Part III b. These special conditions may be based upon clearinghouse comments, requests from the State agency or conditions unique to the project.

The grantee must complete certain regulatory requirements before full grant payment may be made. Because these requirements are so important, and to avoid oversight on the part of the applicant, they may be included in the grant agreement as "special conditions". These are:

- a. User Charge/Industrial Cost Recovery Systems - No more than 50% of the Federal share of the Step 3 grant may be paid until the grantee has submitted evidence of the timely development of the UC/ICR systems, and no more than 80% may be paid until the systems are approved.
- b. O&M Manual - No more than 50% of the grant may be paid until the draft manual has been submitted or evidence of compliance has been received, and no more than 90% may be paid until a satisfactory O&M manual has been furnished.

- c. Sewer Use Ordinance - No more than 80% of the Step 3 grant may be paid until the sewer use ordinance(s) is approved.
- d. Rehabilitation Program - No more than 80% of the grant may be paid until compliance with the rehabilitation program (if required) is achieved.

The grant agreement/amendment is not sent to the applicant until five working days after the signing by the Regional Administrator in order to allow for necessary congressional notification. The applicant is given three weeks to accept the grant offer and to return the signed grant agreement/amendment to EPA.

The individual signing the grant agreement/amendment must be the authorized representative as shown on the application form. Any changes must be documented through a resolution by the jurisdictions involved.

Re: 40 CFR 35.935-12, -13, -16

G. PROCUREMENT OF CONSTRUCTION CONTRACTS

1. Authorization and Formal Advertising for Bids

Discussion:

Once the grantee has accepted the grant offer, EPA may authorize advertising for bids (completed and approved bidding documents, including plans and specifications, were a part of the Step 3 grant application). While the approved bidding documents contain the necessary requirements for formal advertising (35.938-4), the letter authorizing the grantee to advertise for bids should reemphasize and briefly remind the grantee of these requirements and the procedures to be followed after receipt of bids.

Procedures:

Immediately after acceptance of the grant offer, the reviewer should prepare a letter to the grantee:

- a. authorizing him to advertise for bids in accordance with regulations;
- b. indicating the documents to be submitted and procedures to be followed after receipt of bids (see item 2 following for list of documents);
- c. warning him not to award contracts until receiving authorization to do so is received from EPA.

Re: 40 CFR 35.935-10, .938-4

## 2. Review of Bids

### Purpose and Discussion:

A review of the bids, bidding procedures, and accompanying documents is made to insure compliance with applicable laws and regulations and to insure that contracts will be awarded to the lowest responsive, responsible bidder.

### Review Procedures:

The following documents are to be submitted and reviewed prior to authorizing award of construction contracts.

- a. a certified tabulation of all bids received;
- b. two copies of the proposal form and bonds from the successful bidder;
- c. a statement from the authorized official giving the names of the bidders to whom the grantee wishes to award contracts and the amount of each contract;
- d. proof of advertising indicating the circulation dates and time for receipt of bids;
- e. a copy of each addendum issued during the bidding period and acknowledgement of its receipt by the successful bidder;
- f. signed copies of the certification by the contractors regarding compliance with a home-town or imposed plan, as applicable;

- g. if award is to be made to other than the low bidder, a justification from the applicant indicating why the low bidder is not responsive or responsible;
- h. a revised cost estimate, as necessary (see suggested cost breakdown format, Appendix B);
- i. other documents showing conformance with applicable State and local laws and ordinances.

Re: 40 CFR 35.935-4, .938

### 3. Grant Increases/Decreases

#### Discussion:

The grant amount is adjusted, as appropriate, after receipt of bids to more accurately reflect project costs.

#### Procedures:

a. Grant increases - if the bids exceed the estimated construction costs and the excess costs cannot be covered by the contingency allowance, and if the grantee wishes to award the contracts on the basis of these increased costs, he must request a grant increase through the State agency. The State must submit a statement to EPA authorizing the grant increase. A contingency allowance (generally between 3 and 5 percent of construction costs) is to be included in the revised project costs to allow for change orders, overruns, etc. Grant increases require a revised grant agreement/amendment, the updating of the GICS, and Congressional liaison notification if the increase exceeds \$10,000. Refer to Chapter VII, E., Increases and Decreases, for specific procedural instructions.

b. Grant decreases - if the bids are less than the estimated construction costs contained in the Step 3 application, the grant is to be reduced accordingly but should continue to include a contingency allowance (generally between 3 and 5 percent of construction costs). Grant decreases require a revised grant agreement/amendment and the updating of the GICS. Refer to Chapter VII, E., Increases and Decreases, for specific procedural instructions.

c. Contingency adjustment - regardless of whether a grant increase or decrease is appropriate, the contingency allowance noted in the Step 3 grant application should be adjusted after bids have been received. Common practice has been to allow a ten percent contingency allowance for a Step 3 grant request but to adjust the allowance to between 3 and 5 percent of the construction costs after receipt of bids. Should the contingency adjustment result in a need for a grant increase or decrease, follow the procedures in a. or b. above.

Re: 40 CFR 35.915(g), (h)  
40 CFR 30.900-1  
Program Guidance Memorandum, PG-41, 10/16/74

#### 4. Protests

##### Discussion:

In the award of contracts, many individuals and firms have a vested interest in the decision as to who will receive the construction contract. If the proposed award is not in favor of their particular interests, they may choose to protest the award. In such instances, the protester must take his grievance to the grantee for initial resolution. In turn, the grantee must advise EPA of the protest, the basis therefor, and his proposed method of resolution. If the protester is dissatisfied with the decision of the grantee and feels that Federal law will be violated by the proposed award, he may ask the Regional Administrator to review the grantee's decision.

The award of contracts is subject to an immense body of laws and regulations and often involves sensitive legal issues. Therefore, the construction grants reviewer should consult the Regional

Counsel when he learns of a protest or of an action which may lead to a protest in order to obtain advice as to any steps he should take relative to the protest. Early consultation with Regional Counsel is particularly important when a proposal is made for award of the contract to other than the low bidder or when an attempt is made to withdraw a low bid.

#### Review Procedures:

The construction grants reviewer must exercise caution in handling protests, especially with regard to commenting on the nature of the protest or recommending courses of action. Accordingly, the reviewer should:

1. Assure that the protest is taken up with the grantee as a first means of resolution. Any comments to the grantee or protester at this time should be limited to procedural requirements.
2. If the protester is dissatisfied with the grantee's decision on his protest, assure that the protest is referred to the Regional Office with the protester's statement as to what Federal law or regulation would be violated by the proposed award and any comments the grantee wishes to submit.

The reviewer, in consultation with Regional Counsel, will decide if the protest is valid or without merit and so advise the Regional Administrator. If it is decided that the protest is without merit and the Regional Administrator concurs, the protest may be dismissed without further proceedings. If the protest appears to have some merit, Regional Counsel is responsible for coordinating actions as prescribed in 40 CFR 35.939 to resolve the matter. The reviewer should assume the lead role in gathering data necessary to a final decision and in assuring timely resolution of the protest.

Re: 40 CFR 35.939



## 5. Authorization to Award Contracts

### Discussion:

After reviewing the bids and determining that all regulatory requirements have been satisfied, the grantee is given authorization to award contracts. This authorization is in the form of a letter and should contain instructions for arranging a pre-construction conference with the grantee, his resident inspector, the State agency, the successful contractor and a representative of EPA.

## H. PRECONSTRUCTION CONFERENCE

### Purpose:

The preconstruction conference is held to identify and clarify the responsibilities of the grantee (and his consultant, where appropriate), the contractor, the State and EPA.

### Discussion:

Preconstruction conferences are not mandatory but are to be encouraged wherever possible. The conferences may be called at the request of the State, the grantee, the contractor or EPA. EEO may also hold separate preconstruction conferences to discuss the equal employment opportunity responsibilities of each party. The subject matter to be discussed at the preconstruction conference may vary from project to project but should address the responsibilities of each participant. The procedures below list several areas which might be discussed at the conference.

### Procedures:

Suggested subjects to be discussed at preconstruction conferences include:

- a. the responsibilities and authority of the grantee, the contractor, the resident inspector, the State and EPA;
- b. compliance with State and local laws and ordinances;

Re: 40 CFR 35.935-4

- c. compliance with Davis Bacon and related laws concerning the posting and payment of minimum wage rates;

Re: 40 CFR 35.935-5, 30.415

- d. equal employment opportunity requirements;

Re: 40 CFR 35.935-6; 40 CFR Part 8

- e. access to the work site and records;

Re: 40 CFR 35.935-7

- f. requirements for adequate engineering supervision and inspection during construction;

Re: 40 CFR 35.935-8

- g. payment documents, requests and procedures for filing;

Re: 40 CFR 35.945

- h. project changes, including time of completion, change orders, change in project scope or grant amount;

Re: 40 CFR 35.935-9, .935-11, .938, .955

- i. interim and final inspections by the State and/or EPA;

Re: 40 CFR 35.935-14

- j. records to be maintained by the grantee, the inspector, and the contractor and the auditing procedures;

Re: 40 CFR 30.805, .820

- k. requirements for timely submission of
  - a user charge system
  - an industrial cost recovery system
  - a sewer use ordinance
  - an operation and maintenance manual
  - a plan of operation

Re: 40 CFR 35.935-12, -13, -16

- l. archaeological or historical resources requirements, as applicable;

Re: 40 CFR 6.214

- m. mitigating measures to be employed during construction, as recommended in the environmental assessment and contract documents.

Re: 40 CFR 6.512(a) (6)

## I. MONITORING OF CONSTRUCTION ACTIVITIES

### 1. Change Orders

#### Purpose:

A change order is the customary method of modifying the construction contracts after work has begun and may result in cost increases/decreases or other project changes.

#### Discussion:

During the course of construction, it may be necessary to make changes in the project which require a modification of the construction contract. The project changes may result from minor errors in the plans and specifications or consist of emergency changes required to protect life or property. Prior approval by EPA of minor or emergency change orders is not required.

Project changes which will alter the design or scope of the project; the type of treatment; the location, size, capacity or quantity of any major component; or which require additional Federal funds must receive the prior approval of the State and EPA before being executed. Approved change orders resulting in construction cost increases are ordinarily paid for from the contingency portion of the total project cost. Where the change order or combination of change orders exceeds the contingency allowance and the grantee requests an increase in the grant amount, the procedures in item G.3 of this Chapter are to be followed.

### Review Procedures:

To process a change order, the reviewer should determine that:

- it includes a justification statement from the grantee;
- it identifies contract cost increase or decrease in sufficient detail to allow for review as to reasonableness of the costs;
- it does not include work clearly approved in the specifications;
- it agrees with the unit price or unit price adjustments as specified in the contract documents;
- it has been approved by the State agency;
- it does not substitute one piece of equipment or material for another as a means of circumventing the "or equal" provisions of the specifications (40 CFR 35.936-13(a));
- if it alone or in combination with other change orders exceeds \$100,000.00, the grantee has negotiated with the contractor and costs are fully detailed and documented in accordance with 40 CFR 35.938-5(d);
- if it results in a request for a grant increase or decrease, the procedures in section G.3 of this chapter are followed.

Upon review and approval of the change order, the grantee is notified of such approval in writing and is authorized to execute the change order.

Re: 40 CFR 35.935-11, .938-5, .955  
40 CFR 30.900-1  
PG 17A, Contract General Provisions, Sec. 14

## 2. On-Site Inspections

### Purpose:

On-site project inspections are made to insure that the project is being managed properly, is on schedule, and is being constructed in accordance with approved plans, specifications and change orders.

### Discussion:

On-site project inspections are made during construction (interim) and at the completion of construction. The frequency of interim inspections will depend upon the size and complexity of the project. Interim inspections may be made by the State or EPA. If made by the State, they should be coordinated with the Regional Office, and copies of the inspection reports should be furnished to the project officer. EPA may also utilize Inter-Agency Agreement Inspectors.

Final inspections should be made within 60 days after being notified by the grantee that the project is complete and operating, that the necessary operational staff has been hired, and that the project has been accepted by the grantee. EPA has the responsibility for conducting final inspections but usually the Federal inspector will be accompanied by an official of the State agency.

Regional offices are encouraged to develop and use their own inspection report forms. Appendix B includes a sample inspection report for reference.

Procedures:

- a. Interim inspections - the EPA or State inspector shall determine that:
- the grantee is providing competent and adequate supervision and inspection and is maintaining appropriate inspector's logs;
  - approved plans, specifications and change orders are available at the project site;
  - construction conforms to the approved plans, specifications and change orders and is on schedule;
  - the latest engineer's estimate of work-in-place agrees reasonably with the actual observed construction;
  - reasonable tests of materials and equipment are being conducted and noted in logs or reports (slump tests of concrete for example);
  - equipment delivered to the site is being properly protected and stored;
  - a project sign is appropriately displayed and identifies appropriate agencies;
  - the wage rate decision is prominently displayed and agrees with the contract documents;
  - project accounting records are maintained and they distinguish between allowable and nonallowable costs supported by receipts or certified contractor invoices;

- safety provisions are being followed in accordance with OSHA requirements;
  - any special construction techniques or practices are being employed in accordance with the grant agreement;
  - the grantee has hired the operational staff and is providing training, as appropriate (see O&M requirements below);
  - the grantee is preparing an operation and maintenance manual;
  - the grantee is preparing a user charge and an industrial cost recovery system, as required;
  - the grantee is making satisfactory progress toward the completion of service agreements;
  - the grantee is providing wastewater treatment capability during construction;
  - procedure exists to call deficiencies to the attention of the authorized representative;
- b. Final inspections - the items under interim inspections should be considered, as appropriate, as well as the following:
- the facilities are complete, operating and, in the case of a treatment plant, will meet the effluent limitations required by the NPDES permit;
  - the facilities conform to the approved plans, specifications and change orders;
  - all equipment is operational and performing satisfactorily;



- appropriate operation and maintenance staff has been hired and instructed in the startup and operational procedures;
- laboratory facilities are complete and sufficient to conduct appropriate tests;
- the operation and maintenance manual, with schedule for routine maintenance and testing, is readily available and procedures are being carried out in accordance with the manual;
- accounting records are adequate and will be made available for audits;
- if not previously approved, the grantee is completing a user charge system, an industrial cost recovery system, a sewer use ordinance or service agreements;
- industrial dischargers are pretreating wastes as required.

Re: 40 CFR 35.935-8, -11, -14

### 3. Payment Conditions

#### Discussion:

Grant payments are discussed more completely in Chapter VII of this Handbook. Generally, however, Step 3 grant payments are made in accordance with the payment schedule included in the grant agreement. The grantee is responsible for submitting a payment request (EPA Form 2550-16) and supporting documentation. When it is received, EPA will review it and authorize payment as appropriate.

The grantee is also responsible for meeting particular conditions before he may receive full payment. These have been mentioned in earlier parts of the Handbook but are summarized below for the reviewers convenient reference.

- a. Operation and Maintenance Manual - No more than 50% of the Federal share may be paid until a draft O&M manual is submitted, and no more than 90% may be paid until the manual is approved by the Regional Administrator.

Re: 40 CFR 35.935-12

- b. User Charge System - No more than 50% of the Federal share may be paid until the grantee has submitted adequate evidence of the timely development of a user charge system, and no more than 80% may be paid until the system is approved by the Regional Administrator.

Re: 40 CFR 35.935-13

- c. Industrial Cost Recovery System - No more than 50% of the Federal share may be paid until evidence of timely development of an industrial cost recovery system has been submitted by the grantee, and no more than 80% may be paid until the system is approved.

Re: 40 CFR 35.935-13

- d. Sewer Use Ordinance - No more than 80% of the Federal share may be paid until the sewer use ordinance(s) has been submitted by the grantee and approved by the Regional Administrator.

Re: 40 CFR 35.935-16

- e. Rehabilitation Program - No more than 80% of the Federal share may be paid until the grantee has given evidence of complying with a sewer system rehabilitation schedule, where appropriate, as incorporated in the grant agreement.

Re: 40 CFR 35.935-16

- f. Final Inspection - Final payment may not be made until the final inspection has been completed and the Regional Administrator has determined that the treatment works have been satisfactorily constructed in accordance with the grant agreement and approved plans and specifications

Re: 40 CFR 35.935-14

#### 4. User Charge System

##### Purpose:

The user charge system requires that users of a treatment works will pay their proportional share of operation and maintenance (including replacement) costs.

##### Discussion:

In the Step 2 application, the applicant must have developed an approvable plan and schedule for the implementation of a user charge system. During the Step 3 grant activity, the applicant must show evidence of carrying out the implementation plan in accordance with that schedule.

The system must fulfill the objective of distributing the costs of O&M among all users in proportion to their waste load contributions. Factors to be included in the calculation of charges are the volume, flow rate and strength of the wastes of all users. Each user, or class of users, must be charged on an equitable basis to fairly apportion the O&M costs. An effective user charge system will bring about operational self-sufficiency.

Where more than one political jurisdiction is included in the project service area, the user charge system must be legally adopted by each jurisdiction. In the first year of operation, the user charges may be based upon past experience or reasonable estimates. However, each year thereafter, the applicant is to review the user charges and initiate revisions, as necessary, to reflect actual operation and maintenance costs of the treatment works and actual waste load contributions from each user or class of users.

No more than 50% of the Federal share of a Step 3 grant may be paid until the grantee has submitted to the Regional Administrator adequate evidence of timely development of its user charge system. No more than 80% of the Step 3 grant may be paid until the user charge system is approved by the Regional Administrator.

#### Review Procedures:

The user charge system submission must be reviewed to insure compliance with the following criteria:

- a. the program apportions fairly the O&M costs among all users according to waste load or flow characteristics. A system such as one based upon ad valorem taxes (dependent upon taxable property ownership) is not acceptable because it does not adequately consider waste characteristics. Appendix B of 40 CFR Part 35 includes acceptable user charge system models;

- b. the implementation of the program will provide sufficient revenues to offset all actual O&M costs;
- c. the system will be adopted, implemented and enforced by all political jurisdictions within the service area of the treatment works. Resolutions, local ordinances, written statements or other agreements may be accepted as evidence of compliance by the political jurisdictions involved.

Upon review and approval of the user charge system, the grantee is to be notified in writing of such approval and requested to submit a certified statement of compliance once the system has been officially implemented. Payment requests are to be processed as appropriate.

Re: 40 CFR 35.905-26,.925-11, .935-13, Appendix B  
Program Guidance Memorandum, PG-37, 7/9/74;  
PG-38, 7/11/74

## 5. Industrial Cost Recovery System

### Purpose:

The industrial cost recovery system imposed by PL 92-500, provides a means whereby industrial users of a publicly-owned treatment works repay the proportionate Federal share of the construction costs of the treatment works allocated to their use.

### Discussion:

The industrial cost recovery (ICR) system provides a system by which all industrial users of the treatment works will repay, over a defined period, their portion of the Federal share of construction costs of the works. These costs are to be recovered by the grantee over the useful life of the treatment works but not to exceed 30 years. The grantee is obligated to collect these payments no less often than annually

and to refund 50% of the total amount (plus any interest accrued) to the U.S. Treasury annually. Of the remaining half of the recovered funds, 80% (40% of the total) is to be used by the applicant, subject to the Regional Administrator's approval, for the eligible costs of expansion or reconstruction of facilities associated with the project. And 20% (10% of the total) can be used for any purpose except construction of industrial pretreatment facilities or rebates to contributing industries. The system is applicable only to the Federal share of construction costs. No Federal requirement exists for recovery of the State or local share of costs for treatment of industrial wastes (although State or local laws may be so enacted). The Federal share of the cost of construction includes the Steps 1, 2 and 3 grants except the costs associated with I/I analysis and the cost associated with sewer rehabilitation and nonexcessive I/I if they are not attributable to industrial users.

ICR assessments are in proportion to the industrial user's wastewater characteristics. The wastewater characteristics may include strength, volume, delivery flow rate, and shall be monitored according to the schedule included in the approved ICR system. The grantee reviews the ICR system annually and adjusts ICR payments based on the monitored characteristics. If an industrial user discontinues use of the treatment works, its ICR payment will cease.

(NOTE: Certain industrial users may be excluded from ICR payments. Those are small "dry industries" and, in the case of a plant expansion, those industrial users which have reserved and paid for capacity in the existing plant prior to March 1, 1973 (See ICR Guidelines).

#### Review Procedures:

The reviewer shall determine that the grantee has met the following requirements in each milestone point in relation to grant activity to develop its ICR system:

- a. In the application of Step 2 or Step 3 grants:
  - an assurance from applicant that he agrees to require industrial users to pay that portion of the grant amount allocable to the treatment of wastes from such users.

- signed letters to the applicant from each significant industrial users indicating intent to pay its portion of the grant amount allocable to the treatment of its wastes and the period of intended use of the treatment works.
- b. At the 50% level of the Step 3 grant payment:
- the identity of grantee personnel, consultants, grantees legal counsel, or certified public accountants employed or retained by the grantee to develop the ICR system;
  - a detailed schedule for completion of all significant portions of the ICR system (e.g., ordinances, identification of industrial users, etc.)
  - other evidence to demonstrate that the grantee has made timely progress in development of an approved ICR system.
- c. At the 80% level of the Step 3 grant payment:
- a complete questionnaire, in the form shown in Appendix A of ICR Guidelines, which describes the pertinent features of the ICR system;
  - a resolution or written agreement by the grantee that it will properly and lawfully implement all the provisions of its ICR system;

NOTE: See ICR Guidelines for procedures on segmented and multiple facility projects.

- an opinion of the grantee's legal counsel, in the form shown in Appendix B of ICR Guidelines that the grantee's ICR system meets the requirements of Section 204(b) of the statute, applicable EPA regulations and ICR Guidelines.

d. At the completion of project or the date of beneficial use by the first industrial users:

- within 30 days, a notification in writing from the grantee to the Regional Administrator of the date of the implementation of the approved ICR system.
- proper bookkeeping of financial records and information relative to the ICR system for EPA audit for the duration of the cost recovery period.

Re: 40 CFR 35.905-6, 7, 8, .925-12, .928, .935-13  
ICR Guidelines

## 6. Operation and Maintenance Program

### Purpose:

Federally funded treatment works are to be designed, operated and maintained to achieve the effluent limitations required in the NPDES permit. A well planned operation and maintenance program is an essential step in achieving that objective.



### Discussion:

Surveys conducted in 1973, 1974, and 1975, which are included in the Clean Water Report to Congress for each of those years, indicate that approximately one-third of the Federally-funded treatment plants surveyed were not achieving the level of efficiency for which they were designed. In most cases, these problems resulted from inadequate operation and maintenance. To prevent the future occurrence of these unacceptable conditions, strict attention is to be focused on operational considerations during facility design and the development of an effective operation and maintenance program for the completed treatment facilities.

During the Step 3 activity, the grantee is to implement a program for efficient staffing, training of staff, and operation and maintenance of all treatment works facilities. The program must insure that the facilities are maintained at the designed level of efficiency to meet the effluent standards as established in the NPDES permit, and to comply with all other applicable State and Federal requirements for process control, monitoring and reporting. The grantee must provide an adequate budget and a trained staff of personnel to insure the success of the program. The elements of the O&M program should be those included in a Plan of Operation which also identifies required actions and related implementation dates needed to assure proper start-up and continued operation.

A preliminary Plan of Operation should be reviewed concurrent with the review of project plans and specifications and should be included as a part of the Step 3 grant application package. The preliminary plan should be as complete as possible in identifying needed actions and implementation time frames, but specific dates may, of necessity, be omitted until a construction start date is known.

A critical responsibility of the applicant is the preparation of an operation and maintenance manual for each treatment facility, including pumping stations. No more than 50% of the Federal share of the Step 3 grant may be paid until the draft operation and maintenance manual is submitted and no more than 90% of the grant may be paid unless the grantee has furnished a satisfactory final operation and maintenance manual.

### Review Procedures:

The review of the operation and maintenance program submissions included in the Plan of Operation shall assure compliance with the following requirements:

#### a. Staffing and training

- that a staffing plan, to include staffing and salary schedules, staff structure and organization, and certification requirements is developed;\*
- that the chief operator is hired before construction is 50% complete;
- that a preoperation training schedule is developed within 30 days after hiring chief operator;
- that a discussion of hiring problems encountered and actions to solve the problems, if appropriate, is held 60 days prior to start-up;
- that a list of positions filled and qualifications of personnel hired is prepared 30 days prior to start-up\* and assurance is given that vacancies will be filled, if appropriate;
- that a continuous training plan and schedule\* is developed 30 days prior to start-up;

\* To be submitted to both State and EPA.

#### b. Administrative functions

- that program and laboratory facilities are adequate to perform appropriate monitoring and analysis necessary to assure adequate process control and compliance with the NPDES permit and State requirements;

- that arrangements for submission of appropriate operational reports to the State have been made;
- adequate consideration has been given to operational procedures during the start-up period;
- provision is made for employee safety programs and training is conducted in advance of plant start-up;
- provision is made for developing and implementing a maintenance management system;

c. Budget

- provision is made for adequate annual budget to insure efficient operation and maintenance, including administration, supplies, utility charges, and ancillary equipment;
- provision is made for salaries to attract qualified personnel and to train and upgrade employees;

d. Emergency operating plan - in developing the plan the following items and provisions should be taken into account:

- effects of emergencies on operation;
- vulnerability analysis of system;
- protective measures;
- emergency response program;
- periodic revision of plan as necessary;

- e. Operation and maintenance manual - the O&M manual is the primary document required in the operation and maintenance program, and should incorporate items a-d above into a comprehensive package of instructions and information. Specifically, the manual should include:
- design information describing the components and equipment of the treatment plant, including simplified schematic diagrams of the facilities, pipelines and control systems and detailed diagrams of more complicated areas;
  - process information discussing the control of various processes to achieve maximum efficiency, including a clear explanation of process functions of the various components in simplified language with references to appropriate equipment manuals for detailed technical information;
  - maintenance requirements, including schedules for routine adjustment and lubrication of equipment, referencing appropriate manufacturer's manuals for details;
  - laboratory procedures, specifying various analyses and monitoring schedules required for process control and by the NPDES permit and other regulations, describing laboratory equipment and general maintenance, and referencing appropriate literature for standard test procedures;
  - safety aspects of the various process units and related equipment and procedures for complying with the OSHA requirements;

- administrative procedures describing the various records required and reports to be submitted as a function of the State monitoring program;
- troubleshooting procedures and a description of the emergency response plan, including procedures for notification of proper authorities, emergency equipment repair, and references to the appropriate equipment manuals for specifications and limitations of components.

Re: 40 CFR 35.925-10, .935-12  
 Federal Guidelines, Operation and Maintenance  
 of Wastewater Treatment Facilities, August 1974  
 Considerations for Preparation of Operation and  
 Maintenance Manuals, (GPO No. EP 2.8: OP 2)  
 Emergency Planning for Municipal Wastewater  
 Treatment Facilities (GPO No. EP 2.8: W 28/6)  
 Estimating Laboratory Needs for Municipal  
 Wastewater Treatment Facilities (GPO No. EP 2.2:  
 W 28/3)  
 Start-up of Municipal Wastewater Treatment  
 Facilities (GPO No. EP 2.8: W 28/5)  
 Maintenance Management Systems for Municipal  
 Wastewater Facilities (GPO No. EP 2.8: W 28/4)  
 Estimating Staffing for Municipal Wastewater  
 Treatment Facilities (GPO No. EP 2.8: W 28/3)  
 A Planned Maintenance Management System for  
 Municipal Wastewater Treatment Plants  
 (GPO No. EP 1.23/2: 600/2-73-004).

CHAPTER VII  
FINANCIAL CONSIDERATIONS

- A. Introduction
- B. Allowable and Unallowable Costs
- C. Force Account
- D. Payments
- E. Increases and Decreases
- F. Audits

## A. INTRODUCTION

This chapter discusses various financial considerations that are common to all three step grants.

Section B, Allowable and Unallowable Costs, covers problems faced by the reviewer in dealing with these costs and presents five major categories of cost statements.

Section C, Force Account, discusses when this method can be used, prior approvals needed by EPA and other considerations to serve as guidelines for the reviewer.

Section D, Payments, covers prior costs, Step 1, 2 and 3 grant payment schedules and payments.

Section E, Increases and Decreases, discusses when increases occur, contingency funds covering these, and what the reviewer needs for EPA approval.

Section F, Audits, provides the reviewer with pertinent information to help in answering the questions of grantees and in working with the auditors.

B. ALLOWABLE AND UNALLOWABLE COSTS

1. General

In the process of reviewing grant payment requests, the reviewer is confronted with having to make decisions on the eligibility of certain project costs for which there is no absolute guidance. Such costs, termed "allowable and unallowable costs," have been assembled in paragraph 3 of this Chapter to provide uniformity in interpreting their eligibility.

In general, for miscellaneous costs to be eligible for grant participation, they must:

1. Be necessary and reasonable and not a normal expense of municipal administration.
2. Be authorized (or not prohibited) and be consistent with Federal, State, and local laws or regulations.
3. Be consistent with policies and regulations which are applicable to both federally assisted and other activities of the unit of government of which the grantee is a part.
4. Not be included in the costs allocable to any other federally financed program.

In summary, allowable costs are those for which specific eligibility has not been statutorily defined and which -- based upon and EPA policy, appropriate Federal cost principles and reasonability -- are interpreted as eligible for grant assistance.

Re: 40 CFR 35.940  
40 CFR 30.705



## 2. Allowability Determinations

The following pages discuss allowable/unallowable costs. However, no one document can cover all of the various considerations that arise. In these instances, the reviewer must make a determination and, as necessary, seek advice from the Construction Operations Branch, Municipal Construction Division. Final determinations concerning the allowability of costs are conclusive unless appealed within thirty days in accordance with the "Disputes" article (Article 7) of the EPA General Grant Conditions.

Re: 40 CFR 35.940

## 3. Allowability/Eligibility of Miscellaneous Costs

The following statements of allowability/eligibility relating to certain construction grants project costs are included for the reviewers ready reference:

### - Indirect Costs:

Indirect costs are those incurred for a common or joint purpose, benefiting more than one project or cost objective and not specifically identifiable to the particular project or cost objective benefited. Indirect costs consist of items of a general overhead nature such as office space, utilities, telephone, etc. The costs are allowable only if determined on the basis of a negotiated indirect cost agreement and incorporated in the grant agreement. See 40 CFR 30.715-2.

### - Travel Costs:

Grantee travel costs - allowable travel costs include travel considered necessary and directly related to the accomplishment of project objectives. Travel not directly related to construction and/or "start up" of the facility, including trips to professional meetings, symposia, lectures, etc., is not allowable as a direct charge to the project. Travel not directly related to a specific project may, however, be recovered under an Indirect Cost agreement. (Federal Management Circular (FMC) 74-4, 7-18-74).

Architect/Engineer travel costs - allowable travel costs include travel considered necessary and project related, including on-site travel costs. Costs of relocation of employees and their families may be considered allowable when such travel is justified and approved by the grantee. The cost of transportation between living quarters and the construction site is normally unallowable. In unusual circumstances, where job sites are located in isolated areas and living quarters are not available within 30 miles, travel costs between living quarters and the job site are considered allowable. (41 CFR 1-15.2 and 41 CFR 1-15.4)

- Bond Costs:

All costs under PL 92-500 Grants associated with the approval, preparation, issuance and sale of bonds (including bond counsel and underwriters' fees) are ineligible for grant participation. Interest on bonds or any other form of indebtedness is unallowable. (FMC 74-4, 7-18-74)

- Liquidated Damages:

Monies received by grantees in the form of liquidated damages shall have no effect on the determination of allowable costs of grant projects. However, any additional costs - construction, engineering, legal, or administrative-generated because of a contractor's lack of performance should be covered by the liquidated damages received. Thus, any such increase in cost as a result of lack of performance is unallowable for participation even in the event that the grantee elects not to exercise his right to recover liquidated damages.

- Bid Bond Forfeiture:

All bid bond forfeitures should be treated as a reduction to project construction costs.

- Rate Studies:

Such studies are eligible if required for the establishment of user charge or industrial cost recovery system in order to comply with Sections 35.925-11 and 12 of the Title II Regulations. Such studies require prior approval either in the grant agreement or an amendment thereto. Allowable costs may include legal, C.P.A., and engineering fees related to the studies. (In order to avoid double payment, care must be exercised to assure that such work is not incident to a general contractual obligation).

- Financial Reports and Studies:

To the extent that such reports constitute "Rate Studies" (see above) for user charges and/or Industrial Cost Recovery procedures, the costs are allowable; provided that such studies are approved in advance by the Regional Office and that the results of such studies are acceptable to EPA. Financial reports which constitute studies of, for example, the local tax base, structure, etc., to determine the financial capabilities of the applicant or the financial feasibility of the proposed undertaking are similarly allowable. The cost of all other financial reports and studies should generally be considered unallowable in that they constitute a normal function of government.

In this regard the Regional Office should adhere to a strict interpretation of the term "studies". Generally, "studies" refers to preliminary reviews, overviews, examinations, analyses, etc. The interpretation must not be extended to include preparing procedures, designing implementation schemes, drafting statutes or regulations, delineating boundaries relating to finances, issuance of bonds, adjustment of tax rates, establishment of assessment districts, etc. or other activities which are a normal function of government and as such are unallowable.

- Establishment of Special Assessment Districts:

The "mechanics" of establishing special assessment districts developed, for example, on the basis of rate studies (see above), are a normal function of government and as such the costs associated therewith are unallowable. Included in this restriction are legal, administrative and engineering costs associated with activities such as:  
(1) drafting, review and passage of statutes/ordinances,  
(2) preparation of regulations, (3) delineation of district boundaries, (4) elections, etc.

This policy extends equally to the establishment of any "special districts" such as election, service, rate, etc. districts (including Regional Authorities) related to the grant project.

- Public Liaison Services:

Such services are generally unallowable since they constitute a type of public information service and as such are not directly related to or necessary for the construction of the treatment works.

- Assistance with State and Federal Regulations:

The cost of assistance associated with addressing State and Federal Regulations and procedures which are basic to the functions of general government, such as preparation of applications and related documents, obtaining state construction permits, discharge permits, etc. are unallowable. Costs growing out of meeting specific Federal statutory requirements such as public hearings and other activities related to the user charge study, facilities planning, NEPA procedures, Uniform Relocation Assistance and Real Property Acquisition Policies Act, etc. are allowable.

If such costs entail assistance which is readily available through Federal or State offices, such as interpretation of Regulations, explanations of grant procedures, etc. they should be disallowed.

(In order to avoid double payment, care must be exercised to assure that such work is not incident to a general contractual obligation).

- Redesign/Replanning Costs Resulting from Changes in Federal Requirements:

In those cases in which an applicant's completed or partially completed planning and/or designs are rendered invalid or unacceptable by changes in Federal requirements, both the original cost plus the redesign or replanning costs are allowable. The Regional Office must assure itself that the planning and/or design thus invalidated was undertaken in good faith by the applicant and was not the result of a disregard for existing Federal directives by either the applicant or his agent.

- Costs of Implementing the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (PL 91-646):

Basically there are four categories of costs associated with this Act which may be considered allowable:

1. Moving and related expenses
2. Replacement housing
3. Relocation assistance advisory services (entailing direct services of the grantee in assisting the displaced person(s)).
4. Acquisition of real property.

Documented allowable costs from these categories incurred on or after July 1, 1972, will be treated as other allowable project costs and reimbursed at the same percentage rate. In the case of costs resulting from acquisition or displacement occurring before July 1, 1972, EPA shall pay the full amount of the first \$25,000 of such costs for each displaced person. Allowable costs should be determined in accordance with 40 CFR Part 4 and guidelines which will be issued pursuant thereto.

- Field Surveys to Identify Cultural Resources:

Reasonable costs incident to field surveys to identify historical, architectural, archaeological and cultural resources in the primary impact area of grant projects are allowable. Allowable costs must be determined on a case-by-case basis and may include the cost of on-site inspections, review of pertinent documents, photographic reconnaissance, services of archaeologists or historians, etc.

Such costs should receive prior approval and delineation by the EPA Regional Office. Survey costs associated solely with the examination of the National Register of Historic Places are unallowable. EPA may participate in the cost of intensive surveys (e.g. "digging") only when a sufficient amount of information exists to indicate that there is a reasonably high probability of discovering important cultural resources.

See Program Guidance Memorandum #52 (7-2-75) for additional guidance on this subject.

- Industrial Planning:

Step 1 related costs of industrial planning conducted and paid for by an industry whose wastes will be treated in a municipal system are not allowable. (See Section 35.925-15 of the Title Regulations).

- Facilities Serving Communities and Federal Facilities:

Whenever a planned treatment works will jointly serve a municipality and a Federal facility, that portion of the construction cost allocable to the Federal facility will not be allowable for 75 percent construction grant funding, subject to the following exceptions:

1. Facility planning costs.
2. Cost of Step 2 work if a Step 2 grant has been certified by the State for funding to EPA prior to the issuance of PG-62 (12-29-75).

3. Design and construction costs allocable to Federal facilities producing less than \$250,000 gpd or 5 percent of the total design flow of waste treatment works, whichever is less.

That portion of the construction costs allocable to the Federal facility shall be based on all factors which significantly influence the cost of the treatment works. Factors such as strength, volume, and delivery flow rate characteristics will be considered and included to insure a proportional allocation of costs to the Federal facility.

As a minimum, the portion of construction cost allocable to the Federal facility should be based on the ratio of its flow to the total design flow of the treatment works. The portion (percentage) allocable to the Federal facility must be agreed upon by the municipality and Federal agency, and approved by EPA prior to award of a Step 2 or Step 3 grant, whichever is applicable, for the works or any portion thereof. See PG-62 - 12-29-75 for additional details.

- Site Acquisition vs. Site Preparation Costs:

All costs associated either directly or indirectly with the acquisition of any land used for or incidental to the construction of treatment plants, lagoons, force mains, gravity sewers, outfall lines, appurtenant piping and structures, and pumping stations whether by purchase, rental, lease or easement (except as noted above) are ineligible. Similarly, all legal, realty, engineering, and grantee costs associated with such ineligible acquisition are unallowable as are the costs of easements, rights-of-way, nonconstruction related surveying, plat preparation, meetings, etc. (NOTE): The cost of land used as an integral part of the treatment process (such as spray irrigation sites - see PG-49 - 7-18-75) may be eligible if approved and in accordance with pertinent regulations and/or guidelines. Legal, administrative and engineering costs associated with the acquisition of grant eligible land are allowable for grant participation.

Costs associated with the preparation of the treatment works site (including appurtenant features) before, during, and to the extent agreed upon in the grant agreement or amendment thereto, after construction are generally eligible. These costs include such items as: grade and construction staking surveys, surveying for alignment and slope, preparation of working drawings and plans dealing with site preparation, locations, grades, slopes, distances, depths, alignments, etc. Also eligible are costs such as finegrading, seeding, and protective trees and shrubs.

Costs related to reasonable site screening or aesthetic purposes are also allowable. Criteria for participating in aesthetics related work include: Support expressed in NEPA related studies, approved facility plans, necessary screening of adjacent properties, whether the facility is in constant public view or remote therefrom, etc.

- Certificate as to Title to Project Site:

Legal costs associated with certifying as to the adequacy of the grantee's interest in the project site should be considered a normal function of government incident to the project and as such are unallowable. (Except in the case of grant eligible land (see above).

- Acquisition of Privately or Publicly Constructed Waste Treatment Facilities:

Costs incurred by a grantee or applicant associated with the purchase, lease or acquisition of privately or publicly constructed and owned waste treatment facilities are not allowable.

- Demolition of Existing Structures:

Demolition of existing structures constitutes an allowable cost provided that the structures are on the facility site (including rights-of-way for the eligible sewer lines) and that construction cannot be undertaken



without such demolition. Off site demolition is unallowable. Aesthetics related demolition is allowable only if it conforms to the criteria relating to the allowability of site preparation outlined above.

If demolition of existing structures is required on a site not previously owned by the grantee, the grantee must address such demolition in the cost effective analysis and demonstrate to the satisfaction of the Regional Office that in choosing the site appropriate consideration was given to the cost of demolition.

- Removal, Relocation and/or Replacement of Utilities:

Costs associated with the removal, relocation and/or replacement of utilities (water, electricity, etc.) are allowable when such activity is incident to and necessary for the construction of the eligible facility. However, participation in the cost of replacing existing utilities with utilities having a greater capacity than that originally in place can only be allowed if mandated by local, State or Federal codes, ordinances or statutes. If a mandate for greater capacity does not exist any additional cost must be borne by the grantee.

The provision of new or increased utility service when required for the facility (e.g. construction of a new facility or increased capacity) being constructed is an allowable cost provided that the grantee (utility customer) would ordinarily be required to pay for such installation.

- Restoration of Streets and Rights-of-Way:

The cost of restoring streets and/or rights-of-way to their original condition is an allowable cost. The need for such restoration must result directly from the construction of the eligible project. Allowable restoration may include, for example: refilling and patching of street and road-way surfaces (generally limited to the width of the trench), fine grading and reseeding of off-street rights-of-way, reasonable tree plantings, restoration of sidewalks, etc.

- Mobile Equipment:

Generally, such equipment is allowable if identified by the grantee and approved in advance of purchase by the Regional Office and is directly necessary for the operation and/or maintenance of the overall wastewater treatment facility. Such equipment must be necessary for the transmission of wastewater or sludge or for the maintenance of plant grounds and/or equipment. Allowable items include but are not limited to:

- a. Portable stand-by generators.
- b. Large portable emergency pumps to provide "pump-around" capability in the event of pump station failure or pipeline breaks.
- c. Sludge tanks and trailers and other necessary transport and handling equipment in those cases where the location of the ultimate sludge disposal site requires such equipment.
- d. Grounds and building maintenance apparatus. Such apparatus may include, for example: mowers and snow removal equipment (in certain geographic areas). Regional Offices may use such criteria as cost effectiveness, potential for abuse, frequency of use, etc. in considering allowability. Requests for participation based upon less than 100 percent use, should be agreed to only in special situations and prorated accordingly.

- e. Cars and trucks are unallowable, except for specialized sludge handling/transport equipment as noted in "c" above.

NOTE: The grantee is required to maintain property accountability on all such equipment in accordance with FMC 74-7 and 40 CFR 30.810.

- Office Equipment and Furnishings:

Such items as identified by the grantee and approved in advance by the Regional Office, when installed or located at the treatment works and necessary to the administrative and/or technical (including training and meetings) functioning of the works, may be allowable. In larger facilities allowability may be extended to reasonable special purpose rooms and equipment related to the function of the facility. There may well be instances in which the Regional Office will need to exercise judgement as in the case of "luxurious furnishings", televisions, etc.

NOTE: The grantee is required to maintain property accountability on all such equipment in accordance with FMC 74-7 and 40 CFR 30.810.

- Shop Furnishings:

Reasonable furnishings for shop areas such as shelves, bins, work benches, etc. are allowable costs.

NOTE: The grantee is required to maintain property accountability on all such equipment in accordance with FMC 74-7 and 40 CFR 30.810.

- Laboratory Equipment and Supplies:

Generally, laboratory items identified by the grantee and approved prior to procurement by the Regional Office as necessary to conduct tests as may be required for plant operation are allowable. In addition, the cost of a reasonable inventory of chemicals and supplies necessary to start operation of the plant is allowable. Large stocks of expendable materials are, however not allowable. An EPA publication "Estimating Laboratory Needs for Municipal Wastewater Treatment Facilities" discusses equipment needed for various size plants.

NOTE: The grantee is required to maintain property accountability on all such equipment in accordance with FMC 74-7 and 40 CFR 30.810.

- Safety Equipment:

Based upon the specific needs of individual facilities, necessary and reasonable safety equipment is an allowable cost. Generally such equipment should be delineated in the operation and maintenance manual and the approval of that document may constitute the basis for our participation.

NOTE: Such equipment should meet applicable Federal, State, local, and industry safety regulations and standards. The grantee is required to maintain property accountability on all such equipment in accordance with FMC 74-7 and 40 CFR 30.810.

- Tools:

Allowable tools are only those which are specified as special purpose tools necessary for the repair and adjustment of specific process components by the equipment supplier(s)/manufacturer(s) or approved by the Regional Office. All other tools are unallowable.

NOTE: The grantee is required to maintain property accountability on all such equipment in accordance with FMC 74-7 and 40 CFR 30.810.

- Replacement Parts:

Replacement parts identified and approved in advance by the Regional Office as necessary to assure uninterrupted operation of the facility may be included as allowable costs. Allowable replacement items are only those which constitute critical parts of major systems components and which are: (1) not immediately available and/or whose procurement involves an extended "lead-time", (2) identified as critical by the equipment supplier(s), or (3) are critical but not included in the inventory provided by the equipment supplier(s). In those instances where adequate "back-up" components are built into the system a reduction in replacement parts should be made.

Items of routine "programmed" maintenance such as ordinary piping, air filters, couplings, hose, bolts, etc. are unallowable. See EPA Technical Bulletin: "Design Criteria for Mechanical, Electric and Fluid System and Component Reliability" for additional discussion.

- Collection System Maintenance Equipment:

EPA participation in the cost of such equipment purchased in connection with a construction grant shall be based upon a proration of the portion of the collection system in which we participate to the total system. Thus if EPA participates in 65 percent of the grantee's total collection system, the allowable costs shall constitute 65 percent of the cost of such equipment purchased pursuant to the grant agreement. Generally, the proration should be based upon the relative lengths of the new to the total system rather than cost or size. Such equipment must be reasonable and be approved by the Regional Office.

In addition allowability will be based upon: (1) a demonstrable frequency of need, and (2) the equipment must be necessary to preclude the discharge or by-passing of raw sewage, and/or (3) the equipment is necessary to provide for the health, safety and welfare of the citizens.

- Project Inspection:

Costs associated with technical inspections of the eligible project before and during construction (including change order approved time extensions) are allowable. Such costs must be clearly documented and, to avoid double payment, the work must not be incident to a general contractual obligation.

- Groundwater Monitoring Facilities:

Costs associated with the construction of groundwater monitoring equipment and facilities may be considered allowable only in those cases in which, as a direct result of project construction, the possibility of groundwater deterioration, depletion or modification exists. Allowability may not be extended to the operation, surveillance and/or analyses associated with these facilities.

Such facilities require the prior approval of the Regional Office.

- Biological "Seeding":

Under certain conditions (climatic, geographic, nature of wastes, etc.) reasonable costs associated with the purchase and/or transportation of biological seeding materials required for initiating (or expediting the initiation of) the treatment process operation are allowable.

- Services Charges: a/

Service charges are defined as: any supplemental charges added to other direct cost (non-salary) which are claimed on an actual cost basis.

Regardless of contract terms, the actual cost of service charges must be supported by accounting records. If the service charges are not supported or if the actual cost is less than the amount claimed, the total difference is unallowable for Federal participation. This is in accordance with the ASCE manual which states that the service charge is for expenses to be reimbursed by the client.

- Fringe Benefits: a/

Regardless of contract terms, the actual cost of fringe benefits must be supported by accounting records when they are claimed as a direct charge. If the charges are not supported or if the actual cost is less than the amount claimed, the total or the difference is unallowable for Federal participation. Where the fringe benefits are claimed as a direct charge and also included in the multiplier the duplicate direct charge is unallowable for Federal participation.

- Labor Charges and Related Costs: a/

Regardless of contract terms, where charges have been made to the grant and there was no cost incurred, the charges should be questioned. Labor charges and related costs for straight time or overtime hours which are billed but for which cost has not been incurred will be unallowable for Federal participation. (Compensatory time will be considered in determining actual labor costs incurred. However, compensatory time is allowable only if it is incurred in accordance with established company policy, if it is properly controlled and accounted for, and if it is used within an annual accounting period.)

a/ (These requirements have been EPA National policy under both PL 84-660 and PL 92-500 as required under 40 CFR 30.800 and .805).

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C. FORCE ACCOUNT

1. General

In most instances a grantee contracts with engineering or construction firms to perform project related work. The program, however, permits use of the "force account" method wherein the grantees use their own employees, material, and equipment to perform all or part of the project work.

The use of force account is permitted for any Step 1, 2 or 3 grant work provided that prior written approval is obtained from the Regional Administrator. Such approval is based on the grantee's demonstrating that:

- a. he possesses the necessary competence required to accomplish such work;
- b. the work can be accomplished more economically by use of such method;
- c. emergency circumstances dictate its use.

In order to avoid problems with the force account method and to assist grantees who will be using force account, the reviewer must be familiar with those items needing prior approval. The reviewer must determine in advance that adequate procedures, records, and controls will be used by the grantee.

## 2. EPA Prior Approvals

A grantee must obtain prior written approval from EPA to use force account labor in lieu of subagreements for any Step 1 or Step 2 work in excess of \$10,000.00 or any Step 3 work in excess of \$25,000.00

The following items should be considered by the reviewer in considering approval of force account:

- a. all anticipated project administrative costs, including salaries of administrative employees, travel expenses, etc., in order to determine the extent of their allowability;
- b. proposed methods of timekeeping and timechecking, methods for establishment of wage scales for laborers and mechanics and methods for establishment of salaries of supervisory employees (sample time sheets, proposed wage rates and an explanation of the methods for determining those rates and other information necessary to comply with this item should be submitted as soon as possible);
- c. an indirect cost figure that is going to be used as part of the costs billed to the project (this must be a formal written agreement with EPA);
- d. allowances for use, repair and overhaul of grantee owned equipment and rental rates for rental equipment, including when rental rates begin, apply and end, and the extent of allowability of repairs and overhaul (precise usage records for such equipment must be maintained);
- e. the writeoff or depreciation of small tools and other expendable items or equipment;
- f. any disposal and adjustment of costs in connection with unused material and tools left over on completion of the work.

### 3. Other Considerations

The following considerations provide additional guidelines for the reviewer in the force account area:

- a. adequate cost accounting records must be maintained;
- b. satisfactory controls must be established and used to assure that all material, supplies, equipment, labor cost, etc. charged to the project are actually used in connection with the project;
- c. the Copeland Antikickback Regulations apply (see Appendix C-2 of 40 CFR part 35);
- d. adequate insurance must be maintained. This insurance is the same as that discussed in 40 CFR 35.935-3 covering such construction insurance as is customary and appropriate including fire and extended coverage, workmen's compensation, public liability and property damage and "all risk" as required by local or State law.

Re: 40 CFR 30.645, .810  
40 CFR 35.935-2(a), .936-14  
Program Guidance Memorandum, PG-34 5/7/74

### D. PAYMENTS

#### 1. General

It is the policy of EPA to process payment requests and to make periodic progress payments as expeditiously as possible. Payments are to be made in accordance with the approved payment schedule set forth in the grant agreement.

Re: 40 CFR 35.937-16, .938-6, .945  
Program Guidance Memorandum, PG-43, 11/18/74

## 2. Prior Costs

After June 30, 1975, no Step 1 project work may be initiated without a grant award unless the State (based on the review and approval of a plan of study) has requested the Regional Administrator to reserve grant funds. After June 30, 1975, Step 2 work initiated without first having received a grant from EPA is not eligible for grant participation.

Occasionally grant applications will be received for projects in which prior costs have been incurred. These must be handled on a project by project basis and be in accordance with the regulatory date limitations as described in 40 CFR 35.925-18.

In considering prior costs the reviewer should bear in mind that:

- those costs incurred prior to the initiation of construction of the project must be claimed prior to the grant award or no payment may be made for those costs;
- they should be supported by documents identifying dates and the nature of the work performed;
- they should be examined in light of the allowable/unallowable cost statements in "Section B" of this chapter.

Re: 40 CFR 35.945(a)



### 3. Schedules

Schedules for the completion of any of the three grants steps are contained in the grant agreement/amendment. The work schedule is generally discussed with the applicant prior to the grant application and should reflect realistic targets. However, the reviewer has the responsibility for final approval of the schedule, including payments. Once the grant payment schedule has been approved and incorporated into the grant agreement/amendment, the grantee may request grant payment for work which has been completed. If completed work and the resulting payment requests occur prior to dates set forth in the approved schedule, the schedule may be revised by preparing a new grant agreement/amendment. Considerable flexibility may be exercised in setting up the schedules and the documentation required.

Any time that a progress schedule is revised, the Municipal Permits Office of EPA should be notified.

- a. Step 1 and Step 2 - Periodic progress payments for Step 1 and 2 work are to be made on the basis of completion of the step or completion of specific tasks within the step grant as contained in the grant agreement. Every effort should be made to divide the scheduling into tasks, but where this is not possible or practical, the grantee should submit a certified statement as to percentage of completion of the work on a periodic basis.
- b. Step 3 - Step 3 payment schedules should realistically reflect the likely construction progress. For example, early equipment purchases and seasonal weather conditions may require large grant payments for certain months. If the monthly requests exceed those on the schedule, the grant must be amended. Payment schedules should be structured so as to preclude any need for frequent changes.

#### 4. Interim Payments

Problems with both payment requests and payments can be minimized if, at the time of the grant award, the payment request procedure is discussed with the grantee. Each region has specific internal procedures for handling requests and processing payments so the reviewer must be familiar with these. Payments generally follow the following sequence:

- the grantee submits EPA Form 2550-16 (Outlay Report and Request for Reimbursement for Construction Programs);
- the grantee provides necessary documentation to support the request;
- the reviewer approves the request;
- the Regional Fiscal Office is instructed to make payment.

##### a. Payment Requests Review

It is the responsibility of the construction grants reviewer to monitor the progress of the project. One means of doing this is by periodically reviewing payment requests and supporting documents. The frequency of the periodic reviews will depend on the size and complexity of the particular project. In instances where a monthly payment schedule has been established, the reviewer need not perform a detailed check of the request and supporting documents each month. If a problem is discovered later when checking the supporting documents, it can be resolved on a subsequent payment. Judgement will be required to avoid unnecessary delays.

b. Documentation

The following are some examples of task documentation for Step 1 and 2 projects:

- a grantee certified percentage of work complete--preferably divided into tasks (e.g. Step 2: 35% completion of design criteria; 60% completion of preliminary draft P & S; 90% completion of final draft plans);
- working drafts completed for specific tasks and which have been received in the Regional Office or are held by the grantee;

The following are some examples of documentation for Step 3 projects:

- the engineer's latest monthly estimate of work in place;
- invoices accompanying claims for work completed;
- equipment invoices accompanying claims for purchases.

c. Grant Conditions

The reviewer is reminded to check the grant agreement/ amendment and any subsequent amendments for any special grant conditions prior to approving payment requests. An example of this would be the limit on the percentage of the Federal share that may be paid prior to the submission of O&M manual. UC/ICR systems, etc. (Chapter VI, F, 5).

## 5. Final Payments

The final payment is made to the grantee after the final inspection is made by EPA, and after the "final payment request" is submitted by the grantee and the grantee has been found to have complied with all applicable requirements of the regulations and the grant agreement. Prior to the final payment, the grantee must execute and deliver an assignment, to the United States, in form and substance satisfactory to the Regional Counsel, of the Federal share of refunds, rebates, credits or other amounts (including any interest thereon) properly allocable to costs for which the grantee has been paid by the Government under the grant. The grantee must also execute and submit a release discharging the United States, its officers, agents, and employees from all liabilities, obligations, and claims arising out of the project work or under the grant, subject only to such exceptions which may be specified in the release.

Re: 40 CFR 35.945(e)

## 6. Refunds, Rebates, Credits, etc.

The Federal share of any refunds, rebates, credits, or other amounts (including any interest on them) that has accrued to or been received by the grantee in relation to the project, to the extent that they are properly allocable to costs for which the grantee has been paid under a grant, must be credited to the current State allotment or paid to the United States. If the Regional Administrator approves, the grantee may be allowed, reasonable expenses incurred in securing these refunds, rebates, credits or other amounts under the grant.

Re: 40 CFR 35.945(c) and (d)

## E. INCREASES AND DECREASES

### 1. Increases

Grant increases most commonly occur because of cost overruns occurring after the receipt of bids, cost of major change orders, or cost of a sewer system survey. As soon as the grantee sees that costs are going to be substantially more than that upon which the grant is based, the grantee must notify the State and EPA and give an estimate of the amounts involved. EPA will not increase a grant until the State has approved an increase from its available allotment.

In order to make a determination on the increase, the reviewer must:

- have a written justification for the increase from the grantee;
- have an approval letter from the State;
- determine that the increase in cost is eligible for grant participation;
- determine that funds for the increased grant are available in the State's allotment.

### 2. Increase Notification Procedure

Upon approval of an increase in the grant, the following procedures must be carried out: (Detailed explanations of each step can be found in Chapter IV, F.)

- a grant amendment must be prepared (EPA Form 5700-20); (if the increase in the grant amount is over \$10,000, the grant amendment is not sent to the grantee until five working days after signing by the Regional Administrator to allow for Congressional notification);

- the grant amendment information must be entered into GICS;
- Standard Form 240 must be prepared for clearinghouse notification;
- Notification of Grant Award Action, EPA Form 5700-1B, must be prepared and transmitted to Headquarters.

### 3. Decreases

Grant decreases most commonly occur when the bids received are less than the estimated construction costs contained in the Step 3 grant application. In most instances, a request for a decrease is not made by the grantee, but action is initiated by EPA after the review of the bid material. The grant is reduced as necessary but the new project cost continues a contingency allowance (generally between three and five percent of construction costs).

### 4. Decrease Notification Procedure

For a grant decrease, the following procedures must be followed:

- if EPA has initiated the decrease, the State is to be notified of the decrease and the State allotment is to be adjusted accordingly;
- a revised grant agreement/amendment must be prepared (EPA Form 5700-20);
- a revised grant amount must be entered into GICS;

- Standard Form 240 must be prepared for clearinghouse notification;
- Notification of Grant Decrease Action, EPA Form 5700-1D, must be completed and transmitted to Headquarters.

## F. AUDITS

### 1. General

By signing the grant agreement/amendment for a Step 1, 2 or 3 project, the grantee agrees that its books, documents, records, and papers, and those of its contractors, are accessible to the EPA Regional Administrator, the Comptroller General of the United States, or their authorized representatives. The EPA Office of Audit is responsible for audits of all Step 1, 2 and 3 grants. For Step 3 grants, however, it is the general rule that only those projects having grants over \$250,000 will be audited unless there is some indication of irregularities.

Re: 40 CFR 35.935-7

### 2. Objective

The objective of audits of construction grants projects is:

- a. to determine whether the management controls exercised by the grantee through its management system, accounting system, procurement system, and property control system are adequate to assure that costs claimed/incurred are reasonable, allowable, and allocable to the project under the grant terms and conditions, Federal Management Circulars, and applicable EPA regulations;

- b. to identify any non-compliance with applicable grant provisions or EPA rules and regulations and to provide recommendations for improvement.

### 3. Types of Audits

There are two types of audits, interim and final.

- a. Interim audits are performed during the earlier part of a project to review internal accounting controls, procurement systems, design and construction controls, and costs incurred.
- b. Final audits are performed after completion of the project to review the grantee's records to assure that costs claimed are reasonable, allocable, and allowable and that the grantee has met the grant objectives.

### 4. Criteria for Choosing Projects

All Step 1, 2 or 3 projects are not audited. For Step 3 projects, it is the general rule that only those with grants over \$250,000 will be audited unless there is some indication of irregularities. Also, the intensity of the audit will vary from project to project depending on its complexity and the problems encountered.

The EPA Office of Audit utilizes relevant reports, construction grant file information, the results of sampling tests and the following criteria to select projects for audit:

- a. size of the grants/projects
- b. existence of unit-price contracts



- c. type of contracts and subcontracts
- d. the number and significance of change orders
- e. experience with prior grantee's project audits
- f. identification of deficiencies

The EPA grant reviewer will be called upon to supply the auditors with the following information to assist in determining the scope, schedule, resource plans and estimates of audit efforts:

- a. grant number
- b. grantee name, address and phone
- c. eligible project cost
- d. grant amount
- e. number and dollar value of change orders
- f. number, amount and type of construction and engineering agreements
- g. extent of force account work
- h. cut off date
- i. whether construction is located in a flood hazard area requiring the grantee to purchase flood insurance
- j. NPDES Permit.

#### 5. Major Activity Areas for Audit Focus

The major activity areas that are addressed during the audits include the grantee's accounting, procurement and project management practices. Both interim and final audits will include the audit of costs associated with these activities.

- a. Accounting Practices - the grantee's accounting system should include the following:
  - 1) accounting records
  - 2) supporting documents
  - 3) traceability
  - 4) segregation of costs (eligible/ineligible; allowable/unallowable; direct/indirect)
  - 5) internal control
  - 6) accounting reports.
- b. Procurement Practices - the grantee is responsible for demonstrating that engineering and construction contracts were awarded in compliance with the regulations.
- c. Project Management Practices - the project management approach applied by the grantee is significant to his ultimate ability to control costs and schedules.

## 6. Final Report

The final audit report issued by the Office of Audit is an advisory report only and any action such as recovery of funds is the responsibility of the Regional Administrator.

Once the audit review is completed, the process of issuing a final report is flexible, depending on the complexity or seriousness of any deficiencies noted in relation to the project. In general, the following procedures will be followed:

- a. the rough draft report will be presented to the grantee. The grantee and its subcontractors have two weeks to answer any questions raised in the draft;
- b. the Office of Audit will incorporate the grantee's answers into the report and present this report to the Regional Construction Grants Branch Chief. The Branch Chief and Project Officer will meet with the auditor to resolve any issues raised in the report in order to reach concurrence;
- c. an exit interview will be held by the auditors with the grantee to discuss the findings in the final report;
- d. the final report will be presented to the Regional Construction Grants Branch Chief who will recommend necessary action to the Regional Administrator.

The key to this entire process is flexibility because at any one point the auditor may want to meet with the Project Office to discuss findings and resolve issues. The reviewer will generally be involved in the discussions to resolve issues after the grantee has responded to the rough draft. It is the Project Officer's responsibility to determine whether exceptions and claims in the report are justified.

The final report will contain a statement of concurrence between the Regional Administrator and the Office of Audit. A final report may be issued, however, even if both parties do not concur. There may be circumstances where the Regional Administrator chooses to withhold comment pending further investigation. This is usually done to protect the Agency in cases where future litigation may be involved. Final resolution rests with the Regional Administrator.

Re: "Audit Guide for Construction Grant Program"

## APPENDIX A

### FLOW DIAGRAM FOR PROCESSING CONSTRUCTION GRANTS

U S. Environmental Protection Agency  
Region 5, Library (5PL-16)  
100 S. Dearborn Street, Room 1670  
Chicago, IL 60604