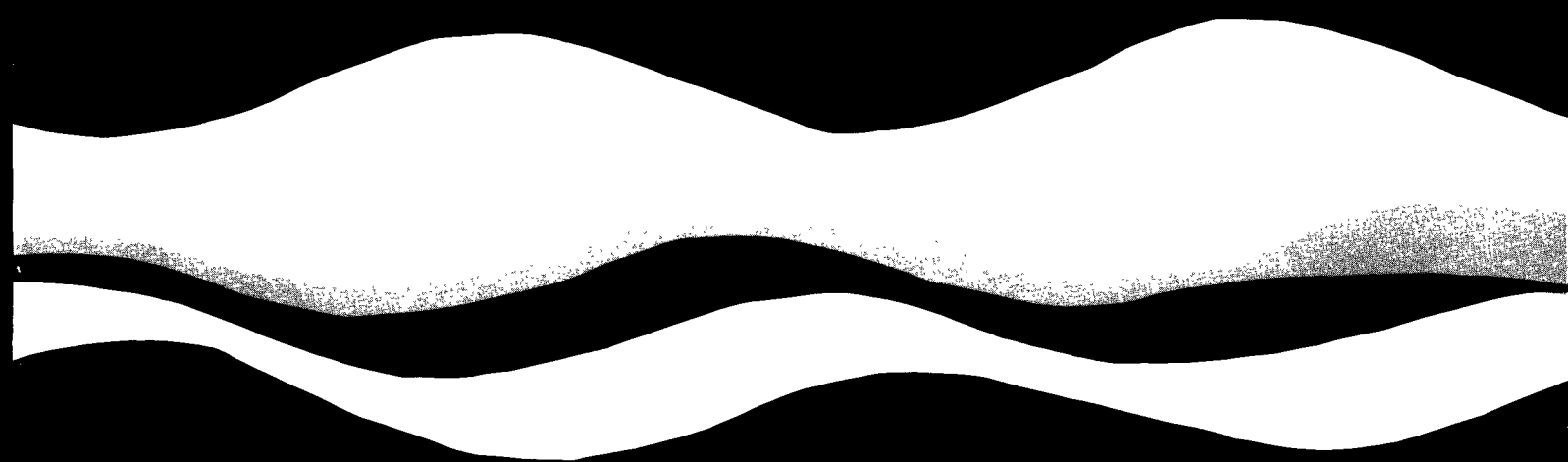




1982 Needs Survey

Cost Estimates for Construction of Publicly-Owned Wastewater Treatment Facilities



Prepared by:
Priority and Needs Assessment Branch (WH-595)
Facility Requirements Division
Office of Water Program Operations
U.S. Environmental Protection Agency
Washington, D.C. 20460
(202) 382-7251

1982 N E E D S S U R V E Y

COST ESTIMATES FOR CONSTRUCTION OF PUBLICLY OWNED
WASTEWATER TREATMENT FACILITIES

December 31, 1982

U.S. Environmental Protection Agency
Region 5, Library (3PL-16)
230 S. Dearborn Street, Room 1670
Chicago, Illinois 60604

U.S. Environmental Protection Agency
Region 5, Library (3PL-16)
230 S. Dearborn Street, Room 1670
Chicago, IL 60604

U.S. Environmental Protection Agency

TABLE OF CONTENTS

	<u>PAGE</u>
Executive Summary	
I. Introduction	1
II. Explanation of the Survey	3
III. Survey Results	5
Table A - Backlog and Year 2000 Needs	6
Table B - Year 2000 Needs Adjusted for Reserve Capacity Limitations	8
Table C - Category V Estimate by Stream Use Objectives	9
Table D - Category V Estimate by Cost Component	10
Table E - Comparison of EPA and State Estimates for Year 2000.	11
Table F - 1982 Separate State Estimates	12
IV. Federal Funding Potential	13
Table G - Analysis of Federal Funding Potential for Conference Committee Proposal of 12/9/81	15
Table H - Current Analysis of Federal Funding Potential	16
V. Comparison of Results: 1982 and 1980 Needs Surveys	19
Table I - Comparison of 1982 and 1980 Needs Surveys	20
VI. Quality of Facility Estimates: Categories I-V	22
VII. Treatment and/or Control of Stormwaters: Category VI	24
Table J - Category VI Estimate by Generic Stream Use Objectives	24
VIII. Progress Towards a Water Quality Based Needs Survey	25
IX. Summary and Conclusions	26
Appendix A: How the Survey was Conducted	28
I. Categories I-IV: Treatment Plants and Sewers	28
II. Category V: Control of Combined Sewer Overflows	32
III. Category VI: Control of Urban Stormwater Runoff	38
Appendix B: Reasons for Separate State Estimates, Categories I-VI	39
Appendix C: Summary Tables 1-43	40

EXECUTIVE SUMMARY

- o The 1982 Needs Survey has been completed in compliance with Sections 205(a) and 516(b)(1) of the Clean Water Act (CWA). It provides the best estimate available of the nationwide costs of compliance with the goals of the 1981 Construction Grant Amendments to the Act.
- o This survey modifies and updates the comprehensive cost estimates of the previous five surveys for constructing all grant-eligible municipal treatment works needed by existing and future populations. It reaffirms that meeting the water quality goals of the CWA will require a substantial investment.
 - Backlog treatment and interceptor needs for existing populations are estimated at \$35.4 billion; total existing and proposed treatment and interceptor needs, including growth to the year 2000, are estimated at \$57.3 billion. The reserve capacity eligibility limitations as specified in the 1981 Construction Grant Amendments reduce this estimate by about \$11.0 billion.
 - Overall, the total backlog needs for existing populations are \$92.6 billion, 78.2 percent of the estimated needs for the year 2000 (\$118.4 billion).
 - The \$118.4 billion represents the total construction needs projected to the year 2000. It does not reflect either the eligibility limitations imposed by the 1981 Construction Grant Amendments or the total Federal funding potential based on the Federal share for these facilities.
- o Advance work completed during the 1982 Needs Survey will provide the foundation for linking treatment facilities with their receiving water bodies and water quality impacts as part of the 1984 Needs Survey. Procedures have been developed and successfully tested to assess municipal water pollution abatement progress and to predict water quality and use improvements from meeting remaining treatment needs. These water quality initiatives of the 1982 Needs Survey are in response to the growing need to target limited construction grants dollars to facilities resulting in the greatest water quality and public health improvements and to the Congressional mandate of the 1981 Construction Grant Amendments for a Survey reflecting water quality needs.
- o The costs reported by the 1980 Needs Survey have grown by about 15.5 percent on the average due to inflation. Absolute backlog needs and year 2000 needs have decreased by about 13.1 percent and 15.3 percent, respectively, since the 1980 Needs Survey. The most significant and measurable progress has been made in meeting treatment needs, which have decreased by 5.9 percent (\$2.3 billion).

- o The decrease in the magnitude of needs is due to a combination of grant awards, 11 ocean discharge waivers, 82 advanced treatment reviews, and modified estimation procedures for combined sewer overflow needs based on designated stream use. Changes in the level of needs are due also to enhanced survey procedures and estimating techniques.
- o For the first time, the need for control and treatment of combined sewer overflows (CSO) was based on an estimate of the costs to achieve the State designated stream use classification rather than on an assumed recreation use for each CSO area. The current CSO estimate of \$35.7 billion represents a 21 percent decrease from the 1980 level.
- o About 16 percent of the national population is currently served by CSOs; 86 percent of the CSO population is in urbanized areas. The greatest CSO problem is limited to 12 States with CSO needs greater than \$1 billion.
- o The 1982 Needs Survey identified a total of more than 15,000 existing municipal treatment plants, including 1081 CSO facilities. About 83 percent of the nation is currently served by a collection system.
- o The quality of the 1982 Needs Survey estimates has been greatly improved. They are based on enhanced procedures and better information from newly available facilities plans, discharge permits, the 1980 Census, and recent actual contract costs.
- o The Needs Survey data and estimates have far reaching applications. They provide:
 - A basis for congressional allotment of funds appropriated for the construction grants program.
 - The only complete inventory of municipal treatment works.
 - A comprehensive technical and cost data base for management, programmatic, and technical analyses of the construction grants program.
- o The 1982 Needs Survey includes a preliminary analysis of the future Federal share of treatment works cost (Federal funding potential). The future Federal funding potential is approximately \$37.3 billion, which is essentially the same as the Agency estimate of \$36.3 billion when the 1981 Construction Grant Amendments were enacted. It is based on phased/segmented facility data supplied by the States and on EPA assumptions concerning the timing of grant awards.

- o EPA will provide a detailed report containing a complete list of marine areas with combined stormwater and sanitary sewer overflow problems and their estimated costs on March 1, 1983, as an addendum to the 1982 Needs Survey Report. The 1983 Appropriations Act includes \$30 million for this separate marine CSO fund authorized at the \$200 million. level by the 1981 Construction Grant Amendments. This report is required by the Conference Report on the FY 1983 Appropriations for HUD and Independent Agencies (P.L. 97-272) which appropriated funds for combined sewer overflow projects discharging into marine waters.

COST ESTIMATES FOR CONSTRUCTION OF PUBLICLY OWNED
WASTEWATER TREATMENT FACILITIES

1982 NEEDS SURVEY

I. INTRODUCTION

This report is submitted in compliance with sections 205(a) and 516(b)(1) of the Clean Water Act (CWA). Included are detailed estimates of the cost of constructing all needed publicly owned treatment works (POTWs) to meet the goals of the Act. These estimates include both backlog needs for current populations and projected needs for the year 2000 populations. This is the sixth Needs Survey since the enactment of the Federal Water Pollution Control Act Amendments of 1972 (P.L. 92-500). Previous surveys were conducted in 1973, 1974, 1976, 1978, and 1980. Cost estimates presented in previous Surveys have served as a basis for congressional allotment of funds appropriated for the construction grants program in accordance with the provisions of the Clean Water Act.

This Survey is restricted to publicly owned wastewater conveyance and treatment facilities, which include sewage treatment plants, sewers, and other types of related treatment facilities. Except for "individual" systems, privately owned facilities, even if intended to serve the general public, and federally owned facilities, such as military installations and national parks, are excluded. Costs for facilities constructed as publicly owned potable water treatment plants for the pretreatment, retention, or treatment of wastes from water purification processes are also ineligible under the financial assistance grant program established by the Clean Water Act and are, therefore, not included in this Survey.

Backlog and year 2000 needs are reported in six major categories, subdivided as follows:

- | | | |
|---------------|---|--|
| Category I | - | Secondary Treatment; |
| Category IIA | - | Advanced Secondary Treatment (AST); |
| Category IIB | - | Advanced Treatment (AT); |
| Category IIIA | - | Infiltration/Inflow Correction; |
| Category IIIB | - | Major Sewer System Rehabilitation; |
| Category IVA | - | New Collectors and Appurtenances; |
| Category IVB | - | New Interceptors and Appurtenances; |
| Category V | - | Correction of Combined Sewer Overflows; |
| Category VI | - | Treatment and/or Control of Stormwaters. |

The basic approach for the 1982 Needs Survey was developed jointly by the Environmental Protection Agency (EPA) and an advisory group consisting of State and regional representatives. The Survey had five initial goals aimed at improving the needs estimating process. These were to:

- o Secure nationally consistent estimates;
- o Improve the overall quality of the estimates;
- o Develop a detailed information base to assist in program planning and management;
- o Update a national inventory of wastewater treatment facilities and combined sewer areas; and
- o Provide a basis for the allotment of construction grant funds among the States.

EPA led the Needs Survey activity with all States participating in varying degrees, depending upon their resource priorities. This approach enabled the use of a single, nationwide methodology with uniform guidelines. The guidelines did, however, provide flexibility for cost estimate variations due to local conditions that affected construction costs.

Because of the major impact of the 1981 Construction Grant Amendments on the level of future Federal participation in the construction grants program, a new analysis of "Federal Funding Potential" has been added to this Survey. Federal participation in funding future municipal wastewater treatment needs is substantially altered by the Amendments. This report includes a preliminary analysis of Federal funding potential, including the timing, scope, and costs of future phased and segmented projects. The redefinition of secondary treatment, the limitations on reserve capacity eligibility, the review of proposed advanced wastewater treatment plants, approval of ocean discharge waivers under Section 301(h) of the Clean Water Act, and grant funding since the 1980 Needs Survey are also discussed in this report.

Work completed during the 1982 Needs Survey will provide the foundation for linking treatment facilities with their receiving water bodies and water quality impacts as part of the 1984 Needs Survey. Procedures have been developed and successfully tested to assess municipal water pollution abatement progress and to predict water quality and use improvements from meeting remaining treatment needs. These water quality initiatives of the 1982 Needs Survey are in response to the growing need to target limited construction grants dollars to facilities resulting in the greatest water quality and public health improvements and to the Congressional mandate of the 1981 Construction Grant Amendments for a Survey reflecting water quality needs. A complete discussion of these activities is found in Section VIII of this report.

On March 1, 1983, as an addendum to this Survey, EPA will provide a detailed report containing a complete list and estimated costs of marine areas with combined stormwater and sanitary sewer overflow problems. This addendum is required by the Conference Report (Amendment No. 29) on the FY 1983 Appropriations for HUD and Independent Agencies (P.L. 97-272) which appropriated funds for combined sewer overflow projects discharging into marine waters.

II. EXPLANATION OF THE SURVEY

A. Cost Categories

The 1982 Needs Survey uses the same categories for construction cost estimates used in 1980. These categories are:

Category I - SECONDARY TREATMENT. This cost category covers facilities, including outfall sewers, needed to achieve secondary levels of treatment. Since the final regulations on the secondary treatment definition in the 1981 Construction Grant Amendments have not yet been issued, the 1982 Needs Survey is based on the existing secondary treatment definition.

Category IIA - ADVANCED SECONDARY TREATMENT (AST). This category includes incremental costs above secondary treatment needed to achieve advanced secondary levels of treatment. This requirement generally exists where water quality standards require a level of removal of conventional pollutants (biochemical oxygen demand (BOD) and suspended solids) greater than 85 percent or 30 milligrams per liter (mg/l) BOD, but less than 95 percent or 10 mg/l of BOD.

Category IIB - ADVANCED TREATMENT (AT). Incremental costs above those needed for AST are reported in this category for facilities that require advanced levels of treatment. This requirement generally exists where water quality standards require a higher degree of removal of such pollutants as carbonaceous and nitrogenous oxygen demands, phosphorus, ammonia, and nitrates. In addition, this requirement exists where removal requirements for conventional pollutants exceed 95 percent.

Category IIIA - CORRECTION OF INFILTRATION/INFLOW. Included in this category are costs for correction of sewer system infiltration/inflow problems. Costs are also reported here for preliminary sewer system analysis and for detailed sewer system evaluation surveys.

Category IIIB - MAJOR REHABILITATION OF SEWERS. This category includes cost estimates for replacement and/or major rehabilitation of existing sewer systems beyond those for correction of infiltration/inflow. Costs are reported if the corrective actions are necessary to maintain the total integrity of the system. Major rehabilitation is considered to be extensive repair of existing sewers beyond the scope of normal maintenance programs, where sewers are collapsing or structurally unsound.

Category IVA - NEW COLLECTOR SEWERS. This category includes costs of construction of grant eligible new collector sewer systems and appurtenances designed to correct violations caused by raw discharges, and to protect public health from such things as malfunctioning septic tanks.

Category IVB - NEW INTERCEPTOR SEWERS. Included in this category are new interceptor sewers and transmission pumping stations necessary for conveying wastewaters from collector sewer systems to treatment facilities.

Category V - CONTROL OF COMBINED SEWER OVERFLOW (CSO). Costs reported in this category are for grant eligible facilities to prevent or control periodic bypassing of untreated wastes from combined sewers to achieve water quality objectives. This category does not include costs either for CSO control allocable to flood control or drainage improvement or for treatment or control of stormwaters in separate storm and drainage systems.

Category VI - CONTROL OF STORMWATER RUNOFF. This category includes costs of abating pollution in urbanized areas from stormwater runoff channeled through sewers and other conveyances used only for such runoff. These facilities are not grant eligible.

The incremental costs for removal of toxic pollutants are not included in the Needs Survey.

B. How the Survey was Conducted

Appendix A explains how the Survey was conducted.

C. Basis of Cost Estimates

All costs are estimated in January 1982 dollars. Cost estimates are provided for two periods of time. The estimate for backlog needs addresses costs of providing treatment service to the 1980 population for abatement of existing pollution problems. In contrast, the estimate for the year 2000 addresses treatment needs, including those of new growth areas, for the projected population of the year 2000.

D. Population

The Needs Survey figures are based on present and future population estimates. The present population is defined as the population of the United States as estimated by the 1980 Census. The future or projected population is based on Bureau of Economic Analysis (BEA) projections for the year 2000. Population estimates and projections are used as State population ceilings for Needs Survey purposes.

E. Indirect Industrial Treatment

Estimates of municipal wastewater treatment needs include the existing industrial flow received by the municipal treatment plant. Future indirect industrial flows are also included in the estimates of the year 2000 needs if they are adequately documented.

III. SURVEY RESULTS

The 1982 Needs Survey focuses for the first time on backlog needs for present populations. In past surveys, the emphasis has always been directed toward needs for the year 2000. This change of focus reflects the objective of the 1981 Construction Grant Amendments to target construction grants dollars to existing treatment and conveyance needs. More specifically, the amendments call for limiting reserve capacity eligibilities to more closely approximate existing needs and for adding backlog needs as a factor in the allotment formula for construction grants appropriations. However, the Year 2000 needs are still included as an integral part of this report.

A. Assessment of Backlog and Year 2000 Needs

The results of the 1982 Needs Survey for backlog and year 2000 needs are shown in the following tables (A through F).

Table A
Backlog And Year 2000 Needs
(January 1982 Dollars, In Billions)

<u>Needs Category</u>	<u>Backlog Estimate</u>	<u>Year 2000 EPA Assessment</u>	<u>Difference</u>	<u>Percent Difference</u>
I (Secondary Treatment)	20.13	31.13	11.00	54.6%
IIA (Advanced Secondary)	3.25	4.87	1.62	49.9%
IIB (Advanced Treatment)	0.53	0.87	0.34	64.2%
IIIA (Infiltration/Inflow)	2.56	2.56	0	0
IIIB (Replacement and/or Rehab.)	4.69	4.69	0	0
IVA (New Collector Sewers)	16.77	20.66	3.89	23.2%
IVB (New Interceptor Sewers)	8.93	17.83	8.90	99.7%
V (Combined Sewer Overflows)	35.74	35.74	0	0
Total Treatment (I, II)	23.91	36.87	12.96	54.2%
Total I, II, IIIA, IVB	35.40	57.26	21.86	61.8%
Total I-V	92.60	118.35	25.75	27.8%

Note: This table does not account for grant eligibility restrictions for statutory requirements regarding reserve capacity as specified in the 1981 Construction Grant Amendments.

As shown in Table A, backlog needs for Categories I-V are estimated at \$92.60 billion, 78.2 percent of the year 2000 needs. Because estimated needs for Category IIIA (infiltration/inflow correction) and Category IIIB (major sewer rehabilitation) are for correcting and repairing existing facilities, they are exclusively backlog needs. Similarly, because combined sewer systems are no longer built, all Category V needs are reported as backlog needs.

The costs reported for backlog needs are sufficient only to build facilities needed to serve the 1980 population. These costs exclude reserve capacity to serve population growth beyond 1980. Backlog needs estimates also exclude treatment plants and sewers not needed in 1980 but projected to be needed for year 2000 populations.

Total backlog treatment needs (Categories I, IIA and IIB) are \$23.9 billion, 54.8 percent of year 2000 estimated needs. Total backlog needs for Categories IIIA and IVB (I/I Correction and New Interceptor Sewers) are \$11.5 billion, 56.4 percent of the year 2000 estimate. Appendix C, Tables 1 through 15, provides detailed estimates of backlog needs; Tables 21 through 31 provide detailed year 2000 needs.

The EPA assessment of the dollar need for construction of municipal wastewater treatment facilities to serve year 2000 populations is \$113.4 billion in Categories I through V. Included in the year 2000 needs assessment is \$57.3 billion for treatment plants and interceptors (Categories I, II, IIIA, and IVB). Needs for treatment plants alone are \$36.9 billion. Of the treatment need \$31.1 billion (84.3 percent) is required to achieve secondary treatment, and \$5.8 billion (15.7 percent) is for treatment levels higher than secondary.

The differences between backlog and year 2000 needs are substantial for two reasons. The first is a projected 21.3 percent population increase from the present 230 million persons to the year 2000 population projection of 279 million. The second is an increase in percentage of population projected to be served by municipal facilities, from the present 71 percent to the year 2000 figure of 92 percent.

The year 2000 needs reported in Table A for Categories I (Secondary Treatment), IIA (Advanced Secondary), IIB, (Advanced Treatment), and IVB (New Interceptor Sewers) do not reflect the limitations on reserve capacity imposed by the 1981 Construction Grant Amendments. The reported needs currently include all projected reserve capacity to the year 2000. The Amendments limit Federal funding of reserve capacity after October 1, 1984, to the capacity for meeting existing needs as of the date of approval of Step 3 grant award, and in no case beyond the capacity for needs that exist as of October 1, 1990. A preliminary national estimate of the impact of these limitations is shown in Table B, as follows:

Table B
Year 2000 Needs Adjusted for
Reserve Capacity
Limitations
(1982 Dollars, in Billions)

<u>Needs Category</u>	<u>Year 2000 Needs Without Res. Cap. Limit.</u>	<u>Estimated Ineligible Due to Res. Cap. Limit.</u>	<u>Revised Year 2000 Needs with Res. Cap. Limit.</u>	<u>1982 Backlog Needs</u>
I (Sec. Treat)	\$ 31.13	\$ 6.07	\$ 25.06	\$ 20.13
IIA (Adv. Sec.)	4.87	0.88	3.99	3.25
IIB (Adv. Treat)	0.87	0.14	0.73	0.53
IVB (New Interceptor Sewers)	17.83	3.99	13.84	8.93
Subtotal	<u>\$ 54.70</u>	<u>\$ 11.08</u>	<u>\$ 43.62</u>	<u>\$32.84</u>

The above EPA estimates of reduced eligibilities due to reserve capacity limitations have not had the benefit of State involvement and must be considered preliminary, although these national totals reflect the approximate overall impact of the limitations. The preliminary estimates are based on facility data supplied by the States and on EPA assumptions about the timing of grant awards and associated reserve capacities. EPA will be working closely with the States to refine these estimates on a State-by-State basis, and enhanced estimates of eligible categories I, IIA, IIB, and IVB needs will be provided in the 1984 Needs Survey.

In this Survey, the Category V backlog needs are reported as one composite estimate. This is a departure from previous surveys which provided only a range of Category V estimates for optional levels of control. The 1982 estimate represents the cost of CSO controls required to maintain the State designated stream use classification. This estimate was developed in four steps: (1) identification of the water body segment receiving the CSO; (2) identification of the State designated stream use classification for the segment; (3) matching of each State stream use to a generic stream use; and (4) estimation of the level of CSO control needed to maintain the stream use. This automated CSO needs estimation process was not used when an acceptable facility plan was available or when sewer separation was more cost effective than other control measures.

The total Category V estimate of \$35.7 billion is disaggregated into general classes of stream use objectives (Table C) and into cost components (Table D) as follows:

Table C

Category V Estimate by Stream Use Objectives
(January 1982 Dollars, in Billions)

<u>Level of Control</u>	<u>Generic Stream Use</u>	<u>Need</u>	<u>Percent of Total</u>
Aesthetics	Navigation Agricultural Water Supply Industrial Water Supply	\$ 0.23	0.6%
Public Health	Domestic Water Supply Partial Body Contact Recreation Noncontact Recreation	1.85	5.2%
Fish and Wildlife	Warmwater Fisheries Coldwater Fisheries General Fish and Wildlife	12.82	35.9%
Recreation	General Recreation Full Body Contact Recreation Shellfish Protection	17.33	48.5%
Other *		<u>3.51</u>	<u>9.8%</u>
Total		\$35.74	100.0%

* Includes needs estimates for cost effective sewer separation (\$2.0 B) and facility plans (\$1.50 B). These estimates are not directly related to a level of control needed to protect receiving water uses.

Table D

Category V Estimate by Cost Component
(January 1982 Dollars, in Billions)

<u>Cost Component</u>	<u>Need</u>	<u>Percent of Total</u>
Wet Weather Interceptors	\$ 9.2	25.8%
Storage Facilities	14.5	40.6%
Treatment Facilities	8.5	23.8%
Other *	<u>3.5</u>	<u>9.8%</u>
Total	\$35.7	100.0%

* Other includes facility plan estimates (\$1.5 B), sewer separation (\$2.0B), and sewer flushing (\$0.03 B).

B. Separate State Estimates for Year 2000 Needs

After EPA formulated the cost estimates, the States were asked either to concur with these estimates or to provide additional data to support differing costs. In many cases these data were supplied and the EPA assessments were modified to reflect the changes. In some instances, however, differences in EPA and State cost estimates were irreconcilable. In these few cases, State participants provided an independent State estimate of need (Appendix C, Table 22).

The reasons for differing cost estimates were, in general, not associated with construction costs themselves but with some States' beliefs that national survey guidelines should be amended and/or adjusted to more accurately reflect local conditions or needs. The differences in needs estimates between EPA and States are listed in Table E, as follows:

Table E
Comparison of EPA and State Estimates
for Year 2000
(January 1982 Dollars, in Billions)

<u>Needs Category</u>		<u>EPA Estimate</u>	<u>State Estimate</u>	<u>Difference</u>	<u>Percent Difference</u>
I	Secondary Treatment	\$31.13	\$31.14	0.01	0
IIA	Incremental Costs above Secondary to Achieve Advanced Secondary Levels (AST)	4.87	4.87	0	0
IIB	Incremental Costs above AST to Achieve Advanced Treatment Levels (AT)	0.87	0.87	0	0
IIIA	Infiltration/Inflow	2.56	2.70	0.14	5.5%
IIIB	Replacement and/or Rehabilitation	4.69	4.69	0	0
IVA	New Collector Sewers	20.66	20.66	0	0
IVB	New Interceptor Sewers	17.83	17.83	0	0
V	Combined Sewer Overflows	<u>35.74</u>	<u>35.60</u>	-0.14	-0.4%
Total	I & II (Treatment)	\$ 36.87	\$ 36.88	0.01	0
Total	I, II, IIIA, IVB	\$ 57.26	\$ 57.41	0.15	0.3%
Total	I-V	\$118.35	\$118.36	0.01	0.01%

Table 21 (Appendix C) shows the number of individual cost estimates made by EPA for each State in Categories I-IV that resulted in a need. Of the more than 463,000 separate potential cost estimates investigated by EPA, only 41 independent estimates (0.008 percent) were submitted by the States. Table 41 (Appendix C) shows the number of separate State estimates submitted in Categories I-IV by category of need. The separate State estimates for year 2000 and backlog needs are shown in Table F, as follows:

Table F

1982 Separate State Estimates
(1982 Dollars, in Millions)

<u>State</u>	<u>Year 2000 Need</u>	<u>1982 Survey Backlog</u>	<u>Affected Category</u>
California	\$139 M -139 M	\$139 M -139 M	IIIA V
Texas	<u>7 M</u>	<u>11 M</u>	I, IVB
Total	\$ 7 M	\$ 11 M	

California's estimate reflects disagreement on whether needs estimates for one proposed project should be reported in the combined sewer overflow correction or the separate sewer rehabilitation categories. Texas has separate State estimates for 30 projects. EPA could not accept these estimates because of inadequate documentation. All other States and Territories reported no independent State estimates.

C. Costs of Plants Requiring Treatment More Stringent than
Secondary (Category II)

The estimated cost to upgrade all facilities to secondary treatment levels is \$31.1 billion (Category I). Secondary treatment facilities represent 85 percent of the treatment projects and 84 percent of the total treatment dollar needs.

Category II cost estimates consist of incremental costs above secondary for each treatment facility where required treatment levels are higher than secondary. Total advanced treatment costs are split as follows:

- o Costs to upgrade Category I facilities from secondary levels to advanced secondary levels where required (Category IIA). Advanced secondary levels are achieved in general when effluent limits for BOD are between 30 and 10 mg/l (85-95 percent removal). These costs are estimated at \$4.9 billion (13 percent of total treatment dollar needs and 13 percent of all treatment projects).
- o Costs to raise Category IIA facilities from advanced secondary levels to advanced treatment levels (AT) where required. Advanced treatment is defined as removal of BOD above 95 percent (less than 10 mg/l) or nitrogen removal requirements. The estimate for AT costs is \$0.9 billion (3 percent of total treatment dollar needs and 2 percent of all treatment projects).

IV. FEDERAL FUNDING POTENTIAL

A. Statutory Requirements

The 1981 Construction Grant Amendments substantially alter the level of future Federal participation in grant awards to municipal wastewater treatment works. A summary of the pertinent changes affecting Federal grant funding follows:

Reserve Capacity

- o Total planned levels of reserve capacity are eligible for funding if an applicant receives a Step 3 grant (single, segmented or phased) for a Category I, II, or IVB project before October 1, 1984.
- o Beginning October 1, 1984, only the capacity designed to serve residential, commercial, and industrial flows that exist on the date of approval of a Step 3 grant for a single, segmented, or phased Category I, II or IVB project will be eligible for Federal assistance. If a phase or a segment of the facility for a Category I, II, or IVB project received a Step 3 grant before October 1, 1984, the total planned levels of reserve capacity are eligible for funding.
- o In no event shall eligible capacity be in excess of needs that exist on October 1, 1990.

Federal Share

- o For any Step 3 construction grant approved prior to October 1, 1984, the Federal share would be 75 percent. Where any segmented or phased Step 3 grant in needs categories I, II, IIIA, and IVB is approved prior to October 1, 1984, subsequent grants for that facility would also be 75 percent.
- o For any Step 3 construction grant approved after October 1, 1984, the Federal share would be 55 percent. Where a facility had received an initial Step 3 grant before that date, subsequent grants for that facility would remain at 75 percent.
- o The Governor of a State, with the concurrence of the EPA Administrator, may modify the Federal share to a lower percentage rate uniform throughout the State.
- o The amount of any grant made after September 30, 1981, for any treatment facilities utilizing innovative or alternative wastewater treatment processes and techniques would be 20 percent greater than the uniform rate, but in no event greater than 85 percent of the cost of construction.

Eligible Categories

- o All categories (I-V) of treatment, storage, and conveyance are grant eligible until October 1, 1984.
- o Only secondary and advanced waste treatment, correction of infiltration/inflow, and interceptor sewers (Categories I, II, IIIA, IVB) will be eligible on or after October 1, 1984, except for those works funded by a Governor's discretionary allowance.

Discretionary Funds

- o Beginning October 1, 1984, a Governor will have discretion to use up to 20 percent of a State's allotment for categories other than I, II, IIIA, and IVB.

Combined Sewer Overflows (CSO)

- o After October 1, 1984, a Governor may request a Step 3 grant out of the State's regular allotment at the prevailing Federal share where correction of CSO is a major State priority.
- o After October 1, 1982, \$200 million annually is authorized for correction of CSO discharges into marine bays and estuaries. Thirty million dollars has been appropriated for Fiscal Year 1983.

B. Preliminary Assessment Based on 1980 Estimated Needs

An early attempt was made to calculate the Federal funding potential based on the December 9, 1981, Conference Committee proposal prior to the enactment of the 1981 Amendments. At that time the estimate of Federal funding potential based on 1980 Needs Survey data was \$36.3 billion for the proposed eligible categories, including \$0.8 billion for the separate marine CSO fund. The breakdown of that projection is as follows (Table G):

Table G
 Analysis Of Federal Funding Potential for
 Conference Committee Proposal of 12/9/81
 (In \$ Billions)

	<u>Federal Funding Potential</u>	<u>Eligible Costs</u>
FY 82/83/84		
Segmented Grants (75%)	\$ 3.4	\$ 4.5
Nonsegmented (75%)	<u>3.3</u>	<u>4.4</u>
FY 82/83/84 Subtotal	\$ <u>6.7</u>	\$ <u>8.9</u>
After FY 84		
Segmented Grants (75%)	\$ 3.9	\$ 5.2
Nonsegmented (55%)	<u>24.9</u>	<u>45.5</u>
After FY 84 Subtotal	\$ <u>28.8</u>	\$ <u>50.7</u>
Total Construction Grants Program	\$35.5	\$59.6
Marine CSO Fund @ \$200 M/yr. for 4 years	<u>0.8</u>	<u>1.4</u>
Total Federal Funding Potential	\$36.3	\$61.0

C. Current Assessment Based on 1982 Estimated Needs

The current projection of Federal funding potential based on the 1981 Construction Grant Amendments and 1982 Needs Survey data is shown in Table H, as follows:

Table H

Current Analysis of Federal Funding Potential (In \$ Billions)

	<u>Federal Funding Potential</u>	<u>Eligible Costs</u>
FY 82/83/84		
Segmented Grants (75%)	\$ 4.7	\$ 6.2
Nonsegmented (75%)	<u>1.8</u>	<u>2.4</u>
FY 82/83/84 Subtotal	\$ <u>6.5</u>	\$ <u>8.6</u>
After FY 84		
Segmented Grants (75%)	\$ 9.3	\$12.4
Nonsegmented (55%)	<u>20.9</u>	<u>38.0</u>
After FY 84 Subtotal	\$ <u>30.2</u>	\$ <u>50.4</u>
Total Construction Grants Program	\$36.7	\$59.0
Marine CSO Fund @ \$200 M/yr. for 4 years (\$30 M. appropriated for 1983)	<u>0.6</u>	<u>1.4</u>
Total Federal Funding Potential	\$37.3	\$60.4

This analysis of Federal funding potential, using 1982 Needs Survey data and a phased/segmented project list submitted by the States, reflects the following assumptions:

1. Project startup dates in the 1982 Needs Survey data or grant award dates in the phased/segmented list were used to determine the projected award date for each project.
2. Eligible costs were obtained from the 1982 Needs Survey data file. Eligible Category V costs were estimated at \$5 billion. The total CSO needs are reduced to reflect the findings of recent site-specific studies which limit CSO controls to those that will result in significant improvement of water uses.

3. Eligible reserve capacities for treatment facilities and interceptor sewer systems were determined from the 1982 Needs Survey data as follows:

a. Wastewater Treatment Plants:

- (1) Step 3 funded before 10/1/84: used the difference between the year 2000 plant design capacity and present design capacity;
- (2) Step 3 funded between 10/1/84 and 9/30/90: prorated the difference between the year 2000 plant design capacity and present design capacity to the year of projected grant award;
- (3) Step 3 funded on and after 10/1/90: used 50 percent of the difference between the year 2000 plant design capacity and present design capacity.

b. Interceptor Sewers:

- (1) If the present design flow and the future design flow were available, the eligible reserve capacity was calculated as described for wastewater treatment plants.
- (2) If survey forms omitted present flow and future design flow, the present population and the future population were used to calculate the reserve capacity, based on the rules described for wastewater treatment plants. Present flow is the product of present population multiplied by assigned per capita flow. Future design flow is the product of future population multiplied by assigned per capita flow. Assigned per capita flows are listed as follows:

Non-SMSA Areas:

Population larger than 10,000:

Assigned per capita flow = 115 gallons per capita per day (gpcd).

Population equal to or less than 10,000 but larger than 5,000:

Assigned per capita flow = 105 gpcd.

Population equal to or less than 5,000:

Assigned per capita flow = 95 gpcd.

SMSA Areas:

Assigned per capita flow = 115 gpcd.

4. Analysis assumes all States use 20 percent of funds each year after October 1, 1984, to fund otherwise ineligible costs.
5. Step I and Step II costs were not included.
6. Since future innovative/alternative projects could not be identified at this time, their increased Federal share was not considered in this estimate.
7. The Federal share was calculated according to the provisions of the 1981 Construction Grant Amendments.

D. Comparison of Preliminary and Current Estimates

The figures shown in Table G and Table H are comparable with minor variances. The major causes of the variances are:

1. Table G (preliminary estimate) is based on 1980 Needs Survey data; Table H (current estimate) is based on 1982 Needs Survey data.
2. Table H is based in part on the phased/segmented project analysis provided by the States. The eligible costs provided by the States are substantially larger in many cases than those derived from the 1980 Needs Survey data. Consequently, Federal funding potential for segmented projects in Table H is substantially larger than for those of Table G.
3. Backlog and year 2000 needs in the 1982 Needs Survey are smaller than those in the 1980 Needs Survey. The total eligible cost for Categories I, II and IVB is \$63.7 billion for the 1980 Needs Survey and \$54.7 billion for the 1982 Needs Survey.
4. In the 1982 Needs Survey, 67 percent of the FY 82-84 funding goes to phased/segmented projects for Categories I, II and IVB, while only 50 percent of the FY 82-84 funding went to phased/segmented projects for Categories I, II and IVB in the 1980 Needs Survey.
5. The dollar amount of remaining phased/segmented needs for Categories I, II and IVB is larger in the analysis of the 1982 Needs Survey data than that obtained from the 1980 Needs Survey data:

1980
Total eligible cost: \$5.2 billion
with \$3.9 billion grant share.

1982
Total eligible cost: \$12.4 billion
with \$9.3 billion grant share.

6. Different funding patterns by category were assumed for FY 82-84:

	<u>Categories I, II and IVB</u>	<u>CSO</u>	<u>I/I</u>	<u>Other</u>
1980 Needs Survey	70%	16%	2%	12%
1982 Needs Survey	86%	2%	3%	9%

E. Federal Funding Potential Qualifications

The 1982 Needs Survey includes an assessment of separate data submitted by the States on facilities projected to be funded in phases or segments, along with a preliminary analysis of the basic provisions that affect Federal funding: reserve capacity, Federal share, eligible categories, Governor's discretionary fund, combined sewer overflow funding, funding authorization, and the allotment formula for fund distribution. The estimate of Federal funding potential from the combined 1982 Needs Survey data file and phased/segmented project list was used to assess the potential Federal financial obligation due to the 1981 Amendments of the Clean Water Act. This analysis and its results, however, are considered preliminary because of the various interpretations of the definition of phased/segmented projects by the States and the EPA Regions. The final construction grant regulations will clarify the definition of "phased/segmented projects" and establish criteria for funding new phased or segmented projects, based on the legislative history of the 1981 Construction Grant Amendments. The Administrator will review all grants for new phased or segmented projects before the construction grant is awarded to ensure compliance with these criteria. The 1984 Needs Survey will refine the "phased/segmented project list" and the estimate of Federal funding potential.

V. COMPARISON OF RESULTS: 1982 and 1980 NEEDS SURVEYS

Table I shows the 1982 Needs Survey results compared with the 1980 Survey. The results of the two Surveys are consistent when the grants awarded in the period 1980-1982 and the inflation of construction costs experienced between surveys are taken into account.

Table I
Comparison Of The 1982 and 1980 Needs Surveys
Year 2000 Needs
(1982 Dollars, in Billions)

<u>Category</u>	<u>1980 Survey</u>	<u>1982 Survey</u>	<u>Difference</u>	<u>Needs Met By Grant Awards</u>
I & II (Treatment)	\$39.3	\$36.9	\$-2.4	\$6.3
IIIA	2.9	2.6	-0.3	0.2
IIIB	6.8	4.7	-2.1	0.5
IVA	21.1	20.7	-0.4	0.8
IVB	24.4	17.8	-6.6	1.5
V	<u>45.2</u>	<u>35.7</u>	<u>-9.5</u>	<u>0.3</u>
Total I, II, IIIA and IVB	\$66.6	\$57.3	\$-9.3	\$8.0
Total I-V	\$139.7	\$118.4	\$-21.3	\$9.6

Reasons for changes in year 2000 needs:

1. Quantified changes:

- a. Grant awards since 1980 Needs Survey satisfied \$9.6 billion of needs.
- b. \$0.7 billion of needs were met by the approval of ocean discharge waivers.
- c. \$0.3 billion of needs were met as a result of advanced treatment review.

2. Nonquantified changes:

- a. The completion of a national facilities inventory for the 1982 Survey resulted in the addition of more than 300 facilities, most of them very small and located in rural areas.
- b. The year 2000 population ceiling has increased for several States.
- c. Facility cost estimates have been enhanced based on facility plans.
- d. Estimating procedures for interceptor lengths, sewer costs, and treatment cost curves have been updated.

- e. CSO needs estimation procedures now address State designated stream use classifications. In addition, more facility plans were used in the estimating process.

Under Section 301(h) of the Clean Water Act, municipal treatment facilities discharging to marine waters are eligible to apply for waivers of the secondary treatment standard. As of September 15, 1982, EPA had approved 11 ocean discharge waivers and denied two applications. The reduction in Category I need from the approval of these 11 applications is approximately \$0.7 billion. EPA is currently reviewing 17 additional applications and expects to review several hundred more in FY 83 and thereafter. The 1984 Needs Survey will reflect the effects of decisions on these applications.

Section 304(d)(4) of the Clean Water Act redefines secondary treatment as follows:

"For the purposes of this subsection, such biological treatment facilities as oxidation ponds, lagoons, and ditches and trickling filters shall be deemed the equivalent of secondary treatment. The Administrator shall provide guidance under paragraph (1) of this subsection on design criteria for such facilities, taking into account pollutant removal efficiencies and, consistent with the objectives of the Act, assuring that water quality will not be adversely affected by deeming such facilities as the equivalent of secondary treatment."

EPA is preparing amendments to 40 CFR Part 133 to implement this new statutory requirement. The potential cost savings from the above changes cannot be assessed until final regulations are published. The 1984 Needs Survey will reflect the secondary treatment cost savings.

The results of the EPA review of advanced treatment (AT) projects were incorporated in the estimate of Category I and II needs. EPA, as directed by Congress, reviews advanced treatment projects designed to meet effluent standards more stringent than secondary, and with incremental costs of \$3 million or more beyond secondary, to ensure all such projects will result in significant water quality and public health improvements. Regional offices review advanced treatment projects with incremental costs less than \$3 million.

The advanced treatment reviews completed to date have resulted in deferring or reducing the capacity of AT processes for some projects. The cost estimates of the affected projects are thus reduced. The overall impact of the AT reviews on the 1982 Needs Survey is a reduction in needs estimates totaling \$0.3 billion.

The 1982 Category V needs are 21 percent less than those estimated in the 1980 Needs Survey, after adjustment for construction cost increases since January 1, 1980. The reported costs are more realistic than those reported in 1980. The primary reasons are the changes in the needs estimating procedure and the use of approved facility plan estimates.

The CSO needs estimating procedure was modified in several ways. For the first time the estimation of needs was based on the required CSO controls to maintain the State designated stream use classifications linked to receiving stream segments. Also, this survey includes the cost estimates of modification or expansion of existing dry-weather treatment plants where such an approach was found to be cost effective. Only the costs of separate wet weather facilities were reported in the 1978 and 1980 surveys. A more detailed explanation of the 1982 needs estimating procedure can be found in Appendix A.

Acceptable CSO facility plans provided the basis for 26 CSO areas (2.4 percent of the nation). The resultant \$1.5 billion in needs is 4.2 percent of the 1982 Category V estimate. The 1980 estimate included facility plan estimates for Chicago and San Francisco only. The remainder of the 1982 CSO estimate was based on the needs estimating model.

EPA corrected and completed an inventory of combined sewer areas in the 1982 Needs Survey. The reported combined sewer acreage increased by 8 percent to 2.8 million acres as a result. Overall population served by combined sewers increased by 2 percent to about 43.2 million people because previously undetected combined sewer service areas in the New York metropolitan area were identified.

The revised inventory comprises 1,081 CSO facilities, 337 (31 percent) of which are in urbanized areas representing about 73 percent of the national CSO area, 86 percent of the national CSO population, and 73 percent of the nationwide 1982 CSO need.

VI. QUALITY OF FACILITY ESTIMATES: CATEGORIES I-V

The quality of cost estimates in this Survey has improved over earlier surveys because of the upgraded quality of technical data supporting the costs.

The reliability of cost estimates depends upon many factors. Highly accurate cost data can be obtained only if treatment facilities have been planned and designed adequately to meet projected water quality requirements. EPA studied a large number of wastewater treatment plants that used a variety of treatment technologies. Using these data, EPA developed cost estimating procedures which were used in the cost estimating process when better quality data were not available. Actual recent cost experience in sewer construction and installation was studied as well. EPA also developed cost estimating procedures and rules of thumb for pipe costs when better data were not available. Approximately 29 percent of the facilities were estimated by EPA cost curves.

Differences in local construction costs were recognized by establishing two cost multipliers for each of 30 areas of the United States. One multiplier was used for estimating treatment costs and the other for sewer costs.

The cost estimates for Categories I, II, and IVB (treatment plants and interceptors) are considered most accurate because of the extensive construction cost data collected for these facilities. The cost estimates for Categories IIIA, IIIB, and V (infiltration/inflow, rehabilitation and combined sewer overflow), while improved, are not as accurate as those for the other categories.

Numerous infiltration/inflow studies and rules of thumb based on experience to date have resulted in a substantial improvement in the Category IIIA estimates. EPA accepted need estimates for infiltration/inflow correction only when the estimates could be documented by facility plans or by engineering studies. In some cases costs of correction of infiltration/inflow can be traded off against treatment costs.

The estimated repair cost of sewers (Category IIIB) is uncertain because many sewers cannot be routinely inspected. Thus, the nature and magnitude of sewer structural deficiencies are unknown until actual sewer collapse, a relatively common event in older cities. The need for this category resulted mainly from both operation and maintenance deficiencies and the many sewer systems that have already exceeded their expected physical lives of 50 to 100 years.

Category IVA (new collector sewers) cost estimates have improved since 1980. The quality of estimates in this category depends partly on assumptions concerning 1972 and future populations. Category IVA needs were limited to include provision for future populations of up to 1.5 times the 1972 population requiring new sewers, as required by the construction grants regulations. The blanket use of the 1.5 factor results in a somewhat high estimate of eligible collector sewer costs because it may allow, in some cases, for ineligible sewerage of vacant lots. Careful and detailed analysis of local conditions as required in the facility planning process would likely reduce the estimated cost of collector sewers eligible for construction grants below the estimate reported in the 1982 Needs Survey. For this reason the year 2000 estimates in Category IVA are still considered high, while the backlog estimates in this category are considered to be a more accurate but slightly understated assessment of national need.

Category V (Control of Combined Sewer Overflow) estimates are imprecise and difficult to develop because of variations in the size, number and frequency of combined sewer overflows, characteristics of the receiving waters, and uncertain and difficult to evaluate water quality and water use effects of CSO pollution control measures. In many cases the shortcoming of the combined sewer area inventory is that important physical data about local conditions, such as the number and location of overflow points and receiving water characteristics, are not available in national studies or data files. As a result a modeling approach for these cases was based on data collected and analyzed for 15 cities in the

United States selected for their diverse wet weather conditions and data availability. The results of these site studies were used to develop the model parameters. These results, therefore, are not precise for individual cities although the overall State and national estimates are considered realistic.

VII. TREATMENT AND/OR CONTROL OF STORMWATERS: CATEGORY VI

This survey includes cost estimates for treating or controlling pollution from separate storm sewers even though stormwater pollution control facilities are not eligible for Federal grants. This additional cost category (Category VI) includes the costs of abating pollution in the urbanized areas from stormwater runoff channeled through sewers and other conveyances used only for such runoff. The costs of abating pollution from stormwater channeled through combined sewers are included in Category V.

The 1982 national stormwater treatment need to maintain the State designated stream uses is estimated at \$93.21 billion. The 1982 estimate is 32.6 percent less than the 1980 estimate to meet recreation use (\$138.38B in 1982 dollars).

Unlike previous surveys, the 1982 Survey presents Category VI estimates as one composite cost for stormwater treatment required to maintain the State designated stream use classifications linked to urbanized areas. Table J presents the 1982 estimate by stream use classification.

Table J

Category VI Estimate by Generic Stream Use Objectives (January 1982 Dollars, in Billions)

<u>Level of Control</u>	<u>Generic Stream Use</u>	<u>Need</u>	<u>Percent of Total</u>
Aesthetics	Navigation	\$ 0.04	1%
	Agricultural Water Supply		
	Industrial Water Supply		
Public Health	Domestic Water Supply	3.60	3%
	Partial Body Contact Recreation		
	Noncontact Recreation		
Fish and Wildlife	Warmwater Fisheries	19.61	21%
	Coldwater Fisheries		
	General Fish and Wildlife		
Recreation	General Recreation	69.96	75%
	Full Body Contact Recreation		
	Shellfish Protection		
Total		\$93.21	100%

The cost estimates for control of stormwater pollution vary greatly depending upon how the problem is approached. Category VI cost estimating methods are based on a uniform methodology similar to that used to estimate CSO needs. However, the Category VI estimate is less precise because data were not available during the 1982 Needs Survey to verify the methodology for stormwater treatment and control.

VIII. PROGRESS TOWARDS A WATER-QUALITY BASED NEEDS SURVEY

Historically, the Needs Survey has been oriented toward administrative and program overview matters related to estimating costs of municipal treatment construction needed to comply with the enforceable requirements of the Clean Water Act and to abate pollution from combined sewer overflows. This focus reflects the joint efforts of EPA, the States, and local authorities to satisfy a congressional mandate. However, in response to growing interest in targeting limited municipal construction dollars to facilities that result in the greatest water quality and public health improvements, the 1984 Needs Survey is being planned to assess water quality and related water use effects of needed municipal facilities.

Although not implemented in the 1982 Survey, a prototype system was developed to assess the water quality effects of the construction grants program. This system can identify the impact of previously funded needs and the remaining needs most critical to water quality and use attainment. It uses the newly available Reach File, an automated file developed by EPA's Office of Water Regulations and Standards to provide the framework for organizing data on all water bodies in this country. The Reach File provides the key to integrating previously unrelated data bases developed over the years by a broad range of State and Federal agencies. Now linked to the Reach File are the STORET file of ambient water quality data, the U.S. Geological Survey (USGS) streamflow and landforms data, the Industrial Facilities File (IFD), the U.S. Fish and Wildlife Services aquatic life survey data, the Grants Information and Control System (GICS) award data, and the Drinking Water Supply file. Two of the major efforts were locating all existing and proposed discharging POTWs (over 21,000) on reaches and correlating all State-delineated stream segments and associated water quality standards to reaches.

A reach is a water segment that generally extends from one stream junction to another. The Reach File includes unique stream reach, lake, and estuarine shoreline segment identifiers appended to the accepted USGS watershed subdivisions. This file is composed of some 61,000 stream reaches and several thousand shoreline segments. The file also provides streamflow estimates for each reach and the stream network and confluence data.

This work, completed during the 1982 Needs Survey, will provide the foundation for linking municipal treatment facility needs with their receiving water bodies and with expected environmental results. The specific applications and modifications of the work will be proposed by the 1984 EPA-State Needs Survey Working Group and then submitted to all States for approval.

IX. SUMMARY AND CONCLUSIONS

The 1982 Needs Survey is the best available estimate of the costs to comply nationwide with the goals of the Clean Water Act. The Survey reaffirms the fact that meeting the water quality goals of the Act will require a substantial investment. For the fourth time in a Needs Survey, the effects of the funds spent to date are noticeable in Categories I, II and IV. The latest estimates reflect a better formulated and more consistent survey methodology; more and better information from such sources as new facility plans, basin plans, discharge permits, and the reach file; and the further expansion of the survey to include all facilities and to account for stream use.

The survey shows backlog needs of \$23.9 billion for the treatment categories, 64.8 percent of the year 2000 needs of \$36.9 billion. The backlog needs of \$35.4 billion for Categories I, II, IIIA and IVB are 61.8 percent of the year 2000 needs of \$57.3 billion. Overall, backlog needs for categories I-V is \$92.6 billion, 78.2 percent of the year 2000 needs of \$118.4 billion.

The results of this survey show a decrease in needs from the 1980 needs survey. The needs for Categories I, II, IIIA and IVB have decreased by \$9.3 billion, a decrease of 14 percent. The overall needs for categories I-V have decreased by \$21.3 billion since the 1980 Survey.

Grant awards have reduced backlog needs and year 2000 needs between 1980 and 1982. The net result is a reduction of 7.5 percent in backlog needs and a reduction of 12.4 percent in the year 2000 needs since 1980. Based on January 1982 dollars, new projects approved between the 1980 and 1982 Surveys account for a reduction of more than \$9 billion in the present Survey estimate.

Year 2000 needs for treatment levels greater than secondary have also dropped since the 1980 Survey. The reasons for this are the increased attention focused on advanced treatment projects and on the related water quality based effluent limitations. This has resulted in a more detailed analysis of the need for advanced treatment facilities and in dropping unnecessary treatment processes as a result of project reviews. Compared with the 1980 Needs Survey, Category II needs are reduced by 10.7 percent. Some advanced treatment projects funded during the 1930-1982 period contributed to the reduction in Category II needs.

The 1982 Category V needs to correct combined sewer overflows are 21 percent less than those estimated in the 1980 Needs Survey. For the first time, the 1982 needs were reported as one composite cost estimate of the most cost effective controls needed to maintain the State designated stream use classification of the CSO receiving water. In addition the 1982 reported costs are more realistic because they reflect a higher number of facility plan estimates.

Preliminary analysis of the 1982 Needs Survey data shows the Federal funding potential is approximately \$37.3 billion compared with the Agency estimate of \$36.3 billion when the 1981 Construction Grant Amendments were enacted.

Advance work completed during the 1982 Needs Survey will provide the foundation for linking treatment facilities with their receiving water bodies and with water quality impacts in the 1984 Needs Survey. This work developed an automated system that has the potential to assess State and national progress in abating municipal water pollution as well as the water quality and water use improvements from meeting remaining treatment needs.

Based on a requirement in the Conference Report on the FY 1983 Appropriations for HUD and Independent Agencies (P.L. 97-272), EPA will provide Congress with a list of marine areas with CSO problems and the estimated costs of correcting them by March 1, 1983.

In conclusion, the Survey results show that the construction grants program is making measurable progress toward meeting national needs for municipal wastewater treatment facilities.

APPENDIX A

HOW THE SURVEY WAS CONDUCTED

I. CATEGORIES I-IV: Treatment Plants and Sewers

A. Introduction

The estimate of needs for the 1982 Survey in Categories I-IV is based on experience and data from previous Needs Surveys. EPA, in consultation with a working group of State representatives, determined that the Survey would be conducted for Categories I-IV on a facility-by-facility basis as in 1978 and 1980. A consulting firm, URS, was competitively selected to do the 1980 Survey, and EPA exercised the option to extend the contract to augment the work effort available within EPA and the States for the 1982 Survey. Survey guidance was prepared in cooperation with the States and was discussed in detail during meetings with the States at EPA regional offices. All data from the 1980 Survey were preprinted on the Survey reporting forms as a starting point for the 1982 effort.

For the 1982 Needs Survey, URS not only updated the 1980 Needs Survey file but also added new needs identified since the previous survey. States were asked to review and comment on estimates and provide assistance. The completed estimates were approved by the State and EPA, subjected to a rigorous quality check, and entered into a computer file.

B. Survey Approach

The Survey approach taken for Categories I-IV, treatment plants and sewers, was:

1. URS, the EPA consultant, conducted the Survey on a facility-by-facility basis for Categories I-IV. The consultant's personnel formulated the cost estimates.
2. Survey guidance and methodology were formulated for Categories I-IV in draft and circulated to all parties involved in the Survey. State comments were solicited and were reflected in the final guidance.
3. While national uniformity of estimating procedures was a goal, the Survey accommodated the cost and construction differences in various sections of the country where possible.

The formal Survey began with three State/EPA work group meetings and orientation meetings conducted in EPA Regional offices where logistics, target dates, and individual State problems were discussed and resolved. States were asked only to provide as many personnel for the Survey as they considered prudent, but were invited to participate fully in the formal Survey field work. This field work was conducted in the spring, summer, and fall of 1982.

As estimates for Categories I-IV were completed, copies of the estimates were reviewed by States on a facility-by-facility basis. When EPA and State personnel could not agree on costs, States submitted separate estimates which have been included in this report.

Facility estimates were reviewed and accepted and/or approved at four levels: 1) contractor; 2) EPA regional office; 3) State; and 4) EPA headquarters. After machine preparation, data for Categories I-IV were summarized for this report.

C. Survey Methodology: Operational Guidance for Categories I-IV

Operational guidance for the Survey was formulated jointly by EPA, the States, and the consultant. This guidance included the following subjects:

1. Responsibilities of participants.
2. Target dates for project milestones, including the calendar for the Survey and the consultant's contractual obligations.
3. Descriptions of all data sources to be provided to participants to help complete the Survey.
4. Briefing schedules for participants.
5. Provisions for State and regional review of consultant's data before it became final.
6. Definitions of terms for needs purposes. Standards were established for definitions of secondary treatment, design year, units of measurement, cost estimating, basis of cost estimate, design flows, and infiltration/inflow reporting.
7. Specific guidelines for completing Survey forms.
8. EPA adjustments to the 1980 Needs data base prior to its use as a starting point in 1982.

9. Cost estimating procedures to be used when more reliable local procedures were not available. These included estimating procedures for treatment costs and new sewers, with factors provided for determining cost variations in any of 30 areas near major cities in the United States.

10. Interceptor sewer sizing tables.

As a result of meetings and other communications with all the States, the guidance was supplemented to include:

1. "Rules-of-thumb" for estimating needs based on best engineering judgment. All of the participants understood that rules-of-thumb would be used only when better information was not available. For example:
 - a. Per capita domestic and commercial flows were allowed consistent with the construction grant regulations.
 - b. Collector sewer length was limited to 16 feet per capita of unsewered population. Interceptor sewer length was determined based on a formula that included size and density of population.
2. A procedure for designating the basis of cost estimates.
3. Additional national cost data showing capital costs for:
 - a. filtration;
 - b. lagoons;
 - c. chlorination.
4. Procedures for estimating backlog needs for all categories.
5. Instructions for reconciliation of population estimates.
6. Guidance for estimation of collector sewer costs.
7. Information on grant eligibilities for land costs.
8. Guidance for estimating infiltration/inflow (I/I) analysis costs.
9. Small cluster and individual onsite treatment systems.

D. Basis of Cost Estimate for Categories I-IV

All individual cost estimates for Categories I-IV of the Survey were accompanied by a basis of cost estimate so that the quality of the estimate could be determined. EPA has determined that the quality of cost estimates generally can be ranked from high to low as follows:

1. Consultant/Engineer final estimate;
2. Consultant/Engineer preliminary estimate;
3. Cost-effectiveness analysis;
4. Cost of previous comparable construction;
5. EPA-supplied cost estimating procedures;
6. State-supplied cost estimating procedures;
7. Rough estimates.

Table 42 shows the percent of State needs reported by basis of estimate. Table 43 shows the relative quality of estimates by Needs Survey category. Note that three bases of estimate (State certification, analysis completed, and evaluation survey completed), refer to Category III (infiltration/inflow correction and major sewer rehabilitation) needs only, and do not apply to other categories.

These tables show that the quality of the cost estimates in the 1980 Survey is substantially higher than that for the 1978 survey, when 37 percent of needs were based on EPA-supplied cost curves.

E. Data Sources for Categories I-IV

1. Many types of data and data sources were used in the Survey. Major data types are:

- a. Population (year 2000 and present);
- b. Total flow (average, current design, and projected year 2000 design);
- c. Industrial flow (average, current design, and projected year 2000 design);
- d. Biochemical oxygen demand and suspended solids concentrations (average, current design, and projected year 2000 design);
- e. Ammonia and phosphorus removal requirements (average, current design and projected 2000 design);
- f. Treatment methods;
- g. Sludge handling and treatment methods;
- n. Level of treatment required.

2. The sources of these data were:

- a. 1980 Needs Survey;
- b. Facility plans (201 Step I plans);
- c. NPDES applications and permits;
- d. Grant application files;
- e. Grant files and Grants Information and Control System data;
- f. Regional and/or basin plans (208 and 303 plans);
- g. Other engineering plans or reports;
- h. State water quality standards.

F. Survey Preparation

The 1982 Survey form was generated by computer, showing the 1980 data of record and adjusted for cost escalation and new rules governing the 1982 Needs Survey data for each facility. Once the revised cost estimates were recorded on Survey forms for each facility, copies of the completed forms were provided for all parties participating in the Survey, primarily for State review and revision. The forms were then used to record the updated 1982 Needs Survey figures.

Census data for 1980 and Bureau of Economic Analysis (Department of Commerce) year 2000 population projections were used as State ceilings. State population totals were not permitted to exceed these ceilings.

As Survey forms were completed, they were double checked by EPA for the accuracy of the data collected and submitted. Each State was then given the opportunity to review and comment on the revised data and to review the total cost estimates for the State.

Where cost estimate differences were not resolved, States submitted independent cost estimates on the form. Few independent State estimates were required.

II. CATEGORY V: Control of Combined Sewer Overflows

A. Background and General Approach

Work on Categories V and VI was undertaken by the URS Company and its subcontractor CH2M Hill with help from EPA and the States. Category V needs estimates were derived from a computerized cost estimating

program that incorporates cost, water quality data and algorithms reported in approved combined sewer overflow abatement facility plans or generated by 15 site studies conducted in cities with diverse wet weather conditions and data availability. This general approach for 1982 was similar to the approach used in 1980.

The Wet Weather Data File, which contains information on each combined sewer system and urbanized area in the nation, was updated and enhanced as part of the 1982 Needs Survey. This file contains the following types of information for each combined sewer facility:

1. Location;
2. Sewer system characteristics;
3. Receiving water characteristics;
4. Annual rainfall and runoff coefficients;
5. Status of CSO correction planning;
6. Grant information;
7. Grant eligible cost estimates.

An important addition to this file during 1982 was the receiving water reach number which identified the water segment receiving the combined sewer overflow and that segment receiving the storm drainage from urbanized areas. The reach number provides a linkage to the U.S. EPA Reach File, which contains hydrologic data, as well as to the stream use classifications and water quality standards data files, which provide information on receiving water designated use.

Other information for the Wet Weather Data File update was obtained from State and local engineering reports, including facility plans and other planning documents. Needs met information, i.e., grant awards, was obtained from the Grants Information and Control File.

B. Needs Estimation Procedure for Category V

Once the update of data was complete, Category V needs were estimated for each facility for four different levels of control. These control levels were:

1. Aesthetics;
2. Public Health;
3. Fish and Wildlife;
4. Recreation.

If an adequate facility plan estimate was available for a given facility, this estimate was used as the basis for establishing Category V needs. Otherwise, Category V needs were established based on one of the four control levels listed above. The control level chosen was a function of the designated receiving water use for the receiving segment. This linkage of Category V needs reported to Congress to receiving water designated use is the major change from the 1980 Category V needs estimating procedure. In 1980, needs reported to Congress were based on the recreation level of control.

Category V needs were estimated by a two-step procedure. First, needs for all combined sewer systems located in urbanized areas were estimated by the Needs Estimation Program, 1982 Version (NEP82). This program estimates both Category V and VI needs for each of 320 urbanized areas in the United States based on site-specific conditions. These site-specific conditions include the combined sewer service area, the population served by combined sewers, the total area and population of the urbanized area, the total annual rainfall, and the receiving water type and characteristics as well as local construction cost factors. NEP82 develops cost estimates for each of the four control levels discussed above. These estimates are then applied to each CSO facility located within each urbanized area.

The cost data generated by NEP82 were used to develop regression equations relating capital cost for each level of control to the combined sewer service area and population served by combined sewers. Next, these regression equations were used to develop needs estimates for each combined sewer facility located outside of urbanized areas. Receiving water use information was then used to select the most appropriate level of control and resulting needs for each individual CSO facility.

The pollutant removal objectives and technologies used to develop Category V cost estimates for four levels of control are described as follows:

1. Aesthetics

The objectives of the Aesthetics level of control are to remove floatables, coarse debris, and 40 percent of the annual BOD and SS load generated by a combined sewer system. The Aesthetics level is considered the minimum level of control necessary to allow limited noncontact recreational uses of the waters. This level is used as a basis for estimating CSO control needs when the primary receiving water use is navigation or agricultural or industrial raw water supply.

Studies conducted in previous Needs Surveys indicated that the least costly mix of technologies required to achieve an overall 40 percent reduction in CSO pollution loads is a combination of combined sewer flushing and a storage/treatment system utilizing physical/chemical treatment. Aesthetics control level cost estimates are, therefore, based on these approaches.

2. Public Health

The objective of the public health level of control is to remove 90 percent of the annual fecal coliform load generated by a combined sewer system. This level of control is chosen for Category V needs estimating purposes when the limiting receiving water use is domestic water supply, partial body contact recreation, or noncontact recreation.

Category V Public Health level cost estimates are based on an optimum combination of CSO storage with pumping and chlorination of the discharge sized to capture and kill 90 percent of the fecal coliform bacteria generated by the combined sewer system. This level of control will also result in significant reductions in annual BOD and SS loads due to the sedimentation achieved in the storage facility.

3. Fish and Wildlife

The objective of the Fish and Wildlife level of control is to achieve and maintain a viable fishery in the receiving water. CSO pollutant removal requirements for BOD and SS are estimated by NEP82 for each urbanized area, considering all dry-weather pollutant loads generated by the urbanized area as well as the characteristics of the receiving water. The estimation of required pollutant removal is based on the results of site-specific studies conducted in previous Needs Surveys and may vary from a minimum of 40 percent to a maximum of 90 percent for areawide wet-weather loads. This level of control is chosen for Category V needs estimating purposes when the limiting receiving water use is aquatic fish and wildlife support for either warm or cold water fisheries.

Once the CSO pollutant removal requirements are established, an optimization procedure based on production theory and marginal cost analysis is used to identify the optimum mix of CSO control technologies that will meet these requirements. Control technologies considered include streetsweeping, combined sewer flushing, and storage/treatment systems. In addition CSO treatment options considered include five different levels of physical/chemical treatment as well as four different alternatives for modification, expansion, and upgrade of existing biological wastewater treatment plants. The optimization procedure will select the least costly combination of the above technologies that will achieve the desired degree of CSO pollution control.

4. Recreation

The objective of the Recreation level of control is to provide receiving water quality suitable for full body contact recreation as well as for a viable fishery. Therefore, it is an increment above the Fish and Wildlife control level. In addition to the CSO pollution removal requirements for BOD and SS established by the Fish and Wildlife level

calculations, the Recreation level will provide for a 95 percent reduction in fecal coliform bacteria generated by the combined sewer system. This level of control is chosen for Category V needs estimating purposes when the limiting receiving water use is full body contact recreation or shellfish protection.

Category V Recreation level cost estimates are based on an optimum combination of storage and treatment sized to capture and kill 95 percent of the annual CSO fecal coliform load. The treatment option used is the same as the treatment option selected in the Fish and Wildlife calculations. This ensures that BOD and SS removals required for fish and wildlife protection will also be obtained at the Recreation level.

Combined Sewer Overflow Control Technologies

As discussed briefly above, a wide range of CSO control technologies are considered in estimating Category V needs. These technologies can be classified as Best Management Practices (BMPs) or structural controls. BMPs are characterized by low capital costs and high operation and maintenance costs. The BMPs considered in the 1982 Needs Survey include streetsweeping and combined sewer flushing. The objective of streetsweeping is to move street surface contaminants before they enter the collection system and the objective of combined sewer flushing is to transport accumulated collection system pollutants to the existing dry-weather treatment plant. In both cases pollutants are removed from the combined sewer watershed and are, therefore, unavailable for washoff to the receiving water during rainfall/runoff events.

The structural CSO controls considered are wet-weather treatment systems which include facilities to intercept, store, and treat CSO before it enters the receiving water. Wet-weather intercepts are, in general, required to collect the CSO at individual overflow points and to transport the intercepted flow to central storage facilities. The types of storage facilities considered are lined earthen basins, open concrete tanks, and closed concrete tanks. Lined earthen basins are used in areas of low population density, whereas open and closed concrete tanks are used in areas with higher population density. In any case, cost estimates for CSO storage include an allowance for aeration conditions and for facilitating cleanout during dry weather.

Treatment options considered in the Category V needs estimating procedure include construction of new physical/chemical treatment facilities designed to treat CSO only, and modification, expansion, and/or upgrade of existing dry-weather biological treatment facilities designed to treat both dry-weather flow and CSO. A total of nine different treatment levels are considered. The first five levels are physical/chemical treatment systems and the remaining four levels are various dry-chemical treatment system modifications. The nine treatment levels are:

- Level 1 - Effluent Pumping (from storage);
- Level 2 - Pumping/Microscreening;
- Level 3 - Pumping/Microscreening/Flocculation-Sedimentation;
- Level 4 - Pumping/Microscreening/Flocculation-Dissolved Air Flotation;
- Level 5 - Pumping/Microscreening/Flocculation-Dissolved Air Flotation/High-Rate Filtration;
- Level 6 - Series/Parallel Modification of Secondary WWTP;
- Level 7 - Enlargement of Secondary WWTP;
- Level 8 - Enlargement and Upgrade of Secondary WWTP to AST;
- Level 9 - Enlargement and Upgrade of Secondary WWTP to AT.

Level 1 treatment relies on the sedimentation and aeration provided by the CSO storage facility for pollutant removal and is, therefore, applicable only where required removals are small. Levels 2 through 5 provide increasing overall pollutant removal efficiency, using more sophisticated physical/chemical treatment systems.

Treatment Level 6 consists of relatively minor modification of existing WWTPs to double peak hydraulic capacity during wet weather. These modifications will allow the primary portion of the plant to operate in parallel with the secondary portion of the plant, thus increasing peak hydraulic capacity at very little cost. However, pollutant removal efficiencies are greatly reduced.

Treatment Levels 7, 8, and 9 all involve enlargement or enlargement and upgrade of existing dry-weather facilities to develop additional capacity to treat wet-weather flows. All processes in the treatment train operate in series.

Economic Optimization

The economic optimization portion of the Category V needs estimating procedure identifies the technology or mix of technologies from those discussed above that will achieve the desired level of pollution control at the least cost. The economic optimization procedures are based on production theory, where the optimum solution will vary with site-specific conditions, such as size and population density of the combined sewer service area as well as the required pollutant removal. Because CSO flows are intermittent and highly variable, it is almost always more cost effective to construct storage facilities along with treatment facilities rather than to construct treatment facilities alone. If storage were not provided, the required treatment capacity would be sized very large to handle peak flows.

Sewer Separation

A CSO control technology which is available but is not considered directly in the economic optimization procedure is separation of the combined sewer system so that combined sewers no longer exist. As a final step in the needs estimation procedures the cost of sewer separation is compared to the cost of the optimum combination of BMPs and storage/treatment systems. If sewer separation is less expensive, then Category V needs for that facility are based on the cost of sewer separation.

III. Category VI: Control of Urban Stormwater Runoff

Category VI needs estimates were generated by NEP82 for each urbanized area in the United States. These needs estimates were computed using an approach similar to that used to provide Category V (CSO) urbanized area needs. Category VI costs were developed for each of the four levels defined for CSO control. However, some of the technologies considered in CSO control are not applicable to stormwater runoff control. These include combined sewer flushing and modification, sewer separation, and expansion and/or upgrade of existing biological treatment facilities. With these exceptions needs estimates and procedures developed for Category VI closely parallel those for Category V described in of Appendix A.

The cost estimates by State and Territory are based on regulations for the application of the NPDES permit program for separate storm sewers published in the Federal Register of March 18, 1976. In these regulations the term "separate storm sewer" is defined as "conveyance or system of conveyance . . . located in an urbanized area and primarily operated for the purpose of collecting and conveying stormwater runoff." In accordance with this guideline, the geographical areas that require control and/or treatment of stormwater runoff are urbanized areas of the nation as defined by the U.S. Bureau of Census. The specific criteria for the delineation of an urbanized area are as follows:

- o A central city of 50,000 inhabitants or more, or twin cities with a combined population of at least 50,000, and with the smaller of the twin cities having a population of at least 15,000; and
- o Surrounding closely settled territory.

APPENDIX B

Reasons for Separate State Estimates Categories I-VI

Before completion of estimates, all Survey forms were sent to the States for review and comment. States were encouraged to provide as much additional information as possible to secure the best available estimates. Where EPA and State estimates differed, an attempt was made to resolve the differences. To achieve the most accurate and nationally consistent cost estimates, adherence to the Survey guidelines and rules-of-thumb as formulated by the EPA/State Needs Survey Working Group was enforced. Where agreement on specific estimates could not be reached between EPA and State personnel, separate estimates were submitted by States.

Of approximately 463,753 possible estimates, 41 separate estimates (0.008 percent) were submitted by States. Most of these estimates were based on State-developed cost curves or State population projections that exceed allowable ceilings. Other reasons for separate estimates included disagreement on allocation of dollars between Categories I-IV versus Category V, inclusion of ineligible facilities, and differing inflation factors.

APPENDIX C

Summary Tables

Cost data from the 1982 Needs Survey are presented in summary tables included in this appendix. The following tables show costs by State and U.S. totals:

Table 1:	EPA Assessments of Backlog Costs by Category, Categories I-V.
Table 2:	Independent State Assessment of Backlog Needs by Categories I-V.
Table 3:	Number of Independent State Backlog Assessments Different from EPA Backlog Assessments.
Table 4:	Comparison of 1982 and 1980 EPA Assessments of Backlog Needs, Categories I-IV.
Table 5:	Comparison of 1982 and 1980 EPA Assessments of Backlog Needs, Category V.
Table 6:	Comparison of 1982 and 1980 EPA Assessments of Backlog Needs, Category VI.
Table 7:	Comparison of 1982 and 1980 EPA Assessments of Backlog Needs for Treatment Plants, Categories I, IIA and IIB.
Table 8:	Comparison of 1982 and 1980 EPA Assessments of Backlog Needs for Categories I, IIA, IIB, IIIA, and IVB.
Table 9:	Comparison of 1982 and 1980 EPA Assessments of Backlog Needs for Category I.
Table 10:	Comparison of 1982 and 1980 EPA Assessments of Backlog Needs for Categories IIA and IIB.
Table 11:	Comparison of 1982 and 1980 EPA Assessments of Backlog Needs for Category IIIA.
Table 12:	Comparison of 1982 and 1980 EPA Assessments of Backlog Needs for Category IIIB.
Table 13:	Comparison of 1982 and 1980 EPA Assessments of Backlog Needs for Category IVA.
Table 14:	Comparison of 1982 and 1980 EPA Assessments of Backlog Needs for Category IVB.

Table 15:	1982 EPA Assessment of Category V Needs by Basis of Estimate.
Table 16:	Comparison of Current and Year 2000 and Per Capita Backlog Costs, Categories I-IV.
Table 17:	Per Capita Backlog Estimate, Category V.
Table 18:	Comparison of Current and Year 2000 Per Capita Backlog Costs, Categories I, IIA, IIB, IIIA, and IVB.
Table 19:	Comparison of Current and Year 2000 Per Capita Backlog costs, Categories I, IIA, IIB.
Table 20:	Current Per Capita Backlog Costs by Categories I-IV.
Table 21:	1982 EPA Assessments of Year 2000 Needs by Categories I-IV.
Table 22:	Independent State Estimates of Year 2000 Needs by Categories I-IV.
Table 23:	Comparison of 1982 and 1980 EPA Assessment of Year 2000 Needs, Categories I-IV.
Table 24:	Comparison of 1982 and 1980 EPA Assessments of Year 2000 Needs for Treatment Plants, Categories I, IIA, and IIB.
Table 25:	Comparison of 1982 and 1980 EPA Assessments of Year 2000 Needs for Categories I, IIA, IIB, IIIA, and IVB.
Table 26:	Comparison of 1982 and 1980 EPA Assessments of Year 2000 Needs for Category I.
Table 27:	Comparison of 1982 and 1980 EPA Assessments of Year 2000 Needs for Category IIA and IIB.
Table 28:	Comparison of 1982 and 1980 EPA Assessments of Year 2000 Needs for Category IIIA.
Table 29:	Comparison of 1982 and 1980 EPA Assessments of Year 2000 Needs for Category IIIB.
Table 30:	Comparison of 1982 and 1980 EPA Assessments of Year 2000 Needs for Category IVA.

Table 31:	Comparison of 1982 and 1980 EPA Assessments of Year 2000 Needs for Category IVB.
Table 32:	Comparison of 1982 and 1980 EPA Assessments of Per Capita Costs for Year 2000 Needs, Categories I-IV.
Table 33:	Comparison of 1982 EPA Dollar Assessments with State Dollar Assessments for Categories I-V.
Table 34:	Comparison of 1982 EPA and State Estimates, Categories I, IIA, and IIB.
Table 35:	Comparison of 1982 EPA and State Estimates, Category IIIA.
Table 36:	Comparison of 1982 EPA and State Estimates, Category IVB.
Table 37:	Comparison of Year 2000 Needs and 1982 Backlog Needs, Categories I-IV.
Table 38:	Comparison of Year 2000 Needs and 1982 Backlog Needs, Categories I, IIA and IIB.
Table 39:	Comparison of Year 2000 Needs and 1982 Backlog Needs, Categories I, IIA, IIB, IIIA, and IVB.
Table 40:	Number of EPA Cost Assessments by Categories I-V.
Table 41:	Number of Facilities Evaluated in Independent State Assessments Compared to EPA Assessments.
Table 42:	Percent of Dollar Needs by Basis of Cost Estimate and by State.
Table 43:	Percent of National Needs by Basis of Cost Estimate.

DECEMBER 31, 1982
TABLE 1

1982 NEEDS SURVEY

EPA ASSESSMENTS OF BACKLOG NEEDS BY CATEGORY
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
MILLIONS OF 1982 DOLLARS

CATEGORIES I THRU V

	TOTAL	I	IIA	IIB	III A	III B	IV A	IV B	V
ALABAMA	800	258	65	14	87	4	296	73	0
ALASKA	249	100	0	0	2	0	84	43	18
ARIZONA	277	115	0	0	1	0	133	27	0
ARKANSAS	268	122	17	3	18	2	92	31	0
CALIFORNIA	3,204	986	24	25	61	156	1,097	286	565
COLORADO	193	117	3	0	5	1	19	3	41
CONNECTICUT	1,932	323	39	4	23	16	550	198	775
DELAWARE	372	19	4	0	0	2	32	19	292
DIST. OF COLUM.	83	0	0	9	6	0	0	0	68
FLORIDA	2,277	808	71	69	77	0	870	370	0
GEORGIA	1,269	262	128	1	93	14	231	123	414
HAWAII	333	76	0	0	0	17	191	48	0
IDaho	323	87	4	0	7	2	77	28	116
ILLINOIS	3,531	322	507	0	178	55	180	191	2,096
INDIANA	3,704	221	108	1	47	3	247	107	2,967
IOWA	1,153	396	76	0	85	1	109	56	426
KANSAS	855	155	0	0	49	21	97	137	393
KENTUCKY	2,499	294	83	0	104	5	398	161	1,450
LOUISIANA	791	205	6	0	76	15	333	153	0
MAINE	1,320	164	1	0	17	6	196	102	829
MARYLAND	830	106	227	0	13	130	225	51	75
MASSACHUSETTS	4,747	1,233	85	17	20	18	806	574	1,990
MICHIGAN	4,523	983	194	28	73	99	506	479	2,157
MINNESOTA	1,105	353	62	12	28	17	128	182	320
MISSISSIPPI	509	230	42	2	55	0	115	61	0
MISSOURI	2,316	643	1	0	37	49	209	326	1,047
MONTANA	235	27	1	0	1	0	34	6	164
NEBRASKA	232	130	0	0	0	1	20	7	72
NEVADA	109	38	17	0	2	3	33	6	0
NEW HAMPSHIRE	1,159	225	2	2	9	4	264	206	443
NEW JERSEY	5,426	1,847	181	97	226	2	440	614	2,015
NEW MEXICO	121	73	0	0	0	0	37	9	0
NEW YORK	16,128	3,290	122	56	186	3,759	2,327	765	5,620
NORTH CAROLINA	1,070	300	94	32	84	0	404	151	2
NORTH DAKOTA	37	12	0	0	0	0	2	3	13
OHIO	6,325	693	393	69	134	21	669	464	3,878
OKLAHOMA	275	105	4	1	13	9	84	55	0
OREGON	1,274	94	20	0	71	17	313	81	674
PENNSYLVANIA	5,354	903	169	15	15	0	1,315	288	2,646
RHODE ISLAND	627	173	12	0	2	29	153	77	177
SOUTH CAROLINA	672	129	25	3	76	0	266	169	0
SOUTH DAKOTA	129	65	7	1	2	0	2	4	43
TENNESSEE	1,452	300	125	1	153	3	398	120	346
TEXAS	2,053	833	97	2	181	29	418	469	21
UTAH	211	94	37	0	11	0	48	17	2
VERMONT	475	84	19	0	7	3	69	29	261
VIRGINIA	1,464	483	33	30	14	2	390	230	274
WASHINGTON	2,766	465	3	13	115	62	528	284	1,292
WEST VIRGINIA	2,437	358	19	1	4	2	699	183	1,167
WISCONSIN	1,841	517	86	0	32	79	210	546	369
WYOMING	69	39	3	0	1	0	2	3	18
AMERICAN SAMOA	36	13	0	0	0	0	6	15	0
GUAM	18	8	0	0	0	0	7	1	0
MARIANAS GROUP	39	9	1	0	0	0	15	13	0
PUERTO RICO	954	174	2	0	18	11	329	245	171
PAC. TR. TERR.	75	40	0	0	0	0	23	10	0
VIRGIN ISLANDS	26	10	0	0	0	0	12	3	0
U.S. TOTALS	92,595	20,137	3,245	528	2,550	4,691	16,769	8,933	35,739

NOTE: SUM OF ENTRIES MAY NOT EQUAL TOTALS DUE TO ROUND-OFFS

DECEMBER 31, 1982
TABLE 2

1982 NEEDS SURVEY

INDEPENDENT STATE ASSESSMENT OF BACKLOG NEEDS BY CATEGORY
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
MILLIONS OF 1982 DOLLARS

CATEGORIES I THRU V									
	TOTAL	I	IIA	IIB	III A	III B	IV A	IV B	V
ALABAMA	800	258	65	14	87	4	296	73	0
ALASKA	249	100	0	0	2	0	84	43	18
ARIZONA	277	115	0	0	1	0	133	27	0
ARKANSAS	288	122	17	3	18	2	92	31	0
CALIFORNIA	3,343	986	24	25	200	156	1,097	286	565
COLORADO	193	117	3	0	5	1	19	3	41
CONNECTICUT	1,932	323	39	4	23	16	550	198	775
DELAWARE	372	19	4	0	0	2	32	19	292
DIST. OF COLUM.	83	0	0	0	6	0	0	0	68
FLORIDA	2,277	808	71	69	77	0	870	370	8
GEORGIA	1,269	262	128	1	93	14	231	123	414
HAWAII	333	76	0	0	0	17	191	48	0
IDAH0	323	87	4	0	7	2	77	28	116
ILLINOIS	3,531	322	507	0	178	55	180	191	2,096
INDIANA	3,704	221	108	1	47	3	247	107	2,967
IOWA	1,153	396	76	0	85	1	109	56	426
KANSAS	855	155	0	0	49	21	97	137	393
KENTUCKY	2,499	294	83	0	104	5	398	161	1,450
LOUISIANA	791	205	6	0	76	15	333	153	0
MAINE	1,320	164	1	0	17	6	196	102	829
MARYLAND	830	106	227	0	13	130	225	51	75
MASSACHUSETTS	4,747	1,233	85	17	20	18	806	574	1,990
MICHIGAN	4,523	983	194	28	73	99	506	479	2,157
MINNESOTA	1,105	353	62	12	28	17	128	162	320
MISSISSIPPI	509	230	42	2	55	0	115	61	0
MISSOURI	2,316	643	1	0	37	49	209	326	1,047
MONTANA	235	27	1	0	1	0	34	6	164
NEBRASKA	232	130	0	0	0	1	20	7	72
NEVADA	109	38	17	6	2	3	33	6	0
NEW HAMPSHIRE	1,159	225	2	2	9	4	264	206	443
NEW JERSEY	5,426	1,847	181	97	226	2	440	814	2,015
NEW MEXICO	121	73	0	0	0	0	37	9	0
NEW YORK	16,128	3,290	122	56	186	3,759	2,327	765	5,620
NORTH CAROLINA	1,070	300	94	32	84	0	404	151	2
NORTH DAKOTA	32	12	0	0	0	0	2	3	13
OHIO	6,325	693	393	69	134	21	669	464	3,878
OKLAHOMA	275	105	4	1	13	9	84	55	0
OREGON	1,274	94	20	0	71	17	313	81	674
PENNSYLVANIA	5,354	903	169	15	15	0	1,315	288	2,646
RHODE ISLAND	627	173	12	0	2	29	153	77	177
SOUTH CAROLINA	672	129	25	3	76	0	266	169	0
SOUTH DAKOTA	129	65	7	1	2	0	2	4	43
TENNESSEE	1,452	300	125	1	153	3	398	170	346
TEXAS	2,060	836	97	2	181	29	418	473	21
UTAH	211	94	37	0	11	0	48	17	2
VERMONT	475	84	19	0	7	3	69	29	261
VIRGINIA	1,448	463	33	30	18	2	390	230	278
WASHINGTON	2,766	465	3	13	115	62	528	244	1,292
WEST VIRGINIA	2,437	358	19	1	4	2	699	183	1,167
WISCONSIN	1,841	517	86	0	32	79	210	546	369
WYOMING	69	39	3	0	1	0	2	3	18
AMERICAN SAMOA	36	13	0	0	0	0	6	15	0
GUAM	18	8	0	0	0	0	7	1	0
MARIANAS GROUP	39	9	1	0	0	0	15	13	0
PUERTO RICO	954	174	2	0	18	11	329	245	171
PAC. TR. TERR.	75	40	0	0	0	0	23	10	0
VIRGIN ISLANDS	26	10	0	0	0	0	12	3	0
U.S. TOTALS	92,742	20,140	3,245	528	2,688	4,691	16,769	8,938	35,739

NOTE: SUM OF ENTRIES MAY NOT EQUAL TOTALS DUE TO ROUND-OFFS

DECEMBER 31, 1982
TABLE 3

1982 NEEDS SURVEY
NUMBER OF INDEPENDENT STATE BACKLOG ASSESSMENTS
DIFFERENT FROM EPA BACKLOG ASSESSMENTS

STATE	TOTAL	CAT I	CAT IIA	CAT IIB	CAT IIIA	CAT IIIB	CAT IVA	CAT IVB	CAT V
CALIFORNIA	1				1				
TEXAS	21	3						18	
US TOTALS	22	3			1			18	

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF BACKLOG NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1982 DOLLARS
CATEGORIES I THROUGH IX

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 BACKLOGS	1982 BACKLOGS	CHANGE	1980 BACKLOGS	1982 BACKLOGS	CHANGE
ALABAMA	622,228	800,647	+178,419	1.0118	1.4081	+0.3963
ALASKA	352,102	230,873	-121,229	0.5725	0.4060	-0.1665
ARIZONA	277,322	277,270	-52	0.4509	0.4876	+0.0366
ARKANSAS	307,371	284,310	-19,061	0.4998	0.5070	+0.0072
CALIFORNIA	3,921,805	2,638,685	-1,283,120	6.3776	4.6409	-1.7367
COLORADO	258,917	151,755	-107,162	0.4210	0.2669	-0.1541
CONNECTICUT	1,038,700	1,157,181	+118,481	1.6891	2.0352	+0.3461
DELAWARE	120,694	79,974	-40,720	0.1962	0.1406	-0.0556
DIST. OF COLUM.	26,466	15,509	-10,957	0.0430	0.0272	-0.0157
FLORIDA	2,353,974	2,268,938	-85,036	3.8280	3.9906	+0.1625
GEORGIA	712,765	854,674	+141,909	1.1591	1.5032	+0.3441
HAWAII	570,205	333,987	-146,218	0.8459	0.5874	-0.2585
IDAH0	252,055	207,267	-44,788	0.4098	0.3645	-0.0453
ILLINOIS	1,966,945	1,435,815	-531,130	3.1986	2.5253	-0.6733
INDIANA	875,619	737,378	-138,241	1.4239	1.2969	-0.1270
IOWA	807,002	726,947	-80,055	1.3123	1.2785	-0.0337
KANSAS	567,352	462,074	-105,278	0.9226	0.8127	-0.1099
KENTUCKY	1,003,173	1,048,918	+45,745	1.6313	1.8448	+0.2134
LOUISIANA	721,613	791,031	+69,418	1.1734	1.3912	+0.2177
MAINE	547,056	490,936	-56,120	0.8896	0.8634	-0.0261
MARYLAND	2,825,540	755,401	-2,070,179	4.5949	1.3286	-3.2663
MASSACHUSETTS	2,540,800	2,757,337	+176,537	4.1969	4.8496	+0.6527
MICHIGAN	2,735,081	2,365,964	-369,117	4.4478	4.1612	-0.2865
MINNESOTA	952,143	784,948	-167,195	1.5483	1.3805	-0.1678
MISSISSIPPI	570,837	509,129	-61,708	0.9283	0.8954	-0.0328
MISSOURI	1,553,146	1,268,912	-284,234	2.5257	2.2317	-0.2939
MONTANA	49,930	71,244	+21,314	0.0811	0.1253	+0.0441
NEBRASKA	176,482	159,461	-17,021	0.2869	0.2804	-0.0065
NEVADA	127,058	109,469	-17,589	0.2066	0.1425	-0.0640
NEW HAMPSHIRE	762,256	715,555	-46,701	1.2395	1.2585	+0.0189
NEW JERSEY	2,650,581	3,410,822	+760,241	4.3104	5.9990	+1.6886
NEW MEXICO	105,057	121,219	+16,162	0.1708	0.2132	+0.0423
NEW YORK	11,048,834	10,508,152	-540,682	17.9677	18.4818	+0.5141
NORTH CAROLINA	1,147,516	1,067,162	-80,354	1.8661	1.8769	+0.0108
NORTH DAKOTA	17,965	19,261	+1,296	0.0292	0.0338	+0.0046
OHIO	2,356,088	2,446,629	+90,541	3.8314	4.3031	+0.4716
OKLAHOMA	346,400	275,988	-70,412	0.5633	0.4854	-0.0779
OREGON	594,208	600,329	+6,121	0.9663	1.0558	+0.0895
PENNSYLVANIA	2,676,834	2,707,936	+31,102	4.3530	4.7627	+0.4096
RHODE ISLAND	634,540	450,076	-184,514	1.0319	0.7916	-0.2403
SOUTH CAROLINA	485,186	672,075	+186,889	0.7890	1.1820	+0.3930
SOUTH DAKOTA	90,241	85,331	-4,910	0.1467	0.1500	+0.0033
TENNESSEE	1,056,754	1,105,187	+48,433	1.7185	1.9438	+0.2253
TEXAS	1,607,358	2,031,650	+424,292	2.6139	3.5732	+0.9593
UTAH	309,047	209,262	-99,835	0.5026	0.3680	-0.1346
VERMONT	223,767	214,466	-9,301	0.3638	0.3772	+0.0133
VIRGINIA	1,208,067	1,189,868	-18,199	1.9645	2.0927	+0.1281
WASHINGTON	1,312,136	1,474,119	+161,983	2.1338	2.5927	+0.4589
WEST VIRGINIA	1,051,680	1,269,492	+217,812	1.7102	2.2328	+0.5225
WISCONSIN	1,734,762	1,472,344	-262,418	2.8210	2.5895	-0.2315
WYOMING	47,966	50,587	+2,621	0.0780	0.0889	+0.0109
AMERICAN SAMOA	56,425	36,234	-20,191	0.0917	0.0637	-0.0280
GUAM	22,993	18,533	-4,460	0.0373	0.0325	-0.0047
MARIANAS GROUP	42,216	39,557	-2,659	0.0686	0.0695	+0.0009
PUERTO RICO	953,565	782,611	-170,954	1.5506	1.3764	-0.1742
PAC. TR. TERR.	44,017	75,562	+31,545	0.1366	0.1328	-0.0037
VIRGIN ISLANDS	41,654	26,416	-15,238	0.0677	0.0464	-0.0212
U.S. TOTALS	61,492,634	56,856,457	-4,636,177	100.0000	100.0000	+0.0000

1982 NEEDS SURVEY

DECEMBER 31, 1982
TABLE 5COMPARISON OF 1980 AND 1982 ASSESSMENT OF
BACKLOG NEEDS, CATEGORY V.
THOUSANDS OF 1982 DOLLARS

STATE	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE
ALABAMA	0	0	0	0	0.0000	0
ALASKA	18,908	18,388	-520	0.0416	0.0515	0.0099
ARIZONA	0	0	0	0	0.0000	0
ARKANSAS	0	0	0	0	0.0000	0
CALIFORNIA	636,445	565,957	-70,488	1.4068	1.5836	0.1768
COLORADO	97,863	41,547	-56,316	0.2158	0.1162	-0.0996
CONNECTICUT	799,636	775,272	-24,364	1.7676	2.1692	0.4016
DELAWARE	284,566	242,110	-42,456	0.6289	0.8173	0.1884
DIST. OF COLUMBIA	509,916	68,119	-441,797	1.1271	0.1906	-0.9365
FLORIDA	7,335	8,526	1,191	0.0161	0.0239	0.0078
GEORGIA	395,779	414,737	18,958	0.8748	1.1604	0.2856
HAWAII	0	0	0	0	0.0000	0
IDAH0	107,155	116,380	9,225	0.2367	0.3256	0.0889
ILLINOIS	2,717,271	2,096,022	-621,249	6.0069	5.8647	-0.1422
INDIANA	3,561,855	2,967,239	-594,616	7.8740	8.3024	0.4284
IOWA	359,701	426,592	66,891	0.7950	1.1936	0.3986
KANSAS	767,384	393,061	-374,323	0.8120	1.0998	0.2878
KENTUCKY	1,000,774	1,450,892	450,118	2.2123	4.0596	1.8473
LOUISIANA	0	0	0	0	0.0000	0
MAINE	1,160,725	829,562	-331,163	2.5659	2.3211	-0.2448
MARYLAND	98,127	75,141	-22,986	0.2168	0.2102	-0.0066
MASSACHUSETTS	2,534,376	1,990,374	-544,002	5.6026	5.5691	-0.0335
MICHIGAN	2,264,938	2,157,457	-107,481	5.0069	6.0366	1.0297
MINNESOTA	390,252	320,721	-69,531	0.8626	0.8974	0.0348
MISSISSIPPI	0	0	0	0	0.0000	0
MISSOURI	990,448	1,047,436	56,988	2.1895	2.9307	0.7412
MONTANA	172,279	164,019	-8,260	0.3807	0.4589	0.0782
NEBRASKA	103,558	72,783	-30,775	0.2288	0.2036	-0.0252
NEVADA	0	0	0	0	0.0000	0
NEW HAMPSHIRE	513,785	443,788	-69,997	1.1357	1.2417	0.1060
NEW JERSEY	3,423,762	2,015,494	-1,408,268	7.5688	5.6394	-1.929
NEW MEXICO	0	0	0	0	0.0000	0
NEW YORK	9,110,513	5,620,385	-3,490,128	20.1405	15.7260	-4.415
NORTH CAROLINA	7,054	2,943	-4,111	0.0154	0.0082	-0.0072
NORTH DAKOTA	38,303	13,331	-24,972	0.0845	0.0373	-0.0472
OHIO	3,695,196	3,878,731	183,535	8.1688	10.8528	2.6840
OKLAHOMA	0	0	0	0	0.0000	0
OREGON	332,574	674,022	341,448	0.7351	1.8859	1.1508
PENNSYLVANIA	5,354,005	2,644,113	-2,709,892	11.8359	7.4039	-4.432
RHODE ISLAND	448,607	177,612	-270,995	0.9916	0.4970	-0.4946
SOUTH CAROLINA	0	0	0	0	0.0000	0
SOUTH DAKOTA	81,793	43,897	-37,896	0.1807	0.1228	-0.0579
TENNESSEE	272,744	340,840	68,096	0.6028	0.9705	0.3677
TEXAS	27,385	21,429	-5,956	0.0604	0.0600	-0.0004
UTAH	5	2,547	2,542	0.0111	0.0073	-0.0038
VERMONT	265,812	261,494	-4,318	0.5875	0.7317	0.1442
VIRGINIA	537,944	274,440	-263,504	1.1891	0.7796	-0.4095
WASHINGTON	1,031,406	1,292,435	260,029	2.2809	3.4163	1.1354
WEST VIRGINIA	982,385	1,167,555	185,170	2.1716	3.2668	1.0952
WISCONSIN	472,378	369,650	-102,728	1.0441	1.0343	-0.0098
WYOMING	19,346	18,687	-659	0.0426	0.0523	0.0097
AMERICAN SAMOA	0	0	0	0	0.0000	0
GUAM	0	0	0	0	0.0000	0
MARIANAS GROUP	0	0	0	0	0.0000	0
PUERTO RICO	34,920	171,557	136,637	0.0770	0.4800	0.4030
PAC. TR. TERR.	0	0	0	0	0.0000	0
VIRGIN ISLANDS	0	0	0	0	0.0000	0
U.S. TOTALS	45,229,453	35,739,535	-9,489,918	100.0000	100.0000	0.0000

DECEMBER 31, 1982
TABLE 6

1982 NEEDS SURVEY

COMPARISON OF 1980 AND 1982 ASSESSMENT OF
BACKLOG NEEDS, CATEGORY VI.
THOUSANDS OF 1982 DOLLARS

STATE	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE
ALABAMA	2,429,345	2,049,124	-380,261	1.7552	2.1984	0.4432
ALASKA	1,202,107	312,420	-889,286	0.8684	0.3356	-.5328
ARIZONA	1,399,818	305,644	-1,094,175	1.0113	0.3279	-.6834
ARKANSAS	814,144	759,343	-54,801	0.5881	0.8147	0.2266
CALIFORNIA	13,392,518	7,971,994	-5,420,524	9.6768	8.5529	-1.124
COLORADO	984,474	336,856	-651,618	0.7141	0.3614	-.3527
CONNECTICUT	5,344,427	4,744,629	-599,798	3.8630	5.0925	1.2295
DELAWARE	770,184	724,721	-45,463	0.5564	0.7775	0.2211
DIST. OF COLUMBIA	474,727	430,082	-44,645	0.3465	0.4614	0.1149
FLORIDA	9,813,279	11,916,252	2,102,973	7.0906	12.7845	5.6939
GEORGIA	2,679,802	2,354,585	-325,217	1.9362	2.5262	0.5900
HAWAII	857,150	643,903	-213,247	0.6192	0.6908	0.0716
IDaho	103,438	54,735	-48,703	0.0746	0.0630	-.0116
ILLINOIS	3,162,942	3,007,742	-155,200	2.2853	3.2269	0.9416
INDIANA	2,702,070	1,804,964	-897,106	1.9523	1.9408	-.0115
IOWA	465,480	750,040	284,560	0.6252	0.8047	0.1795
KANSAS	1,765,531	1,043,081	-722,450	1.2756	1.1191	-.1565
KENTUCKY	1,904,431	2,345,352	440,921	1.3774	2.5162	1.1388
LOUISIANA	1,539,405	1,314,958	-224,447	1.1122	1.4108	0.2986
MAINE	1,354,084	239,474	-1,114,610	0.9819	0.2571	-.7248
MARYLAND	3,240,198	2,917,109	-323,089	2.3700	3.1297	0.7597
MASSACHUSETTS	4,056,091	4,724,900	668,809	5.8209	5.0692	-.7517
MICHIGAN	2,450,121	2,412,446	-37,675	2.0592	2.5447	0.5295
MINNESOTA	1,441,996	961,092	-480,904	1.2152	1.0311	-.1841
MISSISSIPPI	554,256	654,169	99,913	0.4003	0.7018	0.3015
MISSOURI	1,445,623	1,525,770	80,147	1.1849	1.6369	0.4480
MONTANA	103,550	35,212	-68,338	0.0747	0.0378	-.0369
NEBRASKA	302,384	192,972	-109,412	0.2183	0.2070	-.0113
NEVADA	544,551	153,649	-390,902	0.3969	0.1649	-.2320
NEW HAMPSHIRE	3,245,916	1,670,462	-1,575,454	2.3460	1.7922	-.5538
NEW JERSEY	15,214,778	3,791,519	-11,423,259	10.9935	4.0678	-6.926
NEW MEXICO	235,548	50,176	-185,372	0.1701	0.0538	-.1163
NEW YORK	4,779,404	1,154,408	-3,624,996	3.4533	1.2439	-2.209
NORTH CAROLINA	2,030,744	1,044,686	-986,058	1.4672	1.1208	-.3464
NORTH DAKOTA	35,434	14,463	-20,971	0.0256	0.0155	-.0101
OHIO	4,847,543	4,753,459	-94,084	3.5025	5.0998	1.5973
OKLAHOMA	1,002,443	594,645	-407,798	0.7242	0.6380	-.0862
OREGON	1,574,398	2,081,460	507,062	1.1375	2.2331	1.0956
PENNSYLVANIA	7,405,825	3,164,339	-4,241,486	5.7123	3.3992	-2.313
RHODE ISLAND	999,902	742,534	-257,368	0.7223	0.4503	0.1280
SOUTH CAROLINA	1,043,044	539,342	-503,702	0.7535	0.5786	-.1749
SOUTH DAKOTA	44,934	23,047	-21,887	0.0448	0.0247	-.0221
TENNESSEE	2,594,018	2,781,043	187,025	1.8756	2.9437	1.0681
TEXAS	8,314,970	4,322,271	-3,992,700	6.0047	4.6372	-1.371
UTAH	503,642	64,325	-439,317	0.3634	0.0690	-.2948
VERMONT	0	0	0	0	0.0000	0
VIRGINIA	5,724,872	3,414,715	-2,310,157	4.1344	4.0970	-.0394
WASHINGTON	2,519,166	2,441,571	-77,595	1.8201	3.0486	1.2285
WEST VIRGINIA	606,718	597,071	-9,647	0.4382	0.6406	0.2024
WISCONSIN	1,931,569	1,724,750	-206,819	1.3955	1.4504	0.4549
WYOMING	0	0	0	0	0.0000	0
AMERICAN SAMOA	0	0	0	0	0.0000	0
GUAM	0	0	0	0	0.0000	0
MARIANAS GROUP	0	0	0	0	0.0000	0
PUERTO RICO	615,746	676,639	60,893	0.4448	0.7259	0.2811
PAC. TR. TERR.	0	0	0	0	0.0000	0
VIRGIN ISLANDS	0	0	0	0	0.0000	0
U.S. TOTALS	134,394,233	93,204,260	-41,189,973	100.0000	100.0000	0.0000

DECEMBER 31, 1982
TABLE 7

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF BACKLOG NEEDS
FOR CONSTRUCTION OF TREATMENT PLANTS
THOUSANDS OF 1982 DOLLARS
CATS I, IIA, AND IIB

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 BACKLOGS	1982 BACKLOGS	CHANGE	1980 BACKLOGS	1982 BACKLOGS	CHANGE
ALABAMA	215,200	338,468	+123,268	0.8523	1.4154	+0.5631
ALASKA	242,348	100,587	-141,761	0.9598	0.4206	-0.5391
ARIZONA	136,841	115,590	-21,251	0.5420	0.4833	-0.0586
ARKANSAS	145,517	142,926	-2,591	0.5763	0.5977	+0.0214
CALIFORNIA	1,833,183	1,036,488	-796,695	7.2609	4.3344	-2.9264
COLORADO	103,555	121,708	+18,145	0.4101	0.5089	+0.0988
CONNECTICUT	372,596	367,596	-5,000	1.4757	1.5372	+0.0615
DELAWARE	52,054	24,469	-27,585	0.2061	0.1023	-0.1037
DIST. OF COLUM.	9,175	9,036	-139	0.0363	0.0377	+0.0014
FLORIDA	924,061	950,234	+26,173	3.6600	3.9737	+0.3137
GEORGIA	290,058	391,613	+101,555	1.1488	1.6376	+0.4888
HAWAII	153,665	76,862	-76,803	0.6086	0.3214	-0.2871
IDaho	124,055	92,156	-31,899	0.4913	0.3853	-0.1059
ILLINOIS	1,390,940	829,970	-560,970	5.5092	3.4708	-2.0383
INDIANA	386,574	331,317	-55,257	1.5311	1.3855	-0.1455
IOWA	474,898	473,201	-1,697	1.8809	1.9788	+0.0979
KANSAS	217,927	155,973	-61,954	0.8631	0.6522	-0.2108
KENTUCKY	335,050	378,972	+43,922	1.3270	1.5848	+0.2578
LOUISIANA	201,255	211,684	+10,429	0.7971	0.8852	+0.0881
MAINE	185,120	167,275	-17,845	0.7332	0.6995	-0.0336
MARYLAND	668,920	334,166	-334,754	2.6494	1.3974	-1.2519
MASSACHUSETTS	1,028,025	1,337,408	+309,383	4.0718	5.5928	+1.5210
MICHIGAN	1,336,995	1,207,052	-129,943	5.2956	5.0477	-0.2478
MINNESOTA	422,779	428,412	+5,633	1.6745	1.7915	+0.1170
MISSISSIPPI	269,030	275,598	+6,568	1.0655	1.1525	+0.0870
MISSOURI	793,552	645,651	-147,901	3.1431	2.7000	-0.4430
MONTANA	27,544	28,713	+1,169	0.1090	0.1200	+0.0110
NEBRASKA	145,411	130,033	-15,378	0.5759	0.5437	-0.0321
NEVADA	72,966	62,775	-10,191	0.2890	0.2625	-0.0264
NEW HAMPSHIRE	227,951	230,211	+2,260	0.9028	0.9627	+0.0599
NEW JERSEY	1,385,462	2,126,069	+740,607	5.4875	8.8909	+3.4034
NEW MEXICO	62,355	74,249	+11,894	0.2469	0.3105	+0.0636
NEW YORK	3,388,874	3,469,503	+80,629	13.4227	14.5090	+1.0863
NORTH CAROLINA	550,733	426,877	-123,856	2.1813	1.7851	-0.3961
NORTH DAKOTA	13,363	12,787	-576	0.0529	0.0534	+0.0005
OHIO	1,111,345	1,156,524	+45,179	4.4018	4.8364	+0.4346
OKLAHOMA	115,867	111,327	-4,540	0.4589	0.4655	+0.0066
OREGON	118,977	116,195	-2,782	0.4712	0.4859	+0.0147
PENNSYLVANIA	1,208,182	1,087,812	-120,370	4.7854	4.5491	-0.2362
RHODE ISLAND	209,106	186,099	-23,007	0.8282	0.7782	-0.0499
SOUTH CAROLINA	159,909	159,235	-674	0.6333	0.6659	+0.0326
SOUTH DAKOTA	77,979	74,182	-3,797	0.3088	0.3102	+0.0014
TENNESSEE	449,912	428,305	-21,607	1.7820	1.7911	+0.0091
TEXAS	603,132	932,401	+329,269	2.3889	3.8992	+1.5103
UTAH	199,920	131,912	-68,008	0.7918	0.5516	-0.2401
VERMONT	108,197	104,818	-3,379	0.4285	0.4383	+0.0098
VIRGINIA	541,233	548,122	+6,889	2.1437	2.2921	+0.1484
WASHINGTON	471,116	442,424	-28,692	1.8660	2.0174	+0.1514
WEST VIRGINIA	359,191	378,527	+19,336	1.4226	1.5829	+0.1603
WISCONSIN	918,288	603,536	-314,752	3.6371	2.5239	-1.1131
WYOMING	38,384	43,178	+4,794	0.1520	0.1805	+0.0285
AMERICAN SAMOA	16,902	13,847	-3,055	0.0669	0.0579	-0.0089
GUAM	20,252	8,487	-11,765	0.0802	0.0354	-0.0447
MARIANAS GROUP	11,198	10,924	-274	0.0443	0.0456	+0.0013
PUERTO RICO	265,869	176,804	-89,065	1.0530	0.7393	-0.3136
PAC. TR. TERR.	35,466	41,353	+5,887	0.1404	0.1729	+0.0325
VIRGIN ISLANDS	18,790	10,978	-7,812	0.0744	0.0459	-0.0284
U.S. TOTALS	25,247,247	23,912,611	-1,334,636	100.0000	100.0000	+0.0000

DECEMBER 31, 1982
TABLE 8

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF BACKLOG NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1982 DOLLARS
CAT I, IIA, IIB, IIIA, AND IVB

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 BACKLOGS	1982 BACKLOGS	CHANGE	1980 BACKLOGS	1982 BACKLOGS	CHANGE
ALABAMA	361,272	500,016	+138,744	0.9576	1.4126	+0.4550
ALASKA	311,028	146,460	-164,568	0.8244	0.4137	-0.4106
ARIZONA	172,762	144,034	-28,728	0.4579	0.4069	-0.0509
ARKANSAS	198,485	193,341	-5,144	0.5261	0.5462	+0.0201
CALIFORNIA	2,681,149	1,384,761	-1,296,388	7.1073	3.9122	-3.1950
COLORADO	117,433	131,158	+13,725	0.3112	0.3705	+0.0593
CONNECTICUT	560,151	589,948	+29,797	1.4848	1.6667	+0.1819
DELAWARE	89,271	45,175	-44,096	0.2366	0.1276	-0.1089
DIST. OF COLUM.	26,466	15,509	-10,957	0.0701	0.0438	-0.0262
FLORIDA	1,307,307	1,398,307	+91,000	3.4654	3.9504	+0.4850
GEORGIA	503,966	608,759	+104,793	1.3359	1.7198	+0.3839
HAWAII	310,181	125,501	-184,680	0.8222	0.3545	-0.4676
IDAH0	169,299	127,410	-41,889	0.4487	0.3599	-0.0887
ILLINOIS	1,777,874	1,199,908	-577,966	4.7128	3.3899	-1.3228
INDIANA	548,988	486,769	-62,219	1.4552	1.3752	-0.0799
IOWA	688,640	615,868	-72,772	1.8254	1.7399	-0.0854
KANSAS	441,660	343,026	-98,634	1.1707	0.9691	-0.2015
KENTUCKY	547,920	644,688	+96,768	1.4524	1.8213	+0.3689
LOUISIANA	397,752	441,820	+44,068	1.0543	1.2482	+0.1939
MAINE	333,141	287,881	-45,260	0.8831	0.8133	-0.0697
MARYLAND	762,697	394,816	-363,881	2.0217	1.1267	-0.8949
MASSACHUSETTS	1,573,866	1,932,062	+358,196	4.1720	5.4584	+1.2864
MICHIGAN	1,894,783	1,760,178	-134,605	5.0227	4.9728	-0.0498
MINNESOTA	783,056	639,340	-143,716	2.0757	1.8062	-0.2694
MISSISSIPPI	470,425	392,766	-77,659	1.2470	1.1096	-0.1373
MISSOURI	1,288,860	1,009,786	-279,074	3.4165	2.8528	-0.5636
MONTANA	37,956	36,617	-1,339	0.1006	0.1034	+0.0028
NEBRASKA	157,941	137,712	-20,229	0.4186	0.3890	-0.0295
NEVADA	88,812	72,170	-16,642	0.2354	0.2038	-0.0315
NEW HAMPSHIRE	464,273	446,496	-17,777	1.2305	1.2614	+0.0309
NEW JERSEY	1,992,427	2,967,685	+975,258	5.2816	8.3842	+3.1026
NEW MEXICO	71,072	83,593	+12,521	0.1884	0.2361	+0.0477
NEW YORK	4,836,312	4,421,507	-414,805	12.8203	12.4915	-0.3287
NORTH CAROLINA	769,179	662,398	-106,781	2.0389	1.8713	-0.1675
NORTH DAKOTA	15,451	16,340	+889	0.0409	0.0462	+0.0053
OHIO	1,679,248	1,755,807	+76,559	4.4514	4.9604	+0.5090
OKLAHOMA	201,696	181,134	-20,562	0.5346	0.5117	-0.0228
OREGON	271,459	268,882	-2,577	0.7195	0.7594	+0.0399
PENNSYLVANIA	1,486,305	1,392,088	-94,217	3.9399	3.9329	-0.0069
RHODE ISLAND	326,498	266,297	-60,201	0.8654	0.7523	-0.1130
SOUTH CAROLINA	273,058	405,141	+132,083	0.7238	1.1445	+0.4207
SOUTH DAKOTA	85,566	81,619	-3,947	0.2268	0.2305	+0.0037
TENNESSEE	711,625	702,899	-8,726	1.8864	1.9858	+0.0994
TEXAS	1,006,595	1,443,415	+576,820	2.6643	4.4734	+1.8091
UTAH	262,631	161,184	-101,527	0.6961	0.4551	-0.2409
VERMONT	142,887	142,108	-779	0.3785	0.4014	+0.0229
VIRGINIA	889,534	796,807	-92,727	2.3580	2.2511	-0.1068
WASHINGTON	811,642	882,559	+70,917	2.1515	2.4933	+0.3418
WEST VIRGINIA	515,468	566,812	+51,344	1.3664	1.6013	+0.2349
WISCONSIN	1,508,605	1,181,696	-326,909	3.9990	3.3385	-0.6604
WYOMING	47,074	47,644	+570	0.1247	0.1346	+0.0099
AMERICAN SAMOA	45,877	29,717	-16,160	0.1216	0.0839	-0.0376
GUAM	22,993	10,973	-12,020	0.0609	0.0310	-0.0298
MARIANAS GROUP	26,813	24,089	-2,724	0.0710	0.0680	-0.0029
PUERTO RICO	583,868	441,096	-142,772	1.5477	1.2461	-0.3015
PAC. TR. TERR.	46,457	51,869	+5,412	0.1231	0.1465	+0.0234
VIRGIN ISLANDS	26,043	14,408	-11,635	0.0690	0.0407	-0.0282
U.S. TOTALS	37,723,667	35,395,929	-2,327,738	100.0000	100.0000	+0.0000

1982 NFEDS SURVEY

COMPARISON OF 1982 AND 1980 FPA ASSESSMENTS OF BACKLOG NFEDS
FOR IMPROVEMENT OF TREATMENT PLANTS TO ACHIEVE SECONDARY LEVEL
THOUSANDS OF 1982 DOLLARS
CATEGORY I

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 BACKLOGS	1982 BACKLOGS	CHANGE	1980 BACKLOGS	1982 BACKLOGS	CHANGE
ALABAMA	181,271	258,211	+76,940	0.8583	1.2822	+0.4238
ALASKA	242,348	100,587	-141,761	1.1475	0.4994	-0.6480
ARIZONA	136,841	115,137	-21,704	0.6479	0.5717	-0.0761
ARKANSAS	135,110	122,241	-12,869	0.6397	0.6070	-0.0327
CALIFORNIA	1,784,697	986,051	-798,646	8.4505	4.8964	-3.5541
COLORADO	95,945	117,742	+21,797	0.4542	0.5846	+0.1303
CONNECTICUT	312,830	323,285	+10,455	1.4812	1.6053	+0.1240
DELAWARE	47,319	19,956	-27,363	0.2240	0.0990	-0.1249
DIST. OF COLUM.	9,175	0	-9,175	0.0434	0.0000	-0.0434
FLORIDA	693,780	808,708	+114,928	3.2850	4.0158	+0.7307
GEORGIA	219,119	262,442	+43,323	1.0375	1.3032	+0.2656
HAWAII	145,712	76,862	-68,850	0.6899	0.3816	-0.3082
IDAH0	96,056	87,396	-8,660	0.4548	0.4339	-0.0208
ILLINOIS	379,602	322,326	-57,276	1.7974	1.6005	-0.1968
INDIANA	211,798	221,386	+9,588	1.0028	1.0993	+0.0964
IOWA	422,490	396,321	-26,169	2.0004	1.9680	-0.0324
KANSAS	212,123	155,823	-56,300	1.0044	0.7737	-0.2306
KENTUCKY	288,882	294,788	+5,906	1.3678	1.4638	+0.0959
LOUISIANA	197,893	205,109	+7,216	0.9370	1.0185	+0.0814
MAINE	182,304	164,984	-17,320	0.8632	0.8192	-0.0439
MARYLAND	253,154	106,709	-146,445	1.1986	0.5298	-0.6687
MASSACHUSETTS	970,786	1,233,926	+263,140	4.5966	6.1273	+1.5306
MICHIGAN	1,274,660	983,755	-290,905	6.0355	4.8850	-1.1504
MINNESOTA	274,926	353,199	+78,273	1.3017	1.7538	+0.4521
MISSISSIPPI	226,523	230,110	+3,587	1.0725	1.1426	+0.0700
MISSOURI	792,620	643,688	-148,932	3.7530	3.1963	-0.5566
MONTANA	27,423	27,391	-32	0.1298	0.1360	+0.0061
NEBRASKA	145,411	130,033	-15,378	0.6885	0.6457	-0.0428
NEVADA	38,958	38,440	-518	0.1844	0.1908	+0.0064
NEW HAMPSHIRE	216,240	225,388	+9,148	1.0238	1.1192	+0.0953
NEW JERSEY	1,215,444	1,847,193	+631,729	5.7552	9.1727	+3.4174
NEW MEXICO	61,709	73,404	+11,695	0.2921	0.3644	+0.0723
NEW YORK	3,327,983	3,290,484	-37,499	15.7581	16.3397	+0.5816
NORTH CAROLINA	402,310	300,151	-102,159	1.9049	1.4904	-0.4144
NORTH DAKOTA	13,363	12,787	-576	0.0632	0.0634	+0.0002
OHIO	652,150	693,849	+41,699	3.0879	3.4454	+0.3575
OKLAHOMA	104,789	105,357	+568	0.4961	0.5231	+0.0269
OREGON	84,787	94,758	+9,971	0.4014	0.4705	+0.0690
PENNSYLVANIA	1,020,314	903,689	-116,630	4.8312	4.4875	-0.3437
RHODE ISLAND	175,316	173,717	-1,599	0.8301	0.8626	+0.0325
SOUTH CAROLINA	144,274	129,552	-14,722	0.6831	0.6433	-0.0398
SOUTH DAKOTA	53,503	65,463	+11,960	0.2533	0.3250	+0.0717
TENNESSEE	327,460	300,625	-26,835	1.5505	1.4928	-0.0577
TEXAS	549,469	833,188	+283,719	2.6017	4.1374	+1.5356
UTAH	95,207	94,246	-961	0.4507	0.4679	+0.0172
VERMONT	96,946	84,447	-12,499	0.4590	0.4193	-0.0396
VIRGINIA	529,515	483,806	-45,709	2.5072	2.4024	-0.1048
WASHINGTON	464,077	665,578	+1,541	2.1472	2.3119	+0.1147
WEST VIRGINIA	349,558	358,114	+8,556	1.6551	1.7783	+0.1231
WISCONSIN	833,319	517,522	-315,797	3.9457	2.5698	-1.3759
WYOMING	37,526	39,736	+2,210	0.1776	0.1973	+0.0196
AMERICAN SAMOA	16,902	13,847	-3,055	0.0800	0.0687	-0.0112
GUAM	20,252	8,487	-11,765	0.0958	0.0421	-0.0537
MARIANAS GROUP	11,198	9,863	-1,335	0.0530	0.0489	-0.0040
PUERTO RICO	261,544	174,087	-87,457	1.2384	0.8644	-0.3739
PAC. TR. TERR.	35,466	40,934	+5,468	0.1679	0.2032	+0.0353
VIRGIN ISLANDS	18,790	10,978	-7,812	0.0849	0.0545	-0.0344
U.S. TOTALS	21,119,152	20,137,856	-981,296	100.0000	100.0000	+0.0000

DECEMBER 31, 1982
TABLE 10

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF BACKLOG NEEDS
TO ACHIEVE MORE STRINGENT TREATMENT LEVELS
THOUSANDS OF 1982 DOLLARS
CATEGORIES IIA & IIB

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 BACKLOGS	1982 BACKLOGS	CHANGE	1980 BACKLOGS	1982 BACKLOGS	CHANGE
ALABAMA	33,929	80,257	+46,328	0.8219	2.1261	+1.3042
ALASKA	0	0	+0	0.0000	0.0000	+0.0000
ARIZONA	0	453	+453	0.0000	0.0119	+0.0119
ARKANSAS	10,407	20,685	+10,278	0.2521	0.5479	+0.2958
CALIFORNIA	48,486	50,437	+1,951	1.1745	1.3361	+0.1616
COLORADO	7,610	3,958	-3,652	0.1843	0.1048	-0.0794
CONNECTICUT	59,766	44,311	-15,455	1.4477	1.1738	-0.2738
DELAWARE	4,735	4,513	-222	0.1147	0.1195	+0.0048
DIST. OF COLUM.	0	9,036	+9,036	0.0000	0.2393	+0.2393
FLORIDA	230,281	141,526	-88,755	5.5783	3.7492	-1.8290
GEORGIA	70,939	129,171	+58,232	1.7184	3.4219	+1.7035
HAWAII	7,953	0	-7,953	0.1926	0.0000	-0.1925
IDAH0	27,999	4,760	-23,239	0.6782	0.1260	-0.5521
ILLINOIS	1,011,338	507,644	-503,694	24.4989	13.4483	-11.0505
INDIANA	174,776	109,931	-64,845	4.2338	2.9122	-1.3215
IOWA	52,408	76,880	+24,472	1.2695	2.0366	+0.7671
KANSAS	5,804	150	-5,654	0.1405	0.0039	-0.1365
KENTUCKY	46,168	84,184	+38,016	1.1183	2.2301	+1.1118
LOUISIANA	3,362	6,575	+3,213	0.0814	0.1741	+0.0927
MAINE	2,816	2,291	-525	0.0682	0.0606	-0.0075
MARYLAND	415,766	227,457	-188,309	10.0716	6.0257	-4.0458
MASSACHUSETTS	57,239	103,482	+46,243	1.3865	2.7414	+1.3549
MICHIGAN	62,335	223,297	+160,962	1.5100	5.9155	+4.4055
MINNESOTA	147,853	75,213	-72,640	3.5816	1.9925	-1.5490
MISSISSIPPI	42,507	45,488	+2,981	1.0297	1.2050	+0.1753
MISSOURI	932	1,963	+1,031	0.0225	0.0519	+0.0295
MONTANA	121	1,322	+1,201	0.0029	0.0350	+0.0321
NEBRASKA	0	0	+0	0.0000	0.0000	+0.0000
NEVADA	34,008	24,335	-9,673	0.8238	0.6446	-0.1791
NEW HAMPSHIRE	11,711	4,823	-6,888	0.2836	0.1277	-0.1558
NEW JERSEY	169,998	278,876	+108,878	4.1180	7.3879	+3.2699
NEW MEXICO	646	845	+199	0.0156	0.0223	+0.0067
NEW YORK	60,891	179,019	+118,128	1.4750	4.7425	+3.2675
NORTH CAROLINA	148,423	126,726	-21,697	3.5954	3.3571	-0.2382
NORTH DAKOTA	0	0	+0	0.0000	0.0000	+0.0000
OHIO	459,195	462,675	+3,480	11.1236	12.2570	+1.1334
OKLAHOMA	11,078	5,970	-5,108	0.2683	0.1581	-0.1101
OREGON	34,190	21,437	-12,753	0.8282	0.5678	-0.2603
PENNSYLVANIA	187,863	184,123	-3,740	4.5508	4.8777	+0.3269
RHODE ISLAND	33,790	12,382	-21,408	0.8185	0.3280	-0.4904
SOUTH CAROLINA	15,635	29,683	+14,048	0.3787	0.7863	+0.4076
SOUTH DAKOTA	24,476	8,719	-15,757	0.5929	0.2309	-0.3619
TENNESSEE	122,452	127,680	+5,228	2.9663	3.3824	+0.4161
TEXAS	53,663	99,213	+45,550	1.2949	2.6283	+1.3334
UTAH	104,713	37,666	-67,047	2.5365	0.9978	-1.5386
VERMONT	11,251	20,371	+9,120	0.2725	0.5396	+0.2671
VIRGINIA	11,718	64,316	+52,598	0.2838	1.7038	+1.4200
WASHINGTON	7,079	16,846	+9,767	0.1714	0.4462	+0.2748
WEST VIRGINIA	9,633	20,413	+10,780	0.2333	0.5407	+0.3074
WISCONSIN	84,969	86,014	+1,045	2.0583	2.2786	+0.2203
WYOMING	858	3,442	+2,584	0.0207	0.0911	+0.0704
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	0	0	+0	0.0000	0.0000	+0.0000
MARIANAS GROUP	0	1,061	+1,061	0.0000	0.0280	+0.0280
PUERTO RICO	4,325	2,717	-1,608	0.1047	0.0719	-0.0327
PAC. TR. TERR.	0	419	+419	0.0000	0.0110	+0.0110
VIRGIN ISLANDS	0	0	+0	0.0000	0.0000	+0.0000
U.S. TOTALS	4,128,095	3,774,755	-353,340	100.0000	100.0000	+0.0000

DECEMBER 31, 1982
TABLE 11

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF BACKLOG NEEDS
FOR CORRECTION OF INFILTRATION/INFLOW CONDITIONS
THOUSANDS OF 1982 DOLLARS
CATEGORY III A

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 BACKLOGS	1982 BACKLOGS	CHANGE	1980 BACKLOGS	1982 BACKLOGS	CHANGE
ALABAMA	89,477	87,705	-1,772	3.1421	3.4394	+0.2973
ALASKA	28,112	2,218	-25,894	0.9872	0.0869	-0.9002
ARIZONA	934	1,050	+116	0.0327	0.0411	+0.0084
ARKANSAS	31,623	18,538	-13,085	1.1105	0.7269	-0.3835
CALIFORNIA	59,083	61,869	+2,786	2.0748	2.4262	+0.3514
COLORADO	11,822	5,919	-5,903	0.4151	0.2321	-0.1829
CONNECTICUT	13,302	23,557	+10,255	0.4671	0.9237	+0.4567
DELAWARE	4,083	941	-3,142	0.1433	0.0368	-0.1063
DIST. OF COLUM.	17,291	6,473	-10,818	0.6072	0.2538	-0.3533
FLORIDA	102,001	77,471	-24,530	3.5819	3.0380	-0.5438
GEORGIA	100,721	93,295	-7,426	3.5370	3.6586	+0.1216
HAWAII	17	0	-17	0.0005	0.0000	-0.0004
IDaho	19,010	7,044	-11,966	0.6675	0.2762	-0.3912
ILLINOIS	207,428	178,003	-29,425	7.2842	6.9804	-0.3036
INDIANA	47,034	47,577	+543	1.6516	1.8657	+0.2141
IOWA	112,056	85,729	-26,327	3.9350	3.3619	-0.5730
KANSAS	63,428	49,056	-14,372	2.2274	1.9237	-0.3036
KENTUCKY	99,352	104,413	+5,061	3.4889	4.0946	+0.6057
LOUISIANA	59,365	76,993	+17,628	2.0847	3.0193	+0.9346
MAINE	14,653	17,973	+3,320	0.5145	0.7048	+0.1903
MARYLAND	12,500	13,649	+1,149	0.4389	0.5352	+0.0963
MASSACHUSETTS	14,356	20,528	+6,172	0.5041	0.8050	+0.3009
MICHIGAN	69,081	73,260	+4,179	2.4259	2.8729	+0.4470
MINNESOTA	42,289	28,445	-13,844	1.4450	1.1170	-0.3279
MISSISSIPPI	126,448	55,271	-71,177	4.4404	2.1674	-2.2729
MISSOURI	47,596	37,624	-9,972	1.6714	1.4754	-0.1959
MONTANA	1,784	1,459	-325	0.0626	0.0572	-0.0053
NEBRASKA	1,087	637	-450	0.0381	0.0249	-0.0131
NEVADA	2,698	2,560	-138	0.0947	0.1003	+0.0056
NEW HAMPSHIRE	9,595	9,523	-72	0.3369	0.3734	+0.0365
NEW JERSEY	121,494	226,954	+105,460	4.2665	8.9001	+4.6336
NEW MEXICO	0	0	0	0.0000	0.0000	0.0000
NEW YORK	110,688	186,068	+75,380	3.8870	7.2967	+3.4097
NORTH CAROLINA	97,715	84,234	-13,481	3.4314	3.3032	-0.1281
NORTH DAKOTA	572	441	-131	0.0200	0.0172	-0.0027
OHIO	255,301	134,776	-120,525	8.9654	5.2853	-3.6800
OKLAHOMA	44,839	13,904	-30,935	1.5746	0.5452	-1.0293
OREGON	49,645	71,071	+21,426	1.7433	2.7870	+1.0437
PENNSYLVANIA	17,850	15,837	-2,013	0.6268	0.6210	-0.0057
RHODE ISLAND	2,754	2,771	+17	0.0967	0.1086	+0.0119
SOUTH CAROLINA	69,370	76,292	+6,922	2.4360	2.9918	+0.5558
SOUTH DAKOTA	4,947	2,606	-2,341	0.1737	0.1021	-0.0715
TENNESSEE	153,577	153,673	+96	5.3931	6.0263	+0.6332
TEXAS	199,888	181,791	-18,097	7.0144	7.1290	+0.1096
UTAH	36,456	11,450	-25,006	1.2837	0.4490	-0.8346
VERMONT	2,348	7,640	+5,292	0.0838	0.2495	+0.2157
VIRGINIA	18,374	18,199	-175	0.6438	0.7136	+0.0698
WASHINGTON	110,975	115,894	+4,919	3.8971	4.5448	+0.6477
WEST VIRGINIA	2,075	4,423	+2,348	0.0728	0.1734	+0.1006
WISCONSIN	112,543	32,048	-80,495	3.9521	1.2567	-2.6953
WYOMING	6,936	1,426	-5,510	0.2435	0.0559	-0.1875
AMERICAN SAMOA	0	0	0	0.0000	0.0000	0.0000
GUAM	825	922	+97	0.0289	0.0361	+0.0072
MARIANAS GROUP	0	0	0	0.0000	0.0000	0.0000
PUERTO RICO	19,969	18,613	-1,356	0.7012	0.7299	+0.0287
PAC. TR. TERR.	0	0	0	0.0000	0.0000	0.0000
VIRGIN ISLANDS	158	148	-10	0.0055	0.0057	+0.0002
U.S. TOTALS	2,847,625	2,550,001	-297,624	100.0000	100.0000	+0.0000

DECEMBER 31, 1982
TABLE 12

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF BACKLOG NEEDS
FOR CORRECTION OF MAJOR REHABILITATION AND REPLACEMENT
THOUSANDS OF 1982 DOLLARS
CATEGORY III B

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 BACKLOGS	1982 BACKLOGS	CHANGE	1980 BACKLOGS	1982 BACKLOGS	CHANGE
ALABAMA	4,084	4,614	+530	0.0600	0.0983	+0.0383
ALASKA	109	109	+0	0.0016	0.0023	+0.0007
ARIZONA	364	39	-325	0.0053	0.0008	-0.0044
ARKANSAS	3,002	2,236	-766	0.0441	0.0476	+0.0035
CALIFORNIA	193,914	156,111	-37,803	2.8495	3.3278	+0.4783
COLORADO	124,566	1,262	-123,304	1.8304	0.0268	-1.8034
CONNECTICUT	16,324	16,634	+310	0.2398	0.3545	+0.1147
DELAWARE	1,549	2,328	+779	0.0227	0.0496	+0.0269
DIST. OF COLUM.	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	10	0	-10	0.0001	0.0000	+0.0000
GEORGIA	9,287	14,583	+5,296	0.1364	0.3108	+0.1744
HAWAII	0	17,213	+17,213	0.0000	0.3669	+0.3669
IDAH0	436	2,224	+1,788	0.0064	0.0473	+0.0409
ILLINOIS	11,205	55,345	+44,140	0.1646	1.1798	+1.0152
INDIANA	22,660	3,027	-19,633	0.3329	0.0645	-0.2683
IOWA	1,320	1,323	+3	0.0193	0.0281	+0.0088
KANSAS	22,532	21,670	-862	0.3311	0.4619	+0.1308
KENTUCKY	9,428	5,255	-4,173	0.1385	0.1120	-0.0264
LOUISIANA	12,905	15,692	+2,787	0.1896	0.3345	+0.1449
MAINE	7,565	6,351	-1,214	0.1111	0.1353	+0.0242
MARYLAND	1,846,323	130,750	-1,715,573	27.1314	2.7872	-24.3441
MASSACHUSETTS	123,172	18,384	-104,788	1.8099	0.3918	-1.4180
MICHIGAN	87,623	99,451	+11,828	1.2876	2.1200	+0.8324
MINNESOTA	32,614	17,081	-15,533	0.4792	0.3641	-0.1150
MISSISSIPPI	0	947	+947	0.0000	0.0201	+0.0201
MISSOURI	36,558	49,478	+12,920	0.5372	1.0547	+0.5175
MONTANA	598	124	-474	0.0087	0.0026	-0.0060
NEBRASKA	1,315	1,316	+1	0.0193	0.0280	+0.0087
NEVADA	3,138	3,892	+754	0.0461	0.0829	+0.0368
NEW HAMPSHIRE	5,804	4,773	-1,031	0.0852	0.1017	+0.0165
NEW JERSEY	1,903	2,277	+374	0.0279	0.0485	+0.0206
NEW MEXICO	312	89	-223	0.0045	0.0018	-0.0026
NEW YORK	3,829,310	3,759,523	-69,787	56.2711	80.1432	+23.8721
NORTH CAROLINA	0	314	+314	0.0000	0.0066	+0.0066
NORTH DAKOTA	8	88	+88	0.0000	0.0018	+0.0018
OHIO	13,258	21,394	+8,136	0.1948	0.4560	+0.2612
OKLAHOMA	28,485	9,928	-18,557	0.4185	0.2116	-0.2068
OREGON	57,362	17,604	-39,758	0.8429	0.3752	-0.4676
PENNSYLVANIA	909	545	-364	0.0133	0.0116	-0.0016
RHODE ISLAND	29,934	29,963	+29	0.4398	0.6387	+0.1989
SOUTH CAROLINA	624	0	-624	0.0091	0.0000	-0.0090
SOUTH DAKOTA	1,888	721	-1,167	0.0277	0.0153	-0.0123
TENNESSEE	417	3,776	+3,359	0.0061	0.0804	+0.0743
TEXAS	120,029	29,520	-90,509	1.7638	0.6292	-1.1345
UTAH	0	0	+0	0.0000	0.0000	+0.0000
VERMONT	6,824	3,239	-3,585	0.1002	0.0690	-0.0311
VIRGINIA	16,031	2,185	-13,846	0.2355	0.0465	-0.1889
WASHINGTON	85,281	62,963	-22,318	1.2531	1.3421	+0.0890
WEST VIRGINIA	3,251	2,719	-532	0.0477	0.0579	+0.0102
WISCONSIN	18,094	79,662	+61,568	0.2658	1.6981	+1.4323
WYOMING	0	0	+0	0.0000	0.0000	+0.0000
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	0	370	+370	0.0000	0.0078	+0.0078
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	12,782	11,914	-868	0.1878	0.2539	+0.0661
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	0	0	+0	0.0000	0.0000	+0.0000
U.S. TOTALS	6,805,099	4,691,006	-2,114,093	100.0000	100.0000	+0.0000

DECEMBER 31, 1982
TABLE 13

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF BACKLOG NEEDS
FOR CONSTRUCTION OF ELIGIBLE NEW COLLECTORS AND APPURTENANCES
THOUSANDS OF 1982 DOLLARS
CATEGORY IV A

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 BACKLOGS	1982 BACKLOGS	CHANGE	1980 BACKLOGS	1982 BACKLOGS	CHANGE
ALABAMA	256,872	296,017	+39,145	1.5142	1.7651	+0.2509
ALASKA	40,965	84,304	+43,339	0.2414	0.5027	+0.2612
ARIZONA	104,196	133,197	+29,001	0.6142	0.7942	+0.1800
ARKANSAS	105,884	92,733	-13,151	0.6241	0.5529	-0.0711
CALIFORNIA	1,046,742	1,097,813	+51,071	6.1704	6.5464	+0.3760
COLORADO	16,918	19,335	+2,417	0.0997	0.1152	+0.0155
CONNECTICUT	462,225	550,599	+88,374	2.7247	3.2833	+0.5585
DELAWARE	29,874	32,471	+2,597	0.1760	0.1936	+0.0175
DIST. OF COLUM.	0	0	0	0.0000	0.0000	+0.0000
FLORIDA	1,046,657	870,631	-176,026	6.1699	5.1917	-0.9781
GEORGIA	199,512	231,332	+31,820	1.1760	1.3794	+0.2033
HAWAII	210,024	191,273	-18,751	1.2380	1.1405	-0.0974
IDAH0	82,320	77,633	-4,687	0.4952	0.4629	-0.0323
ILLINOIS	177,866	180,562	+2,696	1.0484	1.0767	+0.0282
INDIANA	303,971	247,582	-56,389	1.7918	1.4763	-0.3154
IOWA	117,042	109,756	-7,286	0.6899	0.6544	-0.0354
KANSAS	103,160	97,378	-5,782	0.6081	0.5806	-0.0274
KENTUCKY	445,825	398,975	-46,850	2.6280	2.3791	-0.2489
LOUISIANA	310,956	333,519	+22,563	1.8330	1.9888	+0.1558
MAINE	206,350	196,704	-9,646	1.2163	1.1729	-0.0434
MARYLAND	216,560	225,835	+9,275	1.2765	1.3466	+0.0701
MASSACHUSETTS	883,742	806,891	-76,851	5.2096	4.8116	-0.3980
MICHIGAN	752,675	506,335	-246,340	4.4369	3.0193	-1.4175
MINNESOTA	136,473	128,527	-7,946	0.8044	0.7664	-0.0380
MISSISSIPPI	100,412	115,416	+15,004	0.5919	0.6882	+0.0963
MISSOURI	227,778	209,648	-18,080	1.3424	1.2501	-0.0922
MONTANA	11,376	34,503	+23,127	0.0670	0.2057	+0.1386
NEBRASKA	17,226	20,433	+3,207	0.1015	0.1218	+0.0202
NEVADA	35,108	33,407	-1,701	0.2069	0.1992	-0.0077
NEW HAMPSHIRE	292,229	264,286	-27,943	1.7226	1.5759	-0.1466
NEW JERSEY	656,251	440,860	-215,391	3.8685	2.6289	-1.2395
NEW MEXICO	33,673	37,537	+3,864	0.1984	0.2238	+0.0253
NEW YORK	2,383,212	2,327,122	-56,090	14.0487	13.8770	-0.1716
NORTH CAROLINA	378,337	404,450	+26,113	2.2302	2.4118	+0.1815
NORTH DAKOTA	2,514	2,793	+279	0.0148	0.0166	+0.0018
OHIO	663,582	669,428	+5,846	3.9117	3.9919	+0.0802
OKLAHOMA	116,219	84,926	-31,293	0.6850	0.5064	-0.1786
OREGON	265,387	313,923	+48,536	1.5644	1.8719	+0.3075
PENNSYLVANIA	1,189,620	1,315,303	+125,683	7.0126	7.8434	+0.8307
RHODE ISLAND	278,158	153,816	-124,342	1.6396	0.9172	-0.7224
SOUTH CAROLINA	211,504	266,934	+55,430	1.2467	1.5917	+0.3449
SOUTH DAKOTA	2,787	2,991	+204	0.0164	0.0178	+0.0014
TENNESSEE	344,712	398,512	+53,800	2.0320	2.3763	+0.3443
TEXAS	480,734	414,715	-66,019	2.8338	2.4968	-0.3369
UTAH	46,466	48,158	+1,692	0.2739	0.2871	+0.0132
VERMONT	74,136	69,119	-5,017	0.4370	0.4121	-0.0248
VIRGINIA	302,502	390,876	+88,374	1.7832	2.3308	+0.5476
WASHINGTON	415,213	528,597	+113,384	2.4476	3.1521	+0.7044
WEST VIRGINIA	532,961	699,961	+167,000	3.1417	4.1739	+1.0322
WISCONSIN	208,063	210,986	+2,923	1.2264	1.2581	+0.0316
WYOMING	892	2,943	+2,051	0.0052	0.0175	+0.0122
AMERICAN SAMOA	10,548	6,517	-4,031	0.0621	0.0388	-0.0233
GUAM	0	7,190	+7,190	0.0000	0.0428	+0.0428
MARIANAS GROUP	15,403	15,468	+65	0.0907	0.0922	+0.0014
PUERTO RICO	356,915	329,601	-27,314	2.1039	1.9654	-0.1385
PAC. TR. TERR.	37,560	23,693	-13,867	0.2214	0.1412	-0.0801
VIRGIN ISLANDS	15,611	12,008	-3,603	0.0920	0.0715	-0.0204
U.S. TOTALS	16,963,868	16,769,522	-194,346	100.0000	100.0000	+0.0000

DECEMBER 31, 1982
TABLE 14

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF BACKLOG NEEDS
FOR CONSTRUCTION OF NEW INTERCEPTORS AND APPURTENANCES
THOUSANDS OF 1982 DOLLARS
CATEGORY IV B

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 BACKLOGS	1982 BACKLOGS	CHANGE	1980 BACKLOGS	1982 BACKLOGS	CHANGE
ALABAMA	56,595	73,843	+17,248	0.5877	0.8265	+0.2389
ALASKA	40,568	43,655	+3,087	0.4213	0.4886	+0.0673
ARIZONA	34,987	27,394	-7,593	0.3633	0.3066	-0.0566
ARKANSAS	21,345	31,877	+10,532	0.2216	0.3568	+0.1352
CALIFORNIA	788,883	286,404	-502,479	8.1929	3.2060	-4.9868
COLORADO	2,056	3,539	+1,483	0.0213	0.0396	+0.0183
CONNECTICUT	174,253	198,795	+24,542	1.8097	2.2253	+0.4156
DELAWARE	33,134	19,765	-13,369	0.3441	0.2212	-0.1228
DIST. OF COLUM.	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	281,245	370,602	+89,357	2.9208	4.1485	+1.2277
GEORGIA	113,187	123,851	+10,664	1.1755	1.3863	+0.2108
HAWAII	156,499	48,639	-107,860	1.6253	0.5444	-1.0808
IDAH0	26,234	28,210	+1,976	0.2724	0.3157	+0.0433
ILLINOIS	179,506	191,935	+12,429	1.8642	2.1485	+0.2843
INDIANA	115,380	107,875	-7,505	1.1982	1.2075	+0.0093
IOWA	101,686	56,938	-44,748	1.0560	0.6373	-0.4186
KANSAS	160,305	137,997	-22,308	1.6648	1.5447	-0.1200
KENTUCKY	113,518	161,303	+47,785	1.1789	1.8056	+0.6267
LOUISIANA	137,132	153,143	+16,011	1.4241	1.7142	+0.2901
MAINE	133,368	102,633	-30,735	1.3850	1.1488	-0.2361
MARYLAND	81,277	51,001	-30,276	0.8441	0.5708	-0.2731
MASSACHUSETTS	531,485	574,126	+42,641	5.5197	6.4267	+0.9070
MICHIGAN	488,707	479,866	-8,841	5.0754	5.3716	+0.2962
MINNESOTA	317,988	182,443	-135,545	3.3024	2.0422	-1.2601
MISSISSIPPI	74,947	61,897	-13,050	0.7783	0.6928	-0.0854
MISSOURI	447,712	326,511	-121,201	4.6497	3.6549	-0.9947
MONTANA	8,628	6,445	-2,183	0.0896	0.0721	-0.0174
NEBRASKA	11,443	7,042	-4,401	0.1188	0.0788	-0.0399
NEVADA	13,148	6,835	-6,313	0.1365	0.0765	-0.0599
NEW HAMPSHIRE	276,677	206,762	-19,915	2.3541	2.3144	-0.0396
NEW JERSEY	485,471	614,662	+129,191	5.0418	6.8805	+1.8387
NEW MEXICO	8,717	9,344	+627	0.0905	0.1045	+0.0140
NEW YORK	1,336,750	765,936	-570,814	13.8928	8.5739	-5.3188
NORTH CAROLINA	120,731	151,287	+30,556	1.2530	1.6935	+0.4397
NORTH DAKOTA	1,516	3,152	+1,636	0.0157	0.0352	+0.0195
OHIO	312,602	464,507	+151,905	3.2465	5.1997	+1.9532
OKLAHOMA	40,990	55,903	+14,913	0.4257	0.6257	+0.2000
OREGON	102,837	81,536	-21,301	1.0680	0.9127	-0.1552
PENNSYLVANIA	260,273	288,439	+28,166	2.7030	3.2287	+0.5258
RHODE ISLAND	114,638	77,427	-37,211	1.1905	0.8667	-0.3237
SOUTH CAROLINA	43,779	169,614	+125,835	0.4544	1.8986	+1.4440
SOUTH DAKOTA	2,640	4,831	+2,191	0.0274	0.0540	+0.0266
TENNESSEE	108,136	120,921	+12,785	1.1230	1.3535	+0.2305
TEXAS	203,575	469,223	+265,648	2.1142	5.2524	+3.1383
UTAH	76,145	17,742	-58,403	0.2716	0.1985	-0.0729
VERMONT	32,222	29,650	-2,572	0.3346	0.3318	-0.0027
VIRGINIA	324,447	230,486	-93,961	3.4268	2.5800	-0.8467
WASHINGTON	229,551	284,241	+54,690	2.3840	3.1817	+0.7978
WEST VIRGINIA	154,202	183,862	+29,660	1.6014	2.0581	+0.4567
WISCONSIN	477,774	546,112	+68,338	4.9619	6.1131	+1.1512
WYOMING	1,754	3,040	+1,286	0.0182	0.0340	+0.0158
AMERICAN SAMOA	28,975	15,870	-13,105	0.3009	0.1776	-0.1232
GUAM	1,916	1,564	-352	0.0198	0.0174	-0.0022
MARIANAS GROUP	15,615	13,165	-2,450	0.1621	0.1473	-0.0147
PUEBTO RICO	298,030	245,679	-52,351	3.0951	2.7501	-0.3449
PAC. TR. TERR.	10,991	10,516	-475	0.1141	0.1177	+0.0036
VIRGIN ISLANDS	7,095	3,282	-3,813	0.0736	0.0367	-0.0368
U.S. TOTALS	9,628,795	8,933,317	-695,478	100.0000	100.0000	+0.0000

DECEMBER 31, 1982
TABLE 15

1982 NEEDS SURVEY

1982 EPA ASSESSMENT OF CATEGORY V NEEDS BY BASIS OF ESTIMATE
THOUSANDS OF 1982 DOLLARS

STATE	AESTHETICS	PUBLIC HEALTH	FISH AND WILDLIFE	RECREATION	SEWER SEPARATION	FACILITIES PLAN	TOTAL
ALABAMA	0	0	0	0	0	0	0
ALASKA	0	0	0	18,388	0	0	18,388
ARIZONA	0	0	0	0	0	0	0
ARKANSAS	0	0	0	0	0	0	0
CALIFORNIA	0	0	17,756	77,989	0	470,212	565,957
COLORADO	0	0	0	41,547	0	0	41,547
CONNECTICUT	0	0	0	752,263	23,009	0	775,272
DELAWARE	0	0	0	278,740	13,370	0	292,110
DIST. OF COLUMBIA	0	0	0	0	0	68,119	68,119
FLORIDA	0	0	0	8,526	0	0	8,526
GEORGIA	0	4,492	0	410,245	0	0	414,737
HAWAII	0	0	0	0	0	0	0
IDAH0	0	0	0	96,858	19,522	0	116,380
ILLINOIS	0	0	2,168	1,013,077	126,729	954,048	2,096,022
INDIANA	0	0	2,468,900	446,361	51,978	0	2,967,239
IOWA	0	0	76,157	350,183	252	0	426,592
KANSAS	0	0	393,061	0	0	0	393,061
KENTUCKY	0	0	0	1,450,892	0	0	1,450,892
LOUISIANA	0	0	0	0	0	0	0
MAINE	0	0	341,119	212,924	275,519	0	829,562
MARYLAND	0	0	26,988	48,153	0	0	75,141
MASSACHUSETTS	0	0	398,146	1,573,211	19,017	0	1,990,374
MICHIGAN	0	0	2,061,005	1,944	86,190	8,318	2,157,457
MINNESOTA	0	0	40	293,286	26,269	1,126	320,721
MISSISSIPPI	0	0	0	0	0	0	0
MISSOURI	2,705	0	658,846	385,281	0	604	1,047,436
MONTANA	0	1,620	0	162,399	0	0	164,019
NEBRASKA	31,737	0	0	41,046	0	0	72,783
NEVADA	0	0	0	0	0	0	0
NEW HAMPSHIRE	0	31	27,897	411,097	4,763	0	443,788
NEW JERSEY	0	0	1,367,215	612,607	35,672	0	2,015,494
NEW MEXICO	0	0	0	0	0	0	0
NEW YORK	195,303	1,843,286	1,507,823	1,957,795	116,178	0	5,620,385
NORTH CAROLINA	0	0	2,943	0	0	0	2,943
NORTH DAKOTA	188	0	657	12,486	0	0	13,331
OHIO	0	0	339,695	2,921,034	618,002	0	3,878,731
OKLAHOMA	0	0	0	0	0	0	0
OREGON	0	0	0	660,107	13,915	0	674,022
PENNSYLVANIA	0	0	2,458,014	132,505	55,594	0	2,646,113
RHODE ISLAND	0	0	177,612	0	0	0	177,612
SOUTH CAROLINA	0	0	0	0	0	0	0
SOUTH DAKOTA	0	0	40,151	3,746	0	0	43,897
TENNESSEE	0	0	0	346,840	0	0	346,840
TEXAS	0	0	21,429	0	0	0	21,429
UTAH	0	0	2,597	0	0	0	2,597
VERMONT	0	0	25,513	187,236	48,745	0	261,494
VIRGINIA	0	0	233,076	41,914	3,650	0	278,640
WASHINGTON	0	0	0	1,172,718	119,717	0	1,292,435
WEST VIRGINIA	0	0	0	813,366	354,189	0	1,167,555
WISCONSIN	0	0	0	369,650	0	0	369,650
WYOMING	0	0	0	18,687	0	0	18,687
AMERICAN SAMOA	0	0	0	0	0	0	0
GUAM	0	0	0	0	0	0	0
MARIANAS GROUP	0	0	0	0	0	0	0
PUERTO RICO	0	0	171,557	0	0	0	171,557
PAC. TR. TERR.	0	0	0	0	0	0	0
VIRGIN ISLANDS	0	0	0	0	0	0	0
U.S. TOTALS	229,933	1,849,429	12,820,365	17,325,101	2,012,280	1,502,427	35,739,535

DECEMBER 31, 1982
TABLE 16

1982 NEEDS SURVEY

COMPARISON OF PER CAPITA BACKLOG COSTS
FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1980 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1982 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORIES I THRU IV

	1982 * BACKLOGS	1980 POPULATION	DOLLARS PER PERSON (1980)	2000 POPULATION	DOLLARS PER PERSON (2000)
ALABAMA	800,647	3,890	205	4,140	193
ALASKA	230,873	400	577	694	332
ARIZONA	277,270	2,718	102	4,357	63
ARKANSAS	288,310	2,286	126	2,970	97
CALIFORNIA	2,638,685	23,669	111	26,786	98
COLORADO	151,755	2,889	52	4,371	34
CONNECTICUT	1,157,181	3,108	372	3,902	296
DELAWARE	79,974	595	134	841	95
DIST. OF COLUM.	15,509	638	24	694	22
FLORIDA	2,268,938	9,740	232	15,049	150
GEORGIA	854,674	5,464	156	7,053	121
HAWAII	333,987	965	346	1,366	244
IDAHO	207,267	944	219	1,183	175
ILLINOIS	1,435,815	11,418	125	12,358	116
INDIANA	737,378	5,490	134	6,059	121
IOWA	726,947	2,913	249	3,101	234
KANSAS	462,074	2,363	195	2,642	174
KENTUCKY	1,048,918	3,661	286	4,224	248
LOUISIANA	791,031	4,204	188	4,880	162
MAINE	490,936	1,125	436	1,222	401
MARYLAND	755,401	4,216	179	5,583	135
MASSACHUSETTS	2,757,337	5,737	480	6,736	409
MICHIGAN	2,365,964	9,258	255	10,314	229
MINNESOTA	784,948	4,077	192	4,505	174
MISSISSIPPI	509,129	2,521	201	2,740	185
MISSOURI	1,268,912	4,917	258	5,379	235
MONTANA	71,244	787	90	938	75
NEBRASKA	159,461	1,570	101	1,734	91
NEVADA	109,469	799	137	1,408	77
NEW HAMPSHIRE	715,555	921	776	1,306	547
NEW JERSEY	3,410,822	7,364	463	9,022	378
NEW MEXICO	121,219	1,300	93	1,781	68
NEW YORK	10,508,152	17,577	597	19,683	533
NORTH CAROLINA	1,067,162	5,874	181	7,419	143
NORTH DAKOTA	19,261	653	29	690	27
OHIO	2,446,629	10,797	226	12,237	199
OKLAHOMA	275,988	3,025	91	3,702	74
OREGON	600,329	2,633	228	3,209	187
PENNSYLVANIA	2,707,936	11,867	228	12,854	210
RHODE ISLAND	450,076	947	475	1,084	415
SOUTH CAROLINA	672,075	3,119	215	3,700	181
SOUTH DAKOTA	85,331	690	123	730	116
TENNESSEE	1,105,187	4,591	240	5,573	198
TEXAS	2,031,650	14,228	142	21,000	96
UTAH	209,262	1,461	143	1,963	106
VERMONT	214,466	511	419	607	353
VIRGINIA	1,189,868	5,346	222	6,755	176
WASHINGTON	1,474,119	4,130	356	4,859	303
WEST VIRGINIA	1,269,492	1,950	651	2,101	604
WISCONSIN	1,472,344	4,705	312	5,553	265
WYOMING	50,587	450	112	484	104
AMERICAN SAMOA	36,234	33	1,098	40	905
GUAM	18,533	110	168	275	67
MARIANAS GROUP	39,557	17	2,326	33	1,198
PUERTO RICO	782,611	3,197	244	4,700	166
PAC. TR. TERR.	75,562	118	640	183	412
VIRGIN ISLANDS	26,416	99	266	116	227
U.S. TOTALS	56,856,457	230,075	247	278,888	203

DECEMBER 31, 1982
TABLE 17

1982 NEEDS SURVEY

PER CAPITA BACKLOG ESTIMATE, CATEGORY V.

STATE	1982 EPA ASSESSMENT (THOUSAND \$)	POPULATION SERVED (THOUSANDS)	PER CAPITA COST (\$/PERSON)
ALABAMA	0	0	0
ALASKA	18,388	5	3,784
ARIZONA	0	0	0
ARKANSAS	0	0	0
CALIFORNIA	565,957	852	664
COLORADO	41,547	148	281
CONNECTICUT	775,272	415	1,867
DELAWARE	292,110	90	3,243
DIST. OF COLUMBIA	68,119	489	139
FLORIDA	8,526	4	1,951
GEORGIA	414,737	330	1,256
HAWAII	0	0	0
IDAHO	116,380	46	2,529
ILLINOIS	2,096,022	5,195	403
INDIANA	2,967,239	2,510	1,182
IOWA	426,542	342	1,246
KANSAS	393,061	464	847
KENTUCKY	1,450,892	769	1,888
LOUISIANA	0	0	0
MAINE	829,562	391	2,123
MARYLAND	75,141	54	1,394
MASSACHUSETTS	1,990,374	1,830	1,088
MICHIGAN	2,157,457	2,600	830
MINNESOTA	320,721	530	605
MISSISSIPPI	0	0	0
MISSOURI	1,047,436	872	1,202
MONTANA	164,019	130	1,259
NEBRASKA	72,783	199	365
NEVADA	0	0	0
NEW HAMPSHIRE	443,788	283	1,567
NEW JERSEY	2,015,494	2,003	1,006
NEW MEXICO	0	0	0
NEW YORK	5,620,385	12,106	464
NORTH CAROLINA	2,943	8	368
NORTH DAKOTA	13,331	17	789
OHIO	3,878,731	2,700	1,437
OKLAHOMA	0	0	0
OREGON	674,022	245	2,751
PENNSYLVANIA	2,646,113	4,153	637
RHODE ISLAND	177,612	191	932
SOUTH CAROLINA	0	0	0
SOUTH DAKOTA	43,997	91	482
TENNESSEE	346,840	158	2,191
TEXAS	21,429	35	612
UTAH	2,597	4	680
VERMONT	261,494	128	2,038
VIRGINIA	278,640	537	514
WASHINGTON	1,292,435	637	2,027
WEST VIRGINIA	1,167,555	435	2,684
WISCONSIN	349,650	548	651
WYOMING	18,687	15	1,276
AMERICAN SAMOA	0	0	0
GUAM	0	0	0
MARIANAS GROUP	0	0	0
PUERTO RICO	171,557	600	286
PAC. TR. TERR.	0	0	0
VIRGIN ISLANDS	0	0	0
U.S. TOTALS	35,739,535	43,180	828

DECEMBER 31, 1982
TABLE 18

1982 NEEDS SURVEY

COMPARISON OF PER CAPITA BACKLOG COSTS
FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1980 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1982 DOLLARS
POPULATIONS IN THOUSANDS
CAT I, IIA, IIB, IIIA, & IVB

	1982 * BACKLOGS	1980 POPULATION	DOLLARS PER PERSON (1980)	2000 POPULATION	DOLLARS PER PERSON (2000)
ALABAMA	500,016	3,890	128	4,140	120
ALASKA	146,460	400	366	694	211
ARIZONA	144,034	2,718	52	4,357	33
ARKANSAS	193,341	2,286	84	2,970	65
CALIFORNIA	1,384,761	23,669	58	26,786	51
COLORADO	131,158	2,889	45	4,371	30
CONNECTICUT	589,948	3,108	189	3,902	151
DELAWARE	45,175	595	75	841	53
DIST. OF COLUM.	15,509	638	24	694	22
FLORIDA	1,398,307	9,740	143	15,049	92
GEORGIA	608,759	5,464	111	7,053	86
HAWAII	125,501	965	130	1,366	91
IDAH0	127,410	944	134	1,183	107
ILLINOIS	1,199,908	11,418	105	12,358	97
INDIANA	486,769	5,490	88	6,059	80
IOWA	615,868	2,913	211	3,101	148
KANSAS	343,026	2,363	145	2,642	129
KENTUCKY	644,688	3,661	176	4,224	152
LOUISIANA	441,820	4,204	105	4,880	90
MAINE	287,881	1,125	255	1,222	235
MARYLAND	398,816	4,216	94	5,583	71
MASSACHUSETTS	1,932,062	5,737	336	6,736	286
MICHIGAN	1,760,178	9,258	190	10,314	170
MINNESOTA	639,340	4,077	156	4,505	141
MISSISSIPPI	392,766	2,521	155	2,740	143
MISSOURI	1,009,786	4,917	205	5,379	187
MONTANA	36,617	787	46	938	39
NEBRASKA	137,712	1,570	87	1,734	79
NEVADA	72,170	799	90	1,408	51
NEW HAMPSHIRE	446,496	921	484	1,306	341
NEW JERSEY	2,967,685	7,364	402	9,022	328
NEW MEXICO	83,593	1,300	64	1,781	46
NEW YORK	4,421,507	17,577	251	19,683	224
NORTH CAROLINA	662,398	5,874	112	7,419	49
NORTH DAKOTA	16,380	653	25	690	23
OHIO	1,755,807	10,797	162	12,237	143
OKLAHOMA	181,134	3,025	59	3,702	48
OREGON	268,802	2,633	102	3,209	83
PENNSYLVANIA	1,392,088	11,867	117	12,854	108
RHODE ISLAND	266,297	947	281	1,084	245
SOUTH CAROLINA	405,141	3,119	129	3,700	109
SOUTH DAKOTA	81,619	690	118	730	111
TENNESSEE	702,899	4,591	153	5,573	126
TEXAS	1,583,415	14,228	111	21,000	75
UTAH	161,104	1,461	110	1,963	82
VERMONT	142,108	511	278	607	234
VIRGINIA	796,807	5,346	149	6,755	117
WASHINGTON	882,559	4,130	213	4,859	181
WEST VIRGINIA	566,812	1,950	290	2,101	269
WISCONSIN	1,181,696	4,705	251	5,553	212
WYOMING	47,644	450	105	484	98
AMERICAN SAMOA	29,717	33	900	40	742
GUAM	10,973	110	99	275	39
MARIANAS GROUP	24,089	17	1,417	33	729
PUERTO RICO	441,096	3,197	137	4,700	93
PAC. TR. TERR.	51,869	118	439	183	243
VIRGIN ISLANDS	14,408	99	145	116	124
U.S. TOTALS	35,395,929	230,075	153	278,888	126

DECEMBER 31, 1982
TABLE 19

1982 NEEDS SURVEY

COMPARISON OF PER CAPITA BACKLOG COSTS
FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 1980 POPULATION AND PROJECTED 2000 POPULATION
* THOUSANDS OF 1982 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORIES I, IIA, & IIB

	1982 * BACKLOGS	1980 POPULATION	DOLLARS PER PERSON (1980)	2000 POPULATION	DOLLARS PER PERSON (2000)
ALABAMA	338,468	3,890	87	4,140	81
ALASKA	100,587	400	251	694	144
ARIZONA	115,590	2,718	42	4,357	26
ARKANSAS	142,926	2,286	62	2,970	48
CALIFORNIA	1,036,488	23,669	43	26,786	38
COLORADO	121,700	2,889	42	4,371	27
CONNECTICUT	367,596	3,108	118	3,902	94
DELAWARE	24,469	595	41	841	29
DIST. OF COLUM.	9,036	638	14	694	13
FLORIDA	950,234	9,740	97	15,049	63
GEORGIA	391,613	5,464	71	7,053	55
HAWAII	76,862	965	79	1,366	56
IDAH0	92,156	944	97	1,183	77
ILLINOIS	829,970	11,418	72	12,358	67
INDIANA	331,317	5,490	60	6,059	54
IOWA	473,201	2,913	162	3,101	152
KANSAS	155,973	2,363	66	2,642	59
KENTUCKY	378,972	3,661	103	4,224	89
LOUISIANA	211,684	4,204	50	4,880	43
MAINE	167,275	1,125	148	1,222	136
MARYLAND	334,166	4,216	79	5,583	59
MASSACHUSETTS	1,337,408	5,737	233	6,736	198
MICHIGAN	1,207,052	9,258	130	10,314	117
MINNESOTA	428,412	4,077	105	4,505	95
MISSISSIPPI	275,598	2,521	109	2,740	100
MISSOURI	645,651	4,917	131	5,379	120
MONTANA	28,713	787	36	938	30
NEBRASKA	130,033	1,570	82	1,734	74
NEVADA	62,775	799	78	1,408	44
NEW HAMPSHIRE	230,211	921	249	1,306	176
NEW JERSEY	2,126,069	7,364	288	9,022	235
NEW MEXICO	74,249	1,300	57	1,781	41
NEW YORK	3,469,503	17,577	197	19,683	176
NORTH CAROLINA	426,877	5,874	72	7,419	57
NORTH DAKOTA	12,787	653	19	690	18
OHIO	1,156,524	10,797	107	12,237	94
OKLAHOMA	111,327	3,025	36	3,702	30
OREGON	116,195	2,633	44	3,209	36
PENNSYLVANIA	1,087,812	11,867	91	12,854	84
RHODE ISLAND	186,099	947	196	1,084	171
SOUTH CAROLINA	159,235	3,119	51	3,700	43
SOUTH DAKOTA	74,182	690	107	730	101
TENNESSEE	428,305	4,591	93	5,573	76
TEXAS	932,401	14,228	65	21,000	44
UTAH	131,912	1,461	90	1,963	67
VERMONT	104,818	511	205	607	172
VIRGINIA	548,122	5,346	102	6,755	81
WASHINGTON	482,424	4,130	116	4,859	99
WEST VIRGINIA	378,527	1,950	194	2,101	140
WISCONSIN	603,536	4,705	128	5,553	108
WYOMING	43,178	450	95	484	89
AMERICAN SAMOA	13,847	33	419	40	346
GUAM	8,487	110	77	275	30
MARIANAS GROUP	10,924	17	642	33	331
PUERTO RICO	176,804	3,197	55	4,700	37
PAC. TR. TERR.	41,353	118	350	183	225
VIRGIN ISLANDS	10,978	99	110	116	94
U.S. TOTALS	23,912,611	230,075	103	278,888	85

DECEMBER 31, 1982
TABLE 20

1982 NEEDS SURVEY
CURRENT PER CAPITA BACKLOG COSTS BY CATEGORY
(DOLLARS PER PERSON)

CATEGORIES I THRU IV

	TOTAL	I	IIA	IIB	III A	III B	IV A	IV B
ALABAMA	205	66	16	3	22	1	76	18
ALASKA	577	251	0	0	5	0	210	109
ARIZONA	102	42	0	0	0	0	49	10
ARKANSAS	126	53	7	1	8	0	40	13
CALIFORNIA	111	41	1	1	2	6	46	12
COLORADO	52	40	1	0	2	0	6	1
CONNECTICUT	372	104	12	1	7	5	177	63
DELAWARE	134	33	7	0	1	3	54	33
DIST. OF COLUM.	24	0	0	14	10	0	0	0
FLORIDA	232	83	7	7	7	0	89	38
GEORGIA	156	48	23	0	17	2	42	22
HAWAII	346	79	0	0	0	17	198	50
IDaho	219	92	4	0	7	2	82	29
ILLINOIS	125	28	44	0	15	4	15	16
INDIANA	134	40	19	0	8	0	45	19
IOWA	249	136	26	0	29	0	37	19
KANSAS	195	65	0	0	20	9	41	58
KENTUCKY	286	80	22	0	28	1	108	44
LOUISIANA	188	48	1	0	18	3	79	36
MAINE	436	146	1	0	15	5	174	91
MARYLAND	179	25	53	0	3	31	53	12
MASSACHUSETTS	480	215	14	3	3	3	140	100
MICHIGAN	255	106	21	3	7	10	54	51
MINNESOTA	192	86	15	3	6	4	31	44
MISSISSIPPI	201	91	16	1	21	0	45	24
MISSOURI	258	130	0	0	7	10	42	66
MONTANA	90	34	1	0	1	0	43	8
NEBRASKA	101	82	0	0	0	0	13	4
NEVADA	137	48	22	8	3	4	41	8
NEW HAMPSHIRE	776	244	2	2	10	5	286	224
NEW JERSEY	463	250	24	13	30	0	59	83
NEW MEXICO	93	56	0	0	0	0	28	7
NEW YORK	597	187	6	3	10	213	132	43
NORTH CAROLINA	181	51	16	5	14	0	68	25
NORTH DAKOTA	29	19	0	0	0	0	4	4
OHIO	226	64	36	6	12	1	62	43
OKLAHOMA	91	34	1	0	4	3	28	18
OREGON	228	35	7	0	26	6	119	30
PENNSYLVANIA	228	76	14	1	1	0	110	24
RHODE ISLAND	475	183	13	0	2	31	162	81
SOUTH CAROLINA	215	41	8	1	24	0	85	54
SOUTH DAKOTA	123	94	11	1	3	1	4	7
TENNESSEE	240	65	27	0	33	0	86	26
TEXAS	142	58	6	0	12	2	29	32
UTAH	143	64	25	0	7	0	32	12
VERMONT	419	165	38	1	14	6	135	58
VIRGINIA	222	90	6	5	3	0	73	43
WASHINGTON	356	112	0	3	28	15	127	68
WEST VIRGINIA	651	183	9	0	2	1	358	94
WISCONSIN	312	109	18	0	6	16	44	116
WYOMING	112	88	7	0	3	0	6	6
AMERICAN SAMOA	1,098	419	0	0	0	0	197	480
GUAM	168	77	0	0	8	3	65	14
MAJANAS GROUP	2,326	580	62	0	0	0	909	774
PUERTO RICO	244	54	0	0	5	3	103	76
PAC. TR. TERR.	640	346	3	0	0	0	200	89
VIRGIN ISLANDS	266	110	0	0	1	0	121	33
U.S. AVERAGE	247	87	14	2	11	20	72	38

DECEMBER 31, 1982
TABLE 21

1982 NEEDS SURVEY

1982 EPA ASSESSMENTS OF YEAR 2000 NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
MILLIONS OF 1982 DOLLARS

CATEGORIES I THRU IV

	TOTAL	I	IIA	IIB	III A	III B	IV A	IV B
ALABAMA	1,176	361	82	24	88	4	355	260
ALASKA	396	180	0	0	2	0	98	115
ARIZONA	623	280	0	2	1	0	188	150
ARKANSAS	557	269	30	6	18	2	126	104
CALIFORNIA	5,029	2,435	72	71	61	156	1,487	745
COLORADO	509	312	15	0	5	1	28	145
CONNECTICUT	1,404	363	55	4	23	16	686	254
DELAWARE	144	42	20	0	0	2	41	37
DIST. OF COLUM.	15	0	0	9	6	0	0	0
FLORIDA	4,582	1,680	129	140	77	0	1,219	1,334
GEORGIA	1,538	534	192	3	94	14	324	373
HAWAII	589	181	0	0	0	17	283	106
IDaho	351	161	8	1	7	2	108	62
ILLINOIS	2,373	598	965	0	178	55	209	366
INDIANA	983	313	148	1	47	3	293	174
IOWA	1,017	491	93	0	85	1	122	222
KANSAS	763	253	1	0	50	21	127	308
KENTUCKY	1,621	397	112	0	104	5	477	524
LOUISIANA	1,409	538	18	1	76	15	390	367
MAINE	585	197	2	0	17	6	226	133
MARYLAND	1,152	194	246	17	13	130	266	282
MASSACHUSETTS	3,163	1,375	98	23	20	18	885	740
MICHIGAN	3,081	1,322	263	39	73	99	590	692
MINNESOTA	1,160	578	109	15	28	17	157	253
MISSISSIPPI	804	358	65	3	55	0	134	186
MISSOURI	2,034	1,082	4	0	37	49	251	609
MONTANA	121	44	2	0	1	0	36	36
NEBRASKA	293	196	0	0	0	1	28	66
NEVADA	220	101	30	6	2	3	46	29
NEW HAMPSHIRE	964	317	4	2	9	4	311	315
NEW JERSEY	4,200	2,187	220	133	226	2	577	852
NEW MEXICO	250	149	1	0	0	0	47	52
NEW YORK	11,674	3,762	174	70	186	3,759	2,670	1,051
NORTH CAROLINA	1,775	448	124	40	87	0	509	564
NORTH DAKOTA	45	30	0	0	0	0	2	10
OHIO	3,433	1,045	522	119	135	21	806	781
OKLAHOMA	514	240	14	1	13	9	116	117
OREGON	885	189	34	4	71	17	363	206
PENNSYLVANIA	3,744	1,319	280	24	15	0	1,611	491
RHODE ISLAND	495	194	13	0	2	29	166	88
SOUTH CAROLINA	1,027	197	35	5	76	0	357	354
SOUTH DAKOTA	160	106	15	1	2	0	3	30
TENNESSEE	1,801	444	170	7	153	3	500	520
TEXAS	3,971	1,752	157	7	181	29	588	1,254
UTAH	562	346	75	0	11	0	67	61
VERMONT	234	95	23	0	7	3	76	31
VIRGINIA	1,624	657	44	58	18	2	501	345
WASHINGTON	2,498	876	6	17	115	62	685	724
WEST VIRGINIA	1,449	431	23	1	4	2	747	237
WISCONSIN	2,061	895	143	0	32	80	288	620
WYOMING	126	91	7	0	1	0	2	23
AMERICAN SAMOA	55	22	0	0	0	0	6	26
GUAM	38	22	0	0	0	0	7	7
MARIANAS GROUP	63	15	1	0	0	0	22	24
PUERTO RICO	1,113	369	5	0	18	11	390	316
PAC. TR. TERR.	106	59	0	0	0	0	24	20
VIRGIN ISLANDS	42	15	0	0	0	0	13	13
U.S. TOTALS	82,624	31,134	4,871	873	2,557	4,692	20,664	17,830

NOTE: SUM OF ENTRIES MAY NOT EQUAL TOTALS DUE TO ROUND-OFFS

DECEMBER 31, 1982
TABLE 22

1982 NEEDS SURVEY

INDEPENDENT STATE ESTIMATES OF YEAR 2000 NFFDS BY CATEGORY
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
MILLIONS OF 1982 DOLLARS

CATEGORIES I THRU IV

	TOTAL	I	IIA	IIB	III A	III B	IV A	IV B
ALABAMA	1,176	361	62	24	88	4	355	260
ALASKA	396	180	0	0	2	0	98	115
ARIZONA	623	280	0	2	1	0	188	150
ARKANSAS	557	269	30	6	18	2	126	104
CALIFORNIA	5,168	2,435	72	71	200	156	1,487	745
COLORADO	509	312	15	0	5	1	28	145
CONNECTICUT	1,404	363	55	4	23	16	686	254
DELAWARE	144	42	20	0	0	2	41	37
DIST. OF COLUM.	15	0	0	9	6	0	0	0
FLORIDA	4,582	1,680	129	140	77	0	1,219	1,334
GEORGIA	1,538	534	192	3	94	14	324	373
HAWAII	589	181	0	0	0	17	283	106
IDaho	351	161	8	1	7	2	108	62
ILLINOIS	2,373	598	965	0	178	55	209	366
INDIANA	983	313	148	1	47	3	293	174
IOWA	1,017	491	93	0	85	1	122	222
KANSAS	763	253	1	0	50	21	127	308
KENTUCKY	1,621	397	112	0	104	5	477	524
LOUISIANA	1,409	538	18	1	76	15	390	367
MAINE	585	197	2	0	17	6	226	133
MARYLAND	1,152	194	246	17	13	130	266	282
MASSACHUSETTS	3,163	1,375	98	23	20	18	885	740
MICHIGAN	3,081	1,322	263	39	73	99	590	692
MINNESOTA	1,160	578	109	15	28	17	157	253
MISSISSIPPI	804	358	65	3	55	0	134	186
MISSOURI	2,034	1,082	4	0	37	49	251	609
MONTANA	121	44	2	0	1	0	36	36
NEBRASKA	293	196	0	0	0	1	28	66
NEVADA	220	101	30	6	2	3	46	29
NEW HAMPSHIRE	966	317	4	2	9	4	311	315
NEW JERSEY	4,200	2,187	220	133	226	2	577	852
NEW MEXICO	250	149	1	0	0	0	47	52
NEW YORK	11,674	3,762	174	70	186	3,759	2,670	1,051
NORTH CAROLINA	1,775	448	124	40	87	0	509	564
NORTH DAKOTA	45	30	0	0	0	0	2	10
OHIO	3,433	1,045	522	119	135	21	806	781
OKLAHOMA	514	240	14	1	13	9	116	117
OREGON	885	189	34	4	71	17	363	206
PENNSYLVANIA	3,744	1,319	280	24	15	0	1,611	491
RHODE ISLAND	495	194	13	0	2	29	166	88
SOUTH CAROLINA	1,027	197	35	5	76	0	357	354
SOUTH DAKOTA	160	106	15	1	2	0	3	30
TENNESSEE	1,801	444	170	7	153	3	500	520
TEXAS	3,982	1,758	158	7	181	29	588	1,258
UTAH	562	346	75	0	11	0	67	61
VERMONT	238	95	23	0	7	3	76	31
VIRGINIA	1,628	657	44	58	18	2	501	345
WASHINGTON	2,444	876	6	17	115	62	685	724
WEST VIRGINIA	1,449	431	23	1	4	2	747	237
WISCONSIN	2,061	895	143	0	32	80	288	620
WYOMING	126	91	7	0	1	0	2	23
AMERICAN SAMOA	55	22	0	0	0	0	6	26
GUAM	38	22	0	0	0	0	7	7
MARIANAS GROUP	63	15	1	0	0	0	22	24
PUERTO RICO	1,113	369	5	0	18	11	390	316
PAC. TR. TERR.	106	59	0	0	0	0	24	20
VIRGIN ISLANDS	42	15	0	0	0	0	13	13
U.S. TOTALS	82,773	31,141	4,872	873	2,695	4,692	20,664	17,833

NOTE: SUM OF ENTRIES MAY NOT EQUAL TOTALS DUE TO ROUND-OFFS

DECEMBER 31, 1982
TABLE 23

1982 NFEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF YEAR 2000 NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1982 DOLLARS
CATEGORIES I THROUGH IV

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE
ALABAMA	1,029,982	1,176,325	+146,343	1.0920	1.4237	+0.3316
ALASKA	540,280	396,286	-163,994	0.5940	0.4796	-0.1144
ARIZONA	691,674	623,055	-68,619	0.7333	0.7540	+0.0207
ARKANSAS	545,452	557,139	+8,313	0.5995	0.6743	+0.0747
CALIFORNIA	7,126,075	5,029,973	-2,096,102	7.5554	6.0877	-1.4677
COLORADO	1,056,188	509,435	-546,753	1.1198	0.6165	-0.5032
CONNECTICUT	1,228,871	1,404,510	+175,639	1.3029	1.6998	+0.3969
DELAWARE	303,370	144,249	-159,121	0.3216	0.1745	-0.1470
DIST. OF COLUM.	26,466	15,509	-10,957	0.0280	0.0187	-0.0092
FLORIDA	5,587,410	4,582,047	-1,005,363	5.9240	5.5456	-0.3784
GEORGIA	1,544,271	1,538,000	-6,271	1.6373	1.8614	+0.2241
HAWAII	932,708	589,561	-343,147	0.9889	0.7135	-0.2753
IDaho	480,644	351,935	-128,709	0.5096	0.4259	-0.0836
ILLINOIS	2,618,881	2,373,667	-245,214	2.7766	2.8728	+0.0961
INDIANA	1,254,873	983,128	-271,745	1.3304	1.1898	-0.1406
IOWA	1,099,359	1,017,140	-82,219	1.1656	1.2310	+0.0654
KANSAS	949,403	763,936	-185,467	1.0066	0.9245	-0.0820
KENTUCKY	1,466,447	1,621,521	+244,926	1.9789	1.9625	-0.0163
LOUISIANA	1,310,665	1,409,505	+98,840	1.3896	1.7059	+0.3162
MAINE	650,242	585,094	-65,148	0.6894	0.7081	+0.0187
MARYLAND	3,363,939	1,152,280	-2,211,659	3.5666	1.3946	-2.1720
MASSACHUSETTS	3,006,013	3,163,587	+157,574	3.1871	3.8288	+0.6417
MICHIGAN	3,525,327	3,081,359	-443,968	3.7377	3.7293	-0.0083
MINNESOTA	1,405,233	1,160,341	-244,892	1.4899	1.4043	-0.0855
MISSISSIPPI	962,302	804,009	-158,293	1.0202	0.9730	-0.0471
MISSOURI	2,210,589	2,034,731	-175,858	2.3437	2.4626	+0.1188
MONTANA	126,663	121,237	-5,426	0.1342	0.1467	+0.0124
NEBRASKA	315,863	293,542	-22,321	0.3348	0.3552	+0.0203
NEVADA	275,970	220,216	-55,754	0.2925	0.2665	-0.0260
NEW HAMPSHIRE	995,790	966,026	-29,764	1.0557	1.1691	+0.1133
NEW JERSEY	4,144,482	4,200,363	+55,881	4.4154	5.0836	+0.6682
NEW MEXICO	221,479	250,593	+29,114	0.2348	0.3032	+0.0684
NEW YORK	12,364,059	11,674,194	-689,865	13.1090	14.1292	+1.0201
NORTH CAROLINA	1,978,049	1,775,284	-202,765	2.0972	2.1486	+0.0513
NORTH DAKOTA	62,289	45,027	-17,262	0.0660	0.0544	-0.0115
OHIO	3,804,629	3,433,201	-371,428	4.0338	4.1551	+0.1213
OKLAHOMA	711,371	514,867	-196,504	0.7542	0.6231	-0.1310
OREGON	1,116,082	885,869	-230,213	1.1833	1.0721	-0.1111
PENNSYLVANIA	3,860,607	3,744,310	-116,297	4.0932	4.5317	+0.4384
RHODE ISLAND	696,068	495,183	-200,885	0.7380	0.5993	-0.1386
SOUTH CAROLINA	993,190	1,027,403	+34,213	1.0530	1.2434	+0.1904
SOUTH DAKOTA	211,276	160,034	-51,192	0.2239	0.1936	-0.0302
TENNESSEE	1,858,771	1,801,163	-57,608	1.9707	2.1799	+0.2091
TEXAS	4,982,117	3,971,990	-1,010,127	5.2823	4.8072	-0.4750
UTAH	451,455	562,287	+110,832	0.4786	0.6805	+0.2019
VERMONT	249,014	238,758	-10,256	0.2746	0.2889	+0.0143
VIRGINIA	1,741,914	1,428,455	-313,459	1.8468	1.9715	+0.1246
WASHINGTON	2,597,145	2,484,924	-112,221	2.7536	3.0123	+0.2586
WEST VIRGINIA	1,207,736	1,449,124	+241,388	1.2805	1.7538	+0.4733
WISCONSIN	2,146,880	2,061,234	-85,646	2.2762	2.4947	+0.2184
WYOMING	154,086	126,867	-27,219	0.1632	0.1535	-0.0097
AMERICAN SAMOA	66,386	55,337	-11,049	0.0703	0.0669	-0.0034
GUAM	27,870	38,754	+10,884	0.0295	0.0469	+0.0173
MARIANAS GROUP	71,074	63,502	-7,572	0.0753	0.0768	+0.0014
PUERTO RICO	1,318,513	1,113,541	-204,972	1.3979	1.3477	-0.0502
PAC. TR. ISLANDS	125,320	106,114	-19,206	0.1328	0.1284	-0.0044
VIRGIN ISLANDS	53,970	42,101	-11,869	0.0572	0.0509	-0.0062
U.S. TOTALS	94,316,692	82,624,322	-11,692,370	100.0000	100.0000	+0.0000

DECEMBER 31, 1982
TABLE 24

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF YEAR 2000 NEEDS
FOR CONSTRUCTION OF TREATMENT PLANTS
THOUSANDS OF 1982 DOLLARS
CATS I, IIA, AND IIB

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE
ALABAMA	353,110	468,124	+115,014	0.8982	1.2693	+0.3711
ALASKA	362,583	180,010	-182,573	0.9223	0.4881	-0.4341
ARIZONA	318,205	283,823	-34,382	0.8094	0.7695	-0.0399
ARKANSAS	255,268	305,950	+50,682	0.6493	0.8295	+0.1802
CALIFORNIA	3,166,476	2,579,017	-587,459	8.0549	6.9930	-1.0618
COLORADO	488,450	327,506	-160,944	1.2425	0.8880	-0.3544
CONNECTICUT	471,206	423,546	-47,660	1.0714	1.1484	+0.0770
DELAWARE	156,144	62,752	-93,392	0.3972	0.1701	-0.2270
DIST. OF COLUM.	9,175	9,036	-139	0.0233	0.0245	+0.0012
FLORIDA	2,030,502	1,951,022	-79,480	5.1652	5.2902	+0.1250
GEORGIA	650,493	730,677	+80,184	1.6547	1.9812	+0.3265
HAWAII	295,427	181,540	-113,887	0.7515	0.4922	-0.2592
IDaho	237,760	171,822	-65,938	0.6048	0.4658	-0.1389
ILLINOIS	1,815,119	1,563,949	-251,170	4.6173	4.2406	-0.3766
INDIANA	600,382	463,920	-136,462	1.5272	1.2579	-0.2692
IOWA	593,083	585,127	-7,956	1.5087	1.5865	+0.0778
KANSAS	389,971	254,874	-135,097	0.9920	0.6910	-0.3009
KENTUCKY	605,201	509,897	-95,304	1.5395	1.3825	-0.1569
LOUISIANA	501,895	558,788	+56,893	1.2767	1.5151	+0.2384
MAINE	211,640	200,362	-11,278	0.5383	0.5432	+0.0049
MARYLAND	822,664	458,529	-364,135	2.0927	1.2433	-0.8493
MASSACHUSETTS	1,173,170	1,498,214	+325,044	2.9843	4.0624	+1.0781
MICHIGAN	1,755,572	1,625,789	-129,783	4.4658	4.4083	-0.0574
MINNESOTA	707,853	704,042	-3,811	1.8006	1.9090	+0.1084
MISSISSIPPI	452,365	426,569	-25,796	1.1507	1.1566	+0.0059
MISSOURI	1,101,165	1,086,555	-14,610	2.8011	2.9462	+0.1451
MONTANA	67,585	46,812	-20,773	0.1719	0.1269	-0.0449
NEBRASKA	215,243	196,560	-18,683	0.5475	0.5329	-0.0145
NEVADA	185,032	138,222	-46,810	0.4706	0.3747	-0.0958
NEW HAMPSHIRE	313,190	324,987	+11,797	0.7967	0.8812	+0.0845
NEW JERSEY	2,215,008	2,541,287	+326,279	5.6346	6.8907	+1.2561
NEW MEXICO	130,226	150,839	+20,613	0.3312	0.4090	+0.0778
NEW YORK	3,941,596	4,007,200	+65,604	10.1285	10.8656	+0.7371
NORTH CAROLINA	810,834	612,967	-197,867	2.0626	1.6620	-0.4005
NORTH DAKOTA	42,941	30,433	-12,508	0.1092	0.0838	-0.0253
OHIO	1,775,317	1,687,367	-87,950	4.5161	4.5753	+0.0592
OKLAHOMA	322,731	256,764	-65,963	0.8209	0.6962	-0.1246
OREGON	335,075	227,865	-107,210	0.8523	0.6178	-0.2344
PENNSYLVANIA	1,698,049	1,625,405	-72,644	4.3195	4.4073	+0.0878
RHODE ISLAND	214,539	207,107	-7,432	0.5457	0.5615	+0.0158
SOUTH CAROLINA	299,453	239,048	-60,405	0.7617	0.6481	-0.1135
SOUTH DAKOTA	171,153	123,372	-47,781	0.4353	0.3345	-0.1007
TENNESSEE	722,137	622,920	-99,217	1.8369	1.6890	-0.1478
TEXAS	1,810,479	1,917,345	+106,866	4.6054	5.1989	+0.5935
UTAH	282,249	471,599	+189,350	0.7181	1.1431	+0.4250
VERMONT	123,540	119,954	-3,586	0.3142	0.3252	+0.0110
VIRGINIA	790,353	761,112	-29,241	2.0105	2.0637	+0.0532
WASHINGTON	1,035,217	849,970	-185,247	2.6334	2.4402	-0.1931
WEST VIRGINIA	426,185	456,821	+30,636	1.0841	1.2386	+0.1545
WISCONSIN	1,140,398	1,039,246	-101,152	2.9009	2.8179	-0.0829
WYOMING	105,856	99,083	-6,773	0.2692	0.2686	-0.0005
AMERICAN SAMOA	25,848	22,748	-3,100	0.0657	0.0616	-0.0040
GUAM	21,776	22,958	+1,182	0.0553	0.0622	+0.0069
MARIANAS GROUP	18,962	16,992	-1,970	0.0482	0.0460	-0.0021
PUERTO RICO	472,089	375,333	-96,756	1.2009	1.0177	-0.1831
PAC. TR. TERR.	61,415	60,378	-1,037	0.1562	0.1637	+0.0075
VIRGIN ISLANDS	21,413	15,001	-6,412	0.0544	0.0406	-0.0137
U.S. TOTALS	39,310,788	36,879,639	-2,431,149	100.0000	100.0000	+0.0000

DECEMBER 31, 1992
TABLE 25

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF YEAR 2000 NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1982 DOLLARS
CAT 1, IIA, IIB, IIIA, AND IVB

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE
ALABAMA	696,755	816,685	+119,930	1.0481	1.4260	+0.3779
ALASKA	511,289	297,445	-213,844	0.7691	0.5193	-0.2497
ARIZONA	544,555	434,885	-109,670	0.8191	0.7593	-0.0597
ARKANSAS	418,272	428,897	+10,625	0.6292	0.7489	+0.1197
CALIFORNIA	5,464,541	3,386,544	-2,077,997	8.2203	5.9135	-2.3067
COLORADO	907,085	479,353	-427,732	1.3645	0.8370	-0.5274
CONNECTICUT	661,396	701,471	+40,075	0.9949	1.2249	+0.2300
DELAWARE	263,328	100,898	-162,430	0.3961	0.1761	-0.2199
DIST. OF COLUM.	26,466	15,509	-10,957	0.0398	0.0270	-0.0127
FLORIDA	4,092,294	3,362,908	-729,386	6.1560	5.8723	-0.2836
GEORGIA	1,252,516	1,198,509	-54,007	1.8841	2.0928	+0.2087
HAWAII	635,183	288,377	-346,806	0.9555	0.5035	-0.4519
IDaho	362,845	241,466	-121,379	0.5458	0.4216	-0.1241
ILLINOIS	2,402,740	2,108,370	-294,370	3.6144	3.6816	+0.0672
INDIANA	885,555	686,339	-199,216	1.3321	1.1984	-0.1336
IOWA	970,063	892,954	-77,109	1.4592	1.5592	+0.1000
KANSAS	803,479	614,319	-189,160	1.2086	1.0727	-0.1358
KENTUCKY	1,272,201	1,138,706	-133,495	1.9137	1.9884	+0.0747
LOUISIANA	939,570	1,002,861	+63,291	1.4134	1.7511	+0.3377
MAINE	407,660	351,926	-55,734	0.6132	0.6145	+0.0013
MARYLAND	1,259,083	755,098	-503,985	1.8940	1.3185	-0.5754
MASSACHUSETTS	1,910,746	2,259,488	+348,742	2.8743	3.9455	+1.0712
MICHIGAN	2,603,359	2,391,432	-211,927	3.9162	4.1759	+0.2597
MINNESOTA	1,196,556	985,707	-210,849	1.7999	1.7212	-0.0786
MISSISSIPPI	843,117	668,356	-174,761	1.2683	1.1670	-0.1012
MISSOURI	1,914,974	1,733,367	-181,607	2.8807	3.0268	+0.1461
MONTANA	110,853	84,781	-26,072	0.1667	0.1480	-0.0186
NEBRASKA	291,515	263,630	-27,885	0.4385	0.4603	+0.0218
NEVADA	277,335	169,995	-107,340	0.3419	0.2968	-0.0450
NEW HAMPSHIRE	673,161	649,684	-23,477	1.0126	1.1344	+0.1218
NEW JERSEY	3,308,796	3,620,440	+311,644	4.9774	6.3220	+1.3446
NEW MEXICO	179,454	203,441	+23,987	0.2699	0.3552	+0.0853
NEW YORK	5,897,764	5,244,518	-653,246	8.8720	9.1579	+0.2859
NORTH CAROLINA	1,505,087	1,265,092	-239,995	2.2641	2.2091	-0.0549
NORTH DAKOTA	59,663	42,110	-17,553	0.0897	0.0735	-0.0161
OHIO	2,976,352	2,604,821	-371,531	4.4773	4.5485	+0.0712
OKLAHOMA	524,324	388,214	-136,110	0.7887	0.6778	-0.1108
OREGON	748,874	504,962	-243,912	1.1265	0.8817	-0.2447
PENNSYLVANIA	2,382,475	2,132,609	-249,866	3.5839	3.7239	+0.1400
RHODE ISLAND	346,319	298,600	-47,719	0.5209	0.5214	+0.0005
SOUTH CAROLINA	707,244	669,735	-37,509	1.0639	1.1694	+0.1055
SOUTH DAKOTA	205,471	156,072	-49,399	0.3046	0.2725	-0.0320
TENNESSEE	1,342,302	1,297,171	-45,131	2.0944	2.2651	+0.1707
TEXAS	4,105,236	3,354,003	-751,233	6.1755	5.8567	-0.3187
UTAH	398,687	494,676	+105,989	0.5847	0.8638	+0.2791
VERMONT	171,699	158,892	-12,807	0.2542	0.2774	+0.0232
VIRGINIA	1,344,645	1,125,168	-219,477	2.0227	1.9647	-0.0579
WASHINGTON	1,942,719	1,740,061	-202,658	2.9224	3.0384	+0.1160
WEST VIRGINIA	624,214	699,014	+74,800	0.9390	1.2206	+0.2816
WISCONSIN	1,835,510	1,691,885	-143,625	2.7611	2.9543	+0.1932
WYOMING	152,991	123,875	-29,116	0.2301	0.2163	-0.0137
AMERICAN SAMOA	54,886	48,820	-6,066	0.0825	0.0852	+0.0027
GUAM	27,870	31,194	+3,324	0.0419	0.0544	+0.0125
MARIANAS GROUP	48,086	41,471	-6,615	0.0723	0.0724	+0.0001
PUEERTO RICO	875,414	710,792	-164,622	1.3168	1.2411	-0.0756
PAC. TR. TERR.	84,097	81,309	-2,788	0.1265	0.1419	+0.0154
VIRGIN ISLANDS	36,528	28,387	-8,141	0.0549	0.0495	-0.0053
U.S. TOTALS	66,475,649	57,267,292	-9,208,357	100.0000	100.0000	+0.0000

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF YEAR 2000 NEEDS
FOR IMPROVEMENT OF TREATMENT PLANTS TO ACHIEVE SECONDARY LEVEL
THOUSANDS OF 1982 DOLLARS
CATEGORY I

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE
ALABAMA	299,647	361,290	+61,643	0.9112	1.1603	+0.2491
ALASKA	362,583	180,010	-182,573	1.1026	0.5781	-0.5244
ARIZONA	318,138	240,306	-77,832	0.9674	0.9002	-0.0671
ARKANSAS	234,932	269,586	+34,654	0.7144	0.8658	+0.1514
CALIFORNIA	3,005,746	2,435,180	-570,566	9.1407	7.8213	-1.3193
COLORADO	419,420	312,317	-107,103	1.2754	1.0030	-0.2723
CONNECTICUT	359,473	363,798	+4,325	1.0931	1.1684	+0.0752
DELAWARE	109,341	42,041	-67,300	0.3325	0.1350	-0.1974
DIST. OF COLUM.	9,175	0	-9,175	0.0278	0.0000	-0.0278
FLORIDA	1,571,566	1,680,746	+109,180	4.7792	5.3982	+0.6189
GEORGIA	525,530	534,999	+9,469	1.5981	1.7182	+0.1200
HAWAII	287,474	181,540	-105,934	0.8742	0.5830	-0.2911
IDAH0	185,680	161,895	-23,785	0.5646	0.5199	-0.0446
ILLINOIS	708,686	598,129	-110,557	2.1551	1.9210	-0.2340
INDIANA	315,746	313,968	-1,778	0.9401	1.0083	+0.0681
IOWA	578,360	491,459	-86,901	1.6067	1.5784	-0.0283
KANSAS	383,508	253,827	-129,681	1.1662	0.8152	-0.3510
KENTUCKY	501,359	397,328	-104,031	1.5246	1.2761	-0.2485
LOUISIANA	492,358	538,407	+46,049	1.4972	1.7292	+0.2319
MAINE	208,624	197,511	-11,113	0.6344	0.6343	+0.0000
MARYLAND	381,506	194,541	-186,965	1.1601	0.6248	-0.5353
MASSACHUSETTS	1,100,233	1,375,551	+275,318	3.3458	4.4180	+1.0721
MICHIGAN	1,620,478	1,322,356	-298,122	4.9279	4.2471	-0.6808
MINNESOTA	371,528	578,391	+206,863	1.1298	1.8576	+0.7278
MISSISSIPPI	385,384	358,282	-27,102	1.1719	1.1507	-0.0212
MISSOURI	1,099,759	1,082,281	-17,478	3.3444	3.4760	+0.1316
MONTANA	53,634	44,001	-9,633	0.1630	0.1413	-0.0217
NEBRASKA	215,263	196,560	-18,703	0.6546	0.6313	-0.0233
NEVADA	108,423	101,478	-7,045	0.3300	0.3259	-0.0041
NEW HAMPSHIRE	297,943	317,777	+19,834	0.9060	1.0206	+0.1145
NEW JERSEY	1,988,973	2,187,502	+198,529	6.0486	7.0258	+0.9772
NEW MEXICO	129,221	149,136	+19,915	0.3929	0.4789	+0.0860
NEW YORK	3,869,631	3,762,790	-106,841	11.7678	12.0853	+0.3175
NORTH CAROLINA	602,248	448,361	-153,887	1.8314	1.4400	-0.3914
NORTH DAKOTA	42,941	30,933	-12,008	0.1305	0.0993	-0.0312
OHIO	1,041,859	1,045,564	+3,705	3.1683	3.3581	+0.1897
OKLAHOMA	285,868	240,158	-45,710	0.8693	0.7713	-0.0979
OREGON	206,890	189,165	-17,725	0.6291	0.6075	-0.0216
PENNSYLVANIA	1,432,239	1,319,767	-112,472	4.3555	4.2388	-0.1167
RHODE ISLAND	179,766	194,069	+14,303	0.5466	0.6233	+0.0766
SOUTH CAROLINA	273,487	197,945	-75,542	0.8332	0.6358	-0.1973
SOUTH DAKOTA	130,872	106,485	-24,387	0.3979	0.3420	-0.0559
TENNESSEE	554,160	444,407	-109,753	1.6852	1.4273	-0.2578
TEXAS	1,633,205	1,752,107	+118,902	4.9667	5.6274	+0.6607
UTAH	150,922	346,260	+195,338	0.4589	1.1121	+0.6531
VERMONT	109,176	95,836	-13,340	0.3320	0.3077	-0.0242
VIRGINIA	746,361	657,714	-88,647	2.2697	2.1124	-0.1572
WASHINGTON	496,526	876,261	+379,735	2.7263	2.8143	+0.0879
WEST VIRGINIA	413,573	431,800	+18,227	1.2576	1.3868	+0.1291
WISCONSIN	1,024,874	895,584	-129,290	3.1167	2.8764	-0.2402
WYOMING	93,823	91,721	-2,102	0.2853	0.2945	+0.0092
AMERICAN SAMOA	25,848	22,748	-3,100	0.0785	0.0730	-0.0055
GUAM	21,776	22,958	+1,182	0.0662	0.0737	+0.0075
MARIANAS GROUP	18,962	15,596	-3,366	0.0576	0.0500	-0.0075
PUERTO RICO	464,903	369,926	-94,977	1.4137	1.1881	-0.2256
PAC. TR. TERR.	61,415	59,627	-1,788	0.1867	0.1915	+0.0047
VIRGIN ISLANDS	21,413	15,001	-6,412	0.0651	0.0481	-0.0169
U.S. TOTALS	32,883,029	31,134,990	-1,748,039	100.0000	100.0000	+0.0000

DECEMBER 31, 1982
TABLE 27

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF YEAR 2000 NEEDS
TO ACHIEVE MORE STRINGENT TREATMENT LEVELS
THOUSANDS OF 1982 DOLLARS
CATEGORIES IIA & IIB

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE
ALABAMA	53,463	106,834	+53,371	0.8317	1.8597	+1.0280
ALASKA	0	0	+0	0.0000	0.0000	+0.0000
ARIZONA	67	3,517	+3,450	0.0010	0.0612	+0.0602
ARKANSAS	20,336	36,364	+16,028	0.3163	0.6329	+0.3166
CALIFORNIA	160,730	143,837	-16,893	2.5005	2.5038	+0.0033
COLORADO	69,030	15,189	-53,841	1.0739	0.2643	-0.8094
CONNECTICUT	61,733	59,748	-1,985	0.9604	1.0400	+0.0796
DELAWARE	46,803	20,711	-26,092	0.7281	0.3605	-0.3675
DIST. OF COLUM.	0	9,036	+9,036	0.0000	0.1572	+0.1572
FLORIDA	454,936	270,276	-184,660	7.1349	4.7048	-2.4350
GEORGIA	124,463	195,688	+70,725	1.9441	3.4664	+1.4623
HAWAII	7,953	0	-7,953	0.1237	0.0000	-0.1236
IDaho	52,080	9,927	-42,153	0.8102	0.1727	-0.6373
ILLINOIS	1,106,433	965,820	-140,613	17.2133	16.8125	-0.4007
INDIANA	284,636	149,952	-134,684	4.4282	2.6102	-1.8179
IOWA	64,723	43,668	-20,945	1.0069	1.6305	+0.6236
KANSAS	6,463	1,047	-5,416	0.1005	0.0182	-0.0822
KENTUCKY	103,842	112,569	+8,727	1.6155	1.9595	+0.3440
LOUISIANA	9,537	20,381	+10,844	0.1483	0.3547	+0.2064
MAINE	3,016	2,851	-165	0.0469	0.0496	+0.0027
MARYLAND	441,158	263,988	-177,170	6.8633	4.5953	-2.2679
MASSACHUSETTS	72,937	122,663	+49,726	1.1347	2.1352	+1.0005
MICHIGAN	135,044	303,433	+168,339	2.1017	5.2820	+3.1803
MINNESOTA	334,325	125,651	-210,674	5.2323	2.1872	-3.0450
MISSISSIPPI	66,481	64,287	-2,194	1.0420	1.1886	+0.1467
MISSOURI	1,406	4,274	+2,868	0.0218	0.0743	+0.0525
MONTANA	13,951	2,811	-11,140	0.2170	0.0489	-0.1680
NEBRASKA	0	0	+0	0.0000	0.0000	+0.0000
NEVADA	76,509	36,744	-39,765	1.1902	0.6396	-0.5505
NEW HAMPSHIRE	15,247	7,210	-8,037	0.2372	0.1254	-0.1117
NEW JERSEY	226,035	353,785	+127,750	3.5165	6.1585	+2.6420
NEW MEXICO	1,005	1,703	+698	0.0156	0.0296	+0.0140
NEW YORK	111,465	244,410	+132,445	1.7418	4.2545	+2.5127
NORTH CAROLINA	204,586	184,606	-19,980	3.2450	2.8653	-0.3796
NORTH DAKOTA	0	0	+0	0.0000	0.0000	+0.0000
OHIO	733,458	641,803	-91,655	11.4107	11.1721	-0.2385
OKLAHOMA	36,863	16,610	-20,253	0.5734	0.2891	-0.2842
OREGON	124,185	38,700	-85,485	1.9942	0.6736	-1.3205
PENNSYLVANIA	265,410	305,638	+39,828	4.1353	5.3203	+1.1850
RHODE ISLAND	34,773	13,038	-21,735	0.5409	0.2269	-0.3139
SOUTH CAROLINA	25,466	41,083	+15,617	0.3961	0.7151	+0.3190
SOUTH DAKOTA	40,281	16,847	-23,434	0.6266	0.2939	-0.3326
TENNESSEE	147,977	174,513	+26,536	2.6133	3.1074	+0.4941
TEXAS	177,224	165,248	-11,976	2.7571	2.8763	+0.1192
UTAH	131,377	75,334	-56,043	2.0439	1.3114	-0.7324
VERMONT	14,364	24,118	+9,754	0.2234	0.4198	+0.1964
VIRGINIA	43,442	103,344	+59,902	0.6844	1.7998	+1.1154
WASHINGTON	134,641	23,704	-110,937	2.1576	0.4127	-1.7448
WEST VIRGINIA	12,612	25,021	+12,409	0.1962	0.4355	+0.2393
WISCONSIN	115,524	143,662	+28,138	1.7972	2.5007	+0.7035
WYOMING	12,033	7,362	-4,671	0.1872	0.1281	-0.0590
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	0	0	+0	0.0000	0.0000	+0.0000
MARIANAS GROUP	0	1,396	+1,396	0.0000	0.0242	+0.0242
PUERTO RICO	7,186	5,407	-1,779	0.1117	0.0941	-0.0175
PAC. TR. TERR.	0	751	+751	0.0000	0.0130	+0.0130
VIRGIN ISLANDS	0	0	+0	0.0000	0.0000	+0.0000
U.S. TOTALS	6,427,759	5,744,644	-683,115	100.0000	100.0000	+0.0000

DECEMBER 31, 1982
TABLE 28

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF YEAR 2000 NEEDS
FOR CORRECTION OF INFILTRATION/INFLOW CONDITIONS
THOUSANDS OF 1982 DOLLARS
CATEGORY III A

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE
ALABAMA	89,477	88,114	-1,363	3.1421	3.4454	+0.3033
ALASKA	28,112	2,218	-25,894	0.9872	0.0867	-0.9004
ARIZONA	934	1,050	+116	0.0327	0.0410	+0.0083
ARKANSAS	31,623	18,539	-13,084	1.1105	0.7249	-0.3855
CALIFORNIA	59,083	61,869	+2,786	2.0748	2.4192	+0.3444
COLORADO	11,822	5,919	-5,903	0.4151	0.2314	-0.1836
CONNECTICUT	13,302	23,580	+10,278	0.4671	0.9220	+0.4549
DELAWARE	4,083	941	-3,142	0.1433	0.0367	-0.1065
DIST. OF COLUM.	17,291	6,473	-10,818	0.6072	0.2531	-0.3540
FLORIDA	102,001	77,471	-24,530	3.5819	3.0292	-0.5525
GEORGIA	100,721	94,145	-6,576	3.5370	3.6812	+0.1442
HAWAII	17	0	-17	0.0005	0.0000	-0.0004
IDAH0	19,010	7,044	-11,966	0.6675	0.2754	-0.3920
ILLINOIS	207,428	178,019	-29,409	7.2842	6.9609	-0.3232
INDIANA	47,034	47,577	+543	1.6516	1.8603	+0.2087
IOWA	112,056	85,729	-26,327	3.9350	3.3522	-0.5827
KANSAS	63,428	50,717	-12,711	2.2274	1.9831	-0.2442
KENTUCKY	99,352	104,413	+5,061	3.4889	4.0827	+0.5939
LOUISIANA	59,365	76,993	+17,628	2.0847	3.0106	+0.9259
MAINE	14,653	17,973	+3,320	0.5145	0.7027	+0.1882
MARYLAND	12,500	13,649	+1,149	0.4389	0.5336	+0.0947
MASSACHUSETTS	14,356	20,528	+6,172	0.5041	0.8026	+0.2985
MICHIGAN	69,081	73,344	+4,263	2.4259	2.8679	+0.4420
MINNESOTA	42,289	28,488	-13,801	1.4850	1.1139	-0.3710
MISSISSIPPI	126,448	55,271	-71,177	4.4404	2.1612	-2.2791
MISSOURI	47,596	37,624	-9,972	1.6714	1.4711	-0.2002
MONTANA	1,784	1,459	-325	0.0626	0.0570	-0.0055
NEBRASKA	1,087	637	-450	0.0381	0.0248	-0.0131
NEVADA	2,698	2,560	-138	0.0947	0.1000	+0.0054
NEW HAMPSHIRE	9,595	9,533	-62	0.3369	0.3727	+0.0358
NEW JERSEY	121,494	226,954	+105,460	4.2665	8.8744	+4.6079
NEW MEXICO	0	0	0	0.0000	0.0000	+0.0000
NEW YORK	110,688	186,072	+75,384	3.8870	7.2758	+3.3888
NORTH CAROLINA	97,715	87,345	-10,370	3.4314	3.4153	-0.0159
NORTH DAKOTA	572	441	-131	0.0200	0.0172	-0.0027
OHIO	255,301	135,785	-119,516	8.9654	5.3095	-3.6558
OKLAHOMA	44,839	13,904	-30,935	1.5746	0.5436	-1.0309
OREGON	49,645	71,071	+21,426	1.7433	2.7790	+1.0357
PENNSYLVANIA	17,840	15,837	-2,013	0.6268	0.6192	-0.0075
RHODE ISLAND	2,754	2,771	+17	0.0967	0.1083	+0.0116
SOUTH CAROLINA	69,370	76,292	+6,922	2.4360	2.9831	+0.5471
SOUTH DAKOTA	4,947	2,606	-2,341	0.1737	0.1018	-0.0719
TENNESSEE	153,577	153,873	+296	5.3931	6.0168	+0.6237
TEXAS	194,888	181,791	-13,097	7.0194	7.1084	+0.0890
UTAH	36,556	11,450	-25,106	1.2837	0.4477	-0.8359
VERMONT	2,388	7,840	+5,452	0.0838	0.2947	+0.2109
VIRGINIA	18,334	18,194	-139	0.6438	0.7116	+0.0678
WASHINGTON	110,975	115,494	+4,519	3.8971	4.5317	+0.6346
WEST VIRGINIA	2,075	4,423	+2,348	0.0728	0.1729	+0.1001
WISCONSIN	112,543	32,048	-80,495	3.9521	1.2531	-2.6989
WYOMING	6,936	1,426	-5,510	0.2435	0.0557	-0.1877
AMERICAN SAMOA	0	0	0	0.0000	0.0000	+0.0000
GUAM	825	922	+97	0.0289	0.0360	+0.0071
MARIANAS GROUP	0	0	0	0.0000	0.0000	+0.0000
PUERTO RICO	19,969	18,613	-1,356	0.7012	0.7278	+0.0266
PAC. TR. TERR.	0	0	0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	158	148	-10	0.0055	0.0057	+0.0002
U.S. TOTALS	2,847,625	2,557,382	-290,243	100.0000	100.0000	+0.0000

DECEMBER 31, 1982
TABLE 29

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF YEAR 2000 NEEDS
FOR CORRECTION OF MAJOR REHABILITATION AND REPLACEMENT
THOUSANDS OF 1982 DOLLARS
CATEGORY III B

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE
ALABAMA	4,084	4,614	+530	0.0600	0.0983	+0.0383
ALASKA	109	109	+0	0.0016	0.0023	+0.0007
ARIZONA	364	39	-325	0.0053	0.0008	-0.0044
ARKANSAS	3,002	2,236	-766	0.0441	0.0476	+0.0035
CALIFORNIA	193,914	156,111	-37,803	2.8495	3.3269	+0.4774
COLORADO	174,566	1,262	-123,304	1.8304	0.0268	-1.8035
CONNECTICUT	16,324	16,634	+310	0.2398	0.3544	+0.1146
DELAWARE	1,549	2,328	+779	0.0227	0.0496	+0.0269
DIST. OF COLUM.	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	10	0	-10	0.0001	0.0000	+0.0000
GEORGIA	9,287	14,583	+5,296	0.1364	0.3107	+0.1743
HAWAII	0	17,213	+17,213	0.0000	0.3668	+0.3668
IDAH0	436	2,224	+1,788	0.0064	0.0473	+0.0409
ILLINOIS	11,205	55,345	+44,140	0.1646	1.1794	+1.0148
INDIANA	22,660	3,027	-19,633	0.3329	0.0645	-0.2683
IOWA	1,320	1,323	+3	0.0193	0.0281	+0.0088
KANSAS	22,532	21,670	-862	0.3311	0.4618	+0.1307
KENTUCKY	9,428	5,255	-4,173	0.1385	0.1119	-0.0265
LOUISIANA	12,905	15,692	+2,787	0.1896	0.3344	+0.1448
MAINE	7,565	6,351	-1,214	0.1111	0.1353	+0.0242
MARYLAND	1,846,323	130,750	-1,715,573	27.1314	2.7864	-24.3448
MASSACHUSETTS	123,172	18,384	-104,788	1.8099	0.3917	-1.4181
MICHIGAN	87,623	99,451	+11,828	1.2876	2.1194	+0.8318
MINNESOTA	32,614	17,081	-15,533	0.4792	0.3640	-0.1151
MISSISSIPPI	0	947	+947	0.0000	0.0201	+0.0201
MISSOURI	36,558	49,478	+12,920	0.5372	1.0544	+0.5172
MONTANA	598	124	-474	0.0087	0.0026	-0.0060
NEBRASKA	1,315	1,316	+1	0.0193	0.0280	+0.0087
NEVADA	3,138	3,892	+754	0.0461	0.0829	+0.0368
NEW HAMPSHIRE	5,804	4,773	-1,031	0.0852	0.1017	+0.0165
NEW JERSEY	1,903	2,277	+374	0.0279	0.0485	+0.0206
NEW MEXICO	312	89	-223	0.0045	0.0018	-0.0026
NEW YORK	3,829,310	3,759,523	-69,787	56.2711	80.1218	+23.8507
NORTH CAROLINA	0	314	+314	0.0000	0.0066	+0.0066
NORTH DAKOTA	0	88	+88	0.0000	0.0018	+0.0018
OHIO	13,258	21,394	+8,136	0.1948	0.4559	+0.2611
OKLAHOMA	28,485	9,928	-18,557	0.4185	0.2115	-0.2069
OREGON	57,362	17,604	-39,758	0.8429	0.3751	-0.4677
PENNSYLVANIA	409	545	+136	0.0133	0.0116	-0.0016
RHODE ISLAND	29,934	29,963	+29	0.4398	0.6385	+0.1987
SOUTH CAROLINA	674	0	-674	0.0091	0.0000	-0.0090
SOUTH DAKOTA	1,888	721	-1,167	0.0277	0.0153	-0.0123
TENNESSEE	417	3,776	+3,359	0.0061	0.0804	+0.0743
TEXAS	120,024	29,520	-90,509	1.7638	0.6291	-1.1346
UTAH	0	0	+0	0.0000	0.0000	+0.0000
VERMONT	6,874	3,239	-3,635	0.1002	0.0690	-0.0311
VIRGINIA	16,031	2,185	-13,846	0.2355	0.0465	-0.1889
WASHINGTON	85,281	62,963	-22,318	1.2531	1.3418	+0.0887
WEST VIRGINIA	3,251	2,719	-532	0.0477	0.0579	+0.0102
WISCONSIN	18,094	80,914	+62,820	0.2658	1.7244	+1.4586
WYOMING	0	0	+0	0.0000	0.0000	+0.0000
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	0	370	+370	0.0000	0.0078	+0.0078
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	12,782	11,914	-868	0.1874	0.2538	+0.0660
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	0	0	+0	0.0000	0.0000	+0.0000
U.S. TOTALS	6,805,099	4,692,254	-2,112,841	100.0000	100.0000	+0.0000

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF YEAR 2000 NEEDS
FOR CONSTRUCTION OF ELIGIBLE NEW COLLECTORS AND APPURTENANCES
THOUSANDS OF 1982 DOLLARS
CATEGORY IV A

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE
ALABAMA	329,143	355,026	+25,883	1.5646	1.7180	+0.1533
ALASKA	48,882	99,732	+49,850	0.2323	0.4777	+0.2453
ARIZONA	146,755	188,131	+41,376	0.6976	0.9103	+0.2127
ARKANSAS	144,178	126,006	-18,172	0.6853	0.6097	-0.0756
CALIFORNIA	1,467,620	1,447,318	-19,698	6.9767	7.1973	+0.2206
COLORADO	74,537	28,820	-44,283	0.1166	0.1394	+0.0228
CONNECTICUT	551,151	686,405	+135,254	2.6200	3.3216	+0.7015
DELAWARE	38,493	41,023	+2,530	0.1829	0.1985	+0.0155
DIST. OF COLUM.	0	0	0	0.0000	0.0000	+0.0000
FLORIDA	1,495,106	1,219,139	-275,967	7.1073	5.8995	-1.2077
GEORGIA	282,468	324,908	+42,440	1.3427	1.5722	+0.2294
HAWAII	297,525	283,971	-13,554	1.4143	1.3741	-0.0401
IDAH0	117,363	108,245	-9,118	0.5579	0.5238	-0.0340
ILLINOIS	204,936	209,952	+5,016	0.9742	1.0159	+0.0417
INDIANA	346,658	293,762	-52,896	1.6479	1.4215	-0.2263
IOWA	127,976	122,863	-5,113	0.6083	0.5945	-0.0138
KANSAS	123,342	127,947	+4,555	0.5865	0.6191	+0.0325
KENTUCKY	544,818	477,560	-107,258	2.7800	2.3109	-0.4691
LOUISIANA	358,190	390,952	+32,762	1.7027	1.8918	+0.1891
MAINE	275,017	226,817	-48,200	1.1172	1.0975	-0.0196
MARYLAND	258,533	266,432	+7,899	1.2289	1.2892	+0.0603
MASSACHUSETTS	972,045	885,715	-86,380	4.6211	4.2861	-0.3349
MICHIGAN	874,345	590,476	-243,869	3.9662	2.8573	-1.1088
MINNESOTA	176,063	157,553	-18,510	0.8369	0.7624	-0.0745
MISSISSIPPI	119,145	134,706	+15,521	0.5665	0.6518	+0.0852
MISSOURI	259,057	251,886	-7,171	1.2314	1.2189	-0.0125
MONTANA	15,212	36,332	+21,120	0.0723	0.1758	+0.1034
NEBRASKA	23,033	28,596	+5,563	0.1094	0.1383	+0.0288
NEVADA	45,497	46,329	+832	0.2162	0.2241	+0.0079
NEW HAMPSHIRE	316,875	311,569	-5,256	1.5061	1.5077	+0.0016
NEW JERSEY	853,783	577,646	-276,137	4.0586	2.7953	-1.2633
NEW MEXICO	41,713	47,063	+5,350	0.1982	0.2277	+0.0294
NEW YORK	2,676,985	2,670,153	-6,832	12.5356	12.9212	+0.3856
NORTH CAROLINA	472,962	509,878	+36,916	2.2483	2.4673	+0.2190
NORTH DAKOTA	2,626	2,829	+203	0.0124	0.0136	+0.0011
OHIO	815,019	806,986	-8,033	3.8744	3.9051	+0.0307
OKLAHOMA	158,462	116,725	-41,837	0.7537	0.5648	-0.1889
OREGON	304,846	363,303	+58,457	1.4729	1.7580	+0.2851
PENNSYLVANIA	1,477,223	1,611,156	+133,933	7.0223	7.7966	+0.7742
RHODE ISLAND	319,815	166,620	-153,195	1.5203	0.8062	-0.7140
SOUTH CAROLINA	285,272	357,668	+72,396	1.3561	1.7308	+0.3747
SOUTH DAKOTA	3,467	3,241	-226	0.0164	0.0156	-0.0008
TENNESSEE	466,052	500,216	+34,164	2.2154	2.4206	+0.2051
TEXAS	756,842	584,467	-168,385	3.5478	2.8476	-0.7002
UTAH	42,768	47,611	+4,843	0.2083	0.3271	+0.1188
VERMONT	80,441	70,627	-9,814	0.3826	0.3707	-0.0118
VIRGINIA	381,278	501,602	+120,364	1.8123	2.4273	+0.6150
WASHINGTON	569,165	685,900	+116,735	2.7056	3.3191	+0.6135
WEST VIRGINIA	580,271	747,391	+167,120	2.7584	3.6167	+0.8582
WISCONSIN	293,276	288,435	-4,841	1.3941	1.3957	+0.0016
WYOMING	1,015	2,992	+1,977	0.0044	0.0144	+0.0099
AMERICAN SAMOA	11,500	6,517	-4,983	0.0546	0.0315	-0.0231
GUAM	0	7,190	+7,190	0.0000	0.0347	+0.0347
MARIANAS GROUP	22,988	22,031	-957	0.1092	0.1066	-0.0026
PUERTO RICO	430,337	390,835	-39,502	2.0457	1.8913	-0.1544
PAC. TR. TERR.	41,223	24,805	-16,418	0.1959	0.1200	-0.0759
VIRGIN ISLANDS	17,442	13,714	-3,728	0.0829	0.0663	-0.0165
U.S. TOTALS	21,035,944	20,664,772	-371,172	100.0000	100.0000	+0.0000

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF YEAR 2000 NEEDS
FOR CONSTRUCTION OF NEW INTERCEPTORS AND APPURTENANCES
THOUSANDS OF 1982 DOLLARS
CATEGORY IV B

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE	1980 EPA ESTIMATE	1982 EPA ASSESSMENT	CHANGE
ALABAMA	254,168	260,447	+6,279	1.0452	1.4606	+0.4154
ALASKA	120,594	115,217	-5,377	0.4959	0.6461	+0.1502
ARIZONA	225,416	150,012	-75,404	0.9269	0.8413	-0.0855
ARKANSAS	131,381	104,408	-26,973	0.5402	0.5455	+0.0053
CALIFORNIA	2,238,982	745,658	-1,493,324	9.2073	4.1819	-5.0253
COLORADO	406,813	145,928	-260,885	1.6729	0.8184	-0.8544
CONNECTICUT	226,888	254,345	+27,457	0.9330	1.4264	+0.4934
DELAWARE	103,101	37,205	-65,896	0.4239	0.2086	-0.2152
DIST. OF COLUM.	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	1,959,791	1,334,415	-625,376	8.0592	7.4839	-0.5752
GEORGIA	501,302	373,687	-127,615	2.0615	2.0957	+0.0342
HAWAII	339,739	106,837	-232,902	1.3971	0.5991	-0.7979
IDaho	106,075	62,600	-43,475	0.4362	0.3510	-0.0851
ILLINOIS	340,193	366,402	+13,791	1.5634	2.0549	+0.4915
INDIANA	238,139	174,842	-63,297	0.9793	0.9805	+0.0012
IOWA	264,924	222,098	-42,826	1.0894	1.2456	+0.1562
KANSAS	350,080	308,728	-41,352	1.4396	1.7314	+0.2918
KENTUCKY	567,648	524,396	-43,252	2.3343	2.9410	+0.6067
LOUISIANA	378,310	367,080	-11,230	1.5557	2.0587	+0.5030
MAINE	181,367	133,591	-47,776	0.7458	0.7492	+0.0034
MARYLAND	423,919	282,920	-140,999	1.7432	1.5867	-0.1564
MASSACHUSETTS	723,220	740,746	+17,526	2.9741	4.1544	+1.1803
MICHIGAN	778,706	692,299	-86,407	3.2022	3.8827	+0.6805
MINNESOTA	446,414	253,177	-193,237	1.8357	1.4199	-0.4157
MISSISSIPPI	264,304	186,516	-77,788	1.0868	1.0460	-0.0407
MISSOURI	766,213	609,188	-157,025	3.1509	3.4165	+0.2656
MONTANA	41,444	36,510	-4,934	0.1705	0.2047	+0.0342
NEBRASKA	75,165	46,433	-28,732	0.3091	0.3725	+0.0634
NEVADA	39,605	29,213	-10,392	0.1628	0.1638	+0.0010
NEW HAMPSHIRE	350,376	315,164	-35,212	1.4408	1.7675	+0.3267
NEW JERSEY	972,294	852,199	-120,095	3.9983	4.7794	+0.7811
NEW MEXICO	49,228	52,602	+3,374	0.2024	0.2950	+0.0926
NEW YORK	1,885,480	1,051,246	-734,234	7.4246	5.8958	-1.5287
NORTH CAROLINA	596,538	564,780	-31,758	2.4531	3.1675	+0.7144
NORTH DAKOTA	16,150	10,736	-5,414	0.0664	0.0602	-0.0061
OHIO	945,734	781,669	-164,065	3.8891	4.3839	+0.4948
OKLAHOMA	156,754	117,542	-39,212	0.6446	0.6592	+0.0146
OREGON	364,154	206,026	-158,128	1.4975	1.1554	-0.3420
PENNSYLVANIA	646,576	491,367	-155,209	2.7411	2.7557	+0.0146
RHODE ISLAND	129,026	88,722	-40,304	0.5305	0.4975	-0.0329
SOUTH CAROLINA	338,471	354,395	+15,924	1.3918	1.9875	+0.5957
SOUTH DAKOTA	29,771	30,094	+323	0.1224	0.1687	+0.0463
TENNESSEE	516,588	520,378	+3,790	2.1243	2.9184	+0.7942
TEXAS	2,094,919	1,254,867	-840,052	8.6149	7.0378	-1.5770
UTAH	49,832	61,627	+11,795	0.2871	0.3456	+0.0585
VERMONT	45,771	31,298	-14,473	0.1862	0.1755	-0.0106
VIRGINIA	535,958	345,457	-190,501	2.2040	1.9397	-0.2642
WASHINGTON	796,527	724,197	-72,330	3.2755	4.0616	+0.7861
WEST VIRGINIA	195,954	237,770	+41,816	0.8058	1.3335	+0.5277
WISCONSIN	582,569	620,591	+38,022	2.3957	3.4805	+1.0848
WYOMING	40,194	23,366	-16,828	0.1653	0.1310	-0.0342
AMERICAN SAMOA	29,038	26,072	-2,966	0.1194	0.1462	+0.0268
GUAM	5,269	7,314	+2,045	0.0216	0.0410	+0.0194
MARIANAS GROUP	29,124	24,479	-4,645	0.1197	0.1372	+0.0175
PUERTO RICO	383,346	316,846	-66,500	1.5764	1.7770	+0.2006
PAC. TR. TERR.	22,682	20,931	-1,751	0.0932	0.1173	+0.0241
VIRGIN ISLANDS	14,957	13,238	-1,719	0.0615	0.0742	+0.0127
U.S. TOTALS	24,317,236	17,830,271	-6,486,965	100.0000	100.0000	+0.0000

DECEMBER 31, 1982
TABLE 32

1982 NEEDS SURVEY

COMPARISON OF 1982 AND 1980 EPA ASSESSMENTS OF YEAR 2000 NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED TREATMENT FACILITIES
BASED ON 2000 POPULATION
* THOUSANDS OF 1982 DOLLARS
POPULATIONS IN THOUSANDS
CATEGORIES I THRU IV

	1980 EPA * ESTIMATE	1982 EPA * ASSESSMENT	2000 POP.	1980 COSTS ** PER CAPITA	1982 COSTS ** PER CAPITA	CHANGE IN PER ** CAPITA COSTS
ALABAMA	1,029,982	1,176,325	4,140	248	284	+36
ALASKA	560,280	396,286	694	807	571	-236
ARIZONA	691,674	623,055	4,357	158	143	-15
ARKANSAS	565,452	557,139	2,970	190	187	-3
CALIFORNIA	7,126,075	5,029,973	26,786	266	187	-79
COLORADO	1,056,188	509,435	4,371	241	116	-125
CONNECTICUT	1,228,871	1,404,510	3,902	314	359	+45
DELAWARE	303,370	144,249	841	360	171	-189
DIST. OF COLUM.	26,466	15,509	694	38	22	-16
FLORIDA	5,587,410	4,582,047	15,049	371	304	-67
GEORGIA	1,544,271	1,538,000	7,053	218	218	+0
HAWAII	932,708	589,561	1,366	682	431	-251
IDAH0	480,644	351,935	1,183	406	297	-109
ILLINOIS	2,618,881	2,373,667	12,358	211	192	-19
INDIANA	1,254,873	983,128	6,059	207	162	-45
IOWA	1,099,359	1,017,140	3,101	354	328	-26
KANSAS	949,403	763,936	2,642	359	289	-70
KENTUCKY	1,866,447	1,621,521	4,224	441	383	-58
LOUISIANA	1,310,665	1,409,505	4,880	268	288	+20
MAINE	650,242	585,094	1,222	532	478	-54
MARYLAND	3,363,939	1,152,280	5,583	602	206	-396
MASSACHUSETTS	3,006,013	3,163,587	6,736	446	469	+23
MICHIGAN	3,525,327	3,081,359	10,314	341	298	-43
MINNESOTA	1,405,233	1,160,341	4,505	311	257	-54
MISSISSIPPI	962,302	804,009	2,740	351	293	-58
MISSOURI	2,210,589	2,034,731	5,379	410	378	-32
MONTANA	126,663	121,237	938	135	129	-6
NEBRASKA	315,863	293,542	1,734	182	169	-13
NEVADA	275,970	220,216	1,408	196	156	-40
NEW HAMPSHIRE	945,790	966,026	1,306	762	739	-23
NEW JERSEY	4,164,482	4,200,363	9,022	461	465	+4
NEW MEXICO	221,479	250,593	1,781	124	140	+16
NEW YORK	12,364,059	11,674,194	19,683	628	593	-35
NORTH CAROLINA	1,978,049	1,775,284	7,419	266	239	-27
NORTH DAKOTA	62,289	45,027	690	90	65	-25
OHIO	3,804,629	3,433,201	12,237	310	280	-30
OKLAHOMA	711,371	514,867	3,702	192	139	-53
OREGON	1,116,082	885,869	3,204	347	276	-71
PENNSYLVANIA	3,860,607	3,744,310	12,854	300	291	-9
RHODE ISLAND	696,068	495,183	1,084	642	456	-186
SOUTH CAROLINA	993,190	1,027,403	3,700	268	277	+9
SOUTH DAKOTA	211,226	160,034	730	289	219	-70
TENNESSEE	1,858,771	1,801,163	5,573	333	323	-10
TEXAS	4,942,117	3,971,990	21,000	237	189	-48
UTAH	451,455	562,247	1,963	229	286	+57
VERMONT	259,014	238,758	607	426	393	-33
VIRGINIA	1,741,914	1,628,955	6,755	257	241	-16
WASHINGTON	2,597,165	2,488,924	4,859	534	512	-22
WEST VIRGINIA	1,207,736	1,449,124	2,101	574	689	+115
WISCONSIN	2,146,880	2,061,234	5,553	386	371	-15
WYOMING	154,006	126,867	484	318	262	-56
AMERICAN SAMOA	66,386	55,337	40	1,659	1,383	-276
GUAM	27,870	38,754	275	101	140	+39
MARIANAS GROUP	71,074	63,502	33	2,153	1,924	-229
PUERTO RICO	1,318,533	1,113,541	4,700	280	236	-44
PAC. TR. TERR.	125,320	106,114	183	684	579	-105
VIRGIN ISLANDS	53,970	42,101	116	465	362	-103
U.S. TOTALS	94,316,692	82,624,322	278,888	338	296	-42

** IN DOLLARS PER PERSON

1982 NEEDS SURVEY

COMPARISON OF 1982 EPA DOLLAR ASSESSMENTS WITH STATE DOLLAR ASSESSMENTS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1982 DOLLARS
CATEGORIES I THROUGH V

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1982 STATE ESTIMATE	1982 EPA ASSESSMENT	DIFFERENCE	1982 STATE ESTIMATE	1982 EPA ASSESSMENT	DIFFERENCE
ALABAMA	1,176,325	1,176,325	+0	0.9925	0.9938	+0.0012
ALASKA	414,674	414,674	+0	0.3498	0.3503	+0.0004
ARIZONA	623,055	623,055	+0	0.5257	0.5263	+0.0006
ARKANSAS	557,139	557,139	+0	0.4701	0.4707	+0.0005
CALIFORNIA	5,774,478	5,595,930	-138,548	4.8387	4.7277	-0.1109
COLORADO	550,982	550,982	+0	0.4649	0.4654	+0.0005
CONNECTICUT	2,179,782	2,179,782	+0	1.8392	1.8415	+0.0023
DELAWARE	436,359	436,359	+0	0.3681	0.3686	+0.0004
DIST. OF COLUM.	83,628	83,628	+0	0.0705	0.0706	+0.0000
FLORIDA	4,590,573	4,590,573	+0	3.8734	3.8783	+0.0048
GEORGIA	1,952,737	1,952,737	+0	1.6477	1.6497	+0.0020
HAWAII	589,561	589,561	+0	0.4974	0.4980	+0.0006
IDAHO	468,315	468,315	+0	0.3951	0.3956	+0.0004
ILLINOIS	4,469,689	4,469,689	+0	3.7714	3.7762	+0.0047
INDIANA	3,950,367	3,950,367	+0	3.3332	3.3374	+0.0041
IOWA	1,443,732	1,443,732	+0	1.2182	1.2197	+0.0015
KANSAS	1,156,997	1,156,997	+0	0.9762	0.9774	+0.0012
KENTUCKY	3,072,413	3,072,413	+0	2.5924	2.5957	+0.0032
LOUISIANA	1,409,505	1,409,505	+0	1.1893	1.1908	+0.0014
MAINE	1,414,656	1,414,656	+0	1.1936	1.1951	+0.0015
MARYLAND	1,227,421	1,227,421	+0	1.0356	1.0369	+0.0013
MASSACHUSETTS	5,153,961	5,153,961	+0	4.3488	4.3543	+0.0054
MICHIGAN	5,238,816	5,238,816	+0	4.4204	4.4260	+0.0055
MINNESOTA	1,481,062	1,481,062	+0	1.2497	1.2512	+0.0015
MISSISSIPPI	804,009	804,009	+0	0.6784	0.6792	+0.0008
MISSOURI	3,082,167	3,082,167	+0	2.6007	2.6039	+0.0032
MONTANA	285,256	285,256	+0	0.2406	0.2409	+0.0003
NEBRASKA	366,325	366,325	+0	0.3091	0.3094	+0.0003
NEVADA	220,216	220,216	+0	0.1858	0.1860	+0.0002
NEW HAMPSHIRE	1,409,814	1,409,814	+0	1.1895	1.1910	+0.0014
NEW JERSEY	6,215,857	6,215,857	+0	5.2448	5.2514	+0.0065
NEW MEXICO	250,543	250,543	+0	0.2114	0.2117	+0.0002
NEW YORK	17,294,579	17,294,579	+0	14.5930	14.6113	+0.0183
NORTH CAROLINA	1,778,227	1,778,227	+0	1.5004	1.5023	+0.0018
NORTH DAKOTA	58,358	58,358	+0	0.0492	0.0493	+0.0000
OHIO	7,311,932	7,311,932	+0	6.1697	6.1775	+0.0077
OKLAHOMA	514,867	514,867	+0	0.4344	0.4349	+0.0005
OREGON	1,559,891	1,559,891	+0	1.3162	1.3178	+0.0016
PENNSYLVANIA	6,390,423	6,390,423	+0	5.7921	5.3989	+0.0067
RHODE ISLAND	672,795	672,795	+0	0.5676	0.5684	+0.0007
SOUTH CAROLINA	1,027,403	1,027,403	+0	0.8669	0.8680	+0.0010
SOUTH DAKOTA	203,931	203,931	+0	0.1720	0.1722	+0.0002
TENNESSEE	2,148,003	2,148,003	+0	1.8124	1.8147	+0.0022
TEXAS	4,003,724	3,993,419	-10,305	3.3783	3.3738	-0.0044
UTAH	564,884	564,884	+0	0.4766	0.4772	+0.0005
VERMONT	500,252	500,252	+0	0.4221	0.4226	+0.0005
VIRGINIA	1,907,595	1,907,595	+0	1.6096	1.6116	+0.0020
WASHINGTON	3,781,359	3,781,359	+0	3.1906	3.1946	+0.0040
WEST VIRGINIA	2,616,679	2,616,679	+0	2.2079	2.2107	+0.0027
WISCONSIN	2,430,884	2,430,884	+0	2.0511	2.0537	+0.0025
WYOMING	145,554	145,554	+0	0.1228	0.1229	+0.0001
AMERICAN SAMOA	55,337	55,337	+0	0.0466	0.0467	+0.0000
GUAM	38,754	38,754	+0	0.0327	0.0327	+0.0000
MARIANAS GROUP	43,502	63,502	+0	0.0535	0.0536	+0.0000
PUEERTO RICO	1,285,098	1,285,098	+0	1.0843	1.0857	+0.0013
PAC. TR. TERR.	106,114	106,114	+0	0.0895	0.0896	+0.0001
VIRGIN ISLANDS	42,101	42,101	+0	0.0355	0.0355	+0.0000
U.S. TOTALS	118,512,710	118,363,457	-148,853	100.0000	100.0000	+0.0000

DECEMBER 31, 1982
TABLE 34

1982 NFEDS SURVEY
COMPARISON OF 1982 EPA AND STATE ESTIMATES
FOR CONSTRUCTION OF TREATMENT PLANTS
THOUSANDS OF 1982 DOLLARS
CATS I, IIA, AND IIB

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1982 STATE ESTIMATE	1982 EPA ASSESSMENT	DIFFERENCE	1982 STATE ESTIMATE	1982 EPA ASSESSMENT	DIFFERENCE
ALABAMA	468,124	468,124	+0	1.2690	1.2693	+0.0003
ALASKA	140,010	140,010	+0	0.4880	0.4881	+0.0001
ARIZONA	243,823	243,823	+0	0.7694	0.7695	+0.0001
ARKANSAS	305,950	305,950	+0	0.8294	0.8295	+0.0001
CALIFORNIA	2,579,017	2,579,017	+0	6.9917	6.9930	+0.0013
COLORADO	327,506	327,506	+0	0.8878	0.8880	+0.0002
CONNECTICUT	423,546	423,546	+0	1.1482	1.1484	+0.0002
DELAWARE	62,752	62,752	+0	0.1701	0.1701	+0.0000
DIST. OF COLUM.	9,036	9,036	+0	0.0244	0.0245	+0.0001
FLORIDA	1,951,022	1,951,022	+0	5.7892	5.2902	+0.0010
GEORGIA	730,677	730,677	+0	1.9808	1.9812	+0.0004
HAWAII	181,540	181,540	+0	0.4921	0.4922	+0.0001
IDAH0	171,822	171,822	+0	0.4658	0.4658	+0.0000
ILLINOIS	1,563,949	1,563,949	+0	4.2398	4.2406	+0.0008
INDIANA	463,920	463,920	+0	1.2576	1.2579	+0.0003
IOWA	585,127	585,127	+0	1.5862	1.5865	+0.0003
KANSAS	254,874	254,874	+0	0.6909	0.6910	+0.0001
KENTUCKY	509,897	509,897	+0	1.3823	1.3825	+0.0002
LOUISIANA	558,788	558,788	+0	1.5148	1.5151	+0.0003
MAINE	200,362	200,362	+0	0.5431	0.5432	+0.0001
MARYLAND	458,529	458,529	+0	1.2430	1.2433	+0.0003
MASSACHUSETTS	1,498,214	1,498,214	+0	4.0616	4.0624	+0.0008
MICHIGAN	1,625,789	1,625,789	+0	4.4075	4.4083	+0.0008
MINNESOTA	704,042	704,042	+0	1.9086	1.9090	+0.0004
MISSISSIPPI	426,569	426,569	+0	1.1564	1.1566	+0.0002
MISSOURI	1,086,555	1,086,555	+0	2.9456	2.9462	+0.0006
MONTANA	46,812	46,812	+0	0.1269	0.1269	+0.0000
NEBRASKA	196,560	196,560	+0	0.5328	0.5329	+0.0001
NEVADA	138,222	138,222	+0	0.3747	0.3747	+0.0000
NEW HAMPSHIRE	324,987	324,987	+0	0.8810	0.8812	+0.0002
NEW JERSEY	2,541,287	2,541,287	+0	6.8894	6.8907	+0.0013
NEW MEXICO	150,839	150,839	+0	0.4089	0.4090	+0.0001
NEW YORK	4,007,200	4,007,200	+0	10.8635	10.8656	+0.0021
NORTH CAROLINA	612,967	612,967	+0	1.6617	1.6620	+0.0003
NORTH DAKOTA	30,933	30,933	+0	0.0838	0.0838	+0.0000
OHIO	1,687,367	1,687,367	+0	4.5744	4.5753	+0.0009
OKLAHOMA	256,768	256,768	+0	0.6961	0.6962	+0.0001
OREGON	227,865	227,865	+0	0.6177	0.6178	+0.0001
PENNSYLVANIA	1,625,405	1,625,405	+0	4.4064	4.4073	+0.0009
RHODE ISLAND	207,107	207,107	+0	0.5614	0.5615	+0.0001
SOUTH CAROLINA	239,048	239,048	+0	0.6480	0.6481	+0.0001
SOUTH DAKOTA	123,372	123,372	+0	0.3344	0.3345	+0.0001
TENNESSEE	622,920	622,920	+0	1.6887	1.6890	+0.0003
TEXAS	1,924,327	1,917,345	-6,982	5.2168	5.1989	-0.0178
UTAH	421,599	421,599	+0	1.1429	1.1431	+0.0002
VERMONT	119,954	119,954	+0	0.3251	0.3252	+0.0001
VIRGINIA	761,112	761,112	+0	2.0633	2.0637	+0.0004
WASHINGTON	899,470	899,470	+0	2.4398	2.4402	+0.0004
WEST VIRGINIA	456,821	456,821	+0	1.2384	1.2386	+0.0002
WISCONSIN	1,039,246	1,039,246	+0	2.8174	2.8179	+0.0005
WYOMING	99,083	99,083	+0	0.2686	0.2686	+0.0000
AMERICAN SAMOA	22,748	22,748	+0	0.0616	0.0616	+0.0000
GUAM	22,958	22,958	+0	0.0622	0.0622	+0.0000
MARIANAS GROUP	16,992	16,992	+0	0.0460	0.0460	+0.0000
PUERTO RICO	375,333	375,333	+0	1.0175	1.0177	+0.0002
PAC. TR. TERR.	60,378	60,378	+0	0.1636	0.1637	+0.0001
VIRGIN ISLANDS	15,001	15,001	+0	0.0406	0.0406	+0.0000
U.S. TOTALS	36,886,621	36,879,639	-6,982	100.0000	100.0000	+0.0000

DECEMBER 31, 1982
TABLE 35

1982 NEEDS SURVEY

COMPARISON OF 1982 EPA AND STATE ESTIMATES
FOR CORRECTION OF INFILTRATION/INFLOW CONDITIONS
THOUSANDS OF 1982 DOLLARS
CATEGORY III A

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1982 STATE ESTIMATE	1982 EPA ASSESSMENT	DIFFERENCE	1982 STATE ESTIMATE	1982 EPA ASSESSMENT	DIFFERENCE
ALABAMA	88,114	88,114	+0	3.2684	3.4454	+0.1770
ALASKA	2,218	2,218	+0	0.0822	0.0867	+0.0045
ARIZONA	1,050	1,050	+0	0.0389	0.0410	+0.0021
ARKANSAS	18,539	18,539	+0	0.6876	0.7249	+0.0373
CALIFORNIA	200,417	61,869	-138,548	7.4340	2.4192	-5.0147
COLORADO	5,919	5,919	+0	0.2195	0.2314	+0.0119
CONNECTICUT	23,580	23,580	+0	0.8746	0.9220	+0.0474
DELAWARE	941	941	+0	0.0349	0.0367	+0.0018
DIST. OF COLUM.	6,473	6,473	+0	0.2401	0.2531	+0.0130
FLORIDA	77,471	77,471	+0	2.8736	3.0292	+0.1556
GEORGIA	94,145	94,145	+0	3.4921	3.6812	+0.1891
HAWAII	0	0	+0	0.0000	0.0000	+0.0000
IDaho	7,044	7,044	+0	0.2612	0.2754	+0.0142
ILLINOIS	178,019	178,019	+0	6.6032	6.9609	+0.3577
INDIANA	47,577	47,577	+0	1.7647	1.8603	+0.0956
IOWA	85,729	85,729	+0	3.1799	3.3522	+0.1723
KANSAS	50,717	50,717	+0	1.8812	1.9831	+0.1019
KENTUCKY	104,413	104,413	+0	3.8729	4.0827	+0.2099
LOUISIANA	76,993	76,993	+0	2.8558	3.1106	+0.2548
MAINE	17,973	17,973	+0	0.6666	0.7027	+0.0361
MARYLAND	13,649	13,649	+0	0.5062	0.5336	+0.0274
MASSACHUSETTS	20,528	20,528	+0	0.7614	0.8026	+0.0412
MICHIGAN	73,344	73,344	+0	2.7205	2.8679	+0.1474
MINNESOTA	28,488	28,488	+0	1.0567	1.1139	+0.0572
MISSISSIPPI	55,271	55,271	+0	2.0501	2.1612	+0.1111
MISSOURI	37,624	37,624	+0	1.3955	1.4711	+0.0756
MONTANA	1,459	1,459	+0	0.0541	0.0570	+0.0029
NEBRASKA	637	637	+0	0.0236	0.0248	+0.0012
NEVADA	2,560	2,560	+0	0.0949	0.1000	+0.0051
NEW HAMPSHIRE	9,533	9,533	+0	0.3536	0.3727	+0.0191
NEW JERSEY	226,954	226,954	+0	8.4183	8.8744	+0.4561
NEW MEXICO	0	0	+0	0.0000	0.0000	+0.0000
NEW YORK	186,072	186,072	+0	6.9019	7.2758	+0.3739
NORTH CAROLINA	87,345	87,345	+0	3.2398	3.4153	+0.1756
NORTH DAKOTA	441	441	+0	0.0163	0.0172	+0.0009
OHIO	135,785	135,785	+0	5.0366	5.3095	+0.2729
OKLAHOMA	13,904	13,904	+0	0.5157	0.5436	+0.0279
OREGON	71,071	71,071	+0	2.6362	2.7790	+0.1428
PENNSYLVANIA	15,837	15,837	+0	0.5874	0.6192	+0.0318
RHODE ISLAND	2,771	2,771	+0	0.1027	0.1083	+0.0056
SOUTH CAROLINA	76,292	76,292	+0	2.8298	2.9831	+0.1533
SOUTH DAKOTA	2,606	2,606	+0	0.0966	0.1018	+0.0052
TENNESSEE	153,873	153,873	+0	5.7076	6.0168	+0.3092
TEXAS	181,791	181,791	+0	6.7431	7.1084	+0.3653
UTAH	11,450	11,450	+0	0.4247	0.4477	+0.0230
VERMONT	7,640	7,640	+0	0.2833	0.2987	+0.0154
VIRGINIA	18,199	18,199	+0	0.6750	0.7116	+0.0366
WASHINGTON	115,894	115,894	+0	4.2488	4.5317	+0.2829
WEST VIRGINIA	4,423	4,423	+0	0.1640	0.1729	+0.0089
WISCONSIN	32,048	32,048	+0	1.1887	1.2531	+0.0644
WYOMING	1,426	1,426	+0	0.0528	0.0557	+0.0029
AMERICAN SAMOA	0	0	+0	0.0000	0.0000	+0.0000
GUAM	922	922	+0	0.0341	0.0360	+0.0019
MARIANAS GROUP	0	0	+0	0.0000	0.0000	+0.0000
PUERTO RICO	18,613	18,613	+0	0.6904	0.7278	+0.0374
PAC. TR. TERR.	0	0	+0	0.0000	0.0000	+0.0000
VIRGIN ISLANDS	148	148	+0	0.0054	0.0057	+0.0003
U.S. TOTALS	2,695,930	2,557,382	-138,548	100.0000	100.0000	+0.0000

1982 NEEDS SURVEY
COMPARISON OF 1982 EPA AND STATE ESTIMATES
FOR CONSTRUCTION OF NEW INTERCEPTORS AND APPURTENANCES
THOUSANDS OF 1982 DOLLARS
CATEGORY IV B

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1982 STATE ESTIMATE	1982 EPA ASSESSMENT	DIFFERENCE	1982 STATE ESTIMATE	1982 EPA ASSESSMENT	DIFFERENCE
ALABAMA	260,447	260,447	+0	1.4604	1.4606	+0.0002
ALASKA	115,217	115,217	+0	0.6460	0.6461	+0.0001
ARIZONA	150,012	150,012	+0	0.8411	0.8413	+0.0002
ARKANSAS	104,408	104,408	+0	0.5854	0.5855	+0.0001
CALIFORNIA	745,658	745,658	+0	4.1811	4.1819	+0.0008
COLORADO	145,928	145,928	+0	0.8182	0.8184	+0.0002
CONNECTICUT	254,345	254,345	+0	1.4262	1.4264	+0.0002
DELAWARE	37,205	37,205	+0	0.2086	0.2086	+0.0000
DIST. OF COLUM.	0	0	+0	0.0000	0.0000	+0.0000
FLORIDA	1,334,415	1,334,415	+0	7.4825	7.4839	+0.0014
GEORGIA	373,687	373,687	+0	2.0954	2.0957	+0.0003
HAWAII	106,837	106,837	+0	0.5990	0.5991	+0.0001
IDaho	62,600	62,600	+0	0.3510	0.3510	+0.0000
ILLINOIS	366,402	366,402	+0	2.0545	2.0549	+0.0004
INDIANA	174,842	174,842	+0	0.9804	0.9805	+0.0001
IOWA	222,098	222,098	+0	1.2453	1.2456	+0.0003
KANSAS	308,728	308,728	+0	1.7311	1.7314	+0.0003
KENTUCKY	524,396	524,396	+0	2.9404	2.9410	+0.0006
LOUISIANA	367,080	367,080	+0	2.0583	2.0587	+0.0004
MAINE	133,591	133,591	+0	0.7490	0.7492	+0.0002
MARYLAND	282,920	282,920	+0	1.5864	1.5867	+0.0003
MASSACHUSETTS	740,746	740,746	+0	4.1536	4.1544	+0.0008
MICHIGAN	692,299	692,299	+0	3.8819	3.8827	+0.0008
MINNESOTA	253,177	253,177	+0	1.4196	1.4199	+0.0003
MISSISSIPPI	186,516	186,516	+0	1.0458	1.0460	+0.0002
MISSOURI	609,188	609,188	+0	3.4159	3.4165	+0.0006
MONTANA	36,510	36,510	+0	0.2047	0.2047	+0.0000
NEBRASKA	66,433	66,433	+0	0.3725	0.3725	+0.0000
NEVADA	29,213	29,213	+0	0.1638	0.1638	+0.0000
NEW HAMPSHIRE	315,164	315,164	+0	1.7472	1.7475	+0.0003
NEW JERSEY	852,199	852,199	+0	4.7786	4.7794	+0.0008
NEW MEXICO	52,602	52,602	+0	0.2949	0.2950	+0.0001
NEW YORK	1,051,246	1,051,246	+0	5.8947	5.8958	+0.0011
NORTH CAROLINA	564,780	564,780	+0	3.1669	3.1675	+0.0006
NORTH DAKOTA	10,736	10,736	+0	0.0602	0.0602	+0.0000
OHIO	781,669	781,669	+0	4.3431	4.3439	+0.0008
OKLAHOMA	117,542	117,542	+0	0.6591	0.6592	+0.0001
OREGON	206,026	206,026	+0	1.1552	1.1554	+0.0002
PENNSYLVANIA	491,367	491,367	+0	2.7552	2.7557	+0.0005
RHODE ISLAND	88,722	88,722	+0	0.4974	0.4975	+0.0001
SOUTH CAROLINA	354,395	354,395	+0	1.9872	1.9875	+0.0003
SOUTH DAKOTA	30,094	30,094	+0	0.1687	0.1687	+0.0000
TENNESSEE	520,378	520,378	+0	2.9179	2.9184	+0.0005
TEXAS	1,258,140	1,254,867	-3,323	7.0551	7.0378	-0.0172
UTAH	61,627	61,627	+0	0.3455	0.3456	+0.0001
VERMONT	31,298	31,298	+0	0.1755	0.1755	+0.0000
VIRGINIA	345,857	345,857	+0	1.9393	1.9397	+0.0004
WASHINGTON	724,147	724,147	+0	4.0608	4.0616	+0.0008
WEST VIRGINIA	237,770	237,770	+0	1.3332	1.3335	+0.0003
WISCONSIN	620,591	620,591	+0	3.4798	3.4805	+0.0007
WYOMING	23,366	23,366	+0	0.1310	0.1310	+0.0000
AMERICAN SAMOA	26,072	26,072	+0	0.1461	0.1462	+0.0001
GUAM	7,314	7,314	+0	0.0410	0.0410	+0.0000
MARIANAS GROUP	24,479	24,479	+0	0.1372	0.1372	+0.0000
PUERTO RICO	316,846	316,846	+0	1.7766	1.7770	+0.0004
PAC. TR. TERR.	20,931	20,931	+0	0.1173	0.1173	+0.0000
VIRGIN ISLANDS	13,238	13,238	+0	0.0742	0.0742	+0.0000
U.S. TOTALS	17,833,594	17,830,271	-3,323	100.0000	100.0000	+0.0000

DECEMBER 31, 1982
TABLE 37

1982 NEEDS SURVEY

COMPARISON OF YEAR 2000 NEEDS AND 1982 BACKLOG NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1982 DOLLARS
CATEGORIES I THRU IV

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1982 BACKLOG	2000 EPA ASSESSMENT	DIFFERENCE	1982 BACKLOG	2000 EPA ASSESSMENT	DIFFERENCE
ALABAMA	800.647	1,176,325	+375,678	1.4081	1.4237	+0.0155
ALASKA	230.873	396,286	+165,413	0.4060	0.4796	+0.0735
ARIZONA	277.270	623,055	+345,785	0.4876	0.7540	+0.2664
ARKANSAS	288.310	557,139	+268,829	0.5070	0.6743	+0.1672
CALIFORNIA	2,638.685	5,029,973	+2,391,288	4.6409	6.0877	+1.4468
COLORADO	151.755	509,435	+357,680	0.2669	0.6165	+0.3496
CONNECTICUT	1,157.181	1,404,510	+247,329	2.0352	1.6998	-0.3353
DELAWARE	79.974	144,249	+64,275	0.1406	0.1745	+0.0339
DIST. OF COLUM.	15.509	15,509	+0	0.0272	0.0187	-0.0085
FLORIDA	2,268.938	4,582,047	+2,313,109	3.9906	5.5456	+1.5549
GEORGIA	854.674	1,538,000	+683,326	1.5032	1.8614	+0.3582
HAWAII	333.987	589,561	+255,574	0.5874	0.7135	+0.1261
IDAH0	207.247	351,935	+144,688	0.3645	0.4259	+0.0614
ILLINOIS	1,435.815	2,373,667	+937,852	2.5253	2.8728	+0.3475
INDIANA	737.378	983,128	+245,750	1.2969	1.1898	-0.1070
IOWA	726.947	1,017,140	+290,193	1.2785	1.2310	-0.0475
KANSAS	462.074	763,936	+301,862	0.8127	0.9245	+0.1118
KENTUCKY	1,048.918	1,621,521	+572,603	1.8448	1.9625	+0.1176
LOUISIANA	791.071	1,409,505	+618,474	1.3912	1.7059	+0.3146
MAINE	490.936	585,094	+94,158	0.8634	0.7081	-0.1553
MARYLAND	755.401	1,152,280	+396,879	1.3286	1.3946	+0.0659
MASSACHUSETTS	2,757.337	3,163,587	+406,250	4.8496	3.8288	-1.0207
MICHIGAN	2,365.964	3,081,359	+715,395	4.1612	3.7293	-0.4319
MINNESOTA	784.948	1,160,341	+375,393	1.3805	1.4043	+0.0237
MISSISSIPPI	509.129	804,009	+294,880	0.8954	0.9730	+0.0776
MISSOURI	1,268.912	2,034,731	+765,819	2.2317	2.4626	+0.2308
MONTANA	71.244	121,237	+49,993	0.1253	0.1467	+0.0214
NEBRASKA	159.461	293,542	+134,081	0.2804	0.3552	+0.0748
NEVADA	109.469	220,216	+110,747	0.1925	0.2665	+0.0739
NEW HAMPSHIRE	715.545	966,026	+250,471	1.2585	1.1691	-0.0893
NEW JERSEY	3,410.822	4,200,363	+789,541	5.9990	5.0836	-0.9153
NEW MEXICO	121.219	250,593	+129,374	0.2132	0.3032	+0.0900
NEW YORK	10,508.152	11,674,194	+1,166,042	18.4818	14.1292	-4.3526
NORTH CAROLINA	1,067.142	1,775,284	+708,122	1.8769	2.1486	+0.2716
NORTH DAKOTA	19.261	45,027	+25,766	0.0338	0.0544	+0.0206
OHIO	2,446.629	3,433,201	+986,572	4.3031	4.1551	-0.1479
OKLAHOMA	275.988	514,867	+238,879	0.4854	0.6231	+0.1377
OREGON	600.329	845,869	+245,540	1.0558	1.0721	+0.0162
PENNSYLVANIA	2,707.936	3,744,310	+1,036,374	4.7627	4.5317	-0.2310
RHODE ISLAND	450.076	495,183	+45,107	0.7916	0.5993	-0.1922
SOUTH CAROLINA	672.075	1,027,403	+355,328	1.1820	1.2434	+0.0614
SOUTH DAKOTA	85.371	140,034	+74,703	0.1500	0.1936	+0.0436
TENNESSEE	1,105.187	1,801,163	+695,976	1.9438	2.1799	+0.2361
TEXAS	2,031.650	3,971,990	+1,940,340	3.5732	4.8072	+1.2339
UTAH	209.262	542,287	+333,025	0.3680	0.6805	+0.3124
VERMONT	214.446	238,758	+24,292	0.3772	0.2889	-0.0882
VIRGINIA	1,149.848	1,628,955	+479,087	2.0927	1.9715	-0.1212
WASHINGTON	1,474.119	2,488,924	+1,014,805	2.5927	3.0123	+0.4196
WEST VIRGINIA	1,269.492	1,449,124	+179,632	2.2328	1.7538	-0.4789
WISCONSIN	1,472.344	2,061,234	+588,890	2.5895	2.4947	-0.0948
WYOMING	50.587	126,867	+76,280	0.0889	0.1535	+0.0645
AMERICAN SAMOA	36.234	55,337	+19,103	0.0637	0.0669	+0.0032
GUAM	18.533	38,754	+20,221	0.0325	0.0469	+0.0143
MARIANAS GROUP	39.567	63,502	+23,945	0.0695	0.0768	+0.0072
PUERTO RICO	782.611	1,113,541	+330,930	1.3764	1.3477	-0.0287
PAC. TR. TERR.	75.562	106,114	+30,552	0.1328	0.1284	-0.0044
VIRGIN ISLANDS	26.416	42,101	+15,685	0.0464	0.0509	+0.0044
U.S. TOTALS	56,856,457	82,624,322	+25,767,865	100.0000	100.0000	+0.0000

DECEMBER 31, 1982
TABLE 38

1982 NEEDS SURVEY

COMPARISON OF YEAR 2000 NEEDS AND 1982 BACKLOG NEEDS
FOR CONSTRUCTION OF TREATMENT PLANTS
THOUSANDS OF 1982 DOLLARS
CATEGORIES I, IIA, & IIB

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1982 BACKLOG	2000 EPA ASSESSMENT	DIFFERENCE	1982 BACKLOG	2000 EPA ASSESSMENT	DIFFERENCE
ALABAMA	338,468	468,124	+129,656	1.4154	1.2693	-0.1460
ALASKA	100,587	180,010	+79,423	0.4206	0.4881	+0.0675
ARIZONA	115,590	283,823	+168,233	0.4833	0.7695	+0.2862
ARKANSAS	142,926	305,950	+163,024	0.5977	0.8295	+0.2318
CALIFORNIA	1,036,488	2,579,017	+1,542,529	4.3344	6.9930	+2.6586
COLORADO	121,700	327,506	+205,806	0.5089	0.8860	+0.3791
CONNECTICUT	367,596	423,546	+55,950	1.5372	1.1484	-0.3887
DELAWARE	24,469	62,752	+38,283	0.1023	0.1701	+0.0678
DIST. OF COLUM.	9,036	9,036	+0	0.0377	0.0245	-0.0131
FLORIDA	950,234	1,951,022	+1,000,788	3.9737	5.2902	+1.3165
GEORGIA	391,613	730,677	+339,064	1.6376	1.9812	+0.3436
HAWAII	76,862	181,540	+104,678	0.3214	0.4922	+0.1708
IDaho	92,156	171,822	+79,666	0.3853	0.4658	+0.0805
ILLINOIS	829,970	1,563,949	+733,979	3.4708	4.2406	+0.7698
INDIANA	331,317	463,920	+132,603	1.3855	1.2579	-0.1275
IOWA	473,201	545,127	+71,926	1.9788	1.5865	-0.3922
KANSAS	155,973	254,874	+98,901	0.6522	0.6910	+0.0388
KENTUCKY	378,972	509,897	+130,925	1.5848	1.3825	-0.2022
LOUISIANA	211,684	558,788	+347,104	0.8852	1.5151	+0.6299
MAINE	167,275	200,362	+33,087	0.6995	0.5432	-0.1562
MARYLAND	334,166	458,529	+124,363	1.3974	1.2433	-0.1540
MASSACHUSETTS	1,337,408	1,498,214	+160,806	5.5928	4.0624	-1.5303
MICHIGAN	1,207,052	1,625,749	+418,737	5.0477	4.4083	-0.6393
MINNESOTA	428,412	704,042	+275,630	1.7415	1.9090	+0.1175
MISSISSIPPI	275,598	426,569	+150,971	1.1525	1.1566	+0.0041
MISSOURI	645,651	1,086,555	+440,904	2.7000	2.9462	+0.2462
MONTANA	28,713	46,812	+18,099	0.1200	0.1269	+0.0069
NEBRASKA	130,033	196,560	+66,527	0.5437	0.5329	-0.0107
NEVADA	62,775	138,222	+75,447	0.2625	0.3747	+0.1122
NEW HAMPSHIRE	230,211	324,987	+94,776	0.9627	0.8812	-0.0814
NEW JERSEY	2,126,069	2,541,287	+415,218	8.8909	6.8907	-2.0001
NEW MEXICO	74,249	150,839	+76,590	0.3105	0.4090	+0.0985
NEW YORK	3,469,503	4,007,200	+537,697	14.5090	10.8656	-3.6433
NORTH CAROLINA	426,877	612,967	+186,090	1.7851	1.6620	-0.1230
NORTH DAKOTA	12,787	30,433	+17,646	0.0534	0.0838	+0.0304
OHIO	1,156,524	1,687,367	+530,843	4.8364	4.5753	-0.2610
OKLAHOMA	111,327	256,768	+145,441	0.4655	0.6962	+0.2307
OREGON	116,145	227,865	+111,720	0.4859	0.6178	+0.1319
PENNSYLVANIA	1,087,812	1,625,405	+537,593	4.5491	4.4073	-0.1417
RHODE ISLAND	186,099	207,107	+21,008	0.7782	0.5615	-0.2166
SOUTH CAROLINA	159,235	239,048	+79,813	0.6659	0.6481	-0.0177
SOUTH DAKOTA	74,142	123,372	+49,230	0.3102	0.3345	+0.0243
TENNESSEE	428,305	622,920	+194,615	1.7911	1.6890	-0.1020
TEXAS	932,401	1,917,345	+984,944	3.8992	5.1989	+1.2997
UTAH	131,412	421,599	+290,187	0.5516	1.1431	+0.5915
VERMONT	104,418	119,954	+15,536	0.4383	0.3252	-0.1130
VIRGINIA	548,122	761,112	+212,990	2.2921	2.0637	-0.2283
WASHINGTON	482,424	899,970	+417,546	2.0174	2.4402	+0.4228
WEST VIRGINIA	378,527	456,821	+78,294	1.5829	1.2386	-0.3442
WISCONSIN	603,536	1,039,246	+435,710	2.5239	2.8179	+0.2940
WYOMING	43,178	99,083	+55,905	0.1805	0.2686	+0.0881
AMERICAN SAMOA	13,447	22,748	+9,301	0.0579	0.0616	+0.0037
GUAM	8,447	22,958	+14,511	0.0354	0.0622	+0.0268
MARIANAS GROUP	10,924	16,992	+6,068	0.0456	0.0460	+0.0004
PUERTO RICO	176,804	375,333	+198,529	0.7343	1.0177	+0.2784
PAC. TR. TERR.	41,353	60,378	+19,025	0.1729	0.1637	-0.0091
VIRGIN ISLANDS	10,978	15,001	+4,023	0.0459	0.0406	-0.0052
U.S. TOTALS	23,912,611	36,879,639	+12,967,028	100.0000	100.0000	+0.0000

DECEMBER 31, 1982
TABLE 39

1982 NEEDS SURVEY

COMPARISON OF YEAR 2000 NEEDS AND 1982 BACKLOG NEEDS
FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES
THOUSANDS OF 1982 DOLLARS
CATEGORIES I, IIA, IIB, IIIA, & IVB

	COSTS			PERCENTAGE OF NATIONAL TOTALS		
	1982 BACKLOG	2000 EPA ASSESSMENT	DIFFERENCE	1982 BACKLOG	2000 EPA ASSESSMENT	DIFFERENCE
ALABAMA	500,016	816,685	+316,669	1.4126	1.4260	+0.0134
ALASKA	146,460	297,445	+150,985	0.4137	0.5193	+0.1056
ARIZONA	144,034	434,885	+290,851	0.4069	0.7593	+0.3524
ARKANSAS	193,341	428,897	+235,556	0.5462	0.7489	+0.2027
CALIFORNIA	1,384,761	3,386,544	+2,001,783	3.9122	5.9135	+2.0013
COLORADO	131,158	479,353	+348,195	0.3705	0.8370	+0.4665
CONNECTICUT	589,948	701,471	+111,523	1.6667	1.2249	-0.4417
DELAWARE	45,175	100,898	+55,723	0.1276	0.1761	+0.0485
DIST. OF COLUM.	15,509	15,509	+0	0.0438	0.0270	-0.0167
FLORIDA	1,398,307	3,362,908	+1,964,601	3.9504	5.8723	+1.9219
GEORGIA	608,759	1,198,509	+589,750	1.7198	2.0928	+0.3730
HAWAII	125,501	288,377	+162,876	0.3545	0.5035	+0.1490
IDAH0	127,410	241,466	+114,056	0.3599	0.4216	+0.0617
ILLINOIS	1,199,908	2,108,370	+908,462	3.3899	3.6816	+0.2917
INDIANA	486,769	686,339	+199,570	1.3752	1.1984	-0.1767
IOWA	615,868	892,954	+277,086	1.7399	1.5592	-0.1806
KANSAS	343,026	614,319	+271,293	0.9691	1.0727	+0.1036
KENTUCKY	644,688	1,138,706	+494,018	1.8213	1.9884	+0.1671
LOUISIANA	441,820	1,002,861	+561,041	1.2482	1.7511	+0.5029
MAINE	287,881	351,926	+64,045	0.8133	0.6145	-0.1987
MARYLAND	398,816	755,098	+356,282	1.1267	1.3185	+0.1918
MASSACHUSETTS	1,932,062	2,259,488	+327,426	5.4584	3.9455	-1.5128
MICHIGAN	1,760,178	2,391,432	+631,254	4.9728	4.1759	-0.7968
MINNESOTA	639,340	985,707	+346,367	1.8062	1.7212	-0.0849
MISSISSIPPI	392,766	668,356	+275,590	1.1096	1.1670	+0.0574
MISSOURI	1,004,786	1,733,367	+728,581	2.8528	3.0268	+0.1740
MONTANA	36,617	84,781	+48,164	0.1034	0.1440	+0.0446
NEBRASKA	137,712	263,630	+125,918	0.3890	0.4603	+0.0713
NEVADA	72,170	169,995	+97,825	0.2038	0.2968	+0.0930
NEW HAMPSHIRE	446,496	649,684	+203,188	1.2614	1.1344	-0.1269
NEW JERSEY	2,967,685	3,620,440	+652,755	8.3842	6.3220	-2.0621
NEW MEXICO	83,543	203,441	+119,898	0.2361	0.3552	+0.1191
NEW YORK	4,421,507	5,244,518	+823,011	12.4915	9.1579	-3.3335
NORTH CAROLINA	662,394	1,265,092	+602,698	1.8713	2.2091	+0.3378
NORTH DAKOTA	16,380	42,110	+25,730	0.0462	0.0735	+0.0273
OHIO	1,755,807	2,604,821	+849,014	4.9604	4.5485	-0.4118
OKLAHOMA	181,134	388,214	+207,080	0.5117	0.6778	+0.1661
OREGON	268,802	504,462	+236,160	0.7594	0.8817	+0.1223
PENNSYLVANIA	1,392,088	2,132,609	+740,521	3.9329	3.7239	-0.2089
RHODE ISLAND	266,297	298,600	+32,303	0.7523	0.5214	-0.2308
SOUTH CAROLINA	405,141	664,735	+264,594	1.1445	1.1694	+0.0249
SOUTH DAKOTA	81,619	156,072	+74,453	0.2305	0.2725	+0.0420
TENNESSEE	702,899	1,297,171	+594,272	1.9858	2.2651	+0.2793
TEXAS	1,583,415	3,354,003	+1,770,588	4.4734	5.8567	+1.3833
UTAH	161,104	494,676	+333,572	0.4551	0.8638	+0.4087
VERMONT	142,104	158,892	+16,788	0.4014	0.2774	-0.1239
VIRGINIA	796,807	1,125,168	+328,361	2.2511	1.9647	-0.2863
WASHINGTON	882,559	1,740,061	+857,502	2.4933	3.0384	+0.5451
WEST VIRGINIA	566,812	699,014	+132,202	1.6013	1.2206	-0.3806
WISCONSIN	1,181,696	1,691,885	+510,189	3.3385	2.9543	-0.3841
WYOMING	47,644	123,875	+76,231	0.1346	0.2163	+0.0817
AMERICAN SAMOA	29,717	48,820	+19,103	0.0839	0.0852	+0.0013
GUAM	10,973	31,194	+20,221	0.0310	0.0544	+0.0234
MARIANAS GROUP	24,089	41,471	+17,382	0.0680	0.0724	+0.0044
PUERTO RICO	441,096	710,792	+269,696	1.2461	1.2411	-0.0049
PAC. TR. TERR.	51,869	81,309	+29,440	0.1465	0.1419	-0.0045
VIRGIN ISLANDS	14,408	28,387	+13,979	0.0407	0.0495	+0.0088
U.S. TOTALS	35,395,929	57,267,292	+21,871,363	100.0000	100.0000	+0.0000

DECEMBER 31, 1982
TABLE 40

1982 NEEDS SURVEY

NUMBER OF EPA COST ASSESSMENTS BY CATEGORY

STATE	TOTAL	CAT I	CAT IIA	CAT IIB	CAT IIIA	CAT IIIB	CAT IVA	CAT IVB	CAT V
ALABAMA	1,085	244	102	3	136	7	278	315	0
ALASKA	388	199	0	0	4	1	72	110	2
ARIZONA	585	309	2	1	7	1	105	160	0
ARKANSAS	1,680	594	286	23	42	7	307	421	0
CALIFORNIA	2,918	1,070	34	10	35	22	708	1,034	5
COLORADO	513	166	10	0	27	3	39	264	4
CONNECTICUT	462	105	20	4	36	12	127	144	14
DELAWARE	91	15	6	0	5	4	24	32	5
DIST. OF COLUM.	3	0	0	1	1	0	0	0	1
FLORIDA	1,198	269	170	24	91	0	286	357	1
GEORGIA	1,259	263	130	2	163	4	288	401	8
HAWAII	110	32	0	0	6	1	37	40	0
IDAH0	516	152	10	3	35	3	108	191	14
ILLINOIS	1,456	416	208	0	208	18	227	304	75
INDIANA	1,441	339	237	1	76	5	263	390	130
IOWA	1,748	634	78	0	166	4	251	596	19
KANSAS	687	253	3	0	38	6	123	261	3
KENTUCKY	1,261	279	179	1	129	1	290	365	17
LOUISIANA	1,036	320	25	2	67	12	245	365	0
MAINE	694	152	12	3	36	9	212	209	61
MARYLAND	820	217	149	7	22	9	180	225	11
MASSACHUSETTS	524	78	25	6	33	15	169	165	33
MICHIGAN	1,221	278	79	7	97	20	301	347	92
MINNESOTA	1,261	513	82	21	128	6	179	315	17
MISSISSIPPI	1,618	435	249	3	140	2	342	447	0
MISSOURI	1,448	572	27	1	76	18	298	442	14
MONTANA	226	87	1	0	6	1	30	85	16
NEBRASKA	700	249	0	0	14	1	121	312	3
NEVADA	171	58	4	2	6	4	37	60	0
NEW HAMPSHIRE	454	103	7	3	17	13	145	144	22
NEW JERSEY	743	269	55	18	107	2	135	127	30
NEW MEXICO	356	128	2	0	0	2	98	126	0
NEW YORK	2,776	789	176	71	231	30	757	641	81
NORTH CAROLINA	1,970	461	291	104	181	2	448	482	1
NORTH DAKOTA	291	153	0	0	4	1	15	110	8
OHIO	2,355	470	431	70	182	14	445	623	120
OKLAHOMA	1,216	491	18	1	29	17	214	446	0
OREGON	580	102	51	3	59	11	114	228	12
PENNSYLVANIA	3,841	972	320	20	60	3	1,121	1,234	111
RHODE ISLAND	80	13	5	0	6	2	28	24	2
SOUTH CAROLINA	968	179	94	7	143	0	281	264	0
SOUTH DAKOTA	504	268	12	1	8	4	18	183	10
TENNESSEE	1,044	200	157	8	147	3	251	274	4
TEXAS	5,797	1,624	263	13	204	14	1,410	2,263	1
UTAH	640	144	130	0	22	0	116	207	1
VERMONT	245	39	26	1	13	7	70	68	31
VIRGINIA	1,187	432	58	19	47	5	274	340	12
WASHINGTON	910	201	7	3	45	10	233	379	32
WEST VIRGINIA	1,502	441	68	4	20	9	438	475	47
WISCONSIN	1,011	279	98	0	83	42	221	279	9
WYOMING	157	72	3	0	8	0	8	65	1
AMERICAN SAMOA	3	1	0	0	0	0	1	1	0
GUAM	12	3	0	0	2	1	2	4	0
MARIANAS	12	4	2	0	0	0	3	3	0
PUERTO RICO	117	26	5	0	21	1	32	31	1
PAC. TR. TERR.	72	29	3	0	0	0	20	20	0
VIRGIN ISLANDS	11	3	0	0	1	0	3	4	0
U.S. TOTALS	55,984	16,219	4,410	471	3,464	389	12,548	17,402	1,081

DECEMBER 31, 1982
TABLE 41

1982 NEEDS SURVEY

NUMBER OF FACILITIES EVALUATED IN INDEPENDENT STATE ASSESSMENTS COMPARED TO EPA ASSESSMENTS

STATE	TOTAL	CAT I	CAT IIA	CAT IIB	CAT IIIA	CAT IIIB	CAT IVA	CAT IVB	CAT V	CAT VI
CALIFORNIA	1	0	0	0	1	0	0	0	0	0
KANSAS	18	13	2	0	0	0	0	3	0	0
U.S. TOTALS	19	13	2	0	1	0	0	3	0	0

DECEMBER 31, 1982
TABLE 42

1982 NEEDS SURVEY

PERCENT OF DOLLAR NEEDS
BY BASIS OF COST ESTIMATE AND BY STATE

STATE	CODE 1	CODE 2	CODE 3	CODE 4	CODE 5	CODE 6	CODE 7	CODE 8	CODE 9	CODE 10	CODE 11	CODE 12	CODE 13	TOTAL
ALABAMA	0.0	4.1	0.1	17.2	0.0	10.8	40.1	14.2	0.7	0.0	12.4	0.0	0.0	100.0
ALASKA	0.0	0.0	0.0	0.0	0.0	31.8	40.1	6.6	18.1	0.0	3.1	0.0	0.0	100.0
ARIZONA	0.0	0.1	0.0	0.0	0.0	21.6	45.8	13.8	3.6	0.0	14.8	0.0	0.0	100.0
ARKANSAS	0.0	2.3	0.0	3.8	0.4	32.0	49.5	11.4	0.0	0.0	0.2	0.0	0.0	100.0
CALIFORNIA	0.0	0.2	0.3	0.0	0.0	21.2	43.9	9.2	24.3	0.0	0.4	0.0	0.0	100.0
COLORADO	0.0	0.0	0.0	0.5	0.0	25.6	31.2	40.6	0.2	0.0	1.6	0.0	0.0	100.0
CONNECTICUT	0.0	0.6	0.1	0.3	0.0	30.5	13.7	15.2	0.6	0.0	0.3	38.3	0.0	100.0
DELAWARE	0.0	0.1	0.3	0.6	0.0	42.6	26.6	12.9	3.1	0.0	13.5	0.0	0.0	100.0
DIST. OF COLUM.	0.0	41.7	0.0	0.0	0.0	58.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
FLORIDA	0.0	1.2	0.2	0.2	0.5	31.3	34.0	12.5	0.9	0.0	18.8	0.0	0.0	100.0
GEORGIA	0.0	4.4	0.8	6.0	0.0	40.5	28.4	10.1	2.0	0.0	7.4	0.0	0.0	100.0
HAWAII	0.0	0.0	0.0	2.0	0.9	22.5	55.9	0.4	10.1	0.0	7.9	0.0	0.0	100.0
IDAH0	0.0	0.1	0.0	0.3	0.0	40.3	43.1	6.2	0.3	0.0	9.3	0.0	0.0	100.0
ILLINOIS	0.0	1.8	3.3	1.9	0.0	65.5	8.3	14.5	3.8	0.0	0.5	0.0	0.0	100.0
INDIANA	0.0	1.8	0.8	1.6	0.0	26.9	42.2	13.0	3.7	0.0	9.4	0.0	0.0	100.0
IOWA	0.0	2.7	1.4	5.7	0.5	28.1	14.5	32.5	14.1	0.0	0.0	0.0	0.0	100.0
KANSAS	0.0	5.6	0.0	1.9	0.0	38.0	20.8	7.5	19.2	0.0	6.5	0.0	0.0	100.0
KENTUCKY	0.0	4.0	0.3	7.4	0.2	28.2	30.0	17.6	0.2	0.0	11.6	0.0	0.0	100.0
LOUISIANA	0.0	1.9	1.9	3.8	0.0	32.2	26.7	32.7	0.2	0.0	0.2	0.0	0.0	100.0
MAINE	0.0	1.3	0.7	3.5	0.3	40.1	24.3	20.0	6.0	0.0	3.3	0.0	0.0	100.0
MARYLAND	0.0	0.9	0.2	0.6	5.2	7.4	26.9	6.0	25.1	0.0	27.2	0.0	0.0	100.0
MASSACHUSETTS	0.0	0.5	0.0	0.4	0.0	37.2	8.0	40.2	5.6	0.0	7.8	0.0	0.0	100.0
MICHIGAN	0.0	0.4	0.1	2.7	0.0	29.8	14.5	24.8	2.3	0.0	24.8	0.0	0.0	100.0
MINNESOTA	0.0	1.7	0.1	1.2	0.0	15.6	15.5	61.5	4.0	0.0	0.0	0.0	0.0	100.0
MISSISSIPPI	0.0	4.5	0.2	0.0	0.0	21.7	30.1	33.0	1.3	0.0	8.9	0.0	0.0	100.0
MISSOURI	0.0	1.1	0.0	1.0	0.0	41.7	12.1	27.8	3.2	0.0	12.7	0.0	0.0	100.0
MONTANA	0.0	0.0	0.0	2.0	0.0	59.0	17.3	19.5	0.4	0.0	1.6	0.0	0.0	100.0
NEBRASKA	0.0	0.0	0.0	1.9	0.0	26.4	28.9	1.8	6.1	0.0	34.6	0.0	0.0	100.0
NEVADA	0.0	0.2	0.0	0.1	0.0	47.5	34.9	11.3	1.4	0.0	4.4	0.0	0.0	100.0
NEW HAMPSHIRE	0.0	0.5	0.0	0.0	0.1	41.0	12.1	10.4	32.4	0.0	3.2	0.0	0.0	100.0
NEW JERSEY	0.0	2.2	1.1	22.8	0.0	41.1	21.9	6.6	2.2	0.0	1.6	0.0	0.0	100.0
NEW MEXICO	0.0	0.0	0.0	0.8	0.0	44.5	31.8	22.2	0.2	0.0	0.1	0.0	0.0	100.0
NEW YORK	0.0	0.5	9.2	10.2	2.9	9.8	25.0	7.0	28.7	0.0	6.2	0.0	0.0	100.0
NORTH CAROLINA	0.0	4.6	0.0	2.2	0.5	44.5	26.1	9.5	1.6	0.0	10.6	0.0	0.0	100.0
NORTH DAKOTA	0.0	0.0	0.0	15.5	0.0	38.2	24.0	17.6	4.4	0.0	0.0	0.0	0.0	100.0
OHIO	0.0	0.7	0.5	4.3	0.0	33.0	28.8	25.2	0.4	0.0	6.8	0.0	0.0	100.0
OKLAHOMA	0.0	1.5	0.8	3.7	0.0	15.4	42.8	20.5	2.0	0.0	13.0	0.0	0.0	100.0
OREGON	0.0	1.5	3.2	0.7	0.0	23.2	27.4	1.5	32.3	0.0	9.8	0.0	0.0	100.0
PENNSYLVANIA	0.0	0.1	0.1	0.1	0.0	16.3	68.6	4.2	7.6	0.0	2.5	0.0	0.0	100.0
RHODE ISLAND	0.0	0.0	0.0	0.0	0.5	75.4	11.0	1.5	10.9	0.0	0.4	0.0	0.0	100.0
SOUTH CAROLINA	0.0	6.7	0.1	0.0	0.0	35.9	37.1	6.8	7.6	0.0	5.4	0.0	0.0	100.0
SOUTH DAKOTA	0.0	0.9	0.0	7.4	0.0	50.6	17.3	0.7	2.0	0.0	20.8	0.0	0.0	100.0
TENNESSEE	0.0	6.2	0.1	3.7	0.0	49.5	26.2	8.1	2.6	0.0	3.3	0.0	0.0	100.0
TEXAS	0.0	1.4	1.9	0.1	0.0	22.2	23.1	19.4	0.9	0.0	2.0	28.5	0.0	100.0
UTAH	0.0	0.0	0.6	0.0	0.0	58.9	27.8	3.4	0.3	0.0	8.8	0.0	0.0	100.0
VERMONT	0.0	0.5	0.3	5.5	5.5	49.2	22.9	12.3	3.2	0.0	0.2	0.0	0.0	100.0
VIRGINIA	0.0	0.4	0.0	2.0	0.5	33.7	50.6	1.5	4.3	0.0	6.5	0.0	0.0	100.0
WASHINGTON	0.0	5.4	0.2	2.0	0.0	33.9	26.2	13.6	17.6	0.0	0.7	0.0	0.0	100.0
WEST VIRGINIA	0.0	0.1	0.0	0.0	0.0	41.8	54.9	2.4	0.0	0.0	0.3	0.0	0.0	100.0
WISCONSIN	0.0	0.4	2.4	7.1	0.0	63.6	15.6	7.5	3.1	0.0	0.0	0.0	0.0	100.0
WYOMING	0.0	0.1	0.0	9.3	0.0	67.7	4.9	7.2	6.5	0.0	0.0	0.0	0.0	100.0
AMERICAN SAMOA	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
GUAM	0.0	0.0	0.0	0.0	0.0	80.5	0.0	19.4	0.0	0.0	0.0	0.0	0.0	100.0
MARIANAS	0.0	0.0	0.0	0.0	0.0	0.0	37.9	62.0	0.0	0.0	0.0	0.0	0.0	100.0
PUERTO RICO	0.0	0.8	0.0	0.3	0.2	65.3	26.1	2.6	2.2	0.0	2.0	0.0	0.0	100.0
PAC. TR. TERR.	0.0	0.0	0.0	0.0	0.0	29.4	15.2	44.2	0.0	0.0	11.0	0.0	0.0	100.0
VIRGIN ISLANDS	0.0	0.3	0.0	0.0	0.0	6.9	27.9	0.0	52.9	0.0	11.6	0.0	0.0	100.0

CODE 1 - STATE CERTIFICATION
CODE 2 - ANALYSIS COMPLETED
CODE 3 - EVALUATION SURVEY COMPLETED
CODE 4 - ENGINEER/CONSULTANT FIRM ESTIMATE
CODE 5 - COST OF PREVIOUS COMPARABLE CONSTRUCTION
CODE 6 - ENGINEER/CONSULTANT PRELIMINARY ESTIMATE
CODE 7 - EPA - SUPPLIED COST ESTIMATING PROCEDURES
CODE 8 - COST EFFECTIVE ANALYSIS
CODE 9 - OTHER PRELIMINARY ESTIMATES
CODE 10 - GRANT AWARD FULFILLS ALL NEEDS
CODE 11 - GRANT AWARD FULFILLS PARTIAL NEEDS
CODE 12 - STATE-SIMPLIFIED COST ESTIMATING PROCEDURES
CODE 13 - NONE GIVEN

DECEMBER 31, 1982
TABLE 43

1982 NEEDS SURVEY

PERCENT OF NATIONAL DOLLAR NEEDS
BY BASIS OF COST ESTIMATE

	CAT I	CAT IIA	CAT IIB	CAT IIIA	CAT IIIB	CAT IVA	CAT IVB	TOTAL
BASIS OF ESTIMATE								
STATE CERTIFICATION	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ANALYSIS COMPLETED	0.0	0.0	0.0	46.2	2.2	0.0	0.0	1.6
EVALUATION SURVEY COMPLETED	0.0	0.0	0.0	17.5	23.1	0.0	0.0	1.9
ENGINEER/CONSULTANT FIRM ESTIMATE	8.2	2.5	9.7	2.7	0.5	0.5	3.5	4.3
COST OF PREVIOUS COMPARABLE CONSTRUCTION	0.1	0.0	0.0	0.0	0.0	1.4	1.0	0.6
ENGINEER/CONSULTANT PRELIMINARY ESTIMATE	34.3	50.6	37.4	17.9	6.1	15.3	44.5	30.7
EPA - SUPPLIED COST ESTIMATING PROCEDURES	23.7	16.2	21.2	5.7	0.0	64.9	9.7	28.6
COST EFFECTIVE ANALYSIS	18.0	15.9	20.8	5.0	5.2	6.4	19.7	14.2
OTHER PRELIMINARY ESTIMATES	6.7	2.6	9.0	1.2	62.3	5.2	8.8	9.5
GRANT AWARD FULFILLS ALL NEEDS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GRANT AWARD FULFILLS PARTIAL NEEDS	9.1	12.0	1.8	3.8	0.6	1.3	9.3	6.6
STATE-SUPPLIED COST ESTIMATING PROCEDURES	0.0	0.0	0.0	0.0	0.0	5.0	3.6	2.0
(NONE GIVEN)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
U.S. TOTALS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

United States
Environmental Protection
Agency
Washington DC 20460

Official Business
Penalty for Private Use \$300

Special
Fourth-Class
Rate
Book