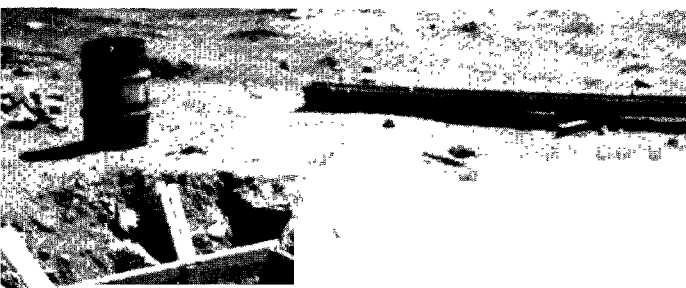

August 1976

All You Need to Know About Sewage Treatment Construction Grants

**Federal Funds Available
for Municipal
Water Pollution Control**



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- Money, local governments, and water pollution.
 - A multi-billion dollar program for water cleanup the U.S. Environmental Protection Agency (EPA) hopes local governments cannot refuse.
 - And how local governments can get their fair share of the Federal funds available to build sewage treatment facilities.

That, in brief, is what this pamphlet is all about.

END

Some Background

The facts are simple. Municipal sewage is a major source of water pollution. Inadequately treated sewage from 107 million people still flows into our waterways. Only 53 million people in the United States are served by sewer systems that provide secondary treatment, the minimum requirement, or better.

To safeguard public health and welfare, Congress enacted a law—the Federal Water Pollution Control Act Amendments of 1972, Public Law 92-500—that says local governments must control this form of water pollution.

At the same time, Congress recognized that many local governments could not afford to build sewage treatment systems without help. So Congress also voted to give local governments \$18 billion in Federal grants to help do the job.

As of October 1, 1976, EPA had made grants totalling \$12 billion.

That means \$6 billion in Federal funds remains to be obligated to local governments for sewage treatment construction grants by September 30, 1977.

How does a city, town, or county get a piece of the \$6 billion still available and put it to work for cleaner water? How, in sum, does the construction grants program work?

Some questions and answers will help explain the basics of the program:

1. Who's eligible for a Federal grant?

Municipalities, intermunicipal agencies, or interstate agencies. That includes cities, towns, boroughs, counties, parishes, districts or other bodies created by State law to take care of sewage disposal. It also includes Indian tribal organizations.

2. How large are the grants?

The Federal grant will pay 75 percent of the total eligible cost of the sewage treatment project. The local government and/or State must provide the other 25 percent.

3. What will the Federal grant pay for?

The Federal grant will pay 75 percent of: The cost of the preliminary (facility) planning, the

design plans and specifications, and the actual construction of the treatment facilities.

The municipality must pay for the costs of preparing its application, which also includes a simple plan of study outlining the nature of the problem and the scope of the facility planning.

Projects eligible for grants include: New treatment plants; expansion or improvement of existing plants; interceptor and outfall sewer lines; pumping, power and other equipment needed to operate the system. Grants may also be made for sewage collection systems to serve development existing prior to October 18, 1972, for projects to control pollution from combined storm and sanitary sewers, and for land treatment of wastewater.

4. How does a local government get a grant?

The first thing a local government has to do is get its proposed project on the "priority list" prepared by the State which is responsible for planning a statewide approach to water pollution control. That involves State and EPA approval. (More on this process later.)

5. When is the Federal grant paid?

If a project is approved, Federal payments are made to the local government as all or part of three distinct steps are accomplished.

The first grant—a Step 1 grant—is made after the local government does a simple plan of study, meets State and Federal requirements, and has its application approved by the State and by EPA. Step 1 grant funds are then used to prepare a facility plan for the works the local government proposes to build.

When the facility plan is completed, the local government submits the plan with its application for a Step 2 grant. If the application is approved by the State and by EPA, the local government gets a Step 2 grant, which is used to prepare detailed engineering plans and specifications for works recommended in the approved facility plan. When the detailed plans and specs are completed, the local government submits them with an application for a Step 3 grant. If the application is approved the local government gets a Step 3 grant, which will be

used to build the new treatment facilities.

Note that there is no guarantee that a local government will automatically receive Step 2 and Step 3 grants once it is awarded a Step 1 grant. A variety of State and Federal legal requirements must be met before each grant can be made. Indeed, the purpose of this booklet is to help local governments understand those requirements and thus to help them move through the three-step grant process as quickly and smoothly as possible.

The grant for each step is not actual cash, but merely an obligation of the Federal Government to make its 75 percent of progress payments as the actual work is accomplished. In other words the grant is not an advance payment.

6. How long does this process take?

That depends on how complete that grant application is, on how thoroughly the local government has met all requirements, and on other factors. In many cases, the preconstruction period—from the time the project is conceived to the start of construction—has taken from twelve to thirty months. EPA is now working to cut that time period to nine to eighteen months. Construction may take one to five years, depending on the size and nature of the project.

So much for the basics of the program. Let's turn now to the grant process itself.

The Grant Process

Assume that a city—let's call it Existing Town, U.S.A.—has decided to take action to remedy its sewage pollution problem—that, for example, it wants to upgrade its inadequate primary treatment system to a secondary treatment system. It wants a Federal grant to help pay for the new facilities. What next?

First comes the *Preapplication Stage*. As noted in question 4 on page 2, the city seeks to have its proposed project placed on the State's "priority list." This is a State ranking of proposed projects in order of their importance. In evaluating requests for aid from its local governments, the State considers several factors, including:

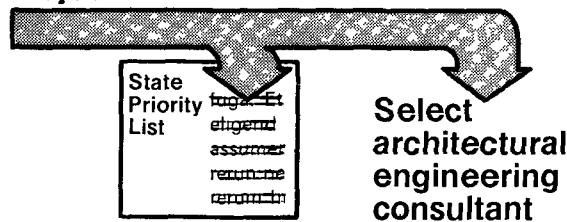
Severity of the pollution problem, the existing number of people affected, need to preserve high-quality water bodies, national priorities, and availability of Federal grant funds and the 25 percent non-Federal share. (Some States pay all or part of the 25 percent; in other States, the local government has to pay the 25 percent.)

Let's say the State determines that Existing Town's project deserves high priority; it puts the project on its list and submits the list to EPA for approval. EPA approves the list.

Existing Town's next job is to prepare a facility plan for the project. It selects a qualified architect-engineering consultant. Some cities have the professional know-how and do this themselves, but others retain an expert outside consultant who specializes in this field.

Choosing a qualified consultant is a critical decision. The consulting firm's facility plan will shape the ultimate cost-effectiveness, environmental soundness, and public acceptance of the project. (More on that later.) Thus,

**New
Town
Project**



choosing the best qualified consultant at the outset is crucial for the city.

The city and its consultant then meet informally, in a “preapplication conference,” with officials from the State water pollution control agency and the EPA Regional Office, to review the requirements for submitting a grant application and to discuss existing or potential problems.

The city then prepares a plan of study describing the nature of the pollution problems; outlining the tasks required for preparing a facility plan and the estimated costs of this work.

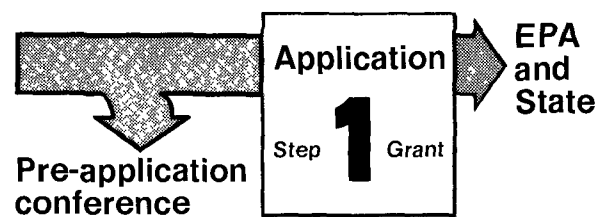
When this is done, the city submits an application for a *Step 1 grant* to the State and to EPA, using a form obtained from the EPA Regional Office.

With the grant application goes a State certification attesting the Step 1 project has priority for funding over other eligible projects and that it meets the requirements of State water pollution control plans and discharge permits. And at the same time, the city of Existing Town must also meet several other requirements. For instance, the city must:

Explain how it will raise 25 percent share of the Step 1 cost.

- Name an “authorized representative.” (This is the specific person, identified by name and title—such as the Mayor or County Executive or someone designated to act on the elected official’s behalf—who is authorized to enter into a construction grants contract with the Federal Government.)

The State and EPA’s Regional Office then review the application. If both approve it, EPA awards a *Step 1 grant*.



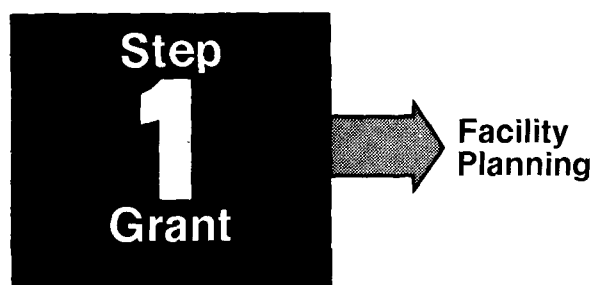
With this grant, the city enters the Facility Planning Stage. Using Step 1 grant funds, the city and its consultant prepare a facility plan.

The facility plan comprises development and evaluation (cost-effectiveness analysis) of alternative ways of achieving the desired degree of pollution control and the economic, social, and environmental costs of the alternatives. It also includes preliminary engineering design of the chosen method. The city seeks public involvement during this period. It may hold formal and informal meetings and hearings to solicit the public's reactions and views on alternatives, on locations for new facilities, on the cost to the taxpayers, and on the overall project.

A key objective of the facility plan is to make sure that the most cost-effective and environmentally-sound project is planned at the outset. In the past, too many applicants for construction grants have not always examined all feasible alternatives, have not always conducted comprehensive economic comparisons of alternatives, and have ignored or slighted primary and secondary environmental and social impacts of proposed treatment projects.

To meet its objectives, the facility plan has to provide answers to many questions, including these:

- Has EPA or the State issued a discharge permit and stated what effluent limits must be met? (An effluent limit is simply the maximum amount of a pollutant that may be discharged into a water body.)
- Will the project be cost effective? That is, will it achieve the needed degree of water pollution control at the least cost in money, and in



environmental impact and other non-monetary costs? This requires a careful cost-effective analysis of alternatives.

- Was recycling and land treatment of wastewater considered to eliminate or reduce pollutant discharge or other wastewater reuse methods?
- What will the project's impact be on the environment? This requires a thorough environmental assessment prepared as an integral part of the facility plan.
- Does the project call for reasonable or excessive reserve capacity, and how will the reserve capacity influence community growth?
- Will the best practicable treatment technology be used?
- Is the sewer system adequate or does it need to be repaired or replaced?
- How will sludge be disposed of? If by incineration, will it meet air pollution control regulations? If in a landfill, has it been approved by the appropriate State agency?
- Will the project meet the requirements of river basin and areawide planning agencies?
- Does the collection system have problems with excessive infiltration and inflow?
- Will the required sewer-use ordinance be enacted before the project is completed?
- And what plans have been made to assure efficient operation and maintenance of the system?

EPA is charged by law to make sure that potential problems are identified early and that the public has an opportunity to participate in the resolution of those problems and in the decision-making process. But beyond the legal requirements, local governments will find that involving the public early in the formulation of the project is the most effective way of assuring public support and acceptance of the new facilities.

When the facility plan is completed, the city submits it to the State for approval. If it's approved, the State then certifies that the project is ready for a *Step 2 grant amendment*.

In compliance with the National

Environmental Policy Act of 1969, environmental impact statements (EIS) must be prepared on proposals for legislation and other major Federal actions which will have a significant adverse impact on the human environment. The facility plan, which includes an environmental assessment as an integral part thereof, covers the primary and secondary environmental impacts of the proposed facilities and the alternatives. EPA reviews the facility plan and determines whether or not an environmental impact statement should be prepared. Where possible, this determination is made during preparation of the facility plan so that the EIS preparation will proceed while the facility plan is being completed, thus avoiding unnecessary delays.

This is the *Design Stage*. First, the city's consultant prepares an application for the Step 2 grant amendment and submits it to the State and EPA. After it's approved by both, EPA awards the Step 2 grant amendment, which is then used to prepare detailed engineering plans and specifications for the approved facility plan. The city and its consultant sometimes hold predesign conferences to consider such things as sewer overflows, bypassing untreated wastes during construction, operation and maintenance plans, user charges, and industrial use of the system.

The city must keep in mind that the law requires it to establish a system of fees—or user charges—to assure that every source putting wastes into the system will pay a fair share of operating and maintenance costs. The city must also keep in mind that the law requires any industry that will send its wastes to the



municipal system for treatment to pay its fair share of construction costs.

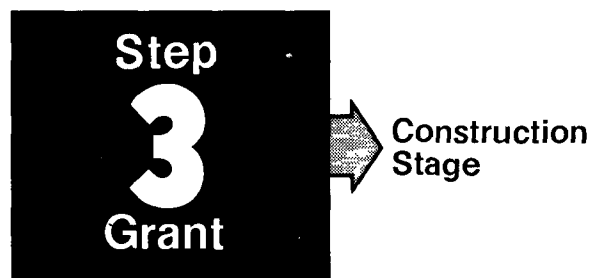
When the plans and specs are completed, the city submits them to the State and EPA, who review them to be sure all environmental, technical, and administrative requirements have been met. If the plans and specs are approved, the project goes on the State's priority list for construction.

The city is then ready to start the *Construction Stage*. It applies for a *Step 3 grant amendment*, which will be used to build the project. If the application is approved, EPA prepares and mails the city a formal grant agreement. That agreement says that EPA will pay 75 percent of the eligible cost of the project provided the city complies with all requirements.

The city signs and returns the grant agreement to EPA, which then sends copies of the project plans and specs to the city's engineering firm via the State agency. Some minor corrections may be made in the plans and specs at this time.

Then the city advertises for bids on the construction work, in accord with the requirements of local and State laws and in accord with EPA regulations. At the close of the bidding period, the sealed bids are publicly opened and read aloud. The city then analyzes the bids and selects the lowest responsive and responsible bidder. The city gives EPA a tabulation of all bids, a copy of the lowest responsive and responsible bid, proof that it advertised for bids, and a request for approval of the contract award to the successful construction bidder.

EPA reviews all this material. It reviews the successful bidder's equal employment





opportunity program to determine if the contractor has a reasonable affirmative action program. A pre-award conference may be held. Then, if all's well, EPA approves the construction award.

With this approval, the city is ready to break ground and begin work on the project. But EPA continues to be involved, for it is required by law to make sure that the billions of taxpayers' dollars invested in water pollution cleanup are properly spent. EPA staffers make interim field inspections, process change orders, and conduct interim audits. And while construction continues, a manual for the operation and maintenance of the treatment system must be prepared and approved by both the State and EPA.

When construction is completed, the State and EPA conduct final pre-operation inspections. And EPA conducts a final audit and makes final payment.

Then comes the *operation and maintenance stage*. The new treatment system goes into operation. To assure proper operation and maintenance—and compliance with State and /or EPA permit conditions—the State and

EPA conduct periodic inspections throughout the life of the project. Periodic audits may also be made to check on the implementation of user fees and industrial cost recovery systems.

Why this "after the fact" concern and involvement by the State water pollution control agency and EPA? Routine inspections of treatment plants built with the help of Federal grants have shown that too many of the plants are *not* being operated to achieve the pollution cleanup they were designed to achieve. That means the Nation's taxpayers are not getting their money's worth. And that also means those plants are not reducing their contributions to the pollution of our waterways to the degree necessary to properly safeguard public health and welfare.

Thus EPA and the State water pollution control agency continue to keep an eye on sewage treatment systems throughout their life—whether built with Federal funds or not, for the construction grant program is only part of a comprehensive nationwide campaign to prevent, reduce, and eliminate water pollution.

A brief outline of that nationwide campaign follows.



Toward Cleaner Water

The 1972 amendments to the Federal Water Pollution Control Act did much more than provide \$18 billion for grants to communities to build sewage treatment facilities.

The law proclaimed two general goals: First, wherever possible by July 1, 1983, water shall be clean enough for swimming and other recreational uses, and clean enough for the protection and propagation of fish, shellfish, and wildlife. Second, there shall be no discharges of pollutants into the Nation's waters by 1985.

To move toward achievement of those goals, the law set out a series of actions that must be taken by Federal, State, and local governments, and by industries. The law also established a system of national effluent limitations for both municipal and industrial polluters.

The law also established new planning requirements for State and local governments. It established a new permit system; under this permit system, no discharge from any point source is allowed without a permit from EPA or from a State with an EPA-approved permit program. Publicly-owned sewage treatment plants and municipally-controlled discharge points—as well as industrial dischargers—must obtain permits. If a polluter cannot meet the permit requirements immediately, a compliance schedule sets out a timetable for taking specific steps toward compliance.

The law established an initial minimum requirement of secondary treatment for all publicly owned sewage systems and a tougher requirement of “best practicable” treatment by July 1, 1983. (Secondary treatment generally removes 85 percent of suspended solids and organic matter that depletes the oxygen in water.) Best practicable treatment may be additional chemical or biological treatment of the effluent from a secondary treatment plant, or land treatment of the effluent as an alternative treatment process.

In total, the 1972 law created formidable new tools “to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.”

In essence, the 1972 law said that nobody—no



city or town, no industry, no government agency, no individual—has a right to pollute our water. What was acceptable in the past—the free use of our waterways as a dumping ground for our wastes—is no longer permitted. From now on, under the 1972 law, we must safeguard our waterways even if it means fundamental and costly changes in the way we manufacture products, produce farm crops, and carry on the economic life of our communities.

With the cooperation and hard work of State and local governments, and of industry, progress has been made toward cleaning up our rivers, streams, lakes, and harbors. Industries and governments at all levels have already invested considerable amounts of money to reduce and eliminate water pollution. But much still remains to be done if we are to have water that is safe and healthful for use in our homes, for use by industry and agriculture, for swimming and boating, and for fish and wildlife.

Some Closing Words

EPA is determined to obligate the remainder of the \$18 billion in sewage treatment construction grants to local governments as expeditiously as possible. EPA is determined to cut red tape and speed up its review and approval of grant applications. To that end, EPA recently boosted its program staff and improved the administration of the program.

But EPA needs the help of local and State governments, and of the architects, engineers, and contractors who design and build treatment systems. For no matter how well EPA streamlines its operation and no matter how many people EPA assigns to the grant program, the hard fact is this: EPA cannot award grants unless it gets grant applications, and EPA cannot approve inadequate or incomplete grant applications.

State and EPA personnel can help local governments and their consultants. But how well the local government completes the grant application and takes other necessary actions before and during the grant process will largely determine if and how fast EPA can issue the grant.

So, if you are a local government official, or an architect or engineer serving as a consultant to a



local government, please keep in mind that EPA cannot approve a treatment plant construction grant unless the applicant demonstrates that:

- The project is environmentally, socially, and institutionally acceptable.
- The secondary and indirect impacts of the project have been fully considered and evaluated.
- All feasible alternatives to the proposed project have been fully considered and evaluated.
- The proposed project is cost effective.
- Provisions have been made to assure fiscal integrity.
- Sludge will be disposed of properly.
- All users of the project will pay their fair and proportional share of the cost.
- The project will be operated and maintained effectively.
- And the public will have an opportunity to participate in the formulation of the proposed project.

Other requirements must also be met, of course, as noted earlier. But failure by grant applications to properly consider these points has generally caused the most delay in review and approval of construction grant applications.



*EPA listens
to the people*

For Further Information

No pamphlet can cover all the requirements that must be met to obtain a Federal grant to build sewage treatment facilities. The purpose of this brief publication is to acquaint readers with the basics of the program, to outline the grant process, and to highlight some of the major issues that must be considered.

Additional information on the grant program is available from State water pollution control agencies and EPA. Especially useful to local governments planning to apply for a grant, and their consultants, are:

“Manual of References”—Contains regulations published in the *Federal Register* to implement the program, EPA program guidance memos, and EPA guidelines. Updated periodically. Handbook for local government officials and consultants.

“Handbook of Procedures - Construction Grants Program”—Handbook for consulting engineers.

“How to Obtain Federal Grants to Build Municipal Wastewater Treatment Works”—Handbook for local government officials.

The above publications may be ordered from:

Director
General Services Administration (8FSS)
Centralized Mailing List Services
Building 41, Denver Federal Center
Denver, Colorado 80225