

PD CAP ISS

PROJECT PAPER

EGYPT

WATER AND WASTEWATER SECTOR
INSTITUTIONAL SUPPORT PROJECT

PROJECT NO. 263-0176
USAID/CAIRO

AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT DATA SHEET

1. TRANSACTION CODE: **A** (A = Add, C = Change, D = Delete)
 Amendment Number: _____
 DOCUMENT CODE: **3**

2. COUNTRY/ENTITY: **EGYPT**

3. PROJECT NUMBER: **263-0176**

4. BUREAU/OFFICE: **ASIA NEAR EAST**

5. PROJECT TITLE (maximum 40 characters): **Water/Wastewater Institutional Support**

6. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM DD YY **09/30/90**

7. ESTIMATED DATE OF OBLIGATION (Under 'B' below, enter 1, 2, 3, or 4)
 A. Initial FY - **85** B. Quarter **4** C. Final FY **87**

8. COSTS (\$000 OR EQUIVALENT \$1 =)

A. FUNDING SOURCE	FIRST FY			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total						
(Grant)	(4,600)	(400)	(5,000)	(12,819)	(2,181)	(15,000)
(Loan)	()	()	()	()	()	()
Other U.S.						
1.						
2.						
Host Country		1,500	1,500		5,000	5,000
Other Donor(s)						
TOTALS	4,600	1,900	6,500	12,819	7,181	20,000

9. SCHEDULE OF AID FUNDING (\$000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1)	ESF	700				15,000		15,000	
(2)									
(3)									
(4)									
TOTALS						15,000		15,000	

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each): **710 545**

11. SECONDARY PURPOSE CODE: _____

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)
 A. Code: _____
 B. Amount: _____

13. PROJECT PURPOSE (maximum 480 characters)

To enhance the institutional capability of the Ministry of Housing & Public Utilities (MHPU) and its executive agency, the National Organization for Potable Water and Sanitary Drainage (NOPWASD), in meeting municipal water and wastewater needs throughout Egypt.

14. SCHEDULED EVALUATIONS: Interim MM YY **02/87** Final MM YY **02/89**

15. SOURCE/ORIGIN OF GOODS AND SERVICES: 000 941 Local Other (Specify) _____

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a _____ page PP Amendment)

USAID / Egypt Controller concurs with the proposed methods of implementation and financing. *Hani Jambak* A/Controller

17. APPROVED BY: *Frank B. Hill*
 Title: **Director, USAID/Cairo**
 Date Signed: MM DD YY **17/30/85**

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION: MM DD YY _____

PROJECT PAPER
EGYPT
WATER AND WASTEWATER SECTOR
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Table of Contents

	<u>Page</u>
List of Tables and Charts	i
Abbreviations	ii
Summary and Recommendations	iii
I. PROJECT RATIONALE	1
A. USAID Financial Support for the Sector	1
B. Status of Policy Dialogue	2
C. Project Development History	3
D. Problem Statement	5
E. Project Goal and Purpose	6
F. Strategy Considerations	7
II. PROJECT DESCRIPTION	8
A. Project Outline	8
B. End of Project Status	11
C. Detailed Project Design	12
III. PROJECT COST ANALYSIS	38
A. Cost Assumptions	38
B. Budget Estimates	39
C. GOE Financial Contribution & Recurrent Cost Analysis	40
D. Financial Projections	43
E. 611(a) Considerations	43
IV. INSTITUTIONAL ANALYSIS	45
V. ECONOMIC ANALYSIS	54
VI. SOCIAL SOUNDNESS ANALYSIS	58
VII. ENVIRONMENTAL ANALYSIS	61

	<u>Page</u>
VIII. IMPLEMENTATION PLAN	64
A. Administrative Arrangements	64
B. Schedule of Activities	66
C. Management Training	69
D. Monitoring and Evaluation Plan	71
E. External Audit	72
IX. RECOMMENDATION, CONDITIONS AND COVENANTS	73
A. Recommendations	73
B. Conditions Precedent to Disbursement	73
C. Covenants	73

TECHNICAL ANNEX

Volume I

- A. Project Authorization
- B. Project Grant Agreement
- C. PID Approval Message
- D. Logical Framework
- E. Grantee's Request for Technical Assistance
- F. Statutory Checklist
- G. Congressional Notification
- H. Draft Terms of Reference
- I. Technical Assistance Tables
- J. Project Cost Tables

Volume II*

- A. Institutional Analysis Report
- B. GOE Program Definition Document

Volume III*

- A. USAID Water and Wastewater Sector Assessment
- B. USAID FY 85 CDSS - Water and Wastewater Sector
- C. USAID 1985 Annual Report of Institutional Progress
- D. UNDP/WHO Mid Decade Evaluation
Conference Recommendations - April 1985
- E. ASRT/NSE Egypt Water Supply and Wastewater
Disposal. Conference Proceedings - May 1984
- F. Literature References

* Vol. II and III available upon request from ANE/PD

LIST OF TABLES AND FIGURES

	<u>Page</u>
1(a) USAID Project Funding of Water and Wastewater System Improvements	1
2(a) Summary Technical Assistance	19
3(a) Personnel Cost Assumptions	38
3(b) Summary of Equipment and Grant Cost Estimates	41
3(c) Summary of Total Project Cost Estimate	42
3(d) Project Estimated Summary Cash Flow	44
4(a) Geographic Scope of Institutional Support Needs	49
5(a) Internal Rate of Return for Improvements in Efficiency of Investment	55
5(b) Internal Rate of Return for Different Improvements	55
8(a) Schedule of Activities	67

ABBREVIATIONSOrganizations

ACPU	Advisory Committee for Public Utilities
A/GOSD	Alexandria General Organization for Sanitary Drainage
ARC	Advisory Committee for Reconstruction
ASTR	Academy for Science and Technology Research
AWGA	Alexandria Water General Authority
CAOA	Central Agency for Organization and Administration
C/GOSD	Cairo General Organization for Sanitary Drainage
CWO	Cairo Wastewater Organization
G/MDPW	Governorate or Municipal Department of Public Works
GOGCWS	General Organization for Greater Cairo Water Supply
GOPP	General Organization for Physical Planning
MHPU	Ministry of Housing and Public Utilities
MLG	Ministry of Local Government
MOF	Ministry of Finance
MOH	Ministry of Health
MOI	Ministry of Irrigation
MPIC	Ministry of Planning and International Cooperation
MRLR	Ministry of Reconstruction and Land Reclamation
NIMD	National Institute of Management Development
NOPWASD	National Organization for Potable Water and Sanitary Drainage
SCA	Suez Canal Authority
TOMOHAR	Training Organization of MRLR/MHPU

Technical Terms

ADC	USAID Direct Contract
FX \$	Foreign Exchange in \$ Dollars
HCC	Host Country Contract
IQC	Indefinite Quantity Contract
LC	Local Currency in Egyptian Pounds
MSBE	Minority and Small Business Enterprise
PASA	Participating Agency Service Agreement
PSC	Personal Services Contract
RSSA	Resources Support Services Agreement
8-A	Set-aside under Sec. 8-A of USC

SUMMARY AND RECOMMENDATIONS

1. Project Title:
GOE Water and Wastewater Sector: Institutional Support Project
2. Project Number:
263-0176
3. Source of Funds:
Economic Support Fund
4. Total Project Amount:
AID: \$ 15 million, initial obligation FY 85 - \$5 million
GOE: LE 5 million of in-kind contributions
5. Terms:
Grant to the Government of the Arab Republic of Egypt
6. Life of Project:
Phase One - 5 years
7. Coordinating Entities:
USAID/Cairo and the Ministry of Planning and International Cooperation
8. Implementing Entities:
Ministry of Housing and Public Utilities, and the National Organization for Potable Water and Sanitary Drainage.
9. Project Goal:
To enhance human health and productivity through the provision of local water and wastewater services.
10. Project Purpose:
To enhance the institutional capability of the Ministry of Housing and Public Utilities (MHPU) and its executive agency, the National Organization for Potable Water and Sanitary Drainage (NOPWASD) in meeting municipal water and wastewater needs throughout Egypt.

11. Project Policy Objective:

To ensure that the GOE meets the sector-wide policy objectives, as outlined in the Memorandum of Understanding of Jan. 84, and that the GOE develops appropriate financial self-help mechanisms to reduce reliance on external FX funded assistance.

12. Project Components:

AID grant funds will cover the cost of technical assistance to the MHPU, NOPWASD and associated central and local governmental agencies, provided by expatriate and Egyptian advisors under long-term host country contracts and short-term AID-Direct contracts, as well as training, the procurement of various types of equipment, materials and publications, and applied research grants to academic institutions. GOE in-kind contributions will cover the cost of office space for expatriate consultants and various types of training, travel, publications and data management implementation. The allocation of funds (in \$,000) is shown in the table below:

<u>Project Components</u>	<u>Technical Assistance</u>		<u>Equipment & Training Materials</u>		<u>SUBTOTALS</u>
	<u>USAID</u>	<u>GOE</u>	<u>USAID</u>	<u>GOE</u>	
MHPU/CDPU Support	2,070	618	275	115	3,078
NOPWASD Support	4,360	1,110	2,140	850	8,460
Municipal Support	1,776	344	760	1,085	3,965
Misc. Sector Support	1,260	173	275		1,708
Subtotals	9,466	2,245	3,450	2,050	
Contingency					2,789
Total					20,000
AID Contribution (75%)					15000
GOE Contribution (25%)					5000

13. Project Rationale

AID and GOE's substantial investments in the sector have had a significant effect on rehabilitating, upgrading and expanding the physical facilities in many cities. Despite these efforts, the sector is still plagued by problems such as the inability to attract and retain personnel, diffusion of authority, poor coordination of interrelated programs, neglect of applied research, lack of enforcement of laws and regulations, and a lack of public awareness. Since the formalization of USAID and GOE's policy dialogue, the GOE has taken some steps to resolve

some of these problems, for example: focusing responsibilities for the sector in the Ministry of Housing and Public Utilities, and agreement with USAID to performance targets that include increased water tariffs, immediate training of system operators, and the provision of incentive payments to workers in the sector.

The project complements and enhances the GOE efforts by providing technical assistance, training, the procurement of various types of equipment, materials and publication, and applied research grants to academic institutions.

14. Project Description:

Technical assistance for MHPU will be focussed on key areas of responsibility, i.e. Management and Administration, Policy Guidance and Monitoring, Plan Review and Finance.

Assistance for NOPWASD will address deficiencies in the areas of Organization and Management, Planning and Economic Analysis, Manpower Development and Training, Finance and Accounting, Information, Engineering and Environmental Coordination.

Assistance to Municipal Public Works Departments through NOPWASD will be limited to the assessment of O&M Needs, O&M Program Development and the provision of O&M (hands-on) Assistance and Training. Miscellaneous issue-specific support may also be provided to other agencies and to support efforts of US institutions called upon to render special technical assistance.

15. End of Project Status:

Progress will be measured by the performance of MHPU and NOPWASD, rather than by the productivity of its expatriate and Egyptian advisors funded under the project. At project termination the MHPU and NOPWASD are expected to have accomplished the following:

- clarified the intra-ministerial and intra-agency lines of authority, defined more clearly the organizational and functional responsibilities, resolved jurisdictional conflicts and established effective intergovernmental coordination and cooperation;
- assigned permanent staff to deal competently with the variety of functional responsibilities, established a differential salary and incentive plan for sector employees, as well as established more flexible career and promotional opportunities;
- completed the first phase US-based management training program for project participants, as an integral part of a comprehensive career development plan;

- designed and partially implemented a comprehensive integrated Management Information System; including a sector wide Performance Monitoring System;
- completed an assessment of water and wastewater capital and O&M requirements of Egypt's urban areas, and prepared a long range plan for meeting the country's financial and human resource needs;
- established a comprehensive Financial Resource Mobilization and Accounting System, for the sector as a whole, for the general water and wastewater organizations under its jurisdiction, as well as the public works departments of the cities and towns in the 26 governorates. The system would be focussed on long term local financing needs and cost recovery mechanisms, the implementation of water tariff and wastewater surcharge policies, O&M cost analyses, improvement of internal accounting and external financial reporting requirements.
- established active twinning relationships between GOE organizations and utilities, technical and industry associations and professional societies and their respective US counterparts, and organized appropriate joint seminars and conferences,
- completed the national manpower requirements study and training needs assessment, developed a comprehensive training plan, for the sector as a whole, trained some 400 central government employees in principles and practices of organization, management and administration, and certified approximately 200 municipal plan operators;
- established a comprehensive environmental publication program in support of the research and manpower training program, procured publications for Training Resource Centers, and provided access to information sources to interested sector employees;
- developed a financial support and coordination program for applied research in cooperation with the Academy for Scientific Research and Technology, (ASRT), the Egyptian academic research institutions and foreign institutions interested in basic research adaptations;
- initiated a comprehensive review of water and wastewater performance standards, based on economic principles and environmental concerns and established an effective code enforcement program;
- assisted local governmental units with the design of treatment facilities, construction management, operation and management of plants, the establishment of laboratory testing procedures and

monitoring efforts, financial accounting and reporting, and the development and implementation of a municipal operator training program.

16. Technical Considerations:

The findings and recommendations of several sector assessments, performed by AID and other international donors over the past several years have been taken into consideration in the design of the project. The assessments have addressed the socio-economic, cultural and political implications of institutional change, and the impacts on the ultimate beneficiaries, i.e. urban population at large.

17. Recommendation:

That AID authorize a \$15 million grant to the GOE under the terms and conditions set forth in the Project Authorization (Annex I).

18. USAID Project Review Committee:

OD/UAD	, Fred Zobrist	, Office Director
DR/UAD	, Frank Miller	, Deputy Office Director
DR/UAD	, Siegbert Schacknies,	Project Officer*
DR/UAD	, Tarek Selim	, FSN Program Advisor
DR/UAD	, Joy Pollock	, Training Coordinator
DR/LAD	, Graham Kerr	, Project Officer
DPPE/PAAD,	Paul Growe	, Economist
DPPE/PO	, Jack Ryan	, Program Officer
LEG	, Michael Williams	, Legal Counselor
FM/FA	, Thomas Johnstone	, Controller
IS/CON	, James Zerow	, Contract Officer
HRDC/EDU	, William R. Charlson,	Program Officer

19. GOE Project Review Committee:

MHPU	, Eng. Fuad El Gohary	, First Undersecretary for the Housing Sector
MHPU/CDPU,	Eng. Ali A. El Hakim	, First Undersecretary for Public Utilities
MHPU	, Dr. Eng. Galal Zahran,	Undersecretary for Foreign Relations
MHPU	, Advisory Committee for	Public Utilities
NOPWASD	, Eng. Hazem El Abd	, Chairman
NOPWASD	, Mr. Magd Abdel Rehim	, Vice Chairman, Finance and Admin (retired)
NOPWASD	, Mr. Jousef Hanna	, Vice Chairman, Planning and Research (retired)
NOPWASD	, Eng. Michael Elias	, Undersecretary for Training

* Principal Author and Project Coordinator

I. PROJECT RATIONALE

A. History of USAID Support for the Sector

AID and the GOE have made substantial investments in the water and wastewater sector. Since 1978 AID has authorized more than US \$2.5 billion in support of projects to rehabilitate and expand existing systems in Cairo, Alexandria, the Canal Cities of Ismailia, Port Said and Suez, and the Provincial Cities of Fayoum, Beni Suef and El Minya. GOE investments in the sector have increased dramatically over the last two decades, increasing from LE 93.2 million in the 1960's to LE 620.9 million in the 1970's. In the current five year plan (1982/83-1986/87), the GOE has earmarked LE 3.4 billion for investment. This current level of investment is approximately five times the amount spent in the previous two decades. Table 1 (a) shows the USAID contribution to Egypt's Water and Wastewater Sector as of 6/1985, in addition to GOE funding.

TABLE 1(a)
FUNDING FOR
WATER AND WASTEWATER SYSTEM IMPROVEMENTS

Project No./Name	Life of Project Funding		
	<u>AID</u>	<u>GOE/</u> <u>(\$,000)</u>	<u>TOTAL</u>
263-0089 - Alex. Wastewater I	15,000	63,000	78,000
263-0100 - Alex. Wastewater II	199,000	284,000	483,000
263-0127 - Provincial Cities Development I	110,000	68,000	176,000
263-0091 - Cairo Wastewater I	129,000	197,000	326,000
263-0173 - Cairo Wastewater II	816,000	495,000	1,311,000
263-0038 - Cairo Water I	92,000	48,000	140,000
263-0193 - Cairo Water II	100,000	15,000	115,000
263-0048 - Canal Cities I	169,000	114,000	283,000
263-0174 - Canal Cities II	399,000	588,000	987,000*
263-0066 - Housing/Community Upgrading**	40,000	40,000	80,000
263-0199 - Urban Development Support**		120,000	120,000*
263-0161 - Decentralization Support Program:**	300,000	120,000	420,000
263-0182 - Local Development II**	80,000	50,000	130,000*
263-0176 - Institutional Support Program	15,000	5,000	20,000*
TOTAL	2,464,000	2,207,000	4,669,000

* Project under design, subject to USAID and GOE approval

** Portion of Project Funding allocated to water and wastewater systems

These investments reflect the high degree of AID and GOE interest in improving conditions in the sector, and to date have had a significant effect on rehabilitating, upgrading and expanding the physical facilities in the project cities. Many of the AID financed projects are about to "come on line," and require a shifting of the focus of USAID efforts from design and construction to operation and maintenance concerns. Although construction expenditures will remain high in the foreseeable future, the emphasis on institutional and human resources development in support of the continued functioning of sector facilities is moving to the forefront of USAID's and the GOE attention.

B. Status of Policy Dialogue

USAID formalized its policy dialogue with the GOE in early 1983 with a commitment by the AID Administrator to provide \$1.2 billion of assistance over the period FY 1982-87 in return for certain financial and institutional reforms considered essential to enhance the GOE's ability to construct, operate and maintain the resulting infrastructure. Subsequently, the Mission negotiated a Memorandum of Understanding (MOU) which was signed by the Administrator and two senior GOE Ministers in January, 1984. In the MOU, which reiterated AID's intent to provide substantial sector support, the GOE agreed to:

- provide adequate facilities for training and technical services to support the sector, and an incentive system to maintain and recruit qualified staff;
- establish autonomous local water and wastewater organizations, with the authority to retain service revenues for their own operating needs;
- implement tariff increases to cover the cost of water and wastewater operations, maintenance, debt service, and routine improvements, as well as appropriate increases in the size of operations, maintenance, and investment budgets to fund the sector; and
- retain, during the program, a construction management firm to ensure on-time completion of the projects.

In addition, the MOU provided for an annual joint review of progress toward achieving these objectives.

The 1984 policy review occurred soon after the MOU signing and showed limited progress. Prior to the 1985 review, the Mission prepared a series of matrices which set forth goals for achieving MOU objectives by 1991 (the presumed completion date of the current construction projects), as well as interim annual targets. These intermediate and final targets were negotiated with MHPU Undersecretary for Water and Wastewater and formally agreed upon in a session co-chaired by Minister Sedki and Mission Director Kimball on February 21, 1985.

The performance targets included among others:

- The introduction of increases in water tariffs sufficient to cover 35% of estimated O&M costs in 1985 and increasing progressively to cover 100% of such costs in 1991, as well as a 10% surcharge for wastewater;
- a comprehensive study of O&M costs;
- the provision of expatriate O&M service contractors linked to a training program for counterpart technicians;
- the immediate training of system operators for USAID funded projects and certain non-AID funded treatment plants and the design of longer-term training programs for managers and operators;
- the provision of expatriate advisors for MHPU/ACPU and NOPWASD in the area of institutional and human resources development;
- the provision of incentive payments to workers in the water sector (using 10% of the user charges), in addition to the funds now available under Law 26/1983 for incentives to wastewater workers.

A complete listing of the targets and the proceedings of the Annual Review sessions is appended. While many actions remain to be taken to achieve these targets, the Mission is confident that Minister Sedki is committed to achieving reforms. The fact that the GOE agreed to the benchmarks reflects its understanding of the extent and nature of the problems which plague sector institutions.

C. Project Development History

The project concept was first proposed by the Ministry of Reconstruction, Housing and Land Reclamation in mid 1984. At that time the Ministry had been funding an expatriate technical assistance advisory team for a period of about 10 years. The Ministry officials noted that because of foreign exchange shortages, the technical assistance team of Tibbets, Abbett, McCarthy, Stratton (TAMS) would have to be terminated in June 1985. USAID was asked to support a follow on effort to replace and refocus the TAMS efforts. USAID agreed to consider the request. The Minister also agreed to continue the Technical Assistance contract with TAMS for one year, to bridge the interim period or until a new project team could be put in place.

A senior level working group was established between the Ministry and USAID, which formulated the preliminary level and scope of USAID support. The results provided the basis for the PID approved by AID/W in August 1984.

At about the same time the GOE undertook a major reorganization of the Cabinet, following the national elections held in June of that year. Housing and water/wastewater sector responsibilities were assigned to a newly established Ministry of Housing and Public Utilities. A new minister was named as was most of the senior staff. The new minister requested that the institutional support concept be continued in an expanded format. The realignment of portfolios and shifting of responsibilities and personnel meant a fresh start with a new group of participants, and existing agencies with changed or increased number of policy, program and line functions.

In late 1984, in order to further the project development process, USAID provided a team of specialists to conduct a needs analysis and develop a terms of reference (TOR) for the proposed institutional support teams. The GOE formed a working group consisting primarily of senior NOPWASD and Ministry officials who further refined the issues, reviewed and proposed additional consultant task descriptions. Concurrently, another group of GOE officials continued the process of organizing and establishing the new policy direction of the Ministry. The reorganization effort, including the clarification of departmental missions and functions, and personnel assignments have not yet been formalized. Project paper development proceeded slowly against a background of uncertainty, caused by the GOE and USAID internal deliberations. Consequently, the PP is based mainly on information gathered during the informal dialogue with GOE officials, the extensive background of studies and sector assessments, supplemented by the results of the annual joint GOE/USAID sector review meeting held in February 1985.

Since the completion of the institutional needs assessment in the Fall of 1984, certain events have occurred, the results of which had to be taken into consideration in preparing the PP. These include a) the completion of a more detailed Sector Assessment by an AID/W team of evaluators, which reaffirmed and strengthened USAID's resolve to support a broad based and long range institutional and human resources capacity building effort; b) the retirement of senior personnel at NOPWASD, who had helped shape the agenda and set the priorities for the institutional support program, but whose successors had not been involved in program formulation, and c) the deliberations of Egyptian management and organization consultants who are conceptualizing and detailing a 'matrix management' structure and process of decision-making for the entire Ministry. The project outlined below responds to the latest and still evolving decisions at the ministerial level.

The extraordinary fluidity of the institutional environment since the inception of project development suggests a number of criteria for the design and implementation of this project, namely: a) that an institutional support program should not be focused too narrowly on one organization, however critical its role may be in the overall decision-making structure and process at the time; b) that the project

components should be defined in broad enough terms to permit a redefinition and adjustment throughout the implementation period, and c) that the implementation mechanisms provide sufficient flexibility to allocate resources to a variety of nodes and channels in the national water and wastewater decision structure, while maintaining a clear focus on the overall and long term goal, project purpose and policy objectives.

D. Problem Statement

Various donor funded sector assessment, and GOE internal reviews of the sector have identified a number of interrelated problems which the Institutional Support Program will attempt to address. As a basis for program design USAID has identified those concerns typically found in the sector assessments of the international donor community. The list is large and the principal categories identified below only attempt to outline the breadth rather than the depth of concern. It defines a 'theme' of problem areas and by implication suggests a 'thematic' or programmatic response to commonly shared perceptions, such as the following:

- a) The sector as a whole is unable to attract and retain key personnel in several categories such as engineers and managers, technicians and skilled workers, because of non-competitive wages and benefits. Training of O&M personnel is a particularly critical need.
- b) The diffusion of authority among multiple levels of government and organizations has limited the effective performance of operating as well as policy making agencies. Decision freedom is particularly limited in key areas, such as organizational and management control, long range planning, budgeting and finance, manpower development and training, job classification and description, wages and benefits, cost accounting systems, revenue generation and retention, etc.
- c) Coordination of interrelated development programs is poor at local and national levels. Inadequate and unbalanced funding makes it impossible for housing (formal and informal) and water/wastewater projects to move ahead together, or to be completed as planned, particularly at the urban/rural interface in the large metropolitan areas and secondary cities.
- d) Basic and applied research is neglected in fields such as water and wastewater treatment technology, hydrology, improved materials, economic and environmental impact analysis, etc.
- e) Laws and regulations, particularly concerning wastewater treatment, are not enforced because of inappropriately high standards and the local organizations' inability to comply, due to a lack of financial and human resources.

16x

- f) Public awareness of the health consequences of inadequate water/wastewater services are lacking. Information sources, and particularly periodical publications for the professionals as well as the general public are not available. Even basic operator manuals and handbooks are scarce commodities.

E. Project Goal and Purpose

USAID has supported institution building in all of its geographic focussed capital projects and will continue to do so in project proposals currently on the 'shelf'. However, USAID has also recognized the inherent limitation of institutional support efforts tied to location specific capital projects. This recognition was reflected in the Memorandum of Understanding (MOU) signed by GOE and USAID officials in January of 1984, which conditioned further funding of capital projects on progress achieved in addressing areas of sector wide concern. The MOU included both project specific and sector wide concerns over

- financial viability,
- manpower availability,
- organizational effectiveness,
- service delivery capability,

The process of addressing these concerns comprehensively was set in motion with the signing of the MOU in January 84 and during the GOE-USAID deliberations at the first Annual Review in February 84. A Project Identification Document (PID) was prepared in April 84 and approved by the Assistant Administrator in August of 84.

The project goal is to enhance human health and productivity through the provision of local water and wastewater services.

The project purpose is therefore stated in more specific terms, namely,

to enhance the institutional capability of the Ministry of Housing and Public Utilities (MHPU) and its executive agency, the National Organization for Potable Water and Sanitary Drainage (NOPWASD) in meeting municipal water and wastewater needs throughout Egypt.

Implicit in the statement of project purpose are certain policy objectives which are common to other USAID funded development projects, namely to ensure that (1) the GOE meet the sector-wide policy objectives as outlined in the MOU which conditioned further capital funding on the rate of progress achieved in resolving institutional policy issues; and, (2) the GOE develop appropriate financial self-help measures and mechanisms to reduce reliance on external FX funded assistance.

F. Strategy Considerations

A project of the magnitude and complexity contemplated requires a 'strategic' and 'tactical' approach to achieving the stated purpose and ultimate goal. Institutional change in Egypt must by necessity be a long-term commitment of effort and one which is flexible enough to respond to short-term problem situations and opportunities. It requires a process rather than a product orientation. It must periodically take account of progress achieved, and if necessary make changes directions, always being mindful of the need to achieve the primary purposes and policy objectives. The design of this project is based on certain key strategy consideration, namely:

- the need for a long long-term commitment by USAID, phased over an 8 to 10 year period;
- the need to identify and address a multiplicity of deferred problems and issues in a short period of time, as part of a three year (phase one) program;
- the need for a periodic monitoring and evaluation of performance and possible redirection of effort;
- the desire for an Egyptianization of and private sector involvement in, the advisory functions, traditionally provided by expatriates, so as to avoid the pitfalls of adopting inappropriate institutional mechanisms;
- the desire to transfer knowledge and experience through the establishment of professional relationships between Egyptian and US institutions with similar responsibilities, yet with capabilities based on vastly different experiences.

USAID's overall strategy consideration for the sector are discussed in the Annex of the FY 1985 CDSS entitled "Egypt Water and Wastewater Sector: Status, Constraints and Strategy. The strategy considerations focus on programming of investment funds, on providing technical assistance and institutional support, on achieving policy objectives and on streamlining USAID's internal sector and project management activities. The report is appended in the Technical Annex Volume III.

II. PROJECT DESCRIPTION

A. Project Outline

The project is actually a comprehensive technical assistance program composed of four major components, each focussing on a different level of government and political jurisdiction. It aims at strengthening central and local government functions, as well as at enhancing the international donor and US interest group support currently provided in a rather uncoordinated manner. Following is a brief synopsis of the support to be provided to the Ministry of Housing and Public Utilities (MHPU), the National Organization for Potable Water and Sanitary Drainage (NOPWASD), selected Municipal governments, and miscellaneous organization, such as associated GOE ministries and US institutions which are expected to contribute to resolving sectorwide issues.

1) Ministry Support Program (MHPU)

USAID's technical assistance program will support the overall mission and the amended functions of the MHPU and is responsive to the explicit requests of its current office holders. The level of assistance requested and provided takes into consideration the respective roles of the MHPU's Central Department of Public Utilities and NOPWASD, which serves as its executive staff. Three long-term technical advisors and up to 45 personmonths of short-term advisors will provide analytical support to the MHPU. These will be complemented by up to 180 person months of Egyptian experts providing support in three general areas.

- a) Policy Guidance and Monitoring activities will include a review of legislative and regulatory constraints to sector improvements, the need for intergovernmental cooperation and coordination, including the coordination of international donor activities and the establishment of a comprehensive Management Information and Performance Monitoring System, including the financial management of all contracts.
- b) Plan Review and Finance activities will focus on the preparation of the next Five-Year Plan (1987-1992) and Annual Budgets, based on NOPWASD's long range National Water and Wastewater Needs Assessment and on monitoring the implementation of the National Water Tariff and Wastewater Surcharge Policy.
- c) Management and Coordination activities include a review of personnel needs and administration, implementation of a management training program, as well as the analysis of long range sectorwide manpower development issues, including compensation and job classification, organizational structure and decision processes.

2) Central Agency Support Program (NOPWASD)

USAID's technical assistance effort is aimed at strengthening those NOPWASD program and line staff capabilities deemed critical to the timely performance of certain tasks. Assistance will be provided in five general areas by five long-term technical advisors up to 140 personmonths of short-term effort, and up to 300 personmonths of Egyptian expert effort:

- a) Planning and Economic Analysis activities will focus on the preparation of a long range and comprehensive National Water and Wastewater Needs Assessment, based on economic principles, the use of appropriate technology and the involvement of the private sector in the design, construction, operation and maintenance of facilities.
- b) Manpower Development and Training is considered one of the most critical needs, and USAID assistance will focus on a range of tasks including an objective manpower needs assessment, the development of a comprehensive sectorwide manpower development program and an O&M focussed on-the-job training and operator certification program for municipal water and wastewater facilities. Training support will range from the provision of equipment and materials for local training centers, to the sponsorship of in-country and off-shore training and applied research, and the development of a comprehensive publications program.
- c) Organizational, Management Finance and Accounting activities will include an analysis of NOPWASD's intra- and interorganizational relationships, an investigation of the suitability of the independent Water Company concept, the establishment of a sector wide quantitative Performance Monitoring System, strengthening municipal revenue generation and cost accounting, on determining practical means of meeting long range municipal capital needs and the development of a comprehensive public awareness campaign of water and wastewater concerns.
- d) Engineering and Environmental Control activities will focus on reviewing design standards and regulations, improving construction management practices and the introduction of appropriate technology, the development of a code enforcement program to ensure water quality standards and to prevent improper discharges of wastewater, particularly industrial (toxic) effluents.

3) Municipal Support Program (NOPWASD)

Local Government laws 43(179), 50(1981) and 53/1981 assign substantial responsibilities to municipalities for the provision of water and wastewater facilities and services. NOPWASD is expected to assist municipalities and is frequently called upon to design and construct facilities. NOPWASD is in the process of turning over 10 newly

constructed facilities to municipalities unable to provide proper O&M, and has asked USAID for assistance to train municipal plant operators. USAID will provide for four-long term technical advisors supported by up to nine person months of short-term advisors and up to 80 person-months of Egyptian experts to: (1) assess the nature of the problems in the ten cities and possibly others, (2) develop a remedial program in response to the problems, (3) provide start-up assistance where needed and train NOPWASD and municipal employees to serve as trainers and operators in their respective organizations. In addition to the technical assistance, USAID will also fund the procurement of spare parts, tools and other equipment as needed, as well as training aids and material. The Pilot O&M Assistance program will be integrated into the more comprehensive nationwide municipal assistance effort developed as part of the NOPWASD support program.

At project completion four or five water and wastewater treatment plants will be operated by municipal employees at a level adequate to meet basic needs, and NOPWASD will have a functioning nucleus of a municipal assistance program which it can carry to other cities in Egypt.

4) Miscellaneous Sector Support

While the MHPU and NOPWASD have the primary responsibility for the resolution of sectorwide issues, other ministries and central government agencies play a contributing role, and on some issues have a controlling position. Facilitating intergovernmental coordination and cooperation may require the provision of technical assistance to associated ministries such as the Ministry of Health, Irrigation, Finance, Local Government and others, in order to meet the sector objectives. USAID technical assistance would be available, if the need arises, to help resolve technical and jurisdictional issues concerning water and wastewater related environmental standards and enforcement procedures, the financial viability of sector organizations, and the organizational/managerial relationships between central and local governmental entities.

In addition, USAID will support a category of activities which are administratively separate but supportive of the overall GOE functions and related consultant efforts. These include premobilization studies and support, project evaluations and impact assessments, basic research adaptations, the sponsorship of conferences and seminars, and the establishments of twinning relationships between Egyptian and US institutions.

The financial support for the associated ministry activities and US institutions will be handled primarily under AID Direct contracting arrangements; i.e. IQC's. The short-term support funding is intended as a supplement to the long term Host Country Contracts, to be activated at the request of the MHPU and NOPWASD as the need arises.

B. End of Project Status

The Project completion is expected in mid 1988, although the PACD may be set for 1989. During the three year period several teams of expatriate and Egyptian advisors will interact intensively with a large number of GOE officials, the results of which will take many forms:

- the physical manifestations of progress will include such items as memoranda, analytical papers, plans, etc, but also purchases of equipment and training materials and the certification of employees who have participated in various management training programs,
- the task specific outputs are listed in the sections following the detailed description of activities to be accomplished over time and with the available resources. Each of the four major program components entails a series of specific outputs which together contribute to the achievement of project objectives;
- the covenants also list certain expectations which can reasonably be achieved within the given time frame and almost independently of the technical assistance effort provided in this project. The covenant conditions listed in the Project Authorization require only executive rather than legislative action, and, assuming the political good will of the participating agencies, the covenants can be easily met.

The critical litmus test of progress and measure of institutional change will be the decisions rendered by the legislative branch of government, which ratifies the executive recommendations. The Institutional Support Program does not include an explicit legislative action agenda, but recognizes the significance of legislative ratification for the various executive proposals, namely the

- National Water Tariff and Wastewater Surcharge Policy, which would mandate a gradual increase in locally retained revenues to cover 100% and 50% respectively, of O&M cost of municipal w/ww systems by 1991.
- Five-Year Capital Investment Plan, based on a comprehensive capital needs assessment for all primary and secondary cities and towns reflecting the acceptance of revised standards and the use of appropriate technology.

- Municipal Assistance Program for Urban Infrastructure, which would further clarify the complex intergovernmental relationship between the various central and local government agencies concerning the provision of water/wastewater facilities and services and advance MHPU/NOPWASD in the regulatory roles that would assume proper functioning of the sector.

The three policy proposals cited above have been discussed at length by GOE officials. The national tariff policy proposal has already advanced beyond the review by the Interministerial Council, the highest executive level review. However, prior to implementation the tariff proposal will still have to be endorsed by the affected Governors, who may request ratification by the National Assembly, as stipulated in Local Government Law.

C. Detailed Project Design

The organization structure, mission and function statements decreed in the various Presidential Orders provide part of the framework within which the CDPU and NOPWASD must develop their respective programs over time. They also serve as a framework against which USAID must evaluate resource requirements and allocate funding for technical assistance. The type and amount of resource requirements will evolve as the offices are staffed and as the individual incumbents develop their program priorities in coordination with their colleagues in other central and local government agencies.

The current, albeit temporary lack of staff at the MHPU and the insufficiently trained staff at NOPWASD, dictates the maintenance of flexibility in formulating the programmatic content and particularly the pace of the technical assistance effort. To be effective, the need for change has to be perceived from within the respective organizations and by its respective office holders, rather than be imposed from the outside.

The component description follows a format as outlined below:

The technical and capital assistance elements are summarized under the heading of a

- Ministry Support Program (MHPU),
- Central Agency Support Program (NOPWASD),
- Municipal Support Program (Pilot O&M Assistance),
- Miscellaneous Support Program involving associated GOE ministries and US institutions.

Each program component is further described in terms of the

- functional responsibilities to be addressed,
- agency needs or task outlines, requiring consultant assistance,
- inputs, such as manmonths of effort and skill levels required, procurement of commodities, grant support etc.
- outputs, such as reports to be issued, decisions to be rendered, expected recommendations, improvement processes initiated, etc.
- budget implications for USAID and the GOE.

An attempt has been made to present the description of agency needs

- in order of priority,
- within the hierarchy of functions of the respective organizational structures,
- in the sequence in which the tasks may be performed due to logistical requirements and staff assignment decisions.

A further distinction is drawn between activities performed under

- Host Country Contracting arrangements, and
- AID-Direct Contracts, such as PASA/RRSA, IQC, 8-A;

The former includes most of the competitively procured

- long-term and short-term expatriate and Egyptian advisors,
- training aids and other commodities, and
- support for training and research grants;

while the latter is essentially limited to the procurement of

- short-term expatriate experts for special review and evaluation functions, which could not be assigned to the primary consultant or staff.

1. Ministry Support Program

a) Functional Responsibilities

The MHPU, recently formed, has submitted proposals to the Prime Minister, defining its role and responsibilities. The decree, once issued, will confirm the responsibilities of the MHPU and help identify the areas into which a USAID assistance program for the water and wastewater sector should be directed. An illustrative list of the responsibilities of the Ministry is set out below:

- to represent the Water and Wastewater Sector in the Cabinet and at the People's Assembly.

- to direct policy formulation for the Sector.
- to ensure that adequate resources for both investment and operating costs are available for the Sector.
- to ensure that facilities in the cities and towns are upgraded and investment projects are properly executed.
- to ensure that technical assistance is available from NOPWASD to the Governorates, to facilitate the provision of adequate water and sanitary drainage services in the provincial and rural areas.
- to ensure that the policies being implemented by the different organizations and municipalities for the Sector are properly co-ordinated and follow national policy goals.
- to ensure that an adequate training program is successfully implemented in accordance with policies for the Sector.
- to monitor the performance of the Sector and advise the Cabinet and Parliament of progress.
- to co-ordinate studies and research for the Sector, including the use of consultants and technical cooperation at international level.

The MHPU has established an Advisory Committee for Public Utilities (ACPU), which comprises approximately seven former chairmen of water and wastewater organizations. The current Chairman of NOPWASD and the chairmen of the major Cairo and Alexandria water and wastewater organizations are members of the ACPU. This Advisory Committee, which meets on a bi-monthly basis, advises the Minister on items referred, including all sector-wide policy recommendations and municipal organization specific proposals. In addition, a new Training Directors Working Group is to be established through a Ministerial Decree.

Support for the Ministry would be focussed primarily on the needs of the Central Department of Public Utilities, and secondarily on the other sectors or divisions and as carried out in central departments and organizations. The matrix management approach to decision-making in the Ministry places responsibility for key functions affecting utility concerns into several divisions and departments thus necessitating a flexible response capability on the part of the USAID funded support program.

The contractor providing support for Ministry officials would be expected to staff a Secretariat of Expatriate Advisors and provide assistance to key officials and their respective staff, such as the Minister, the First Undersecretary responsible for the Housing Sector, the Undersecretaries heading the divisions concerned with planning, management, intergovernmental coordination, training, research, and the Undersecretary in charge of the Central Department of Public Utilities.

The generic tasks of the expatriate advisors include, but are not limited to the following:

- advising on organizational and policy matters covering a broad range of issues;
- assisting in the preparation of policy analyses and the formulation of long-range sector-wide strategic plans;
- assisting with the preparation of agendas and briefing material on matters requiring international intergovernmental and interagency coordination and cooperation;
- designing and administering a participant training program for managerial and technical personnel of the MHPU, NOPWASD and other Egyptian agencies which share sector-wide responsibilities;
- assisting in the procurement and management of short-term technical advisory services for various ministerial offices, and NOPWASD;
- assisting in the monitoring and evaluation of technical and capital assistance contracts managed by municipal organizations, which are under the direct supervision of the Ministry;
- other tasks as may be determined at a later date.

Specifically, the Secretariat will provide assistance to Ministry officials directly responsible for the various policy, program and staff functions which bear on the successful implementation of a sector wide development strategy. These functions and related tasks will be performed primarily by Ministry officials, with the assistance of the long-term or short-term expatriate and Egyptian advisors.

b) Response to Agency Needs (Task Outlines)

(1) Policy Guidance and Monitoring

- Review existing legislative mandates and executive decrees and analyze potential limitations or constraints to sector improvements;
- Review the need for intergovernmental cooperation and coordination and establish a mechanism for improved sector performance and service delivery;
- Review the need for International Donor Coordination, and develop a mechanism (committee structure) to facilitate the solicitation and coordination of financial and technical assistance from multi-and bi-lateral sources;

- Develop a comprehensive Management Information System (MIS) to support sector-wide development activities;

(2) Plan Review and Finance

- Coordinate with NOPWASD the preparation of a long range and comprehensive National Water and Wastewater System Needs assessment of Egypt's urban areas, particularly the identification of capital needs for new treatment plant, distribution and collections systems;
- Assist in the next Five-Year Plan and Annual Budget preparation and approval process, based on the NOPWASD prepared National Water and Wastewater System Needs Assessment;
- Develop an appropriate Tariff and User Charge implementation programs to cover municipal expenditures for operations and maintenance based on the National Water Tariff and Wastewater Surcharge Policy;

(3) Management and Coordination

- Provide expert staff support for other Housing Ministry functions which relate to the responsibilities of the CDPU and facilitate the review and approval requirements of other ministerial departments which have been assigned a significant role in the decision process with the Minister's choice of a matrix management concept for the reorganized MHPU.
- Provide expert advice on Ministry management and administrative needs to include personnel needs in the context of the proposed organization structure, analysis of compensation structure for employees and propose changes, develop management training program for employees, and define short and long-term office space and equipment needs for Ministry employees.
- Maintain an effective liaison with NOPWASD Division offices, its Board of Directors and the MHPU Advisory Committee for Public Utilities, to assure an early airing of potential policy issues and alternative strategies aimed at problem resolution;

c) Inputs

Implementation of the tasks as outlined above requires the provision of technical assistance and budget support to the MHPU staff responsible for the various functions. An outline of the personnel assignment and level of budget support for Phase I of the program follows.

Personnel Assignment

Ministry Employees

The MHPU has a total of 800 employees assigned to various functions and expects the number of employees to increase to a level of 1200 after the reorganization becomes effective. The CDPU currently is supported by three individuals of which two serve on a full-time and one on a part-time basis. The reorganization planners have tentatively allocated an additional 40 positions to the CDPU which could be filled through lateral transfers from other w/ww organizations.

A minimum staffing pattern would require the initial assignment of at least three additional professionals for the functions of:

- Policy Guidance and Monitoring,
- Plan Review and Finance,
- Management and Coordination,

as well as appropriate professional and clerical support staff. It is expected that the newly appointed Ministry officials possess the requisite professional background and experience to guide the consultants in their analytical efforts and to make use of the information provided. The hiring or transferring of additional staff in support of CDPU functions over time is defined in the "Covenants" of the Project Authorization.

Consultants

Expatriate Advisors will be retained for each of the functional areas listed above and assigned on a full-time basis for the duration of the project to support their respective counterparts. One will be designated as project leader, who will coordinate the managerial and logistical support needs of the contractor.

Egyptian experts from private sector consultant firms or the academic community are expected to provide data gathering and analytical support through and in coordination with the expatriate advisors. Egyptian professional support staff will be required on a full-time and part-time basis for the duration of the project. The estimated manmonth of effort for each task is summarized in Table 2(a).

US Technical Specialists are expected to supplement the skills of the long-term expatriate and Egyptian advisors in certain key areas to be determined as the need arises and to meet critical deadlines. Such short-term supplemental assistance may be warranted for special studies such as the development of a computerized Management Information System and related tasks which require a highly specialized knowledge and experience.

The Support Staff to include translators, secretaries/clerk/typists, drivers etc. to be hired on a full-time basis for the duration of the project, as well as general support staff to be hired on a part-time basis as needed is expected to supplement all the consultant efforts.

Equipment Procurement and Grant Support (for MHPU and NOPWASD)

Office equipment procurement will be partially supported from project funds to facilitate project implementation and to avoid possible delays. However, the provision and furnishing of offices for long-and short-term expatriate and Egyptian advisors and support staff will not be funded by USAID. The GOE is expected to provide the actual space in move-in condition, and provide furniture and basic equipment as part of the local contribution.

Computer hardware and software needed for the implementation of the Management Information System and related data and word processing tasks will be provided from project funds, based on a comprehensive assessment of long-range needs and compatibility with other systems currently in place or on order. The acquisition of computer facilities will also be contingent on the availability of competent programmers, operators and maintenance personnel, as well as projections of system capacity needs over time. It is expected that the initial computer needs can be satisfied with a number of desk-top units, at least until the Management Information System has been designed.

Table 2(a)

Summary Technical Assistance

	Long Term	Technical Short Term	Advisors GOE* Staff	Egyptian Experts
MHPU				
Policy Guidance/Monitoring	30	15	90	60
Plan Review/Finance	30	15	60	60
Management/Coordination	30	15	60	60
Subtotal	90	45	210	180
NOPWASP				
Policy and Planning	30	30	180	90
Manpower Development and Training	60	50	90	90
Management, Finance and Accounting	30	30	90	60
Engineering and Environment	30	30	90	60
Subtotal	150	140	450	300
MUNICIPAL				
Identification Assessment	16	2	24	-
Program Development	32	2	48	30
O+M Assistance/Training	54	5	108	50
Subtotal	102	9	180	80
MISCELLANEOUS				
Ministry Support	-	40	30	20
U.S. Institutional Assessment	-	50	30	30
Subtotal		90	60	50
TOTAL MANMONTHS OF EFFORT	342	284	900	610

* This figure does not include the effort of the Undersecretaries and General Directors

Source: Tables I-a through I-d in Technical Annex Volume I.

Management training grants for employees of the MHPU, NOPWASD and other government agencies involved in W/WW sector issues will be available throughout the project period. The program for training both in Egypt and the US will be tailored to the needs of up to 100 individual participants. A survey will be conducted following project authorization to identify the participating agencies and offices to determine personnel needs and professional interests.

The short-term management training program is a separate activity from the manpower development program to be undertaken by NOPWASD to meet long term sector needs. Funding support for the long-term manpower development program and specific training efforts could be a part of a second phase of the program.

d) Outputs

Progress under the project, will be measured by the performance of the MHPU, rather than by the productivity of its expatriate assistants. Although the expatriate long-term and short-term advisors are expected to contribute significantly to the achievement of overall objectives, the burden of providing evidence of progress must rest on the GOE officials. At project termination the MHPU is expected to have accomplished the following:

- clarified the intra-ministerial lines of authority, organizational and functional responsibilities,
- assigned permanent staff to deal competently with the variety of functional responsibilities,
- provided adequate office space and equipment for its employees, long term and short term expatriate advisors working on the project;
- completed the first phase participant training program for MHPU and NOPWASD personnel, as an integral part of a comprehensive career development plan,
- designed and partially implemented a comprehensive integrated Management Information System; including a sector wide Performance Monitoring System;
- completed the inventory of water and wastewater needs in Egypt and prepared a long range plan for meeting the physical financial and human resource needs,
- prepared the next five-year plan for the period of 1987-92 in cooperation with other central and local government entities,

- established a comprehensive management reporting system for the general organizations under its jurisdiction and public works departments of the cities and towns; to include tariff structure, cost analysis programs, accounting and financial reporting,
- established active twinning relationships between GOE organizations and US counterparts,
- other tasks, as agreed upon in the annual work plan and reports.

2. Central Agency Support Program

a) Functional Responsibilities of the National Organization for Potable Water and Sanitary Drainage (NOPWASD)

Presidential Decree No. 197 of 1981 defined the objectives and responsibilities of NOPWASD, which may be summarized as follows.

- Preparation and co-ordination of policymaking and plans for the Water and Wastewater Sector.
- Appraisal, design and implementation of national projects which are beyond the capabilities of local authorities or serve more than one Governorate.
- Undertaking studies and applied research in the field of water and sanitary drainage and participating in the establishment of quality standards for drinking water and wastewater discharges.
- Establish and enforce standard specifications and technical conditions for sewage, sanitary drainage and water supply projects, providing technical advice as required.
- Establish training centers to improve quality of design, construction, operation and maintenance of facilities in the Sector.
- Provide assistance to the Governorates, as required, for feasibility studies, design and construction of large projects, including the utilization of local and international consultants.

Legislative changes to the role of NOPWASD are not anticipated in the near future, although various amendments are under active consideration by the Board of Directors. It is recognized that to date resources have not been available to NOPWASD to fulfill all the functions described above. Consequently, it is envisaged that USAID assistance will be used to help NOPWASD extend its present role and ensure that it can properly fulfil the responsibilities defined in Presidential Decree No. 197 of 1981. NOPWASD is directly

responsible to the MHPU and it is the executive agency for the Ministry for issues of national importance, which require a co-ordinated approach for the Sector. In order to promote its role under this project the majority of USAID assistance will be employed in strengthening NOPWASD.

NOPWASD will be the recipient of a technical assistance program aimed primarily at its program and line function responsibilities. The contractor providing support to the various general departments and offices of NOPWASD would be expected to perform the following generic tasks, which are complementary to the tasks performed by the MHPU's Secretariat. A high degree of coordination and cooperation is expected of the two teams supporting the MHPU and NOPWASD, respectively. As the executive agency of the MHPU/CDPU, the NOPWASD functions must relate vertically and horizontally to those exercised by other Ministry divisions and local government agencies. Since there are, or should be no overlapping responsibilities between the two central government agencies, the consultants must be extremely sensitive in balancing their respective scopes of work and avoid the appearance of conflict.

The generic tasks for NOPWASD's expatriate advisors are similar to those provided by the team staffing the Secretariat, however, with a distinctly different focus. The tasks include but are not limited to the following:

- improving coordination with local governmental agencies and strengthening municipal departments;
- assisting in the preparation of analyses and the formulation of functional and system specific plans;
- assessing the national water and wastewater needs against an updated Urban Development Strategy and local comprehensive plans;
- preparing long range strategic and operating plans, identifying key performance measures and maintaining appropriate data basis;
- advising on organizational and internal management issues covering NOPWASD's areas of responsibility;
- assisting with the preparation of agendas and briefing material on matters requiring intra-and interagency coordination;
- developing a comprehensive sector-wide manpower training program based on a detailed manpower requirements study and objective training needs assessment;
- developing appropriate resource centers including training facilities and equipment, a research support program and a publication program; and

scientific knowledge and appropriate technology to avoid the duplication of efforts at Egyptian research facilities and to stimulate applied research into local problem solving. The basic knowledge transfer effort should be viewed as complementary to the applied research support funded through MHPU/NOPWASD.

The information exchange at national and international conferences on water and wastewater related topics is a critical factor in the professional growth of individuals as well as of organizations.

- providing technical analyses for a variety of tasks as outlined below and reporting the findings and recommendations in formats as agreed upon by NOPWASD and MHPU.

The NOPWASD support team will provide advisory services to various program functions for which the responsibility is shared between NOPWASD and the MHPU, particularly with regard to national policy formulation and implementation. In addition the contractor will be expected to render services in support of efforts aimed solely at strengthening NOPWASD's response capability with regard to municipal needs. The complexities of the tasks will require that the long term contractor receive support from short-term contractual staff retained through sub-contractual arrangements or AID-Direct such as IQC's.

b) Response to Agency Needs (Task Outlines)

The sequence of task outlines reflects the priorities established during the discussions with NOPWASD officials. A large number of tasks can be addressed concurrently, however dependent relationships between the same functions also mandate a sequential scheduling of activities.

(1) Policy, Planning and Economic Analysis

- Prepare a long range and comprehensive National Water and Wastewater System Needs Assessment, focussing on Egypt urban areas, and identify the capital needs for a) new treatment plant, distribution and collection systems (using appropriate technology), b) the expansion of existing systems, and c) the deferred maintenance problems, and rehabilitation based on urban growth and development trend data and policies identified by the MHPU.
- Assist in the development of investment strategies for consideration in the Five-Year Plan to be prepared by the MHPU/CDPU and the Annual Budgets, prepared by the municipal agencies and submitted by the respective Governors.
- Establish an economic analysis capability in support of the proposed review of policies and standards, programs and procedures.
- Encourage the use of private sector companies and ensure their participation in the delivery of water and wastewater services to consumers groups, as a cost effective alternative to public sector activities;

(2) Manpower Development and Training

- Conduct a manpower needs assessment, based on the long range comprehensive National Water and Wastewater System Capital Needs Study and determine skilled manpower requirements by job classification, governmental entities and system type.
- Develop a comprehensive sectorwide manpower development program responding to all aspects of the problem identified in the needs assessment.
- Develop a support program for on-the-job training activities at municipal water and wastewater facilities in secondary cities, in coordination with other donor funded training activities in the primary and secondary cities.
- Develop a Certification and Licensing Program in conjunction with a remedial/tutorial training effort for key treatment plant technicians, supervisors and private sector entrepreneurs interested in qualifying for O&M contracts of municipal plants.
- Coordinate the provision of research support to universities, the development of a comprehensive publication program, and the establishment and maintenance of Training Resource Centers and related services.

(3) Management, Finance and Accounting

- Evaluate the concept of independent water companies, particularly in the context of the newly established water company in Beheira and Kafr El Sheikh.
- Identify key performance measures and design a Performance Monitoring System for the water and wastewater sector as a whole, as an integral part of the Management Information System to be established at and maintained by the MHPU/CDPU.
- Investigate in cooperation with the General Organizations in Cairo and Alexandria, as well as the Suez Canal authority the need for public awareness of sector problems and develop a community liaison program aimed at the general population, at private sector interest groups, opinion shapers and decision-makers.
- Develop or strengthen municipal capability for local revenue generation, to counter the likely of decline of Bab I and II contributions for O&M expenditures, as implied in MHPU Tariff policy framework.
- Assist in the development or improvement and standardization of water and wastewater related cost accounting systems and strengthen municipal officials' estimating capabilities for O&M cost components.

- Advise on NOPWASD's management and organizational structure and relationship, and assist in identifying and developing personnel to meet the growing responsibilities.

(4) Engineering and Environmental Control

- Assist in the review of environmental standards, the current methods of application, enforcement regulations and practices, to include the feasibility of incentive programs to the municipalities
- Assist in the development of a code enforcement program to ensure proper laboratory testing procedures in the maintenance of water quality and to prevent improper discharges of toxic industrial effluents into primary treatment facilities.

Assist in improving construction management procedures, supervision and monitoring of on-site activities, to ensure quality control, on-time performance, and to minimize/reduce delay in the review and approval of plans and change orders.

c. Inputs

Implementation of the tasks as outlined above requires the provision of technical assistance from long-term and short-term expatriate and Egyptian advisors as well as budget support. An outline of the personnel needs and budget support for Phase I of the program follows. It is expected that all analytical tasks will be completed by the end of the first phase technical assistance contract and that the study recommendations will lead to an amended authorization for continued support of several key functions.

Personnel Assignments

NOPWASD Employees and Counterpart Staff

The agency reportedly has a total of 1367 positions authorized assigned to various functions in its Cairo headquarters. The staffing pattern includes 30 managers, 15 lawyers, 4 scientists, 245 engineers, 48 accountants, 51 administrators, 156 Assistant engineers, 275 technicians, 333 clerks, 209 service personnel. While the MHPU/CDPU has a distinct shortage of personnel, NOPWASD has been able to staff most of its functions assigned to it in the legislative mandate. It is expected that NOPWASD should have no difficulties in assigning counterpart staff to whom the expatriate and Egyptian advisors could relate, although language problems may make direct communication between NOPWASD officials and expatriate advisors a somewhat uncertain and challenging experience. A minimum staffing pattern would envision the designation of at least 15 staff members with whom the USAID funded team would cooperate. The effective designation of NOPWASD office directors and staff is a "Condition Precedent" to disbursement of USAID funds. Additional staff is expected to join the team over time and as needed and as provided in the "Covenants" of the project authorization.

Consultants

Expatriate Advisors will be retained for each of the following functional areas, i.e.

- Policy Planning and Economic Analysis,
- Manpower Development and Training
- Management, Finance and Accounting
- Engineering and Environmental Control

They will be assigned on a full-time basis for the duration of the project to the respective NOPWASD office directors and their staffs. One of the expatriate advisors will also be expected to serve as team leader and key liaison with the MHPU/CDPU advisory team.

Egyptian Experts from private sector consultant firms or the academic community are expected to provide the data gathering and analytical support on a full-time and part-time basis as projected and summarized in Table 2(a). They will also be expected to serve in a training capacity.

US Technical Specialists are expected to supplement the knowledge and skills of expatriate and Egyptian advisors on a short term basis, and in certain key areas to be determined as the need arises, e.g. in order to meet critical deadlines. Such short-term assignments are expected for all major functions.

Egyptian Support Staff will include translators secretaries/clerk/typists, drivers, etc. to be hired on a full-time basis for the duration of the project, to be supplemented by additional general support staff on a part-time, short-term basis as the need arises.

Equipment Procurement and Grant Support

Office equipment procurement (but not space rent) will be supported with project funds.

Computer hardware and software needed for the implementation of the MIS and related data processing tasks, is also contained in the MHPU Budget Support line item.

Research Support for the water and wastewater sector, in the past, has been provided to participating universities through the Academy for Scientific Research and Technology (ASRT). In the future NOPWASD would be expected to take a more active role in identifying topics related to the sector by coordinating the establishment of a long range research agenda, and guiding the research efforts of

academic institutions and individuals toward programmatic implementable solutions of actual problems. Efforts would be aimed at "applied" rather than "basic" research, i.e. adapting existing knowledge to local or national problems. Examples are contained in the list of topics suggested by ASRT in its five year plan included in Technical Annex Volume III.

The budget allocation to cover FY 86-88 requirements is deemed sufficient to supplement the official GOE research budget for the environmental sector and to generate additional activities.

Training Aids and Publications are a critical component in the overall manpower development program. A vast amount of technical literature of interest to water and wastewater personnel is available for purchase at commercial prices or free from foreign government and international agencies, equipment and material suppliers, associations and professional societies, academic institutions, individual donors, and written in many languages, except Arabic. The problem of eliminating the information gap in Egypt could be partially overcome through the establishment of a publishing and distribution system for water/wastewater related Arabic language material. As an interim step, the project would fund the establishment of a central Training Resource facility and the provision of services under NOPWASD management. The initial funding would cover the following procurements:

- equipment for a Training Resource Center, including a library facility, such as shelving units, map and catalogue files, desks and chairs, duplicating machines, computer terminal for accessing of Egyptian and overseas information sources, (NTIS, LOC etc.);
- acquisition of all current and relevant English and Arabic language textbooks, research monographs, study reports, sector assessments and evaluations, conference proceedings, journals, newsletters, corporate staff papers, promotional materials, videofilm, slides, photo recordings, O&M manuals, graphics, etc.;
- subscription to periodical literature, bookclubs, abstracting and translation services, catalogues, etc.

Training Centers are essentially passive and underutilized facilities, until and unless a trained staff is encouraged to involve potential users through the sponsorship of frequent presentations, seminars and other stimulating intellectual exchanges. The overall project budget provides for 'operating expenditures' to cover such activities from local currency contributions to the project.

d. Outputs

The listing of functions and tasks is suggestive of the range and the magnitude of the effort faced by NOPWASD and its long-term and short-term consultants. The priorities will be dictated by circumstances which may include the emerging needs of local jurisdictions, as well as the initiatives of NOPWASD personnel. The scope of work outlined above assumes that most of the analytical tasks will be performed during phase one of the program, while the bulk of implementation activities will be delayed pending authorization of funding for the phase two program.

While certain results can be documented by the consultants the actual progress can only be measured by the performance of NOPWASD personnel overtime. Although the expatriate long term and short term advisors are expected to contribute significantly to the achievement of overall objectives, the burden of evidence must rest on NOPWASD. At project termination, NOPWASD should have accomplished the following:

- Clarified inter-and intra-agency lines of authority and strengthened intergovernmental relationship with local governmental entities;
- Assigned, reassigned or transferred permanent staff to deal competently with the variety of functional responsibilities;
- Obtained adequate working space for its employees as well as for the long term and short term expatriate advisors working on the project;
- Participated and concurred in the policy analysis and program formulation efforts undertaken by the MHPU;
- Completed the national manpower requirements study and training needs assessment, developed a comprehensive training plan, trained some 400 on management, administration, and certified approximately 200 operators;
- Established a comprehensive publication program and action plan in support of the training program, procured publications for a central library and provided access to information sources;
- Developed a financial support and coordination program for applied research in cooperation with the MHPU, ASRT, the academic institutions and foreign institutions;
- Initiated a regulatory review program and code enforcement effort;

- Assisted local governmental units with the design of facilities, construction management, operation and management of plants, the establishment of laboratory testing procedures and monitoring efforts, financial accounting and reporting, and the development of a training program.

The accomplishments or lack thereof over the course of the project, will determine to a large extent the scope and focus of any subsequent support effort, if such is deemed necessary.

3. Municipal Support Program

a) Functional Responsibilities

Local Government Law 43/1979, 50/1981, and 53/1981, and the respective Executive Regulations and Amendments define the extent of municipal jurisdiction in the provision of infrastructure and services. Chapter 4 of the Ex. Reg. of 43/1979, entitled "Housing, Physical Planning and Utilities states that "local units of government shall assume, each within its jurisdiction, the following functions: (excerpts from page 94-85 of the English translation).

- Establishing, managing and maintaining potable water and sewage works and maintenance centers;
- Establishing sewage (sludge disposal) farms and organic fertilizer projects;
- Executing works related to environmental improvement and improving public sanitation;
- Maintaining firm control over sanitation departments and sanitation employees and supporting that department with the necessary equipment;
- Implementing laws, provisions and regulations regarding public works and the distribution of land and buildings;
- Checking, auditing and approving special procedures regarding public works related (capital and O&M cost,) increases and decreases;
- Imposing local fees and duties, modifying them, shortening their terms, granting exemptions or lifting them."

NOPWASD's relationship with municipal governments is defined by the degree of dependency of the latter on the former's technical expertise in designing and supervising the construction of water and wastewater facilities. At the request of a municipality, and through the office of the Governor, NOPWASD designs and executes water and wastewater works.

At completion of the facilities, NOPWASD turns the facilities over to municipal departments for management, operation and maintenance, unless the lack of trained staff requires NOPWASD continued involvement. In such cases, NOPWASD provides assistance until such time as the municipality is prepared to assume complete control.

NOPWASD was faced with such a situation during the spring of 1985 when 10 plants which its engineers had designed and supervised during construction were nearing completion and required start-up and O&M assistance. The new plants, type and start-up dates are listed below:

Potable Water Treatment Plants:

Completion Dates:

1. Fayid (Suez Canal) - 400 lps Rapid Sand	Feb. 1985
2. Quseir (Red Sea) - Desalinization Plant	Sep. 1985
3. Kafr Dawar (Delta) - 200 lps Rapid Sand	March 1985
4. Tanta (Delta) - 400 lps Rapid Sand	June 1985
5. Ashmoon (Delta) - 50 lps Rapid Sand	March 1985

Wastewater Treatment Plants:

1. Qena (Upper Valley) 40,000 m ³ /d Trickling Filters	March 1985
2. Sohag (Upper Valley) 40,000 m ³ /d Trickling Filters	April 1985
3. Menouf (Delta) 12,000 m ³ /d Activated Sludge	April 1985
4. Luxor (Upper Valley) 24,000 m ³ /d Trickling Filters	June 1985
5. Samanoud (Delta) 18,000 m ³ /d Trickling Filters	Feb. 1985

Other cities have plants under design or in various phases of construction and will also require trained personnel or a contractor to operate and maintain these facilities.

O&M problems also exist at plants constructed some time ago, and requests for assistance have been received from small cities as well as the large ones, including Cairo's GOGCWS. NOPWASD is not in a position to meet the growing municipal needs.

USAID has been asked to help NOPWASD to provide technical assistance and training to municipal employees so as to enable them to operate and maintain the plants as designed, and to perform other utility related managerial and administrative functions.

USAID's emergency response program will focus on developing capabilities within NOPWASD for assisting municipalities in carrying out this respective operation and maintenance programs.

The contractor selected to provide support to the respective municipalities would be expected to address the following generic tasks:

- assessing the nature of the O&M related problems in the 10 cities listed above and possibly others;
- developing a remedial program in response to the perceived needs;
- provide start-up O&M assistance at selected facilities, i.e. up to two water treatment plants and three wastewater treatment plants;
- train NOPWASD and municipal employees to serve as trainers in their respective organization;
- procure and place into service required equipment, spareparts training aids, materials etc.

It is expected that the tasks will be performed under a host country contract.

b. Response to Agency Needs (Task Outlines)

(1) Assessment of O&M Needs

- Investigate the physical and mechanical characteristics of the 10 water and wastewater plants based on a basic checklist of design criteria and performance measures.
- Determine O&M personnel skill requirements for each system type in the 10 cities and in other cities with similar systems. Select different system types and cities in several regions for demonstration purposes.

(2) O&M Program Development

- Prepare system specific O&M forms, checklists, and other written material, graphics, audio-visual aids, which would serve as the basis of a comprehensive and complete O&M program for each of the selected demonstration plants.

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- Develop a training program for O&M personnel in the demonstratic , cities for the various water and wastewater system types. Distinguish between a stationary on-the-job training effort and a mobile supplementary training effort, to be rotated among the cities.

(3) O&M Assistance and Training

- Assist in the final testing and start-up of treatment plants in the selected cities.
- Provide on-site training for NOPWASD and Municipal employees.

c) Inputs

Implementation of the tasks as outlined above requires the provision of technical assistance and budget support to NOPWASD acting on behalf of municipal authorities. An outline of the personnel assignment and level of budget support follows.

NOPWASD and Municipal Employees

NOPWASD is expected to provide the services of at least six engineers and technicians to work with the technical assistance team throughout the duration of the project. The NOPWASD personnel will participate in all phases of the program and assume primary responsibility for ensuring the coordination with and cooperation of municipal authorities. Specifically, NOPWASD supervisors and engineers from the civil, mechanical and electrical engineering departments will participate in the assessment phase and the plant start-up phases. The services of technicians, draftsmen, secretaries and other support staff will be needed during the development of the standard operating procedures, such as manuals, forms, checklists etc. Personnel of NOPWASD's training department will be expected to participate in all phases of training design and implementation.

Consultants

Expatriate Advisors/Experts will be expected to be skilled in water and wastewater processes, electrical and mechanical systems, engineering, personnel training and administration. Up to five experts are expected to perform the tasks as outlined on a full-time basis, over a 30 month period.

Egyptian Experts from private sector consultancies may be required to support the expatriates in the development of standard operating procedures and the training of municipal employees, as summarized in Table 2(a). Technical assistance may include the provision of engineering expertise, translating of written material and interpreting of presentations and discussions.

US Specialists on short-term assignments may be necessary to complement the team of long-term expatriate advisors in the analysis and resolution of particular technical problems.

Equipment, Material Procurement and Grant Support

Office space, logistical support and secretarial services will be provided by NOPWASD, as part of the local contribution to the Institutional Support Program

Equipment, spare parts, tools, instruments, construction modifications, materials and chemicals deemed essential for the effective operation of the plants, will be provided by NOPWASD and supplemented if necessary by USAID funds as budgeted.

Training materials, such as the production of manuals, forms Standard Operating Procedures, graphics, audio-visual aids, models and cut-out samples, will be procured from USAID project funds, supplemented, if necessary, from NOPWASD's local currency account.

d) Outputs

The list of functions and tasks is only suggestive of the range and the magnitude of effort to be undertaken by the expatriate team in support of NOPWASD and its municipal clients. The rather undefined nature of the problem and the limitations placed on the team as the result of current conceptualization and scope of work, and budget allocation, requires the maintenance of an open ended set of expectations. However, at the end of the projected 30 month effort, the following should be achieved:

- Four or five water and wastewater treatment plants will be operated by municipal employees at a level adequate to meet basic service needs.
- The beginning of system of standard operating procedures, manuals, forms, checklists, graphics, instructions etc., which will have been implemented and tested for acceptability and replicability for four or five cities.
- The nucleus of trainers at NOPWASD's Training Department will have been expanded sufficiently to provide an ongoing 'training of trainers' program.
- Municipal employees in at least four or five cities will have been trained to perform a variety of fundamental O&M tasks.
- Equipment, tools, materials, training aids will have been provided to NOPWASD to supplement its limited inventory.

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4. Miscellaneous Sector Support

a) Functional Requirements

Primary responsibility for the water and wastewater sector is vested in the MHPU (Law 83, 1962 and its regulatory decree No. 648), in NOPWASD (Presidential Decree No. 197, 1981) and in the Governorates and municipalities (Law 43/1978, 50/1981 and 53/1981). Other central governmental agencies have been assigned a secondary, yet critical role, which influences the performance of the primary actors in several important areas of concern:

- environmental enforcement, (MOH,MOI),
- organizational effectiveness, (MOCA/CAQA),
- service delivery capability, (MOLG/ORDEV),

Three of these areas of concern have been identified in the Memorandum of Understanding (MOU) as target areas, requiring significant improvements as a condition of further capital funding of sector projects.

While the MHPU/CDPU and NOPWASD officials are responsible for initiating and maintaining a coordination effort with associated ministries and agencies, MHPU and NOPWASD would not have sufficient financial resources and technical expertise available to assist their sister ministries in developing the appropriate response mechanisms and policy positions necessary to meet the sector improvement objectives expeditiously. USAID assistance may be required to supplement the cooperative efforts of the respective ministries and agencies through the provision of short-term technical expertise and related budget support as outlined below.

In addition, AID's internal regulations and overall program objectives require the allocation of funds for special purposes and subprojects which represent a category of activities separate from but supportive of the GOE functions and related consultant efforts. Funds would be required to pay for services rendered by various US institutions in support of

- evaluations and impact assessments,
- basic research adaptations,
- sponsorship of conferences and seminars,
- establishment of twinning relationships.

Financial support for the associated ministry activities and USAID managed tasks would be handled under AID direct contracting arrangements.

b) Response to Agency Needs Task Outlines

Detailed task descriptions aimed at resolving some or all of the issues outlined below, will be prepared by the expatriate advisors in cooperation with the MHPU and NOPWASD, if and when the need for additional short-time assistance arises.

(1) Associated Ministry Support

- Assist in clarifying the responsibility for setting and enforcing environmental standards, particularly those concerning the quality of water and wastewater treatment. Currently, shared by the Ministry of Housing (Law) 83/1962 and regulatory decree No. 649), the Ministry of Health, (Presidential Decree 864/1969 and regulatory decree 470/1979), the Ministry of Irrigation (Law 48/1982 and regulatory decree No. 8/1982) and coordinated by the Interministerial High Committee for Environmental Affairs (Prime Ministerial Decree No. 10/1982), and supported by the Environmental Affairs Agency.
- Assist in clarifying the responsibility for ensuring the sector organizations' financial viability, currently shared by the Ministry of Housing, the Ministry of Finance, the Ministry of Planning and International Cooperation and the Governors overseeing the respective municipal agencies and organizations.
- Assist in clarifying the responsibility for devising and approving managerial and administrative structures for sector organizations and agencies, currently shared by several central governmental authorities, such as the Ministry of Housing, the Ministry of Cabinet Affairs, the Central Agency for Organization and Administration, the Central Agency for Management and Manpower Development and various other interest groups.
- Assist in identifying project needs for personnel and developing systems to choose, assign and train competent staff in MHPU, NOPWASD and other agencies to be assigned to the project on a full-time basis.

(2) US Institutional Assistance

- A project evaluation at mid-point and after termination of the project. A new authorization is expected to be performed by outside experts or amendment for a possible phase II Institutional Support Program would not only require an evaluation based on the typical criteria set out in AID regulations, but on a more comprehensive sector reassessment and analysis of specific problem areas. USAID expects to draw on expertise available under the AID/W W.A.S.H contract or from other sources for the preparation of the required analysis and documentation. The specific evaluation needs are addressed as part of the Implementation Plan of the project paper.
- The adaptation of US basic research into water and wastewater related issues to the Egyptian and Middle Eastern environment has been offered by scientists associated with various research institutions, such as the F. Kettering Institute of EPA, the National Science Foundation, the Lamont Dougherty Institute of Columbia University, and private/non-profit research laboratories associated with universities or large A&E corporations. USAID will facilitate the transfer of

-36-

scientific knowledge and appropriate technology to avoid the duplication of efforts at Egyptian research facilities and to stimulate applied research into local problem solving. The basic knowledge transfer effort should be viewed as complementary to the applied research support funded through MHPU/NOPWASD.

- The information exchange at national and international conferences on water and wastewater related topics is a critical factor in the professional growth of individuals as well as of organizations. Conferences tend to highlight accomplishments they lend credibility to new problem solving approaches, and honor the organizations which succeed against seemingly insurmountable odds. Egypt's water and wastewater sector is on the threshold of major changes which would be of interest to the national and international community. Members of the international division of the major US water and wastewater organization (e.g. the American Water Works Association (AWWA) and the Water Pollution Control Federation (UPCF) have expressed their intention to organize an international conference focussing on Egyptian and Middle Eastern issues. USAID may want to assist defraying part of the organizer's logistical cost, as well as the cost associated with the active participation of GOE officials in any major conference or series of seminars.
- The twinning of organizations with similar responsibilities but different degrees of experience is a technique, the success of which has been demonstrated in several parts of the world, since the IBRD initiated it 10 years ago. Proposals have surfaced to establish twinning relationships between an Egyptian general organization for water or wastewater and a US utility, between an Egyptian municipal public works department and the counterpart agency of a US city, between NOPWASD and (US Environmental Protection Agency (EPA) between MHPU and US Department of Housing and Urban Development (USHUD), between an Egyptian professional Society and a US counterpart association, between an Egyptian Environmental Interest Group and a US Private Voluntary Organization or Lobby. AID/W is committed to exploring the legal and contractual implications of the concept. If the GOE agencies generate sufficient interest in the exchanges, USAID will be prepared to fund part of the cost on a demonstration basis.

c) Inputs

Implementation of the tasks as outlined above requires the provision of short-term technical assistance and budget support to various GOE ministries and US institutions. An outline of the personnel requirements and level of funding follows. Most of the tasks represent secondary priorities and therefore are not time constrained. It is expected that the activities suggested in the task descriptions would be initiated during phase I of the program, but will most likely be carried out during phase II of the program.

Associated Ministry Employees

The ministries participating in the analyses and interagency deliberations over water and wastewater issues will be expected to assign as many of their professional staff as are available or as warranted from their particular point of view. It is not possible at this time to project the degree of interest which could be mobilized by the USAID offer of technical assistance. Suffice it to say that the respective executive staffs of the various ministries are prepared to address the issues constructively in the light of new conceptualizations and data.

Consultants

US specialists on short-term assignments will be necessary to complement the team of long-term expatriate advisors assisting the staffs of MHPU and NOPWASD. Action on most tasks would be initiated by the expatriate advisors under the direction of MHPU staff. The estimates of Egyptian experts and support staff needed are subject to adjustment pending further clarification of the task objectives, and are estimated in Table 2(a).

Equipment, Material Procurement and Grant Support

Logistical support, publication, printing and grants to GOE and US participants for one or several national or international conferences or seminars focussing in part or completely on the water/wastewater related issues of Egypt. The amount set aside will fund those aspects of a conference which highlight the institutional issues of the sector.

Procurement of basic research papers, lease of electronic transmission facilities and printing of data items, associated computer terminals & modems, processing and data storage equipment, etc., used in the adaptation of US basic research to Egyptian water/wastewater problems. The amount set aside may be used to defray the lease cost of existing transmission equipment and channels (funded under a separate USAID S&T project at Cairo University and MIT) as well as the cost of procuring separate hardware and software for research institutions not presently associated with the University Linkage program.

d) Outputs

The outputs will be generally supportive of outputs previously described for the MHPU, NOPWASD and Municipal Training Programs. In addition a mid-term and final evaluation will have been completed jointly by the GOE and USAID.

III. PROJECT COST ANALYSIS

The original PID identified an authorization level of \$20 million for a four year technical assistance program, with a first obligation expected in the 4th quarter of FY 84. It also stipulated a host country contribution of \$5 million. Due to the shifting of responsibilities from the MRLR to the MHPU and USAID internal staff turn over, program initiation was delayed for almost a year. Consequently, funding levels were also adjusted to \$15 million and the initial life of project core elements reduced to three years, with a subsequent authorization of a second phase pending the results of the interim evaluation and the preparation of a detailed work program and cost estimates. The \$15 million over three years is deemed sufficient to meet start-up cost for phase one of the long range program.

A. Cost Assumptions

T.A. Costs Assumptions

The nature of the Institutional Support Program will engender expressions of interest from the large international A&E companies active in the design and management of water and wastewater systems, from universities and associated international management and development institutes, and from small consultant firms, which assemble teams of experts drawing on independent professionals. The cost assumptions underlying the preparation of the budget figures are based on a review of USAID experience with similar projects, and generally reflect the mid point of the range of 'fully-loaded' cost factors.

The fully loaded cost per man-months of effort of a contract employee of a small company ranges between \$8,000 and \$14,000, while the fully loaded cost of an employee of a large international A&E firm ranges between \$12,000 and \$16,000 per man month. Expatriate experts on short-term (one to three month) assignment generally have a lower overhead rate. Table 3(a) summarizes the fully loaded mid-life cost assumptions for the purpose of budget preparation.

Table 3(a)
Personnel Cost Assumptions (per manmonth)

<u>Contract Staff</u>	<u>Cost Assumptions in US\$</u>
<u>Expatriate Advisors:</u>	
long-term	16,000
short-term	14,000
<u>Egyptian Experts:</u>	
long-term	2,500
short-term	2,500
<u>GOE Employees</u>	800

Commodity Cost Assumptions

The tentative budget allocations are based on preliminary information and serve as guidelines and expenditure ceiling. It is expected that minor reallocations of budgeted funds will occur as detailed cost estimates become available; however, major cost items may require a reconsideration in the context of a 'phase two program' authorization. For instance, the cost of computer facilities for the proposed Management Information System is budgeted at \$1,000,000, even though the preliminary estimates of the MHPU desired comprehensive computer installation program places total cost in the range of \$4 to 5 million. It is assumed that USAID funds would cover an initial phase with expansion considered as part of a phase II program.

Similarly, little is known as yet about NOPWASD's equipment and training material needs which will be the subject of detailed analysis as part of the technical assistance effort. The budget ceilings placed on the various categories reflect the intention to procure a limited amount of equipment and materials and to defer other needed items to a possible later phase of the project and the GOE.

Grants to third parties include GOE employees participating in various management training programs, academic researchers at various Egyptian universities interested in participating in applied research endeavors and US based scientists interested in facilitating the transfer of existing basic research findings for adaptation to Egyptian problems addressed jointly by GOE agencies and research institutions.

Training Grants are calculated at \$5000 per month of training in the US, including observational travel and attendance at short-term (two-six week) courses. The award of and conditions attached to research grants will depend on further analysis to be performed as part of the technical assistance efforts. Suffice it to say that the nature of the entire research support program will be tied to the achievement of stated project objectives. The cost estimates are shown in Table 3(b).

Contingency and Inflation Factors

Inflation factors are reflected in the cost assumption for salaries of expatriates and the procurement of commodities. The cost factors selected for budget calculations represent the high range of salaries and overhead cost at the midpoint of the project period. Contingency has been allowed to allow for unforeseen items and cost overruns.

B. Budget Estimates

The budget is based on detailed estimates of personnel requirements by man-months of effort of expatriate advisors, Egyptian experts serving for the duration of the program, or on short-term assignments for each of the four program elements. Technical Annex Volume I, Tables I-a through d summarize the personnel requirements by program element, function and task group.

Based on these estimates; the various cost factor assumptions from Table 3(a), and the equipment and grant cost estimates from Table 3(b), cost projections have been prepared for each task group, function and program component as shown in Table 3(c).

C. GOE Financial Contribution and Recurrent Cost Analysis

Preliminary cost estimates of various project components and tasks have identified local currency requirements to cover the following costs:

- salary cost of Egyptian experts working with expatriate USAID funded advisors, and salary cost of GOE employees participating in institutional support activities on a full time or part-time basis.
- rent and utility charges for the office space to be occupied by long term and short term expatriate advisors and their support staff;
- operating expenses associated with USAID procured equipment such as computer hardware and other office machinery, the central and mobile library facilities and data retrieval and dissemination services;
- salary bonuses and incentives for municipal employees participating in the Pilot O&M training program and associated activities;
- costs of rehabilitating/improving works under the Municipal Support Program.

The USAID portion of the three-year disbursement is estimated at \$15 million, of which \$9.5 million are allocated for salary expense of the long-term and short-term expatriate consultants, \$3.5 million of non-salary expenditures for equipment, materials and grants to various entities and \$2.0 million for contingency and inflation. The GOE is expected to contribute the local currency equivalent of \$5 million, or 25 percent of total project cost, in the form of in-kind contribution, i.e. for the provision of office space and salaries for its employees, and Egyptian experts and support staff as well as some cash support for various programs.

There may be a financial burden on NOPWASD, since the organization is not yet fully staffed and will have difficulties to transfer laterally or to promote to higher job classifications a sufficient number of employees to handle the program requirements. Only 920 of the 1378 authorized positions are currently filled. The vacancies have not yet been sufficiently appealing or financially rewarding to attract a large number of candidates from other GOE agencies or from the universities.

The expenditure which may be perceived as a burden on the GOE treasury, might be the requirement to contribute a certain amount as incentive payments and bonuses for municipal employees participating in the O&M Assistance and Training Program.

Table 3 (b)
Summary of Equipment and Grant Cost Estimates
(in 1985 \$1000)

TYPE	MHPU		NOPWASD		MUN		MISC		SUBTOTAL		GRAND TOTAL
	F.X.	LOC	F.X.	LOC	F.X.	LOC	F.X.	LOC	F.X.	LOC	
TRAINING EQUIPMENT											
LAB INSTRUMENTS			100						100		
CENTER FACILITIES			100						100		
LIBRARY FACILITIES			30		20				50		
AUDIO VISUAL			50						50		
SUB-TOTAL			280		20				300		300
TRAINING MATERIAL											
MODELS			70		30				100		
HANDS			30		20				50		
TRANSLATION			100	70	50	30			150	100	
PUBLICATION			250		50				300		
VIDEO PRODUCTION			100		50				150		
SUB-TOTAL			550	70	200	30			750	100	850
TRAINING IN EGYPT AND U.S.											
MGT TRAIN. IN EGYPT		10		15							25
LANGUAGE TRAIN. IN EGYPT		10		15		10					55
OPERATOR TRAINING				75							75
TRAVEL TO U.S.		15		20		10					45
PERCEN	105		175		20		50		350		
HONORARIUM	40		125		10		25		200		
SUB-TOTAL	145	35	300	120	30	20	75		550	200	750
STUDIES AND CONFERENCES											
APPLIED RESEARCH							100		100		
CURRICULUM DEVELOP							100		100		
LOCAL CONFERENCES	50								50		
SUB-TOTAL	50						200		250		250
DATA MGT INFORMATION CENTER											
PC HARD AND SOFT WARE	40		50		10				100		
MINI COMPUTER HARD WARE			900						900		
COMPUTER SETUP		20		480						500	
SUB-TOTAL	40	20	950	480	10				1000	500	1500
LOGISTICS											
OFFICE SPACE		40		30		30					100
LIBRARY AND TRAIN. CENTER				150							150
OFFICE EQUIPMENT	40		60						100		
SPARE PARTS					500				500		
CONSTRUCTION						1000					1000
SUB-TOTAL	40	40	60	180	500	1030			600	1250	1850
GRAND TOTAL	275	95	2140	850	760	1080	275	0	3450	2050	5500

Table 3(c)
SUMMARY OF TOTAL PROJECT COST ESTIMATE

TASK DESCRIPTION	TECHNICAL ASSISTANCE			COMMODITIES			SUB-TOTAL		GOE LOC	GRAND TOTAL	
	USAID F.X.	LOC	TOTAL	USAID F.X.	GOE LOC	USAID F.X.	LOC	TOTAL			
MHPU SUPPORT	1665	405	2070	618	275	115	1940	405	2345	733	3078
NOPWASD SUPPORT	3490	870	4360	1110	2140	850	5630	870	6500	1960	8460
MUNICIPAL SUPPORT	1443	333	1776	344	760	1085	2203	333	2536	1429	3965
MISCELLANEOUS SUPPORT	990	270	1260	173	275	0	1265	270	1535	173	1708
SUB-TOTAL	7588	1878	9466	2245	3450	2050	11038	1878	12916	4295	17211
CONTINGENCY & INFLATION	-	-	-	-	-	-	-	-	2084	705	2789
TOTAL	7588	1878	9466	2245	3450	2050	11038	1878	15000	5000	20000

Source: Annex J, Technical Annex Volume I, and Table 3(b).

52

D. Financial Projections

The activity schedule for technical assistance and procurement of commodities reflects the sequence in which the tasks should be undertaken as well as the time it takes to retain a contractor and to mobilize the personnel. A number of tasks will be undertaken concurrently and great care must be exercised in assuring the availability of both local and expatriate staff. It is expected that the activity schedule will be revised in the work program to reflect host country and contractor considerations.

The tentative schedule of activities included in the Implementation Plan served as the basis for projecting expenditures through FY 1988. Table 3(d) summarizes the financial projections for the four major program components for both the total \$20 million program and the USAID funded \$15 million program.

Although project authorization and obligation of funds is expected in FY 1985, project mobilization efforts will delay actual disbursements until FY 1986. The USAID annual obligations and disbursements are expected to be \$5 million for each of the three years. The GOE obligations and disbursements are also expected to start in FY 85. This provides sufficient time for the GOE to obtain authorization for the local currency contribution to the project.

E. 611(a) Considerations

Section 611(a) of the Foreign Assistance Act requires that no agreement or grant which constitutes an obligation of over \$100,000 of US funds shall be made "if such agreement or grant requires substantive technical or financial planning" until (1) "engineering, financial, and other plans necessary to carry out such assistance, and a reasonably firm estimate of the cost" to the US Government have been completed, and (2) any necessary "Legislative action within the recipient country "has occurred or can be expected to occur in a timely manner.

The considerations of adequacy of planning required by Section 611(a) have been met. The technical and financial analyses presented in the Project Paper, along with the Implementation Plan, have identified the specific interventions required, have costed out these interventions, and have addressed the question of what interventions can be financed, at what level, with available AID resources. The MHPU and NOPWASD have proven to be fully competent to review designs, award contracts, and monitor contract performance.

The Project Grant Agreement must be ratified by the People's Assembly. In the past, such ratification has taken place in a timely manner. No further legislative action on the part of the GOE is required for Project implementation. However, project outputs themselves may lead to follow on legislative changes.

Table 3(d)

PROJECT ESTIMATED SUMMARY CASH FLOW

TASK DESCRIPTION	YEAR 1			YEAR 2			YEAR 3			YEAR 4			TOTAL		GRAND TOTAL
	USAID F.X.	LOC	GOE LOC	USAID F.X.	LOC	GOE LOC	USAID F.X.	LOC	GOE LOC	USAID F.X.	LOC	GOE LOC	USAID	GOE	
MEPU SUPPORT	655	134	255	1760	160	290	525	111	183	0	0	0	2345	733	3078
NOPWASD SUPPORT	1295	260	440	1760	350	570	2045	260	660	615	0	290	6500	1960	8460
MUNICIPAL SUPPORT	930	50	715	640	140	568	633	143	146	0	0	0	2536	1429	3965
MISCELLANEOUS SUPPORT	470	100	70	400	80	50	215	45	30	180	45	23	1535	173	1708
SUB-TOTAL	3350	544		3560	730		3418	559		795	45				
SUB-TOTAL	3894	1480		4290	1483		3997	1019		840	313		12916	4295	17211
CONTINGENCY	626	20		700	117		663	381		95	187		2084	705	2789
GRAND TOTAL	4500	1500		4990	1600		4660	1400		935	500		1500	5000	20000

IV. INSTITUTIONAL ANALYSIS

Water and Wastewater facilities and services are provided within the framework of a complex central and local governmental system. The system is tightly integrated in that authority, responsibility, forms of organization and managerial/administrative procedures are prescribed in national legislation which is applied uniformly throughout the country. In other respects, the system is highly diffuse, in that it spreads responsibility and authority over several levels of government and a number of different agencies.

Following a period of a high degree of centralization, Egypt has since the early 1970's been moving toward a decentralized decision making process. The extent of decentralization and the ultimate form and content it will take is still uncertain. This uncertainty and the ambiguity in the decision process has led to tension (and occasionally to creative solutions to problems) but also to ambivalence and inaction. In the wake of this evolutionary trend the water and wastewater organizations are caught in a quandry, which is exacerbated to a large extent by the international donor community's assistance efforts.

1. International Donor Concerns

More than a dozen western nations as well as several multi-lateral aid organizations have contributed and continue to contribute to Egypt's growing needs in the water and wastewater sector. Numerous Sector Assessments have been conducted by expatriate consultants in preparation for a variety of assistance packages. The most notable and comprehensive assessments have been undertaken by the UNDP/World Health Organization in 1977 and 1984, by the World Bank in 1977, 1979 and 1981, by the Egyptian Academy for Scientific Research and Technology in 1984, and by USAID in 1978, 1983 and 1985.

Every assessment documented the immediate and long range needs of a rapidly growing urban and rural population, recommended a series of self-help measures, identified projects requiring financial and technical assistance by the respective donors, and urged numerous institutional changes, either to facilitate project implementation or to accommodate broader program objectives. The advice offered by international donors fills several shelves in a large bookcase. A partial listing of available documents is included in Technical Annex Volume III.

Fortunately, the donors did not only offer advice but also loans at concessionary terms, and grants. The massive amount of financial aid and the provision of technical knowledge has severely strained the absorptive capacity not only of the organizations responsible for the operation of water and wastewater facilities, but also of those agencies responsible for the provision of policy guidance, the preparation of appropriate standards and regulations, human resource development and the maintenance of quality control over all aspects of the sector.

The project orientation of the capital assistance effort also dictated a format for the technical assistance, which in turn was focussed narrowly on the objectives of "facilitating an expeditious project implementation" and "protecting the donor investment" by ensuring adequate O&M practices. The narrowness of the institutional support focus is understandable and acceptable when viewed in the context of a single project, -as in the case of the IBRD'S Water Company project in Beheira. However, it is not a useful model of institutional intervention, when one realizes the large number of ideologically diverse international donors, undertaking multiple projects in various localities, involving three levels of government (central, governorate, and municipal), and, countless political jurisdictions in Egypt.

2. USAID's History of Institutional Support

USAID's commitment to the water and wastewater sector of Egypt also involves a multiplicity of governmental agencies. USAID funded projects interface with the primary interest groups in a number of locations and in a variety of ways. The project portfolio involves governmental entities in all of the 26 governorates, primarily through the 'Decentralization Support Program', in six of the nation's secondary cities and in the two primary cities of Cairo and Alexandria. It also involves central governmental agencies with direct responsibility for sector affairs, such as the Ministry of Housing and Public Utilities, the National Organization for Potable Water and Sanitary Drainage, as well as several Ministries and Agencies whose decisions indirectly affect the sector as whole.

USAID's technical assistance effort to date can be categorized in terms of a) architectural and engineering services, b) project management and related knowledge transfers to local project supervisory staff, c) manpower training and d) special project related studies. Although significant amounts of resources have been expended or are committed, the impact on the staff capability of local organizations cannot be easily measured. It was the absence or lack of staff capability at the local level which necessitated the retention of expatriate experts, either as substitutes for local staff or to work very closely with local 'counter part' staff. Where trained personnel was available to work with expatriate advisors, significant knowledge transfer has occurred and reportedly used to full effectiveness.

It could be argued that the work of expatriate technicians and managers over time will have a significant demonstration effect on local organizations. However, no attempt has been made to evaluate the cost effectiveness of this on-the-job knowledge transfusion process, and the issue of the cost effectiveness of the model may well be moot, since a realistic alternative was not then and is not now available for comparison.

Whether the 'trickle-down or perc-up' theory of development applies to the institutional environment as well, remains an unanswered question. The general development literature has cast doubt on the viability of the concept of generating significant secondary benefits through the achievement of primary objectives. In the case of the provision of project specific technical assistance it is doubtful that the spill-over effect will be sufficient enough to influence sectorwide decision processes and structural/organizational change at the national level.

In recognition of the necessity to provide a sectorwide technical assistance effort, in parallel with the project specific technical assistance, USAID retained in 1977 a US/Egyptian consultant team to analyze the sector-wide problems and to recommend solutions which could be implemented by the local organizations, assuming the concurrence by the central governmental agencies and other interested parties. The twelve volume series of 'Management and Tariff Studies Relative to the Water/Sewerage Systems of Egypt' prepared by a reputable US/Egyptian Joint Venture consultant team is the most comprehensive document ever prepared for any developing country. It covers in great detail every aspect of utility management, yet did not accomplish its objectives. There are a number of possible explanations that may account for the lack of impact:

- the lack of absorptive capacity of local and central government agencies,
- the choice of a critical premise, namely that of the political feasibility in Egypt of the 'independent utility company' concept,
- the lack of a commitment for an immediate and longrange follow-up implementation program,
- the lack of concern for the critical nature of sector external constraints

Only a few people were prepared or able to review a twelve volume study and act on its many recommendations. The study set out an overwhelming task, and no single manager of an organization was in the position to implement or even set in motion, a gradual implementation of the long range program.

The project also did not take into account the interactive nature of central and local government decision structures. The drafters of the 'Terms of Reference' for the consultant team attempted to simplify the task of strengthening local water and wastewater organizations by isolating them as much as possible from the inherent conflicts of the local and national decision structure. The aim of the consultant study was "to allow the 'utilities' the appropriate degree of autonomy, financial independence and self-supported growth", i.e. to graft the US model of politically and financially independent utility districts onto the Egyptian governmental framework

The combination of factors relegated an otherwise superb study to the book shelves. However, the encyclopedic quality of the work will guarantee that the volumes will remain a valuable information source for years to come.

The USAID funded study, in particular, examined local governmental administrative practices and identified modifications required to enhance the capabilities of the operating agencies. Some of these recommendations have been carried forward through the project specific technical assistance efforts, leaving the broader sectoral concerns for the complementary effort addressed in this project paper.

3. Magnitude of Institutional Problems

The problem statements, which have been verified and redefined in every sector assessment in one form or another, must be viewed within the context of Egypt's large number of rural and urban communities. If the problems were confined to a limited number of organizational and governmental entities, the recommended solutions could be implemented with relative ease. However, the complexity and large number of communities in need of services makes it much more difficult to devise and follow through with an action agenda.

More than one hundred cities and towns with a population in excess of 40,000, not to mention the thousands of villages, are in need of basic facilities and services. These communities have neither the financial nor the human resources to develop and maintain adequate systems. Table 4(a) lists a number of large towns and cities in need of wastewater facilities or service expansions. It was compiled by a Special Legislative Committee of the A.R.E Peoples Assembly in 1983 and reflects the political sensitivity of water and wastewater issues throughout the country. It also highlights the managerial dimension of the problem, the magnitude of responsibilities faced by the central governmental agencies and the jurisdictional complexities that must be addressed in any Institutional Support Program.

TABLE 4 (a)
GEOGRAPHIC SCOPE OF
INSTITUTIONAL SUPPORT NEEDS

- I. USAID Assisted Wastewater Projects
- (2) Primary Cities : Cairo, Alexandria
- (6) Secondary Cities : Minia, Beni Suef, Fayoum, Port Said, Ismailia, Suez
- II. Other Project Needs:
- (12) (a) Cities with Limited W/WW Systems: Tanta, Damanhour, Zagazig, Mansoura, Mehalla, El Kobra, Kafr el Zayat, Benha, Shebin El Kom, Damietta, Assuit, Ras el Bar, Kafr el Sheikh;
- (9) (b) Cities with Incomplete W/WW projects: Aswan, Qena, Sohag, Luxor, Shubrakheet, Menouf, Kafr el Dawar, Samanoud. El Mahmoudia;
- (11) (c) Cities with Projects in Design Stage: Qaliyoub, Shebin el Quanater, Barrages, El Khanka, Toukh, Kafr Shukur, Kafr Saad, Ezbet El Borg, Abou el Matameer Fakous, El Fekria;
- (13) (d) Cities requiring conversion to Sanitary Drainage Systems: Meet Ghamr, El Mattaria, Dessouk, Zefta, Belgas, El Sembellawin, El Manzala, Beala, Dakaruus, Talkha, Menia el Kamh, Sherbeen and Farascour;
- (41) (e) Cities requiring extension of sanitary drainage services: Abou Kebeer, Belbase, Fakkous, Bahteem, Kaha, Ashmoun, Baltime, Foah, El Delgamon, Hosh Eissa, Rashid, Edfo, El Hawamdia, Warrak-el Arab, Warrak el Haddar, Nasser, Senores, Malawi, Samalnt, Maghagha, Beni Mazar, Naga Hamadi, Armant, Kom Ombo, El Dakla, El Kharga, El Badrashin, Aga, El Kantara Shark, Tema, Manfalout, Abnoub, Akhmim, Gerga, Tahta, Moot, Marsa Matrouh, El Kantara Gharb, El Arish and Abu Homous;
- (14) (f) New Cities, planned or under study: 10th of Ramadan, 15th of May, El Sadat, 6th of October, New Ameriah, Damietta city and port. El Obour, Badr, El Amal, El Salhia, Beni Suef East Bank, Minia East Bank Assuit extension, Aswan;
- (na)* (g) Rural Towns and Villages/District Systems supported under USAID's Decentralization Program
- (109) Communities with populations over 40000

Source:

Special Legislative Committee Report
A.R.E. People's Assembly, Third Legislative Sec, Fourth Ordinary Session,
Combined Committee of Housing, Infrastructure, Local Government, Popular
Organizations, Planning and Budgeting Committees
Engineer Moheb Ramzy Stino, Chairman
January 1983

607

4. Considerations for Institutional Support

The experiences of donor assisted institutional support efforts in Egypt and the lessons learned elsewhere by AID, IBRD and other international aid organizations, lead to the conclusion that the scope of any new technical assistance program must take into consideration the following concerns:

- the host country legislative and executive policy environment,
- the political impact of various alternative organizational structures and decision processes,
- the importance of institutional learning capacity,
- the problem of transferring expatriate knowledge and technology,
- the lack of coordination and effective linkages between institutions at various levels of government,
- the inadequate flow and lack of quality information for all those directly or indirectly involved in sector related decisions,
- the lack accountability to public interest groups and the degree of their participation in the decision process.

These and other criteria for the design of effective institutional support program have been described in detail in the applicable academic evaluation literature, and are also reflected in the AID Policy Paper on Institutional Development, dated March 1983.

Such considerations guided the design effort of this institutional support project. It was developed through a careful review of the organizational strength of the key agencies responsible for the water and wastewater sector as detailed in Technical Annex Volume II. The analysis considered the following factors;

- comprehensiveness of the legislative mandates and Presidential Decrees establishing the organizations;
- responsiveness of the organizational structure and decision process to a variety of problem situations;
- adequacy of staffing pattern to handle the complexity and volume of tasks confronting the organizations;
- deliberateness of the leadership in bringing about needed change in the areas cited above.

The Presidential Decrees establishing the original Ministry of Housing, including its responsibilities in the public utilities sector and NOPWASD are a broadly stated framework, which permit a liberal interpretation of functions and the initiation of a variety of action programs, if resources were available. Unfortunately, the permissive and open ended mandates of the MHPU and NOPWASD, are matched by the permissive and open-ended mandates of other central government agencies, which leads to potential jurisdictional conflicts. Officials at NOPWASD have indicated their desire to seek a clarification through an amendment of the Presidential Decree aimed at, strengthening the mandate to render assistance to their municipal clients.

The organizational structure of NOPWASD reflects its current involvement in the design and construction of treatment plants for a number of municipalities which do not have the staff capability to handle those tasks themselves. Local Government Law No. 43/19979 and subsequent amendments, however, have assigned the responsibility for the construction, ownership, operation and maintenance of water and wastewater facilities to local entities. Given the growing trend toward decentralization and increased local staff capabilities, NOPWASD's response mechanism will have to adjust to the changing circumstances. NOPWASD's organizational structure and divisional breakdown of functional responsibility has sufficient flexibility to accommodate additional tasks. A copy of the organization chart and executive assignments is appended in Technical Annex Volume II.

The staffing pattern of NOPWASD reflects both the broader mandate as well as the narrow range of current activities. The number of authorized staff position stands at 1367, while the actual number of employees is 920 as of June 1985. However, the large number of vacancies does not suggest the needs for a hiring or retraining program. NOPWASD will have to increase its staff resources in certain areas, but this should be done in the context of the Institutional Support Program and following the analysis of the comprehensive manpower needs assessment for the sector as a whole.

The response of the GOE leadership to emerging problem situations has been deliberate and slow given the sensitivity of the political issues to be resolved. Following the last national elections, the housing and public utilities concerns were shifted from the Ministry, which had actually been established in 1969, but whose functions were subsequently absorbed into the portfolio of the 'Development' Ministry. The old legislative mandate of the Ministry of Housing was an inadequate umbrella for the new Ministry (MHPU), and organization planners have attempted to redefine the mission, functions and organization structure of the new entity. A Presidential Decree ratifying the reorganization scheme is expected after the Summer of 1985. The possible implications for the public utilities component of the new Housing Ministry are discussed in the Institutional Analysis appended in Technical Annex Volume II.

5) Scope of Support and Capabilities

To assist both the MHPU and NOPWASD achieve their respective roles and functions in the water and wastewater sector, three areas of technical assistance have been identified.

For the Ministry of Housing and Public Utilities assistance will include technical assistance in the areas of policy guidance, plan review and finance, and management and coordination, as well as logistical, data management and participant training support. The technical assistance absorptive capacity for the MHPU can be identified in terms of the ability to provide adequate counterparts, the ability to pay for local experts, and the ability to implement and use the assistance provided. The MHPU is currently in a position to provide approximately five full-time staff professionals to work in the three technical areas, although English communication skills need some improvements prior to the arrival of the technical advisory staff. The MHPU currently maintains a studies and research budget of approximately LE 500,000 which can be utilized to fund Egyptian expert costs. It is not expected that the MHPU will have great difficulties in the management and administration of the assistance contracts. While some prior training in USAID regulations might be useful, the Ministry of Development's handling of the TAMS ten-year contract indicates that GOE officials can adequately handle technical assistance contracts both administratively and financially. Information handling at both the MHPU and its Central Department for Public Utilities is a major problem as no staff specializes in information management. Before data management hardware is procured for the MHPU, staff training is necessary and has already been initiated.

In terms of the potential use and implementation of the results of the assistance provided to the MHPU, it is difficult to evaluate. Management and policy advice must be presented in terms of technical versus managerial advice. Because neither the capacity nor capability for long-range planning, standard setting and preparing systematic impact analyses exists in the Ministry, it can only be developed through hands-on advisory training and off-shore technical training or invitational travel.

For NOPWASD assistance will include technical assistance in the areas of management and finance, planning and economic analysis, manpower development, and engineering and environment, as well as logistical, data management, publications and training aids, and participant training support. Assistance to NOPWASD and the recipient municipalities will also include a pilot start-up and Operations and Maintenance program. In contrast to the MHPU, NOPWASD is able to provide a larger number of capable staff professionals to work with the advisory staff. NOPWASD has identified 12-15 professionals for the technical assistance efforts, and six engineers for the start-up/O&M efforts. It would be useful if selected NOPWASD staff focussing on manpower development and training could receive specialized training, and like the MHPU, many of NOPWASD's

staff could benefit from English communication training in the early stages of project implementation. NOPWASD currently utilizes Egyptian consultants regularly and maintains a budget for this purpose. NOPWASD's ability to manage foreign assistance contracts is clear. Currently NOPWASD manages USAID's Canal Cities project adequately. Presently NOPWASD is training a small number of its staff in information management. Before data management hardware is procured additional staff training is a requirement.

The potential use and implementation of the technical assistance issues including economic analysis, engineering, effluent standards and external management will get NOPWASD's management support. Internal management problems will not be supported unless addressed in the context of cost impacts on agency performance, and approached with large inputs from the Central Agency for Organization and Administration.

The Municipal Start-up and Operations and Maintenance program is dependent upon the availability of NOPWASD personnel to receive hands-on training, and NOPWASD's assurance that plant modifications for operability will be completed. Since NOPWASD is most anxious to see this program implemented, the personnel and plant adjustments required should be adequately supplied as needed.

6. Scale of Assistance

After reviewing both the MHPU and NOPWASD's requirements and capabilities it is not unreasonable to expect a smaller effort at the MHPU with three long-term advisors complemented with some 45 man months of short-term advisors, and approximately 180 manmonths for local advisors. This is in contrast to the longer effort at NOPWASD with five long-term advisors, and 140 man months of short-term, supplemented with 300 manmonths of local advisors. In addition, the start-up assistance effort requires approximately four long-term advisors, and nine manmonths of short-term, and 80 manmonths of local advisors.

The local advisors for both agencies will be handled through the MHPU and NOPWASD respectively, and should not present any major management or administrative problems. To ensure flexibility in the program, and to allow for a quicker response time than that of host country contracting, approximately 100 man months of short-term AID-direct contracts is factored in the technical assistance. The AID direct contracts will be used to start the project during the premobilization phase, for AID evaluations and to respond to an emergency request for assistance from another agency or municipality other than from the MHPU, NOPWASD, or a municipality where the Institutional Support Project is actively involved. These contracts will be administered by USAID/Cairo and will not impose additional burdens on the MHPU or NOPWASD, except in providing counterparts when necessary.

USAID/Cairo prefers that the TA contract involve one firm serving both the MHPU and NOPWASD. The GOE agencies each would prefer separate contracts. This point remains under discussion with the two agencies.

6/2/81

V. ECONOMIC ANALYSIS

1. Economic Issues

The traditional approach to conducting an economic analysis of a USAID funded project is not appropriate. The Institutional Support program does not lend itself to a calculation of an Internal Rate of Return or a Least Cost Analysis. Although various aspects of the program could be subjected to a critical analysis of cost effectiveness, it is more opportune to identify those areas of the water and wastewater sector, which are expected to show improvements at termination of USAID technical assistance. The tasks supported by USAID will individually as well as collectively contribute to the national wealth and social welfare, as follows:

- enhance, or at least protect from erosion, the value of physical assets currently on and under the ground;
- ensure the maintenance of value of facilities under construction or scheduled to be constructed;
- encourage significant manpower productivity improvements and administrative efficiency;
- achieve equity in the allocation of public resources by shifting the burden of system operation and maintenance cost to the beneficiaries of services;
- reduce dependence on national budgets permitting the allocation of scarce resources to socially more productive enterprises;
- reduce public and private welfare expenditures through minimization of health risk associated with waterborne i.e. enteric diseases,
- reduce capital and O&M requirements through the comprehensive analysis and demonstration of the cost effectiveness of appropriate technology;
- reduce dependence on Foreign Exchange for the finance of capital intensive utility systems through the mobilization of local resources.

Each of the points listed above could (and perhaps should) be subjected to further scrutiny. However, for this analysis only the second point on present or future investment will be further examined to determine the likelihood of this project having the potential for an acceptable economic rate of return. The task of improving the MHPU/CDPU and NOPWASD

65

staffs' economic analysis capability is an item on the program support list. With greater understanding by the GOE staff of the economic and financial consequences of the decisions rendered and actions taken, the benefits or efficiency of presently being undertaken or planned investment should be improved.

The GOE estimates that an additional \$11 billion in investments in water and wastewater systems are needed to meet the longrange capital needs of the sector. AID itself is currently, heavily investing in water and wastewater system improvements, with almost \$2.5 billion already authorized and obligated. What sort of improvement in the efficiency of these investments through better economic analysis in selection, design, technology and maintenance (outputs of this project) would be needed to justify this project on economic grounds? Tables 5(a) and 5(b) demonstrate the sort of Internal Rate of Return (IRR) which improvements in investment would cause. If the project would influence the benefits of \$2.5 billion month at investment over a 20 year horizon, an increase in the annual flow of benefits by 1/10th of 1 percent of the value of the investments would generate an IRR of 8.6 percent; a 2/10 of 1 percent increase would mean an IRR of 19.8 percent. Given the present low levels of economic analysis, this should be achievable.

TABLE 5(a)
Internal Rate of Return For Improvements in Efficiency of Investment

Year	1	2	3	4	5	6	20
Costs (\$ million)	5	5	5	5			
Benefits (\$million)			.625	1.25	1.875	2.5	2.5
Benefits-Costs	-5	-5	-4.375	-3.75	1.875	2.5	2.5

IRR (%) 8.56%

(Based on Investment Total of US \$2.5 Billion and a .10% improvement)

TABLE 5(b)
Internal Rate of Return for Different Improvements

<u>Improvement (%)</u>	<u>IRR(%)</u>
.05%	.32%
.10%	8.56%
.20%	19.83%
.25%	24.45%
.30%	28.70%

(Based on same pattern of calculations as Table 5(a))

6/6/7

The economic value of the Institutional Support Program can be also gauged in the context of the national population projections, particularly the urban growth projections, and the constraints on the public sector's ability to finance urban infrastructure and services. By the year 2000 more than half of Egypt's population, i.e. 35 million, of an expected total of 67 million, (growing at an annual rate of 2.4%) will be living in the primary and secondary cities. Only a fraction of the current (1985) urban population of 20 million of a total of 48 million is benefitting from centralized water and wastewater treatment, distribution and collection systems.

Other critical economic problems which this project will address are resource generation and subsidies. Egypt's ability to generate internal resources or to attract external capital assistance for domestic infrastructure needs, is rapidly diminishing, as its revenues from traditional sources e.g. oil exports, tourism, Suez Canal transit fees and repatriated earnings decline. The GOE also has determined that more resources have to be allocated to the productive sector to generate economic growth and to strengthen the economic base of its urban centers. Although the current Five-Year Plan and Annual budget allocations reflect the GOE's sincere concern for meeting the growing needs of urban utilities, the amounts available are insufficient to cover the capital and O&M costs. The macroeconomic trends may require a rethinking of the traditional approach of providing utility services exclusively through public sector allocations. In addition the GOE will have to rethink its current subsidy distribution schemes, including those that affect the water and wastewater sector, and to shift at least part of the capital and O&M cost burden to those consumers able to pay for the municipal services.

The GOE has been providing direct and indirect subsidies to households since the 1950's. It was in the mid-1970's that these income transfers took on major significance as international prices started to rise dramatically and the government attempted to moderate local prices to protect the public from their effect. For a large segment of the urban population the protective cover may be appropriate, but most households seem not only willing but also able to pay for water and wastewater services, as shown in studies performed under IBRD and USAID auspices.

Obviously, making household income estimates and ability to pay projections must be viewed as speculative and subject to error. The only point in attempting such an estimate is to provide some sense of order of magnitude. The USAID funded National Urban Policy Study (NUPS) of 1981 provided disaggregated data for urban areas and various population groups. The results of the study showed a significant rise in median annual income (LE 2060 by the year 2000 in 1980 LEs). While this would be a dramatic improvement in household income, it falls still short of increasing the affordability of infrastructure services that the government is trying to provide.

The NUPS also indicates, that the subsidy program highly favors urban households over rural households by a factor of three and that it represents a 41 percent addition "in kind" to urban household incomes. Within the urban centers, the subsidies are unevenly distributed among urban households, in that the higher income groups obtain a significantly larger share of the subsidy than the lower income groups. This is particularly true for subsidies implicit in the infrastructure support programs. The general conclusion readed by the NUPS was that the top 21.2 percent of the urban population received in-kind subsidies (valued at LE 736.8 million in 1979) which is larger than the total cash income of the lowest 34 percent of the entire urban population (Table II-5, page 392, Egypt Urban Growth and Urban Data Report). Equity considerations are an increasingly important factor in the development of a long range utility financing program.

The Institutional Support Program will provide assistance to the MHPU and NOPWASD in strengthening the economic analysis capability in the respective policy offices of central and local governmental entities concerned with the provision of water and wastewater services. The two most critical tasks to be confronted by GOE decision makers will be to ensure the establishment of a long-term and guaranteed source of capital funding for facilities, as well as the establishment of an efficient and equitable mechanism of funding the operation and maintenance costs of the systems over time.

VI. SOCIAL SOUNDNESS ANALYSIS

The Institutional Support Program focuses directly upon the senior managing agencies for the Water and Wastewater Sector who in turn are either directly or indirectly responsible to assure that the entire urban and rural population of Egypt has satisfactory service. For example training will lead to improved treatments of both water and wastewater, a direct impact on the health of the entire nation. Improved planning and financial management will lead to an expansion of service to a greater majority of the low-income, meeting a basic human need. Improved O&M efforts will lead to improved service and in turn a reduction of health and inconvenience problems. This project will have far reaching effects on Egypt's quality of life, through meeting basic human needs and improving health conditions.

The demand for improved services has been expressed repeatedly by political leaders including,

- the President and Prime Minister,
- the elected Representatives in the Shura and National Assembly,
- the Governors and Mayors,
- the local District Council representatives,
- the representatives of Public and Private Sector Interest Groups, and
- the consumers, occasionally, even in the form of riotous behavior, such as in the streets of Cairo and Giza in 1982.

Evidence of expressions of demand for services, and of support for improvement programs can be found in numerous documents (none of which are appended, because most of which are available only in Arabic).

- the Presidential Decrees establishing the MHPU and NOPWASD
- the Presidential requests for financial assistance presented to US President Reagan in 1983;
- Legislative Committee Hearing Records and special reports, such as the Fact Finding Report on the Giza Pumping Station Failure, which lead to a broader inquiry into national needs.
- GOE official participation in various Sector Assessments conducted by international donors, such as UN/WHO, IBRD, UK/ODA, USAID, FRG/GTZ, CIDA, Japan OECF, etc.
- Newspaper articles in both the official government press and the opposition papers;
- Conference and Seminars proceedings and academic research papers prepared by Egyptian scholars.

Improvement in the delivery of Water and Wastewater services benefits society at large, as outlined in the economic analysis section, but particularly certain beneficiary population groups, such as

- women, who have traditionally served as carriers of water, cooks and cleaners of dishes and clothes;
- children, whose delicate intestinal system make them susceptible to enteric disease risks;
- utility-employees, particularly those associated with the operation and maintenance of wastewater systems.

The Institutional Support Program will only be able to exert an indirect influence on the development of the sector. However, the degree of influence and benefits generated may very well be in excess of the cost of the program. Additional details about the potential social and health impact can be obtained from the literature cited in bibliography appended in the Technical Annex Volume III.

The social soundness of the Institutional Support Program must be judged against the demands and expectations expressed over time by the political representatives and beneficiary population groups. As with any intervention, there are reasons that would support both a pessimistic as well as an optimistic view of the chances of success.

Some of the reasons for a possible failure of the project would include the following:

- In an Arabic/Islamic and male dominated society, the concerns of the members of minority groups, such as women, children and the poorest paid workers in an unrecognized public service sector, are not always given the prominence and political support they deserve.
- The health consequences of inadequate water and wastewater treatment processes and associated human productivity implications are not generally understood, causing widespread apathy and ambivalence toward major improvement programs.
- The value systems and experiences of expatriate advisors are generally viewed with suspicion and any response to an expatriate initiated program would be of a superficial but not of a fundamental nature.

There is enough evidence in Egypt to support any pessimistic assessment of the situation. Fortunately, for the optimist there are also signs which hold out a promise of success:

- Adequate water and wastewater services are seen increasingly as a 'Community Right' (not just as a necessity and a women's responsibility to fetch) as well as a community 'Status Symbol', i.e. if one community has it, so must the other, sooner or later. The competition for scarce resources has given the water/wastewater sector a rapidly growing political prominence.
- The decentralization movement has raised municipal consciousness about the need to support the agencies and organizations providing basic community infrastructure, which includes not only electrification and telecommunication networks, and transportation linkages but more importantly water and wastewater systems. The rise in status and prestige of the former service providers, justifies a more equitable treatment for the latter.
- Expatriate advisory services are most successful when they evolve from discussions with and are presented through their Egyptian peers from the public and private sector interest groups. Principles of effective organization and efficient management are universal, and any characterization of same either as American or Islamic would only tend to politicize an arena for no apparent gain.

In light of the viewpoints expressed above it is clear that a key factor determining the outcome of the Institutional Support Program, would be the attitude of the participants and the care taken to ensure that a collegial and objective atmosphere prevails at all times.

VII. ENVIRONMENTAL ANALYSIS

The proposed project is consistent with and supportive of the environmental objectives pursued through the USAID funded construction of water and wastewater facilities. Each of the capital projects have been subjected to detailed environmental assessments. CFR 216 2(c) of the applicable environmental protection regulations, identifies certain 'categorical exclusions', i.e. areas of concern which do not require an Environmental Examination or an Environmental Assessment. These include education and training programs, as well as technical assistance in general. AID policy papers which contain additional guidance relevant to the proposed project have been reviewed, as suggested in the PID. These include;

- Domestic Water and Sanitation Policy Paper
- Health Assistance Policy Paper,
- Development Training Policy, and the
- Institutional Development Policy Papers.

Even though an analysis is not required, it should be pointed out that a major thrust of the Institutional Support Program is directed toward enhancing the MHPU/CDPU and NOPWASD environmental analysis and particularly, the latter's code enforcement capability. The responsibility for both aspects is currently shared between the MHPU, Ministry of Health, Ministry of Irrigation and others, none of whom have sufficient resources to meet their mandated responsibilities. The maintenance of environmental quality has been exacerbated by the pressures of urbanization. Conflicts have developed over the allocation of water resources among domestic, industrial and agricultural users, scarce agricultural land has been irreversibly transformed to urban and industrial use without adequate advance planning and the installation of water and wastewater systems, and a wide array of mobile and stationary sources of air pollution have greatly deteriorated the quality of the environment.

Over the past 20 years, the GOE, in recognizing the need to respond to growing environmental conflict and stresses, has created a series of advisory organizations, and has issued a series of laws and decrees intended to provide a framework for environmental management. However, these measures have lacked uniform commitment from all agencies involved in environment and natural resource management and the comprehensiveness of approach necessary for implementation under the Egyptian national planning process. Regulatory authority has been divided among a number of ministries, with resultant jurisdictional conflicts. The present legal framework includes the following:

87/1

- Law 83 (1962) and its regulatory decree, Minister of Housing Decree No. 649 (1962), to control wastewater (domestic sanitary and industrial toxics) collection, treatment and disposal. Enforcement authority is vested in the MHPU and the municipalities, with special functions for the Ministries of Health, Irrigation, Transport and Industry.
- Presidential Decree 864 (1969) and its regulatory decree, Minister of Health Decree No. 470 (1971), to establish a High Committee for Air Quality that regulates ambient air quality standards. Enforcement authority rests with the Ministry of Health;
- Law 48 (1982) and its regulatory decree, Minister of Irrigation Decree No. 8 (1982), to control sanitary and industrial wastewater discharges into the Nile, its branches and canals. Enforcement authority was assigned to the Ministry of Irrigation;
- Prime Ministerial Decree No. 10 (1982), to establish the High Committee for Environmental Affairs, to coordinate the efforts of all ministries with environmental and natural resource management responsibilities; and
- Presidential Decree No. 631 (1982), to establish the Environmental Affairs Agency (EAA) under the control of the President of the Cabinet.

Much of the legislation suffers in that it has been produced through the direct transfer of standards from other industrialization countries, with little analysis as to the appropriateness, and the economic implications. Most notably, the legislation has produced inflexible approaches that do not provide for a phased implementation of standards over a realistic time period. In addition, there have been few efforts aimed at establishing practical procedures for issuing temporary discharge permits on a case by case basis, to monitor and assist with individual compliance efforts, to impose fines and otherwise deal constructively with private corporate and municipal violators.

The need to deal forcefully and comprehensively with the array of environmental issues was highlighted at a conference entitled "Egypt in the year 2000", held in Cairo under the auspices of the Prime Minister, in December of 1984. The conference was attended by senior representatives of all GOE organizations with environmental responsibilities. As a result, the Environmental Affairs Agency, which serves as the staff and secretariat for the High Committee for Environmental Affairs, was directed to produce an "Environmental Action Plan" and long range action agenda. This represents a major change in the position of the GOE with regard to their interest in conducting comprehensive programmatic status reviews of environmental issues, and

has received the support of the international donors. While the EAA's new mandate provides the opportunity for a broad based discussion, the actual implementation responsibility would rest with the line ministries, and, particularly, with the MHPU and NOPWASD. The proposed Institutional Support Program will reflect the added dimension of raising the environmental consciousness in the urban communities, and of improving the staff's regulatory analysis capability and enforcement practices.

It is expected that the technical expertise for this effort will be drawn from the US Government agencies and organizations with relevant experience to serve as logical counterparts. For instance, the US Council on Environmental Quality (CEQ) has a mandate similar to that of the Egyptian HCEA/EAA. USEPA could serve as a model for the functions to be performed by MHPU/NOPWASD. And US public interest organizations and technical societies such as the Water Pollution Control Federation (WPCF), the American Water Works Association (AWWA), the American Consulting Engineers Council (ACEC) and others, could provide useful start-up assistance to fledgling Egyptian organizations with similar mandates. The Institutional Support Program will attempt to facilitate and accelerate the exchange of ideas and data and strengthen the GOE environmental decision making process.

VIII. IMPLEMENTATION PLAN

A. Administrative Arrangements

1) Project Steering Committee

The project will be coordinated through a project steering committee composed of senior members of MHPU, NOPWASD and USAID. The core members of this group will include the Chairman of NOPWASD, the Undersecretary for Utilities in MHPU and the Office Director for USAID/DR/UAD.

Specific coordinating activities may be delegated to key staff of the participating GOE agencies of which the USAID project manager would be expected to participate as an observer.

The core group would be expected to meet as needs arise, however not less than once each quarter.

2) Consultant Role in Program Implementation

The managerial and administrative tasks associated with an institutional capacity building effort are made more complex by the lack of trained personnel to assume the project management functions. The gradual transfusion of technical knowledge and managerial skills has to be facilitated by an external mechanism which, at the same time, is viewed as part of the internal structure of the organization receiving assistance. This mechanism must be sufficiently supportive of internal self-help efforts without appearing overly intrusive. It should facilitate the rendering of advice, but not actually participate in proffering opinions on issues of concern, particularly where individual expatriate staff members may have insufficient technical expertise or credibility.

The design of the program took into consideration the fact that 'generalists' have little technical expertise and 'specialists' tend not to be concerned with the broader aspects of the institutional problems. Consequently, the program provides for both types of professionals in a highly complementary and interactive manner. It is expected that the long-term team of expatriate advisors for both the MHPU and NOPWASD will be composed of generalists in their respective areas of assignment, with sufficient academic training and practical field experience to earn the respect and credibility of their Egyptian peers. The highly technical support is to be provided by expatriate specialists with the assistance of Egyptian experts from private sector consulting firms, university faculty and retired government officials serving on a short-term basis. The combination requires a series of contractual arrangements which facilitate the transfer and utilization of knowledge.

3) Contract Modes

It is expected that the long term expatriate advisory services be provided under a Host Country (HC) Contract administered by NOPWASD. The contract would cover the services of two teams of advisors, one serving the interests of the Central Department of Public Utilities in the Ministry, and the other team serving NOPWASD, the executive agency of the Ministry's CDPU. Procurement of equipment, commodities, and training materials will also be conducted under a NOPWASD - administered host country contract. AID Handbook 11 details the applicable procedures for Host Country Contracts.

Joint venture arrangements with Egyptian companies are encouraged and efforts will be made to involve existing Egyptian private sector concerns in analytical efforts requiring a high degree of understanding of governmental processes and societal values. It is expected that the short-term 'specialist' services will be provided under the Host Country Contracts, or under Indefinite Quantity Contracts (IQC), Personal Service Contracts (PSC), Minority Business Set-a Sides (8-A), participating Agency Service Agreements (PASA), Resources Support Services Agreements (RSSA), etc. The long-term expatriate team would be expected to draft the scopes of work and task orders for short-term personnel for processing through AID-Direct contract mechanisms. The prime contractor will be requested to submit a Minority Contracting Plan.

4) Disbursement and Procurement Procedures

The MHPU and NOPWASD team leaders, through the Program Manager, will submit monthly requests for reimbursements and disbursements made in accordance with the approved annual work plan and budget submitted to the USAID Controller.

Documentation required for each disbursement will be in accordance with AID established procedures. No deviations from the procedures are anticipated. Materials and equipment procured in the US or Egypt will be paid for in accordance with standard AID disbursement procedures. These procedures and other relevant regulations will be transmitted to the respective GOE Project Managers through Project Implementation Letters.

5) Host Country Agency Contracting Capabilities

Both the MHPU and NOPWASD have extensive experience in administering foreign donor and lender funded contracts for capital and technical assistance projects. NOPWASD currently is administering a USAID funded contract for the improvement of the Canal Cities Wastewater system. USAID has found NOPWASD personnel to be effective. The procedures for negotiation and approval of contracts and amendments are consistent with general practices. USAID has determined that both NOPWASD and the MHPU's Central Department for Public Utilities possess the necessary contracting capabilities for this and other projects.

6) Reporting Requirements

The actual project outputs will be dependent upon the scope of work agreed to during finalization of the Terms of Reference (TOR) between USAID and the MHPU, during contract negotiations between the MHPU and the contractor, and during preparation of the work plans, as called for in the overall Institutional Support Program.

Typical products of the consultant effort will include the following.

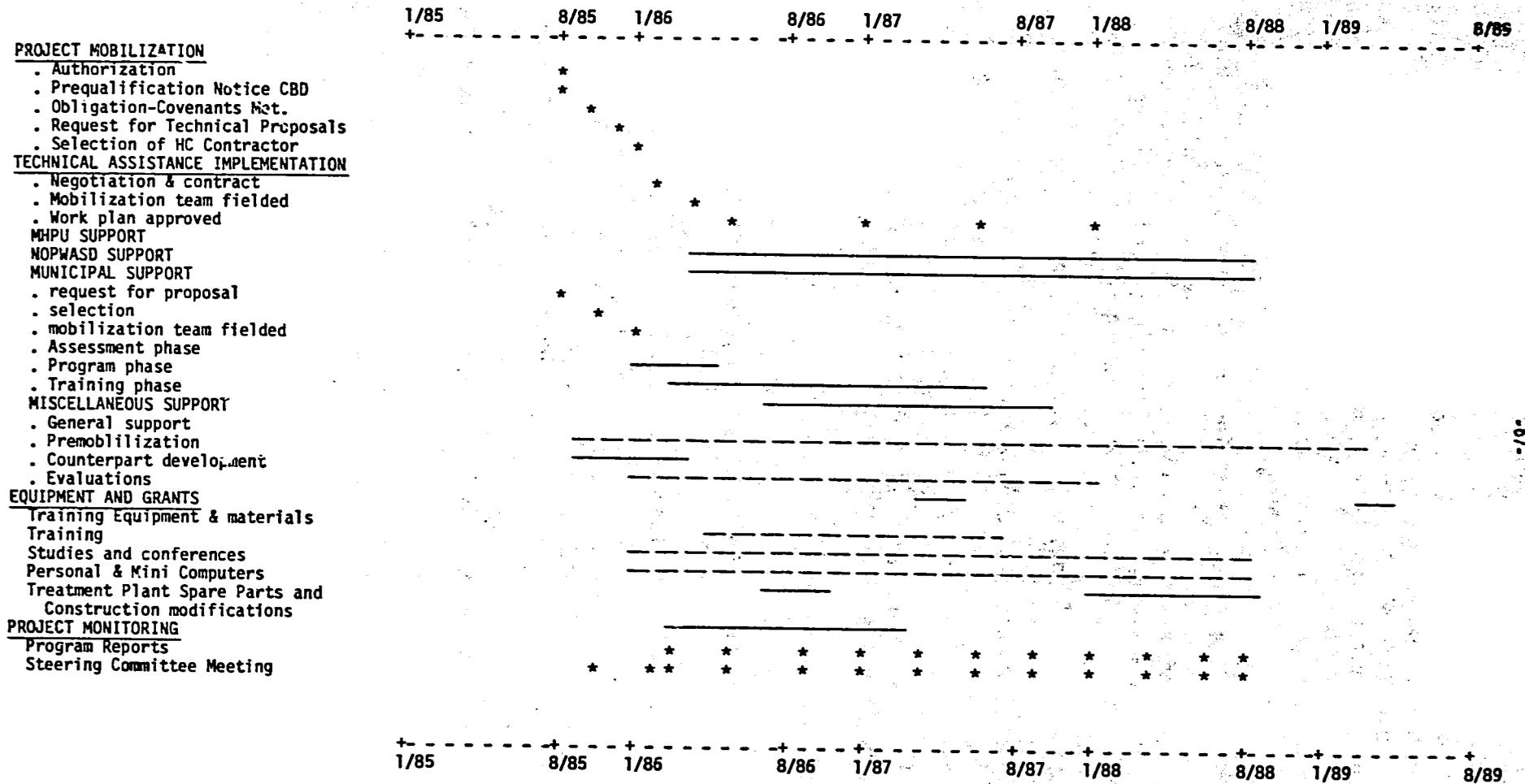
- Progress reports, including manpower assignments and schedule of activities, issued
 - . monthly, (for financial reports)
 - . quarterly, and
 - . annually
- Analytical studies, addressing the needs and issues as defined by the respective ministerial officers, and as suggested in the functional listing of tasks for each program component.
- Work order definitions for short-term expatriate and Egyptian consultant services to supplement the analytical efforts of the long term expatriate staff and other Ministerial units.
- Monitoring and evaluation reports of sector wide policy and special priority concerns of the MHPU and USAID, as related to the overall M.O.U. objectives, i.e. the preparation of an Annual Report detailing the progress towards achieving the policy objectives.

B. Schedule of Activities

The Schedule of Activities, Figure 8(a), is based on a number of considerations, which include the procedural requirements of competitive host country contracting, certain program priorities, which mandate a less-time consuming AID-Direct contracting mode, and various critical points in the GOE and USAID decision process, which require a timely and substantive staff and/or consultant input.

Concerning the major host country contract it is expected that 6 to 12 months will be required to have a team in place after the signing of the Project Agreement between USAID and MPIC. Assuming a reasonable time spent in responding to the Request for Proposal, team mobilization, familiarization and the preparation of a detailed work plan, the prime contractor could be expected to contribute effectively approximately 12 to 15 months from the date of project authorization.

FIGURE 8(a)
SCHEDULE OF ACTIVITIES



A large number of tasks, however, do not depend on the availability of the prime contractor and can (must) proceed independently and immediately after receiving the official GOE approvals. Most of the program elements could be initiated sequentially and be managed concurrently by the USAID/DR/UAD staff, in close coordination with the MHPU and NOPWASD program managers. The program elements which could be managed under AID-Direct contracting procedures include the following:

- Some MHPU/NOPWASD Organization and Management Studies: e.g.
 - . Identification of counterparts and their training needs
 - . Analysis of organizational structures and processes
 - . Design and implementation of counterparts training program
- Mobilization of some U.S. institutional assistance: e.g.
 - . initiation of twinning relationships
- Five-Year Plan Preparations, e.g.
 - . review of urban development assumptions
 - . engineering standards
- Some policy analysis issues, such as
 - . legislative impact analysis
 - . evaluation of impact of water company concept on reporting needs for the sector

The Schedule of Activities is influenced by various critical decision points throughout the life of the program. The prime contractor and the short term expatriate advisors must adhere to the dates set by sector external organizations and their requirements for a timely submission of material, such as the dates for:

- Submittal of the next Five-Year Plan (1987-1982)
- Annual Budget Submittals and hearing schedule of the National Assembly
- Review Meetings:
 - . MOU Annual Review of Institutional Progress
 - . GOE/USAID Program Steering Committee
 - . International Donor Coordination Committee
- International Professional and Industry Conference Schedules
- USAID Project Evaluation and Reauthorization

The Institutional Support Program will only be successful if the technical assistance is closely tied to the ongoing GOE decision processes and is responsive to the information needs of critical decision makers (as well as opinion shapers) at a given point in time. Any delays in the preparation of quantitative and qualitative data can render the total program moot.

14

C. Management Training Program

The Participant Training component of the Institutional Support Program will provide opportunities for up to one hundred GOE management personnel from the Ministry of Housing and Public Utilities, NOPWASD, municipal governments and utilities, and associated central ministries and institutions to attend academic, technical, hands-on, or observational training in the United States and Egypt (or a third country) during the life of the project. Identified GOE personnel will be selected to attend appropriate training opportunities in the areas of: (1) Policy and Planning, (2) Management and Administration, (3) Engineering and Environment, (4) Manpower Development and Training, and (5) Research and Publications. All GOE personnel participating in the Participant Training program are required to meet USAID Handbook 10 regulations.

1. Management Training Needs Identification

A survey of training needs will be conducted among management personnel from MHPU, NOPWASD, municipal utilities, and associated ministries and institutions to determine:

- Prospective trainees major fields of interest,
- Type of training,
- Training period desired,
- Academic skills of prospective trainees,
- English language proficiency,
- Career goals of prospective trainees,
- Availability of prospective trainees for participant training, and
- Prospective trainees responsibility concerning implementation of project objectives.

2. Program Development

An analysis of the training needs survey with officials from the MHPU and NOPWASD will determine the major training priorities to be pursued under the project. USAID and the GOE will prioritize the training needs according to the participant training budget, MHPU/NOPWASD planning schedules, and implementation schedules and objectives of the Institutional Support Project. It is envisioned that two major training priorities will be identified:

- "Programmed/Specialized" training including hands-on training, invitational visits, observational travel to selected U.S. agencies, or organizations and utilities and conference/seminar attendance.
- academic/technical training including short-term non-degree training (Certificate programs), one-three months.

The program content, training sites, itineraries and selected logistical arrangements for accommodations and transportation will be developed with the assistance of the GOE, the long-term contractor or an IQC contractor experienced in preparing US-based training programs to meet institutional development objectives.

3. Participating GOE Agencies and Participant Training Budget

The primary pool of management participant trainees will be selected from NOPWASD and the MHPU with approximately 40 and 20 participants, respectively. It is estimated that the remaining pool of participants will be drawn from municipal government/utility staffs in the 26 governorates, and from associated ministry/institution staffs such as the Ministries of Health, Irrigation, Planning, Manpower and Training, Education, and Reconstruction, or academic/research institutions such as the Alexandria High Institute for Public Health, Cairo, or Ain Shams Universities.

It is proposed that up to 100 participant trainees will be scheduled for training at six month intervals over the three year life-of-project. For planning purposes it is proposed that each trainee will participate in training for a one-month period at an approximate cost of \$5000 per person, including overseas travel expenses. In a recent proposal to USAID, the GOE proposed to fund overseas travel to the U.S. on the Egyptian national airlines to be paid from the Mission's Activity Trust Account (FT-800). If enacted, this proposal will allow funding availability for expanded academic or technical training study in the U.S. or a third country and/or a larger number of opportunities for overseas training.

4. Participant Training Evaluation

Upon the return from training in the U.S. or a third country, each participant trainee will be required to submit to USAID and his/her GOE Training Officer, a Participant Training Report which will cover the following points: (1) a summary of training activities, and (2) the trainees' original training objectives and a discussion of the accomplishment of those objectives through the Participant Training program.

The mid-term and final project evaluations will assess the effectiveness of USAID-sponsored participant training in meeting the Institutional Support Program's project goal and attaining GOE ministerial and personnel development objectives.

D. Monitoring and Evaluation Plan

1) Monitoring of Progress

Progress monitoring is expected to be a shared responsibility. All involved USAID and GOE officials will participate in meeting the project's objectives and report periodically to various levels of review. These include:

- Project Internal Reviews. On a monthly, quarterly and annual basis. These are essentially 'process' oriented, i.e. with a focus on meeting schedules, expenditure projections, unforeseen problems and opportunities, etc.
- MHPU/CDPU and NOPWASD Management Reviews. A project coordinating committee will conduct meetings at regular intervals to insure timely implementation and add a new dimension to the decision processes and hopefully, contribute new insights and data to the deliberations.
- USAID/GOE Annual Reviews. The MOU, signed in January 84, institutionalized a periodic review of progress toward the achievement of certain sector wide and project specific policy objectives. The Institutional Support Program is one of the eight USAID funded w/w projects and thus subject to the annual reviews.

The format and content of the Annual Review concerning MOU objectives is evolving and will become an integral part of the overall Institutional Support Program monitoring effort. However, care will be taken to differentiate between the objectives of strengthening the national organizations responsible for sector wide problems and the more narrow USAID objectives of protecting the investments of the General organizations in Cairo, Alexandria, the Canal Cities and Provincial Cities, to which USAID has contributed substantial amounts of capital. The Annual Report on the MOU objective will continue to be presented as a separate document, and will include references to the progress achieved in the Institutional Support Program.

For the MHPU/CDPU and NOPWASD the monitoring of progress is an important management tool. The setting and monitoring of performance targets goes beyond the broader policy concerns of international funding agencies, and relates to issues of organizational and managerial effectiveness as well as administrative efficiency. By comparison with US practices, the GOE formal reporting requirements are minimal. The legislative statutes and Presidential decrees establishing the organizational entities at the national and local level do provide for a periodical accounting of activities. However, the absence of specific, i.e. quantitatively stated mandates, permits progress to be dictated by a variety of mitigating circumstances and conditions seemingly beyond the control of any one individual.

2) Evaluation Plan

The extensive monitoring efforts built into the project will facilitate an AID/GOE Evaluation at mid-point of the project and at completion. Since the project is viewed as a possible two-phased effort the major evaluation is scheduled to take place prior to reauthorization. The project budget includes funds for an evaluation by a team of experts in the respective fields of institutional capacity building and who are knowledgeable of the Egyptian situation with expected participation from the USAID and GOE staffs. The Evaluation Report will contribute to the design of subsequent project elements as well as be a factor in determining the need for a follow-on phase. Consequently, the evaluation should focus on those process related design issues, which would lead to specific guidelines for the improvement of any follow-up support activities:

- Implementation of the 'Covenants' as stated in the Project Authorization;
- Effectiveness and responsiveness of GOE agencies with regard to the advocacy of policy recommendations developed by expatriate and Egyptian consultants;
- Effectiveness of working relationship between GOE officials, expatriate advisors and Egyptian experts;
- Effectiveness of Management Information System development, including the Performance Monitoring System and Reporting activities, as a tool in the decision processes;
- Organizational structure and interaction pattern among governmental units responsible for program development and implementation;
- Other constraints within the GOE environment that mitigate against achieving overall project objectives;
- Role of USAID staff in managing project resources toward achieving project goal.

E. External Audit

Funds may be used as required for external audits of the host country contracts, as part of the AID-direct contract Miscellaneous sector support component. Such audits may be conducted upon definition of need or upon completion of the host country contracts but prior to the PACD.

IX. RECOMMENDATION, CONDITIONS AND COVENANTS

A. Recommendations:

Subject to the conditions and covenants listed below, it is recommended that AID authorize a grant from the Economic Support Fund of \$15 million to fund foreign exchange and local currency costs of the Water and Wastewater Sector Institutional Support Project. These funds will be used for technical assistance, training, and goods and services to the Ministry of Housing and Public Utilities (MHPU), and the National Organization for Potable Water and Sanitary Drainage (NOPWASD). All goods and services financed with AID provided foreign exchange will have their sources, origin and nationality in the United States.

B. Conditions Precedent to Disbursement

It is recommended that the following conditions to disbursement be satisfied prior to AID's disbursement of project funds:

(1) evidence that the MHPU plans to employ on a permanent basis a sufficient number of personnel to carry out the responsibilities of its central utility department and NOPWASD, as such responsibilities are defined in the draft presidential decree establishing the MHPU, its central utility department, and NOPWASD;

(2) evidence that MHPU and NOPWASD will provide adequate office space for their personnel assigned to the Project and for technical advisors working on the Project.

C. Covenants

The following covenants will apply:

(1) the Grantee will establish a reporting systems for the progress of the Project and will issue quarterly progress reports to A.I.D.;

(2) the Grantee will use its best efforts to establish a differential salary and incentive plan for employees in the water and wastewater sector to retain qualified personnel and to provide career and promotional opportunities for personnel participating in Project-funded training programs;

(3) the Grantee will use its best efforts to implement the national water tariff and wastewater surcharge policy through the various governorates or other means, in cooperation with the general water and wastewater organizations in the primary cities of Cairo and Alexandria and the municipal agencies in the secondary cities;

(4) the Grantee will use its best efforts to provide adequate support in its plans for the planning, design, construction and maintainance of its water and wastewater facilities.

PROJECT PAPER

EGYPT

**WATER AND WASTEWATER SECTOR
INSTITUTIONAL SUPPORT PROJECT**

TECHNICAL ANNEX

VOLUME I

PROJECT NO. 263-0176

USAID/CAIRO

85

Project Authorization

Name of Country: Arab Republic of
Egypt

Name of Project: Water and
Wastewater Sector Institu-
tional Support Project

Number of Project: 263-0176

1. Pursuant to Sections 531 and 532 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Water and Wastewater Sector Institutional Support Project for the Arab Republic of Egypt (the "Cooperating Country") involving planned obligations of not to exceed Fifteen Million Dollars (\$15,000,000) in grant funds over a three (3) year period from the date of the authorization, subject to the availability of funds in accordance with the AID OYB allotment process, to help in financing foreign exchange and local currency costs of goods and services required for the Project. Of the amount authorized for the Project, up to Five Million Dollars (\$5,000,000) is authorized for obligation in FY 1985. The planned life of the Project is approximately five (5) years from the date of initial obligation.

2. The Project will develop the institutional capability of the Ministry of Housing and Public Utilities (MHPU), the National Organization for Potable Water and Sanitary Drainage (NOPWSD), and local governments in the water and wastewater sector by providing them with technical assistance; training; the procurement of various types of equipment, materials and publications; and applied research grants to academic institutions.

3. The Project Agreement, which may be negotiated and executed by the officer to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority, shall be subject to terms and conditions, covenants, and conditions precedent substantially as follows, together with such terms and conditions as AID may deem appropriate.

(A). Source and Origin of Commodities, Nationality of Services

Commodities financed by A.I.D. under the Project shall have their source and origin in the Cooperating Country or in the United States except as A.I.D. may otherwise agree in writing. Except for ocean shipping, the suppliers of commodities or services shall have the Cooperating Country or the United States as their place of nationality, except as A.I.D. may otherwise agree in writing. Ocean shipping financed by A.I.D. under the Project shall, except as A.I.D. may otherwise agree in writing, be financed only on flag vessels and carriers of the United States.

(B) Conditions Precedent to First Disbursement

The Project Agreement shall contain conditions precedent in substance as follows:

Prior to any disbursement or to the issuance by A.I.D. of any commitment documents under the Grant Agreement, the Grantee shall, except as A.I.D. may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D.:

(1) evidence that the MHPU plans to employ on a permanent basis a sufficient number of personnel to carry out the responsibilities of its central utility department and NOPWASD, as such responsibilities are defined in the draft Presidential Decrees establishing the MHPU, its central utility department, and NOPWASD;

(2) evidence that MHPU and NOPWASD will provide adequate office space for their personnel assigned to the Project and for technical advisors working on the Project.

(C) Covenants

The Grant Agreement shall contain covenants substantially as follows:

(1) the Grantee will establish a reporting system for the progress of the Project and will issue quarterly progress reports to A.I.D.;

(2) the Grantee will use its best efforts to establish a differential salary and incentive plan for employees in the water and wastewater sector to retain qualified personnel and to provide career and promotional opportunities for personnel participating in Project-funded training programs;

(3) the Grantee will use its best efforts to implement the national water tariff and wastewater surcharge policy through the various governorates or other means, in cooperation with the general water and wastewater organizations in the primary cities of Cairo and Alexandria and the municipal agencies in the secondary cities; and

(4) the Grantee will use its best efforts to provide adequate support in its plans for the planning, design, construction and maintenance of its water and wastewater facilities.



Frank B. Kimball
Director, USAID/Egypt

7/30/85
Date

CLEARANCES: DPPE:GLaudato JMC
FM:TMcMahon TM
DR:RvanRaalte R
for for

MJW
T.E.C. - M. Williams

A.I.D. Project Number 263-0176

PROJECT
GRANT AGREEMENT
BETWEEN
THE ARAB REPUBLIC OF EGYPT
AND THE
UNITED STATES OF AMERICA
FOR THE
WATER AND WASTEWATER SECTOR
INSTITUTIONAL SUPPORT PROJECT

Date:

Table of Contents

Project Grant Agreement

	<u>Page</u>
Article 1: The Agreement	1
Article 2: The Project	1
SECTION 2.1. Definition of Project	1
SECTION 2.2. Incremental Nature of Project	2
Article 3: Financing	2
SECTION 3.1. The Grant	2
SECTION 3.2. Grantee Resources for the Project	3
SECTION 3.3. Project Assistance Completion Date	3
Article 4: Requirements Precedent to Disbursement	4
SECTION 4.1. First Disbursement	4
SECTION 4.2. Notification	5
SECTION 4.3. Terminal Dates for Requirements Precedent	5
Article 5: Special Covenants	5
SECTION 5.1. Project Evaluation	5
SECTION 5.2. Ratification	6
SECTION 5.3. Progress Report	6
SECTION 5.4. Salaries	6
SECTION 5.5. Implementation of Tariff and Surcharge Policy	7
SECTION 5.6. Support for Five Year Plan	7
Article 6: Procurement Source	7
SECTION 6.1. Foreign Exchange Costs	7
SECTION 6.2. Local Currency Costs	7
Article 7: Disbursement	8
SECTION 7.1. Disbursement for Foreign Exchange Costs	8
SECTION 7.2. Other Forms of Disbursement	9
SECTION 7.3. Rate of Exchange	9

Table of Contents (continued)
Project Grant Agreement

Article 8: Miscellaneous	9
SECTION 8.1. Communications	9
SECTION 8.2. Representatives	10
SECTION 8.3. Standard Provisions Annex	11
SECTION 8.4. Language of the Agreement	11

Annex 1

PROJECT DESCRIPTION

Annex 2

PROJECT GRANT STANDARD PROVISIONS

Table of Contents

Project Grant Standard Provisions Annex

Page

Article A:	Project Implementation Letters	1
Article B:	General Covenants	1
SECTION B.1.	Consultation	1
SECTION B.2.	Execution of Project	1
SECTION B.3.	Utilization of Goods and Services	2
SECTION B.4.	Taxation	2
SECTION B.5.	Reports, Records, Inspections, Audit	2
SECTION B.6.	Completeness of Information	3
SECTION B.7.	Other Payments	3
SECTION B.8.	Information and Marking	3
Article C:	Procurement Provisions	3
SECTION C.1.	Special Rules	3
SECTION C.2.	Eligibility Date	4
SECTION C.3.	Plans, Specifications, & Contracts	4
SECTION C.4.	Reasonable Price	5
SECTION C.5.	Notification to Potential Suppliers	5
SECTION C.6.	Shipping	5
SECTION C.7.	Insurance	6
SECTION C.8.	U.S. Government-Owned Excess Property	7
Article D:	Termination; Remedies	7
SECTION D.1.	Termination	7
SECTION D.2.	Refunds	8
SECTION D.3.	Nonwaiver of Remedies	8
SECTION D.4.	Assignment	9

A.I.D. Project No. 263-0176

Project Grant Agreement

Dated , 1985

Between

The Arab Republic of Egypt ("Grantee")

And

The United States of America, acting through the
Agency for International Development ("A.I.D.").

Article 1: The Agreement

The purpose of this Agreement is to set out the understandings of the parties named above ("Parties"), with respect to the undertaking by the Grantee of the Project described below and with respect to the financing of the Project by the Parties.

Article 2: The Project

SECTION 2.1. Definition of Project. The Project, which is further described in Annex 1, will provide technical assistance; training; various types of equipment, materials and publications; and applied research grants to academic institutions to assist the Ministry of Housing and Public Utilities ("MHPU"), the National Organization of Potable Water and Sanitary Drainage ("NOPWASD"), and local governmental agencies in meeting municipal water and wastewater needs throughout Egypt.

Annex 1, attached, amplifies the above definition of the Project. Within the limits of the above definition of the Project, elements of the amplified description stated in Annex 1 may be changed by written agreement of the authorized representatives of the Parties named in Section 8.2.; without formal amendment of this Agreement.

SECTION 2.2. Incremental Nature of Project.

(a) A.I.D.'s contribution to the Project will be provided in increments, the initial one being made available in accordance with Section 3.1 of this Agreement. Subsequent increments will be subject to availability of funds to A.I.D. for this purpose, and to the mutual agreement of the Parties, at the time of a subsequent increment, to proceed.

(b) Within the overall Project Assistance Completion Date stated in this Agreement, A.I.D., based upon consultation with the Grantee, may specify in Project Implementation Letters appropriate time periods for the utilization of funds granted by A.I.D. under an individual increment of assistance.

Article 3: Financing

SECTION 3.1. The Grant. To assist the Grantee to meet the costs of carrying out the Project, A.I.D., pursuant to the Foreign Assistance Act of 1961, as amended, agrees to grant the Grantee under the terms of this Agreement not to exceed Five Million United States ("U.S.") Dollars (\$5,000,000) ("Grant").

The Grant may be used to finance Foreign Exchange Costs, as defined in Section 6.1, and Local Currency costs, as defined in Section 6.2, of goods and services required for the Project.

SECTION 3.2. Grantee Resources for the Project.

(a) The Grantee agrees to provide or cause to be provided for the Project all funds, in addition to the Grant, and all other resources required to carry out the Project effectively and in a timely manner.

(b) The Grantee will provide under the terms of this Agreement, increments parallel to those provided by A.I.D. For the first year, the amount contributed will be One Million, Five Hundred Thousand Egyptian Pounds (LE 1,500,000), including costs borne on an "in-kind" basis. It is expected that within the overall Project Assistance Completion Date, the Grantee will have provided not less than Five Million Egyptian Pounds while A.I.D. will have granted Fifteen Million U.S. Dollars (\$15,000,000).

SECTION 3.3. Project Assistance Completion Date.

(a) The "Project Assistance Completion Date" (PACD), which is July 30, 1990, or such other date as the Parties may agree to in writing, is the date by which the Parties estimate that all services financed under the Grant will have been performed and all goods financed under the Grant will have been furnished for the Project as contemplated in this Agreement.

(b) Except as A.I.D. may otherwise agree in writing, A.I.D. will not issue or approve documentation which would authorize disbursement of the Grant for services performed subsequent to the PACD or for goods furnished for the Project, as contemplated in this Agreement, subsequent to the PACD.

(c) Requests for disbursement, accompanied by necessary supporting documentation prescribed in Project Implementation Letters are to be received by A.I.D. or any bank described in Section 7.1 no later than nine (9) months following the PACD, or such other period as A.I.D. agrees to in writing. After such period, A.I.D., giving notice in writing to the Grantee, may at any time or times reduce the amount of the Grant by all or any part thereof for which requests for disbursement, accompanied by necessary supporting documentation prescribed in Project Implementation Letters, were not received before the expiration of said period.

Article 4: Requirements Precedent to Disbursement.

SECTION 4.1. First Disbursement. Prior to any disbursement or to the issuance by A.I.D. of any commitment documents under this Agreement, the Grantee shall, except as the Parties may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D.:

(a) a statement of the names and titles of the persons authorized pursuant to Section 8.2 to act as the representatives of the Grantee, together with a specimen signature of each person specified in such statement;

(b) evidence that MHPU and NOPWASD will provide adequate office space for their personnel assigned to the Project and for the technical advisors working on the Project; and

(c) evidence that the MHPU plans to employ on a permanent basis a sufficient number of personnel to carry out the responsibilities of its central utility department and NOPWASD as such responsibilities are defined in the draft Presidential Decrees establishing the MHPU, its central utility department and NOPWASD.

SECTION 4.2. Notification. When A.I.D. has determined that the requirements precedent specified above have been met, it will promptly notify the Grantee.

SECTION 4.3. Terminal Dates for Requirements Precedent. If all of the requirements specified in Section 4.1 have not been met within 90 days from the date of this Agreement, or such later date as A.I.D. may agree to in writing, A.I.D., at its option, may terminate this Agreement by written notice to Grantee.

Article 5: Special Covenants.

SECTION 5.1. Project Evaluation. The Parties agree to establish an evaluation program as part of the Project. Except as the Parties otherwise agree in writing, the program will include, during the implementation of the Project and at one or more points thereafter:

(a) evaluation of progress toward attainment of the objectives of the Project;

(b) identification and evaluation of problem areas or constraints which may inhibit such attainment;

(c) assessment of how such information may be used to help overcome such problems; and

(d) evaluation, to the degree feasible, of the overall development impact of the Project.

SECTION 5.2. Ratification. The Grantee will take all necessary action to complete all legal procedures necessary for ratification of this Agreement and will notify A.I.D. as promptly as possible of the fact of such ratification.

Section 5.3. Progress Reports. The Grantee will establish a reporting system for the progress of the Project and issue quarterly progress reports to A.I.D.

Section 5.4. Salaries. The Grantee will use its best efforts to establish a differential salary and incentive plan for employees in the water and wastewater sector to retain qualified personnel and to provide career and promotional opportunities for personnel participating in Project-funded training programs.

Section 5.5. Implementation of Tariff and Surcharge Policy. The Grantee will use its best efforts to implement the national water tariff and wastewater surcharge policy through the various governorates or other means in cooperation with the general water and wastewater organizations in the primary cities of Cairo and Alexandria and the municipal agencies in the secondary cities.

Section 5.6. Support for Planning. The Grantee will use its best efforts to provide adequate support in its plans for the planning, design, construction and maintenance of its water and wastewater facilities.

Article 6: Procurement Source

SECTION 6.1. Foreign Exchange Costs. Disbursements pursuant to Section 7.1 will be used exclusively to finance the costs of goods and services required for the Project having their source and origin in the United States (Code 000 of the A.I.D. Geographic Code Book as in effect at the time orders are placed or contracts entered into for such goods or services) ("Foreign Exchange Costs"), except as A.I.D. may otherwise agree in writing, and except as provided in the Project Grant Standard Provisions Annex, Section C.1(b) with respect to marine insurance.

SECTION 6.2. Local Currency Costs. Disbursements pursuant to SECTION 7.2 will be used exclusively to finance the costs of goods and services required for the Project having their source and, except as the Parties may otherwise agree in writing, their origin in Egypt ("Local Currency Costs").

Article 7: Disbursement

SECTION 7.1. Disbursement for Foreign Exchange Costs.

(a) After satisfaction of requirements precedent, the Grantee may obtain disbursements of funds under the Grant for the Foreign Exchange Costs of goods or services required for the Project in accordance with the terms of this Agreement, by such of the following methods as may be mutually agreed upon:

(1) by submitting to A.I.D., with necessary supporting documentation as prescribed in Project Implementation Letters, (A) requests for reimbursement for such goods or services, or, (B) requests for A.I.D. to procure commodities or services on Grantee's behalf for the Project; or,

(2) by requesting A.I.D. to issue Letters of Commitment for specified amounts (A) to one or more U.S. banks, satisfactory to A.I.D., committing A.I.D. to reimburse such bank or banks for payments made by them to contractors or suppliers, under Letters of Credit or otherwise, for such goods or services, or (B) directly to one or more contractors or suppliers, committing A.I.D. to pay such contractors or suppliers for such goods or services.

(b) Banking charges incurred by Grantee in connection with Letters of Commitment and Letters of Credit will be financed under the Grant unless Grantee instructs A.I.D. to the contrary. Such other charges as the Parties may agree to may also be financed the Grant.

SECTION 7.2. Other Forms of Disbursement. Disbursements of the Grant may also be made through such other means as the Parties may agree to in writing.

SECTION 7.3. Rate of Exchange. Except as may be more specifically provided under Section 7.2, if funds provided under the Grant are introduced into Egypt by A.I.D. or any public or private agency for purposes of carrying out obligations of A.I.D. hereunder, the Grantee will make such arrangements as may be necessary so that funds may be converted into currency of the Arab Republic of Egypt at the highest rate of exchange prevailing and declared for foreign exchange currency by the competent authorities of the Arab Republic of Egypt.

Article 8: Miscellaneous

SECTION 8.1. Communications. Any notice, request, document, or other communication submitted by A.I.D. or the Grantee to the other under this Agreement will be in writing or by telegram or cable, and will be deemed duly given or sent when delivered to such party at the following addresses:

To the Grantee:

Ministry of Planning and
International Cooperation
8 Adly Street
7th Floor
Cairo, Egypt

To A.I.D.:

Agency for International Development
U.S. Embassy
Cairo, Egypt

To the Implementing Organizations:

- (1) Ministry of Housing and Public Utilities
1, Ismail Abaza Street
Cairo, Egypt
- (2) National Organization for Potable Water
and Sanitary Drainage
Mogamma Building
Cairo, Egypt

All such communications will be in English, unless the Parties otherwise agree in writing. Other addresses may be substituted for the above upon the giving of notice.

SECTION 8.2. Representatives. For all purposes relevant to this Agreement, the Grantee will be represented by the individual holding or acting in the office of Minister of Planning and International Cooperation and/or the Administrator of the Department for Economic Cooperation with U.S.A., and A.I.D. will be represented by the individual holding or acting in the office of Director, USAID, each of whom, by written notice, may designate additional representatives for all purposes other than exercising the power under Section 2.1 to revise elements of the amplified description in Annex 1. The names of the representatives of the Grantee, with specimen signatures, will be provided to A.I.D., which may accept as duly authorized any instrument signed by such representatives in implementation of this Agreement, until receipt of written notice of revocation of their authority.

SECTION 8.3. Standard Provisions Annex. A "Project Grant Standard Provisions Annex" (Annex 2) is attached to and forms part of this Agreement.

SECTION 8.4. Language of Agreement. This agreement is prepared in both English and Arabic. In the event of ambiguity or conflict between the two versions, the English version shall control.

IN WITNESS WHEREOF, the Grantee and the United States of America, each acting through its duly authorized representative, have caused this Agreement to be signed in their names and delivered as of the day and year first above written.

ARAB REPUBLIC OF EGYPT

UNITED STATES OF AMERICA

BY : _____

BY : _____

NAME : Kamal Ahmed El-Ganzoury

NAME : Nicholas Veliotos

TITLE: Minister of Planning and
International Cooperation

TITLE: American Ambassador

ARAB REPUBLIC OF EGYPT

UNITED STATES OF AMERICA

BY : _____

BY: _____

NAME : Mr. Ahmad Abdel Salam Zaki

NAME: Frank B. Kimball

TITLE: Administrator of the Department
for Economic Cooperation
with U.S.A.

TITLE: Director
USAID/Egypt

Implementing Organization

In acknowledgement of the foregoing Agreement, the following representatives of the implementing organization have subscribed their names:

MINISTRY OF HOUSING AND PUBLIC UTILITIES

NATIONAL ORGANIZATION FOR POTABLE WATER AND SANITARY DRAINAGE

BY: _____

BY: _____

NAME: _____

NAME: _____

TITLE: _____

TITLE: _____

ANNEX 1

WATER AND WASTEWATER SECTOR INSTITUTIONAL SUPPORT PROJECT
AMPLIFIED PROJECT DESCRIPTION
(263-0176)

I. General Project Description

1. Project Goal:

To enhance human health and productivity through the provision of local water and wastewater services.

2. Project Purpose:

To enhance the institutional capability of the Ministry of Housing and Public Utilities (MHPU) and its executive agency the National Organization for Water and Sanitary Drainage (NOPWASD), in meeting municipal water and wastewater needs throughout Egypt.

3. Project Components:

AID grant funds will cover the cost of technical assistance to the MHPU, NOPWASD and associated central and local governmental agencies, provided by technical advisors under host-country and AID-Direct contracts, as well as training, the procurement of various types of equipment, materials and publications, and applied research grants to academic institutions. GOE contributions will cover in-kind costs of office space for the technical consultants and the salary costs of Egyptian consultants and GOE participating staff. Technical assistance to municipal public works departments, provided through the offices of

NOPWASD, will be limited to the assessment of operating and maintenance needs, O&M program development and actual operating and maintenance (hands-on) assistance and training. Miscellaneous issue-specific support may be provided to other agencies and to pay for efforts of U.S. institutions called upon to render special assistance (for example, basic research adaptations, training relationships, conference support, etc.).

4. End of Project Status:

Progress will be measured by the performance of MHPU and NOPWASD. At Project termination the MHPU and NOPWASD are expected to have accomplished the following:

- clarified the lines of authority, and functional responsibilities, and established effective intergovernmental coordination and cooperation;
- assigned permanent staff to deal competently with the variety of functional responsibilities, established a differential salary and incentive plan for sector employees, as well as more flexible career and promotional opportunities;
- completed the first phase management training program for Project participants as an integral part of a comprehensive career development plan;

- designed and partially implemented a comprehensive integrated Management Information System; including a sector wide Performance Monitoring System;
- completed an assessment of water and wastewater capital and operation and maintenance requirements of Egypt's urban areas, and prepared a long range plan for meeting the country's financial and human resource needs;
- established a Comprehensive Financial Resource Mobilization System, for the sector as a whole, for the general water and wastewater organizations under its jurisdiction, as well as public works departments of the cities and towns in the 16 governorates. The system will be focused on long term local financing needs and costs recovery mechanisms, the implementation of water tarriff and wastewater surcharge policies, O&M cost analyses, improvement of internal accounting and external financial reporting requirements.
- established active twinning relationships between GOE organizations and utilities, technical and industry associations and professional societies and their respective US counterparts, and organized appropriate joint seminars and conferences;

- completed the national manpower requirements study and training needs assessment, developed a comprehensive training plan, for the sector as a whole, trained approximately 400 central government employees in principles and practices of organization, management and administration, certified approximately 200 municipal plant operators;
- established a comprehensive environmental publication program in support of the research and manpower training program, procured publications for Training Resource Centers, and provided access to information sources;
- developed a financial support and coordination program for applied research in cooperation with the Academy for Scientific Research and Technology, (ASRT), the Egyptian academic research and foreign institutions interested in basic research adaptations;
- initiated a comprehensive review of water and wastewater performance standards, based on economic principles and environmental concerns and established an effective code enforcement program;

- assisted local governmental units with construction management, operation and management of plants, the establishment of laboratory testing procedures and monitoring efforts, financial accounting and reporting, and the development and implementation of a municipal operator training program.

5. Relationship to Other Projects:

The project builds upon the experience of the limited technical assistance efforts provided in the context of AID capital funding for water and wastewater projects in many parts of Egypt. The Project also continues and expands on the technical assistance efforts provided by the IBRD, UN/WHO, and various bi-lateral donors. The findings and recommendations of several sector assessments, performed by AID and other international donors over the past several years, have been taken into consideration in the design of the Project.

II. Responsibilities

Detailed responsibilities of the participants will be specifically defined in Project Implementation Letter No. 1. MHPU and NOPWASD will be responsible for the management of the long-term and short-term technical advisors.

III. Evaluations

A mid-term evaluation is planned during the Project and will be financed from the short-term technical assistance component. In addition, GOE and AID staff will be expected to participate as available. This evaluation will be critical in establishing the future direction of the project as well as the potential need for a follow-on second-phase project. In addition, a final or termination evaluation is also planned and will be financed from short-term technical-assistance resources.

IV. Illustrative Financial Plan

The table below summarizes planned obligations for FY 85 through FY 1988. The financial plan is illustrative and is subject to change. Future obligations by A.I.D. beyond the amount specified in the text of the Agreement are subject to the availability of funds and mutual agreement of the Parties. Changes may be made by representation of the parties named in the text of the Agreement without formal amendment to the Agreement, provided that such changes do not cause: (1) USAID's contribution to exceed the amount specified in the text of the Agreement; or (2) the GOE's contribution to be less than the amount specified in the text of the Agreement. Additionally, AID's obligations are subject to the availability of funds and a mutual agreement of the parties to proceed with the project.

PROJECT FINANCIAL PLAN
CUMULATIVE OBLIGATIONS

	As of July 30, 1985		Future Years		Total Project	
	USAID (in \$000)	GOE (in LE000)	USAID (in \$000)	GOE (in LE000)	USAID (in \$000)	GOE (in LE000)
PROJECT INPUTS						
MHPU Support						
Technical Assistance	920	205	1,150	413	2,070	618
Commodities	—	50	275	65	275	115
Subtotal	920	255	1,425	478	2,345	733
NOPWASD Support						
Technical Assistance	1,980	330	2,380	780	4,360	1,110
Commodities	—	110	2,140	740	2,140	850
Subtotal	1,980	440	4,520	1,520	6,500	1,960
Municipal Support						
Technical Assistance	800	70	976	274	1,776	344
Commodities	500	645	260	440	760	1,085
Subtotal	1,300	715	1,236	714	2,536	1,428
Miscellaneous Support						
Technical Assistance	500	70	640	103	1,250	173
Commodities Assistance	—	—	275	—	275	—
Subtotal	500	70	965	103	1,465	173
Total	4,700	1,480	8,146	2,815	12,846	4,295
Contingency & Inflation	300	20	1,854	685	2,154	705
GRAND TOTAL	5,000	1,500	10,000	3,500	15,000	5,000

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Annex C

ACTION: AID-6 INFO: DCM USIS FCON FAS /10

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PP RUEHC
DE RUEHC #7538 2342204
ZNR UUUUU 7ZR
P 212159Z AUG 84
FM SECSTATE WASHDC
TO AMEMBASSY CAIRO PRIORITY 135R
BT
UNCLAS STATE 247538

LOC: 08? 701
21 AUG 84 2205
CN: 04574
CHRG: AID
DIST: AID

ACTION TO	<u>DRPS</u>	<u>DPPC</u>
ACTION TAKEN	DATE	<u>8/23</u>
NAME	INITIALS	

AIDAC

E.O. 12356: N/A

TAGS:

SUBJECT: WATER AND WASTEWATER INSTITUTIONAL/HUMAN
RESOURCE DEVELOPMENT PID (263-0176)

1. SUMMARY. THE NEAC MET AUGUST 14, 1984 TO REVIEW THE SUBJECT PID. THE NEAC APPROVED THE DEVELOPMENT OF A PP TO PROVIDE FOR AN INITIAL PHASE OF RELATIVELY SHORT-TERM (TWO-TO-THREE YEARS) TECHNICAL ASSISTANCE TO THE ADVISORY COUNCIL FOR RECONSTRUCTION (ACR), AS WELL AS SUPPORT FOR PROPOSED TOMOHAR TRAINING ACTIVITIES. HOWEVER, THE NEAC DID NOT APPROVE PROVIDING AID SUPPORT FOR THE CREATION OF A GOVERNMENT CONSULTING ORGANIZATION UNDER LAW 43, AS PROPOSED IN THE PID, AT THIS TIME. END SUMMARY.

2. THE NEAC RECOGNIZED THAT THE SUBJECT PROJECT REPRESENTS A NEW INITIATIVE ON THE INSTITUTIONAL SUPPORT SIDE OF AID'S GROWING WATER/WASTEWATER SECTOR PROGRAM AND THAT THE RECENT GOF REQUEST FOR ASSISTANCE TO HELP IT MEET MOU INSTITUTIONAL AND HUMAN RESOURCE DEVELOPMENT OBJECTIVES IS A POSITIVE STEP. HOWEVER, IT CONSIDERED AID SUPPORT FOR THE FORMATION OF A GOVERNMENT CONSULTING ORGANIZATION PREMATURE. INASMUCH AS THE GOE'S IMMEDIATE

NEED IS FOR: (1) GENERAL TECHNICAL ASSISTANCE TO REPLACE THAT WHICH HAS BEEN SUPPLIED UNDER ITS CONTRACT WITH TAMS, (2) HELP IN EXPLORING ALTERNATIVE APPROACHES TO LONGER-TERM INSTITUTIONAL SUPPORT, AND (3) SUPPORT FOR TRAINING ACTIVITIES TO BE CONDUCTED BY TOMOHAR. THE NEAC APPROVED THE PID AS THE BASIS FOR DEVELOPING (FOR FY 84 OR EARLY FY 85 FUNDING) A TWO-TO-THREE YEAR TECHNICAL ADVISORY SERVICES PROJECT. THIS PROJECT SHOULD BE GEARED TO EXPLORING ALTERNATIVE APPROACHES TO PROVIDING LONGER-TERM SUPPORT FOR INSTITUTIONAL DEVELOPMENT IN THE SECTOR, WHILE MEETING THE GOE'S IMMEDIATE NEEDS FOR TECHNICAL ASSISTANCE OF A MORE GENERAL NATURE, AS WELL AS SUPPORT FOR TOMOHAR.

3. MORE SPECIFICALLY, WE ARE NOT PREPARED TO SUPPORT THE CREATION OF A GOVERNMENT CONSULTING ORGANIZATION, ALTHOUGH WE WOULD BE PREPARED TO CONSIDER A LAW 43 ARRANGEMENT WITH SUBSTANTIAL GOF PRIVATE SECTOR PARTICIPATION. THEREFORE, THE MISSION IS ENCOURAGED TO

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CONSIDER ALTERNATIVE APPROACHES WHICH WOULD PROVIDE FOR PRIVATE SECTOR PARTICIPATION. THE SCOPE OF WORK FOR THE TECHNICAL SERVICES CONTRACTOR, PARA 2, SHOULD INCLUDE A REQUIREMENT TO ASSIST THE GOE TO EXPLORE ADDITIONAL ALTERNATIVES TO MEETING GOE NEEDS FOR LONG- AND SHORTER-TERM TECHNICAL ASSISTANCE AND INSTITUTIONAL DEVELOPMENT.

4. THE PROPOSAL TO SUPPORT EXPANDING TOMOHAR'S TRAINING RESPONSIBILITIES TO INCLUDE WATER AND WASTEWATER WAS APPROVED, WITH THE RECOMMENDATION THAT THE MISSION A CONSIDER SUPPORTING OTHER GOE SECTOR TRAINING INITIATIVES, INCLUDING THOSE WHICH MAY BE TIED MORE DIRECTLY TO SPECIFIC AID-SUPPORTED INFRASTRUCTURE PROGRAMS AND WHICH INCLUDE OPPORTUNITIES FOR TRAINING THE PRIVATE SECTOR. THE NEAC NOTED THAT NO PRELIMINARY EVALUATION PLAN WAS INCLUDED IN THE PID AND ENCOURAGED THE MISSION TO DEVELOP ONE, ESPECIALLY FOR TOMOHAR AND RELATED ACTIVITIES.

5. THE NEAC APPROVED THE MISSION REQUEST THAT THE PP BE AUTHORIZED BY THE MISSION DIRECTOR, CONTINGENT UPON THE PROPOSED CONTRACTING MODE (INCLUDING A SUBCONTRACTING PLAN PROVIDING FOR MINORITY CONTRACTOR INVOLVEMENT) BEING REVIEWED BY THE BUREAU PRIOR TO OBLIGATION.

6. FINALLY, DESPITE UNCERTAINTY WHETHER IT WILL BE POSSIBLE TO DEVELOP THE PROJECT FOR FY 84 FUNDING, IN VIEW OF THE RECENT GOVERNMENT REORGANIZATION, THE BUREAU IS PROCEEDING TO SECURE THE SERVICES OF A TEAM TO ASSIST

IN THE PREPARATION OF A SCOPE OF WORK FOR THE RFP. FRED ZOBRIST AND MONICA SINDING MET WITH THE INTERNATIONAL SCIENCE AND TECHNOLOGY INSTITUTE (ISTI), THE B(A) IOC CONTRACTOR IN THE WATER AREA. ISTI WAS ASKED TO SUPPLY A FOUR PERSON TEAM, INCLUDING A SENIOR MANAGER OF A CONSULTING ORGANIZATION, A UTILITIES MANAGER, AN INSTITUTIONAL DEVELOPMENT SPECIALIST, AND A HUMAN RESOURCE DEVELOPMENT SPECIALIST. THE RESUMES OF SEVERAL POSSIBLE TEAM MEMBERS ARE CURRENTLY UNDER REVIEW. IN VIEW OF THE REQUIREMENT FOR IMMEDIATE ASSISTANCE, THE BUREAU WILL MAKE REGIONAL ESF PD AND S FUNDS AVAILABLE FOR THE IOC WORK ORDER.

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ACTION: AID-5 INFO: LCM USIS ECON FAS /1✓

VZCZCC10256
OO RUEHGG
DE RUEFC #9073/21 2161632
ZNR UUUUU ZZH
O 031614Z AUG 84
FM SECSTATE WASHDC
TO AMEMBASSY CAIRO IMMEDIATE 0564
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UNCLAS SECTION 01 CF 02 STATE 229073

LOC: 053 903
04 AUG 84 0442
CN: 62725
CHRG: AID
DIST: AID

AID-6

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ACTION TO	<u>DRPS</u>	<u>DPPE</u>
ACTION TAKEN		DATE <u>8/6</u>
NAME		INITIALS

F.C. 12356: N/A

TAGS:

SUBJECT: WATER AND WASTEWATER INSTITUTIONAL/HUMAN
RESOURCE DEVELOPMENT PID

REF: SINDING-ZOBRIST TELECON, 31 JULY 84

1. THE PRC REVIEWED THE PID FOR THE SUBJECT PROJECT ON 19 JULY 84. THE FOLLOWING ISSUES WERE IDENTIFIED FOR CONSIDERATION BY THE NEAC:

-- (A) PHASING: THE PID PROPOSES OBLIGATING FUNDS THIS YEAR FOR INSTITUTIONAL DEVELOPMENT ACTIVITIES WHICH ARE NOT YET FULLY CONCEPTUALIZED OR DESIGNED. EVEN IN ADVANCE OF THE RECENT REORGANIZATION OF THE MINISTRY OF DEVELOPMENT, THE PROPOSAL TO ESTABLISH A GOVERNMENT CONSULTING ORGANIZATION WAS DEPENDENT UPON MINISTER KATHAWI RENEWING HIS REQUEST FOR APPROVAL OF THE SCHEME BY THE PRIME MINISTER AND CABINET. IN THE AREA OF TRAINING, HOWEVER, PROPOSED ACTIVITIES ARE CONSIDERABLY FIRMER, ALTHOUGH DEPENDENT UPON COMPLETION OF TOMORROW'S NEW NATIONAL TRAINING FACILITIES. IN VIEW OF THE UNCERTAIN FUTURE OF THE GOI INSTITUTIONAL SUPPORT PROPOSAL, THE PID SHOULD MORE CLEARLY REFLECT THE PHASED NATURE OF THE PROJECT BY SETTING FORTH FIRM CRITERIA TO

BE AGREED UPON WITH THE GOV FOR BOTH INITIAL AND SUBSEQUENT OBLIGATIONS (E.G., A REQUIREMENT FOR THE DEVELOPMENT OF AN IMPLEMENTATION PLAN TO BE APPROVED BY AID, AS WELL AS JOINTLY AGREED UPON ANNUAL WORK PLANS). ALTERNATIVELY, IN VIEW OF THE RECENT GOVERNMENT REORGANIZATION AND THE CONTINUING UNCERTAINTY OVER THE FORMAT THE PROJECT WILL ASSUME, THE MISSION MAY WISH TO DEVELOP AN INITIAL, SMALLER-SCALE PROJECT THE MAJOR OUTPUT OF WHICH WOULD BE THE DEVELOPMENT OF A MECHANISM TO PROVIDE LONGER-TERM TECHNICAL ADVISORY SERVICES AND THE INITIATION OF TRAINING ACTIVITIES, OR IT MAY WISH TO PROVIDE INTERIM TECHNICAL ASSISTANCE AND SUPPORT FOR TRAINING THROUGH SOME OTHER PROJECT SUCH AS TSFS. IN ANY CASE, THE MISSION MAY FIND IT NECESSARY TO DELAY INITIATION OF A NEW PROJECT UNTIL EARLY IN FY 85.

-- (B) ALTERNATIVE APPROACHES TO TECHNICAL ASSISTANCE.

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IN VIEW OF THE IMPORTANCE OF ADEQUATELY EXPLORING ALTERNATIVE APPROACHES TO PROVIDING TECHNICAL ADVISORY SERVICES, INCLUDING UTILIZING PRIVATE SECTOR RESOURCES, THE MISSION SHOULD NOT CHARACTERIZE ITS ACTIVITIES AT THIS STAGE IN TERMS OF UNDERTAKING A FEASIBILITY STUDY OF THE GO'S PROPOSED GOVERNMENT CONSULTING ORGANIZATION. RATHER THAN PRE-JUDGE THE OUTCOME, THE CONSULTANT SHOULD BE CHARGED WITH LOOKING AT ALTERNATIVE APPROACHES TO MEETING GOE NEEDS FOR LONG- AND SHORTER-TERM TECHNICAL ASSISTANCE.

-- (C) PRIVATE VS. PUBLIC OWNERSHIP. THE PROPOSAL TO ESTABLISH A GOVERNMENT CONSULTING ORGANIZATION TO BE UTILIZED BY ITS SHAREHOLDERS INCORPORATES A PRIVATE SECTOR APPROACH IN A PUBLIC SECTOR SERVICE DELIVERY EFFORT. NONETHELESS, AS PROPOSED, IT COULD COMPETE WITH THE PRIVATE SECTOR OR DISCOURAGE THE DEVELOPMENT OF EGYPTIAN PRIVATE SECTOR CAPABILITIES. THEREFORE, THE MISSION SHOULD EXPLORE PRIVATE AS WELL AS PUBLIC SECTOR APPROACHES TO PROVIDING TECHNICAL ADVISORY SERVICES. IN THE EVENT THE MISSION CONTINUES TO SUPPORT THE NOTION OF A GOVERNMENT-OWNED CONSULTING ORGANIZATION, THE PP SHOULD SPELL OUT THE REASONS WHY PRIVATE SECTOR ALTERNATIVES WERE REJECTED. IN ADDITION, IT SHOULD ADDRESS PAST EXPERIENCE WITH ESTABLISHING AND WORKING WITH PUBLIC, QUASI-PUBLIC AND PRIVATE NATIONAL CONSULTING ORGANIZATIONS IN EGYPT AND ELSEWHERE. IN THIS REGARD, IT WOULD BE HELPFUL IF ZORIST WERE TO BRING WITH HIM INFORMATION ON LAW 43 AND OTHER LAWS WHICH PERMIT THIS TYPE OF ORGANIZATION TO BE ESTABLISHED.

-- (D) UTILIZATION. THE PROPOSED TECHNICAL ASSISTANCE ACTIVITIES ARE INTENDED TO BENEFIT BOTH NATIONAL INSTITUTIONS AND LOCAL OPERATING ORGANIZATIONS. THE PID PROPOSES THAT LOCAL WATER/WASTEWATER ORGANIZATIONS BE SHAREHOLDERS AND THUS MEMBERS OF THE BOARD OF DIRECTORS OF THE GOVERNMENT ORGANIZATION. HOWEVER, BECAUSE FOR THE FORESEEABLE FUTURE LOCAL ORGANIZATIONS WILL REQUIRE INCREASED NATIONAL BUDGET SUBSIDIES TO QUOTE BUY INTO AND UNQUOTE THE CONSULTING ORGANIZATION, IT IS UNCLARIFIED WHETHER THIS APPROACH WILL INDEED RESULT IN A SENSE OF CONTROL ON THE PART OF THE LOCAL ENTITIES. FURTHER, IT WILL BE NECESSARY CLARIFY WHETHER ADVISORS ATTACHED TO THE PROPOSED ORGANIZATION WILL BE IN LIEU OF OR IN ADDITION TO PROJECT-FUNDED LOCAL MANAGEMENT ADVISORY CONTRACTS. FINALLY, THE NOTION OF CHARGING THE LOCAL ORGANIZATIONS USER FEES APPEARS TO BE CONTRARY TO THE DESIRE TO MAXIMIZE LOCAL UTILIZATION OF PROJECT SERVICES.

2. ALTHOUGH THE PRC WAS ENCOURAGED BY THE INCREASED GOV INTEREST IN ADDRESSING INSTITUTIONAL/HUMAN RESOURCE

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ACTION: 4IT-E INFO: DCM USIS ECON FAS /10

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DEVELOPMENT ISSUES, IT CONCLUDED THAT THE PROPOSED PROJECT CONCEPT IS NOT YET SUFFICIENTLY WELL DEFINED TO PERMIT THE DEVELOPMENT OF A PP FOR A RELATIVELY LONG-TERM INSTITUTIONAL/HUMAN RESOURCE DEVELOPMENT ACTIVITY BEFORE THE END OF FY 84. THE PRC IS THEREFORE PREPARED TO RECOMMEND TO THE NEAC THAT IT SUGGEST TO THE MISSION EITHER OF TWO ALTERNATIVE COURSES OF ACTION, AS FOLLOWS:

-- (A) PROCEED TO DEVELOP FOR FY 84 FUNDING AND UNDER THE CURRENT PID A RELATIVELY SHORT-TERM TECHNICAL ADVISORY SERVICES PROJECT (INCLUDING SUPPORT FOR TRAINING, IF APPROPRIATE) WHICH IS GEARED TO IDENTIFYING AND EXPLORING ALTERNATIVE INSTITUTIONAL DEVELOPMENT APPROACHES, WITH A VIEW TOWARD DEVELOPING A FOLLOW-ON PROJECT FOR FY 85 OR 86 FUNDING; OR

-- (B) PROVIDE SHORT-TERM TECHNICAL ASSISTANCE INCLUDING TRAINING SUPPORT UNDER TSFS OR ONE OF THE SECTOR PROJECTS AND THEREBY BUY MORE TIME TO DEVELOP COUNTERPART RELATIONSHIPS, EXPLORE ALTERNATIVES, AND DESIGN A RELATIVELY LONG-TERM TECHNICAL ASSISTANCE/HUMAN RESOURCE DEVELOPMENT PROJECT FOR FUNDING IN FY 85.

3. IN EITHER CASE, THE PROPOSED SHORT-TERM TECHNICAL ASSISTANCE TO THE MINISTRY CAN BE PROVIDED AS A FIRST STEP, REGARDLESS OF THE FORM A FUTURE CONSULTING ORGANIZATION TAKES. IN ADDITION, TRAINING ACTIVITIES APPEAR TO BE SUFFICIENTLY WELL DEFINED THAT THE MISSION CAN PROVIDE INITIAL SUPPORT FOR THE PROPOSED NATIONAL TRAINING CENTER AT BOMBAR UNDER EITHER SCENARIO.

4. THE NEAC IS SCHEDULED TO REVIEW THE PID ON 14 AUGUST. IT WOULD BE APPRECIATED IF ZOBHRIST WERE PREPARED TO BRING THE GATHERING ON RECENT DEVELOPMENTS VIS-A-VIS THE REORGANIZATION OF THE MINISTRY AND TO ADDRESS THE FOREGOING ISSUES. DAM

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**PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK**

ANNEX D

Life of Project:
From FY 85 to FY 88
Total U.S. Funding \$15 million
Date Prepared: 7/11/85

Project Title & Number: 263-0176 Water and Wastewater Sector Institutional Support

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS																											
<p>Program or Sector Goal: The broader objective to which this project contributes:</p> <p>to enhance central and local government capability to respond effectively and efficiently to rapidly growing demand for water and wastewater services, thereby reducing health risks and associated human productivity losses resulting from currently inadequate services.</p>	<p>Measures of Goal Achievement:</p> <ul style="list-style-type: none"> decisions rendered by governmental entities which reflect recognition and acceptance of project goal and related objectives. 	<ul style="list-style-type: none"> establishment of a Management Information System (MIS) including availability of adequate data series showing positive trend lines. 	<p>Assumptions for achieving goal targets:</p> <ul style="list-style-type: none"> improved water treatment and delivery and wastewater collection and treatment will lead to reduced incidence of enteric diseases and improved human productivity, institutional support to central governmental entities will result in improved decision structures and processes. 																											
<p>Project Purpose:</p> <p>to assist the Ministry of Housing and Public Utilities (MHPU) and its executive agency (NOPWASD) in the performance of their respective mission and function, particularly with regard to policy formulation, intergovernmental coordination, longrange planning, budgeting and financial accounting, manpower program development and training, etc. as well as supporting local government units in the performance of their duties.</p>	<p>Conditions that will indicate purpose has been achieved: End of project status.</p> <ul style="list-style-type: none"> technical and managerial capability to conduct policy analyses, to formulate and analyze the impact of policy alternatives, to monitor and evaluate implementation activities, to coordinate with sector external and internal interest groups and agencies. 	<ul style="list-style-type: none"> establishment of a Performance Monitoring System as an integral part of the M.I.S. budget allocations for Bab I, II and III reflecting a new investment strategy (5-year Plan for 1987-92) Annual Reports regarding achievement of M.O.V. objectives. 	<p>Assumptions for achieving purpose:</p> <ul style="list-style-type: none"> GOE will act on proposed reorganization plan for MHPU and support NOPWASD's request for clarifying scope and mandate regarding the provision of assistance to municipal governments 																											
<p>Outputs:</p> <ul style="list-style-type: none"> Organizational changes at various levels of government, personnel assignments and trained manpower, planning documents and analytical reports, procurement of equipment, materials, publications. GOE Policy decisions rendered and implemented concerning the W/WW sector's financial viability, organizational effectiveness, manpower availability and service delivery capability. 	<p>Magnitude of Outputs:</p> <ul style="list-style-type: none"> GOE employees trained new employees hired/transferred to fill newly created positions policy studies completed decisions (decrees) issued 	<ul style="list-style-type: none"> monthly, quarterly and annual reports project evaluation completed regulations, standards & decrees revised procurements completed 	<p>Assumptions for achieving outputs:</p> <ul style="list-style-type: none"> expatriate advisor on long term and short term contracts as scheduled; Egyptian experts available in numbers and with requisite expertise; GOE staff assigned to work cooperatively with counterpart expatriate staff; financial compensation package sufficient to attract and retain personnel; 																											
<p>Inputs:</p> <ul style="list-style-type: none"> Technical assistance to the Ministry, NOPWASD, local governmental units and other affected central governmental agencies through long-term and short-term contracts with expatriate and Egyptian experts. Procurement of equipment, training material, spare parts, etc. Grants for management training participants and applied research/basic research adaptations. 	<p>Implementation Target (Type and Quantity) (\$,000)</p> <table border="1"> <thead> <tr> <th>Project Component</th> <th>TA</th> <th>Commodities & Grants</th> </tr> </thead> <tbody> <tr> <td>MHPU</td> <td>2730</td> <td>1300</td> </tr> <tr> <td>NOPWASD</td> <td>6622</td> <td>3260</td> </tr> <tr> <td>Municipal</td> <td>3232</td> <td>900</td> </tr> <tr> <td>Misc. Support</td> <td>958</td> <td>500</td> </tr> <tr> <td>Subtotal</td> <td>14042</td> <td>5960</td> </tr> <tr> <td>Total</td> <td>20000</td> <td>5960</td> </tr> <tr> <td>USAID</td> <td>15000</td> <td></td> </tr> <tr> <td>OE</td> <td>5000</td> <td></td> </tr> </tbody> </table>	Project Component	TA	Commodities & Grants	MHPU	2730	1300	NOPWASD	6622	3260	Municipal	3232	900	Misc. Support	958	500	Subtotal	14042	5960	Total	20000	5960	USAID	15000		OE	5000		<p>USAID and GOE records of:</p> <ul style="list-style-type: none"> obligations disbursements audits number of trained personnel 	<p>Assumptions for providing inputs:</p> <ul style="list-style-type: none"> Technical advisory services relevant to local conditions and needs and provided on a timely basis as scheduled. Knowledge transfer mechanisms appropriate and replicable over time, and across political jurisdiction; funds available for obligation and disbursement; CP's and covenants met. Placement of trained personnel.
Project Component	TA	Commodities & Grants																												
MHPU	2730	1300																												
NOPWASD	6622	3260																												
Municipal	3232	900																												
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Subtotal	14042	5960																												
Total	20000	5960																												
USAID	15000																													
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Annex E

MINISTRY OF Planning AND
INTERNATIONAL COOPERATION

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July 28 , 1985

Mr. Frank B. Kimball
Mission Director
USAID/Cairo
Egypt

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ACTION TO	DR	DPPE
ACTION TAKEN	<input checked="" type="checkbox"/>	DATE 8/6
INITIALS	<input checked="" type="checkbox"/>	<i>[Signature]</i>

Dear Mr. Kimball:

This is to request USAID funding in the amount of \$15 million for a new project, Water/Wastewater Institutional and Human Resources Development (263-0176). \$5 million would be for an initial tranche in FY 1985.

The Government of Egypt (GOE) contribution of inkind assistance for this project will be 5 million Egyptian Pounds.

We consider that this new project will enhance organizational, managerial and technical capabilities of GOE central and local governmental agencies with distribution/collection capabilities.

Sincerely,

Ahmad Abdel Salam
Ahmad Abdel Salam Zaki
Administrator

Received
1/29/85
O.H.S

5C(2) PROJECT CHECKLIST

Listed below are statutory criteria applicable to projects. This section is divided into two parts. Part A. includes criteria applicable to all projects. Part B. applies to projects funded from specific sources only:

B.1. applies to all projects funded with Development Assistance loans, and B.3. applies to projects funded from ESF.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT?

Yes

Yes

A. GENERAL CRITERIA FOR PROJECT

1. FY 1985 Continuing Resolution Sec. 525; FAA Sec. 634A; Sec. 653(b).

(a) Describe how authorizing and appropriations committees of Senate and House have been or will be notified concerning the project; (b) is assistance within (Operational Year Budget) country or international organization allocation reported to Congress (or nor more than \$1 million over that amount)?

a) Congressional Notification has been submitted

b) Yes

2. FAA Sec. 611(a)(1). Prior to obligation in excess of \$100,000, will there be (a) engineering, financial or other plans necessary to carry out the assistance and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?

a) Yes

b) Yes

3. FAA Sec. 611(a)(2). If further legislative action is required within recipient country, what is basis for reasonable expectation that such action will be completed in time to permit orderly accomplishment of purpose of the assistance?

The People's Assembly must ratify the project grant agreement. In the past, the People's Assembly has ratified grant agreements in a timely manner.

4. FAA Sec. 611(b); FY 1985 Continuing Resolution Sec. 501. If for water or water-related land resource construction, has project met the standards and criteria as set forth in the Principles and Standards for Planning Water and Related Land Resources, dated October 25, 1973, or the Water Resources Planning Act (42 U.S.C. 1962, et seq.)? (See AID Handbook 3 for new guidelines.)

None
Required

5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and all U.S. assistance for it will exceed \$1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability effectively to maintain and utilize the project?

None
Required

6. FAA Sec. 209. Is project susceptible to execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs.

No

However, multi-lateral and other bi-lateral interests are incorporated in project design.

7. FAA Sec. 601(a). Information and conclusions whether projects will encourage efforts of the country to:
(a) increase the flow of international trade; (b) foster private initiative and competition; and (c) encourage development and use of cooperatives, and credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.
8. FAA Sec. 601(b). Information and conclusions on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).
9. FAA Sec. 612(b), 636(h); FY 1985 Continuing Resolution Sec. 507. Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized in lieu of dollars.
10. FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?

Project will not impact significantly on items a) through f). However, project will foster private sector activities in areas traditionally reserved for public sector functions.

Project will have a major impact on US trade and investment through the procurement of US source and origin goods and services provided by US private sector firms and suppliers.

The GOE is contributing 25% of project costs or the local currency equivalent of US\$5 million.

The GOE is no longer an "excess currency area".

- 11. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise? Yes

- 12. FY 1985 Continuing Resolution Sec. 522. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity? N/A

- 13. FAA 118(c) and (d). Does the project comply with the environmental procedures set forth in AID Regulation 16. Does the project or program taken into consideration the problem of the destruction of tropical forests? Yes

- 14. FAA 121(d). If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (dollars or local currency generated therefrom)? N/A

15. FY 1985 Continuing Resolution Sec. 536. Is disbursement of the assistance conditioned solely on the basis of the policies of any multilateral institution?

No

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

- a. FAA Sec. 102(b), 111, 113, 281(a). Extent to which activity will (a) effectively involve the poor in development, by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using the appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote

N/A

the participation of women in the national economies of developing countries and the improvement of women's status, (e) utilize and encourage regional cooperation by developing countries?

b. FAA Sec. 103, 103A, 104, 105, 106. Does the project fit the criteria for the type of funds (functional account) being used?

N/A

c. FAA Sec. 107. Is emphasis on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)?

N/A

d. FAA Sec. 110(a). Will the recipient country provide at least 25% of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed country)?

N/A

e. FAA Sec. 110(b). Will grant capital assistance be disbursed for project for more than 3 years? If so, has justification satisfactory to Congress been made, and efforts for other financing, or is the recipient country

"relatively least developed"? (M.O. 1232.1 defined a capital project as "the construction, expansion, equipping or alteration of a physical facility or facilities financed by AID dollar assistance of not less than \$100,000, including related advisory, managerial and training services, and not undertaken as part of a project of a predominantly technical assistance character."

N/A

f FAA Sec. 122(b). Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities and self-sustaining economic growth?

Yes

g. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective participation in governmental processes essential to self-government.

N/A

175

2. Development Assistance Project
Criteria (Loans Only)

a. FAA Sec. 122(b).
Information on conclusion on
capacity of the country to
repay the loan, at a
reasonable rate of interest.

Project is grant funded.

b. FAA Sec. 620(d). If
assistance is for any
productive enterprise which
will compete with U.S.
enterprises, is there an
agreement by the recipient
country to prevent export to
the U.S. of more than 20% of
the enterprise's annual
production during the life
of the loan?

N/A

3. Economic Support Fund Project
Criteria

a. FAA Sec. 531(a). Will this
assistance promote economic
and political stability? To
the extent possible, does it
reflect the policy
directions of FAA Section
102?

Yes

b. FAA Sec. 531(c). Will
assistance under this
chapter be used for
military, or paramilitary
activities?

No

c. FAA Sec. 534. Will ESF
funds be used to finance the
construction of, or the
operation or maintenance of,
or the supplying of fuel
for, a nuclear facility? If
so, has the President
certified that such use of
funds is indispensable to
nonproliferation objectives?

No

- d. FAA Sec. 609. If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made?

N/A

Department of State
Foreign Service of the United States of America
OUTGOING TELEGRAM

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SECSTATE WASHDC, IMMEDIATE

AIDAC

FOR NE/PD/E, CHARLES PATALIVE

E.O. 12356:N/A

SUBJECT: CONGRESSIONAL NOTIFICATION FOR WATER AND
- WASTEWATER SECTOR INSTITUTIONAL SUPPORT PROGRAM

1. USAID PLANS TO OBLIGATE DOLLARS 5 MILLION IN FY 85 FOR
THE WATER/WASTEWATER INSTITUTIONAL SUPPORT PROGRAM. WE
THEREFORE REQUEST AID/W PROCESS THE REQUIRED CN FOR THE
PROJECT ASAP. THE FOLLOWING IS THE SUGGESTED TEXT FOR THE
CN:

A. ADVICE OF PROGRAM CHANGE

DATE: (TO BE INSERTED BY LEG)

COUNTRY	:	EGYPT
PROJECT TITLE	:	WATER/WASTEWATER SECTOR INSTITUTIONAL SUPPORT PROGRAM
PROJECT NUMBER	:	263-0176
FY 1985 CP REFERENCE	:	NONE
APPROPRIATION CATEGORY	:	ECONOMIC SUPPORT FUND (ESF)
LIFE-OF-PROJECT FUNDING	:	DOLLARS 15 MILLION (GRANT)
INTENDED BY 1985 OBLIGATION	:	DOLLARS 5 MILLION (GRANT)

THIS IS TO ADVISE THAT AID INTENDS TO OBLIGATE DOLLAR 15
MILLION FOR THE WATER AND WASTEWATER SECTOR INSTITUTIONAL
SUPPORT PROJECT. THIS IS A NEW PROJECT AND WAS NOT

INITIALS
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DRAFTER <i>[Signature]</i>
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Department of State
OUTGOING TELEGRAM

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PAGE 2

INCLUDED IN THE FY 1985 CONGRESSIONAL PRESENTATION, AS PLANS WERE NOT SUFFICIENTLY DEVELOPED TO PRESENT IT AT THAT TIME.

THE PROJECT WILL ASSIST THE GOVERNMENT OF EGYPT BY PROVIDING TECHNICAL ASSISTANCE TO THE MINISTRY OF HOUSING AND PUBLIC UTILITIES (MHPU) AND ITS EXECUTIVE AGENCY, THE NATIONAL ORGANIZATION FOR POTABLE WATER AND SANITARY DRAINAGE (NOPWASD) TO IMPROVE THE PERFORMANCE OF THEIR RESPECTIVE MISSION AND FUNCTIONS. FURTHER DETAILS ARE PROVIDED IN THE ATTACHED ACTIVITY DATA SHEET.

B. ACTIVITY DATA SHEET

PROJECT TITLE : WATER/WASTEWATER SECTOR
- : INSTITUTIONAL SUPPORT PROGRAM
PROJECT NUMBER : 263-0176
FUNDS : ECONOMIC SUPPORT FUND
PRIOR REFERENCE : NONE
PROPOSED OBLIGATION FY 1985 : DOLLARS 5 MILLION
INITIAL OBLIGATION : FY 1985
LIFE OF PROJECT : DOLLARS 15 MILLION
ESTIMATED FINAL OBLIGATION : FY 1988
ESTIMATED COMPLETION DATE
OF PROJECT : FY 1989

PURPOSE:

TO STRENGTHEN THE MINISTRY OF HOUSING AND PUBLIC UTILITIES (MHPU), THE NATIONAL ORGANIZATION FOR POTABLE WATER AND SANITARY DRAINAGE (NOPWASD) AND OTHER NATIONAL AND LOCAL ORGANIZATIONS RESPONSIBLE FOR DEVELOPING, OPERATING AND MAINTAINING WATER AND WASTEWATER SYSTEMS IN EGYPT.

BACKGROUND:

IN RECOGNITION OF EGYPT'S NEED FOR MAJOR CAPITAL INFUSION TO REHABILITATE AND EXPAND INADEQUATE WATER AND WASTEWATER SERVICES IN THE PRIMARY AND SECONDARY CITIES, USAID INITIATED A REHABILITATION AND CONSTRUCTION PROGRAM IN 1978. WHILE EACH OF THE DESIGN AND CONSTRUCTION PROJECTS INCLUDE A MANAGEMENT AND TRAINING SUPPORT ELEMENT FOR THE LOCAL IMPLEMENTING ORGANIZATION, THE INDIVIDUAL PROJECTS COULD NOT ADDRESS THE BROADER INSTITUTIONAL PROBLEMS OF THE SECTOR AS A WHOLE. IT WAS RECOGNIZED THAT UNLESS SECTOR-WIDE POLICY CONSTRAINTS WERE RESOLVED IN PARALLEL

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CONTINUATION FORM

UNCLASSIFIED

129

Department of State
OUTGOING TELEGRAM

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PAGE 3

WITH THE PHYSICAL PROBLEMS OF THE LOCAL SYSTEMS, USAID'S ASSISTANCE EFFORT WOULD FALL SHORT OF ITS BASIC DEVELOPMENT OBJECTIVE.

USAID HAS OBLIGATED OVER ONE BILLION DOLLARS IN SUPPORT OF THE WATER AND WASTEWATER PROGRAM. TOTAL JOINT GOE AND USAID CURRENT AND PLANNED COMMITMENTS EXCEED DOLLAR THREE BILLION DOLLARS. THIS REPRESENTS ONLY A FRACTION OF THE TOTAL CAPITAL NEEDS OF THE COUNTRY'S URBAN AREAS. CAIRO ALONE CURRENTLY HAS OVER DOLLAR ONE BILLION DOLLARS IN UNFUNDED WORKS AWAITING CONSTRUCTION. A JOINT COMMITTEE OF THE NATIONAL ASSEMBLY IDENTIFIED 109 CITIES WITH A POPULATION EXCEEDING 40,000, WHICH ARE IN NEED OF WATER AND WASTEWATER SYSTEM IMPROVEMENTS.

THE INSTITUTIONAL SUPPORT PROGRAM WILL ENSURE THAT THE SUBSTANTIAL INVESTMENT OF CAPITAL FUNDS PROVIDED BY AID AND OTHER INTERNATIONAL DONORS IS PROPERLY OPERATED AND MAINTAINED AND THAT RELIANCE ON FOREIGN SOURCES OF FUNDING WILL BE REDUCED AS THE LOCAL AND CENTRAL GOVERNMENTS' ABILITY TO RAISE FUNDS THROUGH USER CHARGES AND EFFICIENCY MEASURES IS INCREASED.

PROJECT DESCRIPTION:

THE WATER/WASTEWATER INSTITUTIONAL SUPPORT PROGRAM CONSISTS OF THE FOLLOWING ELEMENTS:

- THE PROVISION OF MANAGEMENT AND TECHNICAL ASSISTANCE SERVICES FOR MHPU, NOPWASD AND RELATED ORGANIZATIONS.
- THE PROVISION OF A PILOT OPERATIONS AND MAINTENANCE PROGRAM FOR SEVERAL NEW WATER AND WASTEWATER TREATMENT FACILITIES.
- TRAINING SUPPORT PROGRAM FOCUSING ON PROGRAM DEVELOPMENT, NEEDS ASSESSMENT, PUBLICATIONS, PARTICIPANTS, AIDS AND TRANSLATION.
- GENERAL SUPPORT PROGRAM REGARDING APPLIED RESEARCH AND DATA MANAGEMENT.

A DETAILED REVIEW OF THE PROJECT WILL BE CONDUCTED AT THE END OF THREE YEARS WITH THE INTENT OF DETERMINING THE VALUE OF A SECOND PHASE AID SUPPORTED EFFORT.

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Department of State
OUTGOING TELEGRAM

UNCLASSIFIED

PAGE 4

RELATION TO AID COUNTRY STRATEGY:

THE PROGRAM SUPPORTS THE USAID COUNTRY STRATEGY SECTOR GOAL OF REHABILITATION, MODERNIZATION AND EXPANSION OF EGYPT'S PHYSICAL INFRASTRUCTURE. IT WILL IMPROVE EGYPT'S WATER AND WASTEWATER SERVICE DELIVERY TO URBAN POPULATION CENTERS IN ORDER TO REDUCE THE HEALTH RISKS ASSOCIATED WITH INADEQUATE SERVICES AND THE PRODUCTIVITY LOSS RESULTING FROM ENTERIC DISEASES AND ASSOCIATED HIGH MORTALITY RATES. IT, THEREFORE, WILL ALSO CONTRIBUTE TO OUR COUNTRY STRATEGY EMPHASIS ON IMPROVING CHILD SURVIVAL RATES.

HOST COUNTRY AND OTHER DONORS:

THE GOE IS EXPECTED TO CONTRIBUTE LE 5 MILLION OR 25 PERCENT OF TOTAL PROJECT FUNDS IN LOCAL CURRENCY TO COVER COST OF OFFICE SPACE, PARTICIPANT SALARIES AND OTHER PROJECT SUPPORT SERVICES. TECHNICAL ASSISTANCE FROM OTHER DONORS WILL BE PROVIDED ON A PROJECT SPECIFIC BASIS, RATHER THAN SECTORWIDE, EXCEPT FOR THE WORLD HEALTH ORGANIZATION'S SUPPORT FOR THE GOE MINISTRY OF HEALTH WATER QUALITY TESTING PROGRAMS. THE GOE HAS BILATERAL COMMERCIAL RELATIONS WITH 15 COUNTRIES, PRIMARILY FOR THE PROCUREMENT ON CONCESSIONARY LOAN TERMS OF WATER AND WASTEWATER RELATED EQUIPMENT AND MATERIALS. AID IS THE ONLY DONOR OF GRANT FUNDS FOR CAPITAL PROJECTS AND TECHNICAL ASSISTANCE.

BENEFICIARIES:

THE IMMEDIATE BENEFICIARIES OF THE PROPOSED TECHNICAL ASSISTANCE EFFORT ARE THE CENTRAL AND LOCAL GOVERNMENTAL AGENCIES RESPONSIBLE FOR THE PROVISION OF FACILITIES AND SERVICES. THE INDIRECT TARGET GROUP IS THE ENTIRE POPULATION OF EGYPT, PARTICULARLY CERTAIN POPULATION GROUPS SUCH AS 1) WOMEN, WHOSE PRODUCTIVITY IS SEVERELY AFFECTED BY THE LACK OR INADEQUATE WATER AND WASTEWATER FACILITIES; 2) CHILDREN, WHOSE DELICATE INTESTINAL SYSTEMS MAKE THEM HIGHLY SUSCEPTIBLE TO ENTERIC DISEASE RISKS, AND 3) UTILITY EMPLOYEES WHO ARE EXPOSED TO EXTREMELY UNHEALTHY CONDITIONS DUE TO IMPROPER OPERATION AND MAINTENANCE PRACTICES.

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CONTINUATION FORM

UNCLASSIFIED

131

Department of State
OUTGOING TELEGRAM

UNCLASSIFIED

PAGE 5

MAJOR OUTPUTS:

-		ALL YEARS
1.	ORGANIZATIONAL CHANGES, WHICH CLARIFY INTER-AND INTRA-AGENCY LINES OF AUTHORITY, AND STRENGTHEN INTERGOVERNMENTAL RELATIONSHIPS	VARIOUS
2.	IMPROVED POLICY PLANNING AND MANAGEMENT CAPABILITIES LEADING TO IMPROVED ALLOCATION OF FINANCIAL AND HUMAN RESOURCES.	VARIOUS
3.	TRAINING PROGRAM	1
4.	A NATIONAL WATER AND WASTEWATER CAPITAL AND OPERATION AND MAINTENANCE NEEDS ASSESSMENT	1
5.	A NATIONAL MANPOWER REQUIREMENTS AND TRAININGS NEEDS ASSESSMENT.	1
6.	A COMPREHENSIVE HUMAN RESOURCE DEVELOPMENT PROGRAM.	1
7.	A QUALITY CONTROL PROGRAM DEVELOPED THROUGH A COST BASED REGULATORY REVIEW AND CODE ENFORCEMENT PROGRAM.	1
8.	SHIFT OF CENTRAL GOVERNMENT RESPONSIBILITIES FOR DESIGN, CONSTRUCTION, AND OPERATIONS AND MAINTENANCE OF WATER AND WASTEWATER FACILITIES TO LOCAL GOVERNMENT AGENCIES.	VARIOUS

AID FINANCED INPUTS:

-		LIFE OF PROJECT (DOLLARS ,000)
1.	TECHNICAL ASSISTANCE	10,000
2.	TRAINING	500
3.	COMMODITIES	3,500

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OUTGOING TELEGRAM

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4. SUB GRANTS (APPLIED RESEARCH, CONFERENCES, SEMINARS, ETC.)	1,000
- TOTAL	15,000

THE PRINCIPAL GOE AGENCY FOR THE PROGRAM IS THE MINISTRY OF HOUSING AND PUBLIC UTILITIES.

2. REQUEST IMMEDIATE ATTENTION BE GIVEN TO PROCESSING OF THIS CN TO ENSURE PLANNED JULY OBLIGATION. PLEASE ADVISE BY IMMEDIATE CABLE WHEN CN SUBMITTED TO CONGRESS AND WHEN CN EXPIRES WITHOUT CONGRESSIONAL OBJECTIONS.##

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TASK DESCRIPTIONS/TERMS OF REFERENCE

A. MINISTRY SUPPORT PROGRAM

1. Introduction

Specifically, the contractor will provide assistance to Ministry officials directly responsible for the various policy, program and staff functions, which bear on the successful implementation of a sector wide development strategy. These functions and related tasks to be performed primarily by Ministry officials, with the assistance of the long-term or short-term expatriate and Egyptian advisors, may include the following illustrative tasks.

2. Task Descriptions

2.1 Management and Administration

- 2.1.1 Review of the long range personnel needs in the context of the proposed organization structure, position classification system, personnel selection processes, career development and promotion opportunities and other personnel management issues, to serve the needs of a fully and competently staffed Ministry, and particularly the CDFU.

Develop recommendations for meeting the short-range staffing needs of the MHPU and identify means of attracting candidates for leadership positions, either through inter and intra-agency transfers and promotions, recalls of staff on leave to the Gulf states, special temporary appointments for US/Egyptian expatriates and faculty members of Egyptian universities.

- 2.1.2 Analyze the current compensation structure for ministry employees and sector organizations and compare with the practices of other ministries and associated organizations which also serve "critical national needs" such as the power and telecommunications sector, health, irrigation and transport sector. Recommend appropriate base pay adjustments, bonus and incentive pay plans, fringe benefits, including participation in off-shore training and observational travel, and identify a strategy for implementation.

- 2.1.3 Develop a Management Training program for employees of the Ministry, NOPWASD and other central and local organizations which have a direct or indirect responsibility for major policy and management functions. This program should be designed to meet the immediate and short-term needs of MHPU and NOPWASD officials, to be followed by a NOPWASD administered long-term manpower development program for all sector organizations (defined in Sect. C.2.3). The MHPU administered training program for participants in the ISP would be limited to professional conference attendance, issue-focused seminars and retreats, observational travel and invitational visits to US institutions, short-term certificate courses at US academic institutions, correspondence courses, self-directed study of professional literature, membership in international professional associations, and technical English language training.
- 2.1.4 Define the short and long-term Office Space and Equipment needs for the MHPU/CDPU and NOPWASD employees, expatriate and Egyptian advisors, and develop for each agency a procurement plan for the required space, office furniture and files, computers, word processors and related software, copying machines and materials.

Review the standard operating procedures and, if necessary, establish systems to facilitate the horizontal and vertical interaction processes between GOE officials and expatriate staff and among MHPU and NOPWASD offices and associated organizations.

2.2 Policy Guidance and Monitoring

- 2.2.1 Review existing legislative mandates and executive decrees and analyze potential limitations or constraints to sector improvements. Evaluate impact of proposed enabling legislation preparing by MHPU and NOPWASD and assist in the preparation of documentation for possible presentation to executive councils, such as Interministerial Councils and High Committees, legislative oversight committees of the Shura and National Assembly, and other political bodies. Establish a reporting system aimed at raising political consciousness and awareness of the relationship between legislative actions and the level of water and wastewater service provided, focussing on the constraints of funding and high standards.

- 2.2.2 Review the need for intergovernmental cooperation and coordination and establish a mechanism for improved sector performance and service delivery. Analyze sector external policy issues in conjunction with other central governmental agencies, on issues such as a) job classification, salary structure and manpower training, (CAOA); b) local resource mobilization, tariff structure and revenue retention, (MOF); c) water and wastewater effluent standards and coordination of enforcement programs (MOH); d) tapping of water resources and draining of wastewater effluent into irrigation canals, (MOI); coordination of municipal decision making over long-range planning and capital programming for infrastructure, (MOLG/ORDEV); financial resource allocation processes for the annual budget cycle and Five-Year Plans and associated national urban economic development strategies, (MPIC) and (MRLR/GOPP).
- 2.2.3 Review the need for International Donor Coordination, and develop a mechanism (committee structure) to facilitate the solicitation and coordination of financial and technical assistance from multi-lateral sources (eg. IBRD, UNDP, WHO, EEC, AIB), bi-lateral aid organizations (e.g. USAID, ODA, CIDA, FRG/GTZ, JOEC, etc.) commercial banks, or international equipment supply companies, and other international organizations interested in establishing a cooperative relationship with Egyptian counterpart organizations. Identify investment and business opportunities for foreign donors and associated suppliers which reflect the respective national policy interests, predominant technical capabilities and adaptability of systems to local conditions. Assist in the review of contract proposals, warranty clauses, system O&M and spare parts inventory maintenance. Assist in the sponsorship of periodic International Donor Conferences.
- 2.2.4 Develop a comprehensive Management Information System (MIS) to support sector-wide development activities, compatible with the function-specific information systems to be developed by NOPWASD and other municipal water and wastewater organizations. The MIS should include a sectorwide Performance Monitoring, Evaluation and Reporting System (MERS) based on quantitative indicators of progress to be determined in conjunction with the formulation of the long-range facility and service improvement program defined by NOPWASD (Sec. C.2.2.)

Included in the development of the MIS and the performance focussed MERS, should be an analysis of the needs for computerization of clerical tasks, the coordination of data gathering, the standardization of data series, software and hardware systems, operating procedures and procurement guidelines.

2.3 Plan Review and Finance

- 2.3.1 Coordinate with NOPWASD the preparation of a long range and comprehensive National Water and Wastewater System Needs assessment of Egypt's urban areas, particularly the identification of capital needs for new treatment plant, distribution and collections systems (-using appropriate technology applications-), the expansion of existing systems, and deferred maintenance problems. Review urban growth and development trends and current policies as a basis for the water and wastewater needs assessment, and update the USAID funded National Urban Policy Study to obtain an understanding of the cost implications of alternative urban growth and development scenarios. Assist in coordinating the national and local w/ww system planning process with other national and sectoral planning activities undertaken by MPIC, MLG/ORDEV, MRLR/GOPP and others.
- 2.3.2 Assist in the next Five-Year Plan and Annual Budget preparation and approval process. Based on the NOPWASD prepared National Water and Wastewater System Needs Assessment, develop criteria for the establishment of funding priorities for the next Five-year Plan (1987-1992) and the Annual Budgets. Review local government and general organization expenditure pattern and assess absorptive capacity. Identify alternative sources of funding for capital projects, such as domestic and foreign grants-in-aid or domestic and foreign government or commercial loans. Assist in the analysis of local government funding requests and in the preparation of budget request justifications, and establish a forum for hearing and adjudicating funding appeals in conjunction with, and in support of other urban development objectives of the MHPU.

2.3.3 Develop an appropriate Tariff and User Charge structure to cover municipal expenditures for operations and maintenance based on the National Water Tariff and Wastewater Surcharge Policy proposed by the MHPU. Assist in the development of an expanded and standardized accounting systems for general organizations and municipal departments to facilitate cost factor analysis and simplify financial reporting to various data analysis centers. Develop or review for consistency alternative tariff and user charge formulas, giving due consideration to affordability and equity criteria, and capital cost recovery objectives, where appropriate. Evaluate alternative revenue collection mechanisms, e.g. property tax levies, tandem collection with electricity charges, composite utility tax on land use categories and building type, as well as incentive systems and fines, etc.

2.3.4 Assist in monitoring the Financial Management of foreign and domestic firms under contract with the various general organizations in Cairo and Alexandria and governorate/organizations in Cairo and Alexandria and governorate/municipal departments. Assist in monitoring contract execution and compliance with the terms of multi-and bi-lateral government loan and grant agreements, escalation of cost factors, performance bonds, incentive packages, etc. Review and assist in amending performance and warranty clauses, O&M provision and availability of spare parts. Develop a policy position and incentive program aimed at facilitating transfer of technical and managerial knowledge between US and other foreign/Egyptian joint venture companies, so as to reduce the drain on FX requirements. Provide audit support for domestic and foreign auditing authorities and their private sector contractors.

2.4 Misc. Ministry Support

2.4.1 Provide expert staff support for other Housing Ministry functions which relate to the responsibilities of the CDPU. Facilitate the review and approval requirements of other ministerial departments which have been assigned a significant role in the decision process with the Ministers choices of a matrix management concept for the reorganized MHPU. Render technical assistance to and engage in a constructive dialogue those central

departments and divisions which have primary responsibility for functions such as the following:
a) long-range urban policy analysis, b) housing policy development, particularly for the informal sector and community upgrading, c) construction management, d) materials research, e) management information system f) manpower training, g) other.

- 2.4.2 Maintain an effective liaison with NOPWASD Division offices, its Board of Directors and the MHPU Advisory Committee for Public Utilities, to assure an early airing of potential policy issues and alternative strategies aimed at problem resolution. Participate actively in the analytical efforts and deliberations over program responsibilities, which by law are shared between the MHPU and NOPWASD, but for which the lead has been assigned to NOPWASD. These include a) comprehensive system planning and network design, b) manpower development and training, c) research support and publication program, d) regulatory analysis and e) environmental code enforcement. Monitor the provision of support to local governmental entities, such as the Pilot O&M and training program, and supplement the assistance effort where needed.

B. CENTRAL AGENCY SUPPORT PROGRAM

1. Introduction

The NOPWASD support contractor will be providing advisory services to various program functions for which the responsibility is shared between NOPWASD and the MHPU, particularly with regard to national policy formulation and implementation. In addition the contractor will be expected to render services in support of efforts aimed solely at strengthening NOPWASD's response capability with regard to municipal needs. The complexities of the tasks will require that the long term contractor receive support from short-term contractual staff retained through his or other contractual arrangements, administered through USAID or NOPWASD. The following are illustrative tasks that may be included in the program.

2. Task Description

The sequence of task descriptions reflects the priorities established during the discussions with NOPWASD officials. Dependent relationships between the various functions also mandate a sequential scheduling of activities. However, a large number of tasks can be addressed concurrently requiring coordination only at various intermediate points, and during preparation of the annual work plans.

2.1 Organization and Management

2.1.1 Advise on NOPWASD's intra-and interorganizational structure and relationship, including the present and proposed departments and sections, and assist in identifying and developing personnel to meet the growing responsibilities. Review the w/ww related responsibilities of NOPWASD, the Governorates and Municipalities under existing legislation and proposed amendments, and develop guidelines aimed at improving liaison, minimizing conflicts and ensuring effective cooperation and coordination.

2.2.2 Evaluate the concept of independent water companies, particularly in the context of the newly established water company in Beheira and Kafr El Sheikh. Consider the possible cost and benefits of adding responsibilities for wastewater functions to the water companies. Analyze the financial, managerial and political implications of the independent company concept in the Egyptian situation, and comment on the feasibility and acceptability of establishing independent

joint water/wastewater companies throughout Egypt. Review the legislative mandate and recent experience of the Suez Canal Authority concerning the operation of the Canal Cities Water systems and SCA's reluctance to take on the operational wastewater systems, and consider possible alternative organizational arrangements to effectuate system coordination, municipal control and/or intergovernmental coordination. Based on results of task 2.1.1. and 2.1.2 recommend a course of action.

2.1.3 Identify key performance measures and design a Performance Monitoring System for the water and wastewater sector as a whole, as an integral part of the Management Information System to be established at and maintained by the MIPU/CDPU. Establish a comprehensive computerized data base of key information services, including operational data for all major urban systems, equipment and material inventories, personnel, financial and cost accounting, revenue collection, transport and other urban management related needs as deemed appropriate and cost effective. Assist in analyzing the technical and logistical problems associated with the proposed establishment of a decentralized data collection and centralized data analysis effort. Review cost effective hardware and software options and related personnel training needs, taking into consideration the information needs of other local and central government agencies.

2.1.4 Investigate in cooperation with the General Organizations in Cairo and Alexandria, the need for public awareness of sector problems and develop a community liaison program and private sector interest groups, opinion shapers and decision-makers. The program should be broad in scope yet specific enough to accomplish a number of interrelated objectives, namely to

- a) educate school children, women and the population in general about the health implications of improper sanitation practices and the limitations of particular municipal water and wastewater systems;
- b) respond to crisis situations, in the event of treatment plant failures, flooding as a result of wastewater pump breakdowns, bacterial infestations as a result of groundwater seepage into low pressure water distribution networks, water conservation needs, etc.

c) built support for and lift the morale of employees working in water and wastewater organizations by focussing attention on the critical nature of their work through exhibits, plant visits, citations, etc.);

d) facilitate the transfer and exchange of technical knowledge among professional personnel in the various sector organizations, through the sponsorship of meetings, national and international conferences and the establishment of effective linkages with other national and international associations.

e) encourage the establishment of organizational forums for private sector interest groups and professional employees of the respective water and wastewater organizations, possibly in association with other national and international associations.

2.2 Planning and Economic Analysis

2.2.1 Prepare a long range and comprehensive National Water and Wastewater System Needs Assessment, focussing on Egypt urban areas, and identify the capital needs for a) new treatment plant, distribution and collection systems (-using appropriate technology applications-), b) the expansion of existing systems, and c) the deferred maintenance problems, and based on urban growth and development trend data and policies identified by the MHPU (see task B.2.3.1). Develop a range of system improvement options based on alternative inter-urban development scenarios and intra-urban land use and density patterns. Evaluate the cost/benefit implications from the point of view of various competing interest groups and funding agencies.

2.2.2 Assist in the development of investment strategies for consideration in the Five-Year Plan to be prepared by the MHPU/CDPU and the Annual Budgets, prepared by the municipal agencies and submitted by the respective Governors. Identify objective criteria for the establishment of funding priorities, design and implement a system of reviews and approvals for municipal development proposals in advance of the budget preparation cycle. Assist local governmental planning agencies in the analysis of alternative approaches to meeting service needs and in the development of interim and cost-effective solutions. Provide technical and financial assistance to prepare or update local comprehensive land use plans and associated capital improvement programs, in cooperation with other affected local and central government agencies.

2.2.3 Establish an economic analysis capability in support of the proposed review of policies and standards, programs and procedures, which, because of the static quality, have a negative effect on the governmental resource allocation decision process. Review current national standards for potable water and laws regulating the discharge of wastewater effluent into receiving waters/rivers, canals, ponds, lakes, oceans, aquifers. Analyze implications of alternative standards and regulations and recommend standards commensurate with the GOE's ability to afford and to enforce. Ensure a common understanding of economic principles and cost/benefit methodologies, through the development of appropriate training programs, seminars and dissemination of information particularly at the local government level.

2.2.4 Encourage the formation of private sector companies and ensure their participation in the delivery of water and wastewater services to consumers groups, as a cost effective alternative to public sector activities; particularly as an interim solution until the availability of centralized distribution/collection and treatment systems. Develop a program aimed at strengthening the competitive position of private sector enterprises so that they play a more significant role in the design, construction, operation and maintenance of water and wastewater facilities, e.g. companies engaged in construction activities, material supply, equipment leasing, manufacturers of instruments and O&M services, etc. Develop a demonstration (grant) program for the efficient utilization of sector resources and physical assets for private and/or public revenue generation, e.g. sludge disposal for horticulture and private gardening/farming, aquaculture in wastewater oxidation ponds, contracting of surplus municipal labor pool, etc.

2.3 Manpower Development and Training

2.3.1 Conduct a manpower needs assessment, based on the longrange comprehensive National Water and Wastewater System Capital Needs Study. Determine skilled manpower requirements by job classification, governmental entities and system type. Compare projections with current staffing patterns, attrition rates and trends. Survey current skill levels, using objective criteria and unbiased testing mechanisms (-on a sample basis, if necessary). Assess short-term and long-term training needs based on the survey results and manpower needs projections. Review municipal practices of hiring/firing, training/promoting, compensation/benefits/career development, competitive pressure on skilled technicians and craftsmen, and summarize dimensions of sector-wide manpower problem.

2.3.2 Develop a comprehensive sectorwide manpower development program responding to all aspects of the problem identified in the needs assessment. Identify alternative program components which respond to the needs for a) pre-employment training at vocational secondary and academic institutions, b) on-the-job training of current and prospective employees, c) retraining of current employees deemed surplus, and who should be transferred into other public or private sector enterprises with significant and a growing absorptive capacity, d) continuing education of professionals and technicians, leading to certification and licensing and career advancement, e) familiarization efforts for public and private sector officials indirectly involved in w/ww sector decisions. Analyze cost-effective program options for funding considerations and phased implementation.

2.3.3 Develop a support program for on-the-job training activities at municipal water and wastewater facilities in secondary cities, (-in coordination with training activities undertaken by the general organizations in the primary cities of Cairo and Alexandria and other donor funded programs). Prepare a comprehensive Resource Requirements Plan, including an assessment of existing and proposed training centers (stationary and mobil units), trainers and facilitators, equipment, visual aids, and publications (manuals, textbooks, journals, directives, etc.) Analyze existing facility capacity, adequacy of training staff and publications, and prepare cost-effective program options for funding consideration (-by GOE and international donor agencies-) and phased implementation. Establish a management entity to administer a Pilot O&M assistance and training program to be funded on an emergency basis for selected cities in Upper Egypt, the Delta and Cairo. (see Municipal Support program D.2.1-5).

2.3.4 Develop a Certification and Licensing Program in conjunction with a remedial/tutorial training effort for key treatment plant technicians, supervisors and private sector entrepreneurs interested in qualifying for O&M contracts of municipal plants. Review the legislative basis for the establishment of a quality control system, and if too ambiguous, suggest a legislative amendment to strengthen NOPWASD's position based on precedence setting legislation in the US, Europe and other Middle Eastern countries. Secure a preferential salary scale for certificated/licensed operators. Offer special tutorials and training sessions for prospective candidates, administer tests and award certificates in public ceremonies. Provide for a gradual phase-in of the 'licensed operator requirement' in the amended legislation.

2.3.5 Coordinate the provision of research support to universities, the development of a comprehensive publication program, and the establishment and maintenance of library facilities and services.

- a) Coordinate with affected and interested ministries and academic institutions in the development of a long range and comprehensive applied research agenda which is closely related to the policy issues of the water and wastewater sector, and which reflects the priorities of the organizations involved: (e.g. Ministries of Housing, Health, Irrigation, Reconstruction, Universities of Cairo, Ain Shams, America, Alexandria, Academy for Scientific Research and Technology and international donor agencies and US research institutions). Develop funding priorities, administrative and review procedures, disseminate research findings to ensure timely and effective application, evaluate and report on results.
- b) Promote the development of a comprehensive publication program through private sector enterprises. Assist companies in analyzing the demand for arabic language material throughout Egypt and the Middle East, including technical manuals for plant O&M, research monographs and textbooks, study reports and evaluations, conference proceedings and occassional papers, journal and newsletters, video film, slides, photos, recordings, posters, graphics, public relations campaign material, etc. Provide technical and financial support to establish and sustain (a) publishing house(s) over a period of time.

- c) Provide access to information sources through the establishment of central and mobil libraries, (-with commercially available or free publications), circulation of catalogues of material available through inter-library or interoffice loans, subscription from world publishing/distribution companies, and computer links to information centers and abstracting services, (e.g. NTIS, LOC. etc.).

2.4 Finance and Accounting

2.4.1 Develop or strengthen municipal capability for local revenue generation, to counter the likely of decline of Bab II contributions for O&M expenditures, as implied in MHPU Tariff policy framework. In cooperation with MHPU/CDPU (see task B./2.3.3) and affected Governorates and municipalities review existing user charge formulas for consistency with proposed national schedules and social policy considerations. Analyze metering and collection related problems and recommend alternative revenue collection mechanisms which are cost effective, and which accomplish the principal objective of shifting the O&M cost burden from the government treasury to those beneficiaries who can afford to pay for services.

2.4.2 Assist in the development or improvement and standardization of water and wastewater related cost accounting systems and strengthen municipal officials' estimating capabilities for O&M cost components. Assist in the establishment of an inventory of physical assets for the sector as a whole, and for each operating unit at the municipal level. Summarize data by system type and foreign equipment source, related spare parts procurement schedule and associated FX requirements. Develop a standardized system of record keeping, reporting, procurement procedures, including a NOPWASD approved source prequalification review process, for all foreign built systems. Analyze O&M cost factors for different systems but similar performance characteristics and capacities and recommend general procurement policy guidelines and O&M practices.

2.4.3 Evaluate the feasibility of a Grant-in Aid Incentive program for municipalities, administered by MHPU/NOPWASD, outside the annual budget allocations through the MOF, for the purpose of testing the potential of major self-help efforts. Sporadic evidence seems to hint at the willingness of local communities to mobilize modest amounts of resources on a matching basis, not always in expectation of external funding (e.g. USAID grant) assistance. Although the concept of conditional matching grants has been well established in the U.S. and in Europe, performance based funding has not been tested in Egypt for municipal infrastructure development.

Develop a series of options defining appropriate system components suitable for funding on a matching grant basis, define performance criteria, technical and administrative guidelines, intergovernmental coordination requirements. Solicit capital fund allocations from domestic sources (MPIC/MOF and Development Banks) and international bi-lateral and multi-lateral donors and banks. Present a concept paper on "capital pooling" and fund administration by NOPWASD as an alternative to project specific investments for consideration by the members of the International Donor community.

2.5 Engineering and Environmental Control

2.5.1 Assist in the review of environmental standards, the current methods of application, enforcement regulations and practices. Analyze the opportunities for and possible implications of applying variances to the standards for water quality, wastewater effluent treatment, toxic (industrial) effluents, solid (excludable) waste and demonstrate design and cost implications for selected cities scheduled to receive funding for facility and service improvements. Perform system feasibility studies, as a demonstration exercise, for replicability in cities and towns with similar conditions. Explain analytical methods, design specifications, cost estimating procedures and base line data gathering, using manuals and seminar proceedings.

2.5.2 Assist in the development of a code enforcement program to ensure proper laboratory, testing procedures in the maintenance of water quality, to prevent improper discharges of toxic industrial effluents into primary treatment facilities, to protect groundwater resources used for drinking purposes, to prevent improper dumping of solid waste into wastewater collection systems and canals, etc. Develop alternative solutions and provide municipal officials with technical data to facilitate negotiations with key offenders. Analyze cost effectiveness of a national or local code enforcement and adjudicatory program, based on projected level of charges and fines, and administrative cost of issuing waivers and exemptions and preparation of legal case load.

2.5.3 Assist in improving construction management procedures, supervision and monitoring of on-site activities, to ensure quality control, on-time performance, and to minimize/reduce delay in the review and approval of plans and change orders. Develop an assistance program for Egyptian private and public sector contractors to enable them to bid successfully on water and wastewater construction contracts. Provide interim

assistance to selected contractors and municipal construction management units, as a demonstration exercise, and develop a long range approach in the context of a broader construction industry focused effort, that may be undertaken as part of a separate (USAID funded) initiative.

2.5.4 Develop a comprehensive municipal O&M assistance program based on the national capital and manpower needs assessment undertaken as part of task C.2.2.1 and C.2.3.3. Review municipal departmental response capabilities, procedures for record keeping and compliance monitoring, personnel management and training opportunities (-in addition to those developed by NOPWASD-). Analyze the financial, legal and political implications of contracting for municipal O&M activities with expatriate companies and/or Egyptian private sector firms, and prepare a model contract format and scope of work.

Administer on behalf of municipal departments, and on an interim basis, a Pilot O&M Assistance Program for plants in cities in Upper Egypt, the Delta and Cairo. (see tasks D.2.1. - D.2.3).

Maintain a National O&M Compliance Monitoring Center and prepare evaluation reports on progress achieved.

STATEMENT OF WORK

MUNICIPAL SUPPORT PROGRAM/ NOPWASD PILOT OPERATION AND MAINTENANCE ASSISTANCE

I. PROBLEM BEING ADDRESSED

The present state of existing water and wastewater facilities in Egypt indicates that there are serious and widespread deficiencies in the areas of operation and maintenance. The GOE has not demonstrated the ability to adequately operate and maintain these existing facilities let alone the capability to handle new, complex facilities currently being constructed. The latest sector assessment found that generally there are no formal procedures for maintenance. Maintenance is performed on an as needed basis during emergency or crisis conditions; the concept of preventative maintenance is alien to the sector. It is the heroic efforts of a few, dedicated operators and managers, rather than established procedures, that keep the facilities functioning. Obviously, the lack of a systematic approach to operations and maintenance results in inadequate levels of service at high cost with the potential for serious future problems.

The Ministry of Housing and Public Utilities/National Organization for Potable Water and Sanitary Drainage (MHPU/NOPWASD) is aware of weaknesses in this area, and has expressed a desire to provide emergency operation and maintenance assistance at new water and wastewater treatment plants in the various governates. NOPWASD has supplied the following list of 10 plants for which emergency assistance has been requested:

Facilities Recently Completed Date of Completion

Potable Water Plants

Fayid (400 lps Rapid Sand)	February 1985
Quseir (Desalination)	September 1985
Kafr Dawar (200 lps Rapid Sand)	March 1985
Tanta (400 lps Rapid Sand)	June 1985
Ashmoon (50 lps Rapid Sand)	March 1985

Wastewater Treatment Plants

Qena (40,000 m ³ /d Trickleing Filter)	March 1985
Sohag (40,000 m ³ /d Trickleing Filter)	April 1985
Menouf (12,000 m ³ /d Activated Sludge)	April 1985
Luxor (24,000 m ³ /d Trickleing Filter)	June 1985
Samanoud (18,000 m ³ /d Trickleing Filter)	February 1985

There are numerous factors contributing to the poor operational status of water and wastewater facilities in Egypt. Some the critical factors include: (1) inappropriate or unrealistic policies, (2) poor management, (3) lack of technical skills, (4) poor design practices, (5) poor construction techniques, and (6) insufficient funding for operation and maintenance.

II. RESPONSE TO THE PROBLEM

This program will address the problem of poor operation and maintenance practices in the sector. Proper operation and maintenance procedures will be demonstrated to sector personnel, and a remedial on-the-job training effort will be established for the operation and maintenance staff at treatment facilities. Primary emphasis will be on improving management and technical skills at the plant facilities.

This program will also seek to develop within the sector an awareness of poor design and construction practices and the adverse effect of these practices upon the operability of treatment plants. In addition, the establishment of several treatment facilities in Egypt operating at acceptable levels will provide the opportunity for future data collection of operation and maintenance requirements at typical facilities. This data is necessary if proper levels of funding for the operation and maintenance of treatment facilities is to be established.

This program will initiate action to address at least five of the six previously identified critical factors contributing to the poor operational status of treatment facilities in Egypt. Only the problem of inappropriate or unrealistic policies will not be addressed in at least some form by this program.

A. Guiding Strategy

A two and one-half year, multi-phase program will be established which will use two (2) water treatment plants and three (3) wastewater treatment plants as demonstration facilities. Remedial assistance will be provided in order to develop a systematic approach to operation and maintenance at each facility. These demonstration facilities would be used to show sector personnel how a properly operated facility functions.

The CONTRACTOR will work with selected NOPWASD personnel in developing a pilot on-the-job training program. The above mentioned demonstration facilities will be used as the vehicle

for testing and restructuring the on-the-job training program. Sufficient skills will be transferred to the NOPWASD personnel to enable them to duplicate this program at other facilities. It is envisioned that the NOPWASD personnel will form the nucleus of the on-the-job training component of a broad based training department within the organization.

An extremely important element of this program is the response of NOPWASD to the proposed plant modifications identified as a result of the assessment. Implementation of the training phase will be contingent upon NOPWASD having satisfactorily completed the necessary corrections to the various plants.

B. Component Activities

The pilot operation and maintenance assistance program will be developed in four phases:

1. Assessment Phase - During the initial phase of the program the CONTRACTOR will make site investigations at the 10 treatment facilities. The anticipated duration of this activity is three and one-half (3 1/2) months.
 - a. Past experience indicates that the plants built by NOPWASD will require a number of modifications if they are to perform at a satisfactory level. The CONTRACTOR will assess the operability of each plant. This assessment will include a review of the specifications and "as-built" drawings for each facility. The CONTRACTOR will evaluate design, construction, and equipment adequacy at each facility.
 - b. Engineers at NOPWASD who are responsible for design and construction will be advised of all defects noted during the assessment. The CONTRACTOR will work with the appropriate NOPWASD personnel to develop a list of recommended modifications to the existing plants that will be needed to ensure satisfactory plant performance. In addition, the CONTRACTOR will develop a list of recommended modifications for inclusion in future design and construction projects.
 - c. After completing the initial site investigations, the CONTRACTOR will select two (2) water treatment facilities and three (3) wastewater treatment facilities to be used as demonstration facilities.
2. Program Development Phase - Normally, an operations and maintenance manual would serve as the keystone of the training effort at a treatment plant. Such a manual is generally prepared by or through the design engineer during the construction phase of a treatment facility. Due to the fact

that such manuals are not available, it will be necessary for the CONTRACTOR to develop a training program for each of the selected demonstration plants. The program developed will address only the most critical and basic elements of operation and maintenance at each facility. Primary emphasis will be placed on the establishment of a program of routine and systematic procedures. The concept of preventative maintenance will be stressed. Initial training efforts will be directed only at the most critical plant components. The anticipated duration of the program development phase is approximately seven and one-half (7 1/2) months.

The CONTRACTOR will develop a set of very basic standard procedures for operation, maintenance, and safety. These procedures will use graphics to the maximum extent possible; where written explanations are required, they should be brief and in Arabic. The standard procedures will be prepared as multi-color, plastic cards (approximately 8 1/2" by 11"). The CONTRACTOR will provide NOPWASD with fifty (50) copies of each set of procedures as well as the master. In addition, standard procedures will be developed on video tape with a sound track in Arabic (Egyptian dialect, native speaker). The CONTRACTOR will use these materials as the foundation of the training effort at each plant site.

- b. The CONTRACTOR will develop appropriate forms and checklists for use by the plant staffs. These materials will be consistent with a systematic program for operation and maintenance that the CONTRACTOR will develop for each plant.
- c. The CONTRACTOR will prepare an inventory of specific job skills ("need-to-know") for each of the proposed demonstration plants. This inventory will detail the skills which each specific employee must have to perform his job at an acceptable level.
- d. Follow-up visits will be conducted at the proposed demonstration facilities to assess the progress of NOPWASD in mitigating design and construction defects identified during the Assessment Phase. On-site technical assistance will be provided to NOPWASD as required.
- e. The CONTRACTOR will develop a final testing and start-up program for water and wastewater treatment facilities. Standard forms and criteria will be developed as part of this effort.
- f. The CONTRACTOR will work with the NOPWASD team to develop skills in the organization and presentation of technical

training. The CONTRACTOR will provide a training specialist to conduct this activity. "Train-the-trainers" workshops will be provided to acquaint approximately ten (10) NOPWASD employees with the following training items:

- * assessing training needs
- * learning objectives
- * establishing training tasks
- * training agendas
- * audio-visual support systems
- * evaluations
- * practice presentations

3. Start-Up Assistance Phase - The CONTRACTOR will assist NOPWASD in the final testing and start-up of the proposed demonstration facilities. The duration of this phase will be approximately five (5) months.
 - a. The CONTRACTOR will use the procedures and materials developed in the program development phase to demonstrate to NOPWASD personnel a systematic procedure for the testing and start-up of water and wastewater treatment facilities.
 - b. In conjunction with the start-up procedures the CONTRACTOR will conduct preliminary training of plant staff in basic operational techniques.
 - c. The CONTRACTOR will monitor NOPWASD's progress towards implementing the recommended modifications at the proposed demonstration facilities. If the results of the final testing and start-up of these facilities indicates that it will be impractical to achieve satisfactory performance at these facilities within the contract period, the CONTRACTOR will recommend in writing to NOPWASD with copy to the United States Agency for International Development in Cairo that the contract be terminated at the conclusion of the start-up phase.
 - d. Follow-up visits are an integral part of this component to ensure that defects discovered during final testing and start-up are corrected.
4. Training Phase - The greatest level of effort will be required in this phase. Two teams will be established -- one for water and one for wastewater. The teams will rotate from plant to plant providing on-the-job training via a series of carefully planned training efforts. The anticipated duration of this phase is approximately thirteen (13) months.
 - a. The CONTRACTOR will direct the training effort at three major levels of skill -- non-skilled personnel performing limited,

routine tasks (assumed to be illiterate), semi-skilled personnel such as filter operators and pump operators performing relatively complex tasks (assumed to have very limited reading capabilities), and professionals such as engineers and plant managers requiring a broad knowledge of system operations (assumed to have a college level education). An on-the-job training effort will include but not be limited to the following topics:

- * proper operation of specific items of equipment
- * proper maintenance of specific items of equipment
- * plant processes and unit operations
- * troubleshooting techniques and common malfunctions
- * preventative maintenance practices
- * corrective maintenance procedures
- * safety
- * recordkeeping
- * inventory
- * laboratory procedures and process monitoring

- b. The CONTRACTOR will have a budget of \$100,000 to implement minor modifications which would improve operator safety and/or ease of operability of plant uni's.
- c. The CONTRACTOR will coordinate his work effort with the assigned NOPWASD employees and will assist them in developing their skills as trainers of trainers.

III. STAFFING

The CONTRACTOR will provide adequate staff to accomplish the tasks described in this document. It is highly desirable that a substantial number of the staff have a working knowledge of the Arabic language (Egyptian dialect).

- A. An Environmental Engineer will serve as the Team Leader. This position requires not less than ten (10) years of experience in engineering with extensive experience in the design, construction, operation, and maintenance of water and wastewater treatment facilities. A degree in an appropriate engineering discipline and registration as a professional engineer is required. This position will be required throughout the life of the project (30 months).
- B. A Senior Operations Specialist (Wastewater) will provide expertise in regard to the day-to-day operation of wastewater treatment facilities. This individual should have not less than six (6) years experience in the operation and maintenance of wastewater treatment facilities. A degree in a technical field is highly desirable. The individual should hold a operator's certificate for wastewater treatment facilities. This position will be required throughout the life of the project (30 months).

- C. A Senior Operations Specialist (Water) will provide expertise in regard to the day-to-day operation of water treatment facilities. This individual should have not less than six (6) years experience in the operation and maintenance of water treatment facilities. A degree in a technical field is highly desirable. The individual should hold a operator's certificate for water treatment facilities. This position will be required throughout the life of the project (30 months).
- D. A Senior Maintenance Specialist will provide expertise regarding the maintenance and repair of mechanical and electrical equipment. This individual should have not less than eight (8) years of experience in the field of maintenance of which not less than three (3) years will have been at either water and/or wastewater treatment facilities. This position will be required for the program development phase, the start-up phase and most of the training phase (24 months).
- E. A Training Specialist will assist in structuring the proposed training program and will supervise the start-up of the training effort. This individual should have a degree in education or in a technical field. The individual should have not less than eight (8) years experience in the field of training of which not less than three (3) years should be directly related to the training of water and/or wastewater treatment plant operators. This position will be required for the program development phase, the start-up phase, and the beginning of the training phase (18 months).
- F. Two (2) Plant Superintendents will be available as short-term consultants (30 days each) during the training phase. These individuals should be certified plant superintendents and have not less than ten (10) years of experience each in the operation of water and/or wastewater treatment facilities.
- G. An Environmental Engineer will be available as a short-term consultant (30 days) during the project. This position requires not less than ten years (10) of experience in engineering with extensive experience in the design, construction, operation, and maintenance of water and wastewater treatment facilities. A degree in an appropriate engineering discipline and registration as a professional engineer is required.
- H. A Maintenance Specialist with expertise in the maintenance and repair of mechanical and/or electrical equipment will be available as a short-term consultant (30 days). This position requires not less than ten (10) years of experience with water

and wastewater equipment. A degree in an appropriate engineering discipline is desirable.

IV. MOBILIZATION AND DE-MOBILIZATION

A period of one-half month is allowed for mobilization and one-half month for de-mobilization for each of the long-term positions.

V. HOME OFFICE SUPPORT

The CONTRACTOR's home office will provide overall management direction and support for the field staff. This will include the provision of the expert opinion of specialists as required for the solution of problems related to the project.

VI. SCHEDULE

It is anticipated that the duration of the project will be thirty (30) months.

<u>Phase</u>	<u>Duration</u>
Mobilization	1/2 month
Assessment	3 1/2 months
Program Development	7 1/2 months
Start-Up	5 months
Training	13 months
De-Mobilization	1/2 months

VII. ILLUSTRATIVE BUDGET

<u>Item</u>	<u>Cost in U.S. Dollars</u>
Field Personnel Remuneration.....	\$ 814,000
International Travel and Transport.....	132,000
Field Trips.....	119,000
Local Costs for Expatriate Personnel.....	333,000
Field Office.....	284,000
Training Costs.....	187,000
Minor Improvements to Plants.....	100,000
Vehicles.....	112,000
Home Office Backstopping.....	79,000
Overhead.....	102,000
Short-Term Consultants.....	40,000
Other Direct Costs.....	41,000

Sub-Total.....	\$ 2,243,000
Contingency.....	224,000
TOTAL.....	\$ <u>2,467,000</u>

Table (I-a)

MHPU TECHNICAL ASSISTANCE

TASK DESCRIPTION	TECHNICAL ADVISORS			
	LONG TERM	SHORT TERM	GOE STAFF	EGYPTIAN EXPERTS
POLICY GUIDANCE AND MONITORING				
Intergovernmental Cooperation			30	
International donor Cooperation			30	
Management Information System			30	
Sub-Total	30	15	90	60
PLAN REVIEW AND FINANCE				
National needs assessment			15	
Five year plan & budgets			30	
Programming of tariff increases			15	
Sub-Total	30	15	60	60
MANAGEMENT AND COORDINATION				
Misc. Ministry support and mgt needs			30	
NOPWASO liaison			30	
Sub-Total	30	15	60	60
TOTAL PERSON MONTH OF EFFORT	90	45	210	180

* This figure does not include the effort of the Undersecretaries and General Directors

Table (I-b)

NOPWASD TECHNICAL ASSISTANCE

TASK DESCRIPTION	TECHNICAL ADVISORS		GOE STAFF*	EGYPTIAN EXPERTS
	LONG TERM	SHORT TERM		
POLICY AND PLANNING				
National W/W needs assessment			90	
5-year investment plans			60	
Economic analysis of service			15	
Private sector support			15	
Sub-Total	30	30	180	90
MANPOWER DEVELOPMENT AND TRAINING				
Needs assessment review	30		30	
Support hands-on-training			30	
Publication program	30		15	
Certification program			15	
Sub-Total	60	50	90	90
MANAGEMENT FINANCE AND ACCOUNTING				
Analysis of water company concept			15	
Development of performance monitoring system			30	
Development of billing system			30	
Review cost allocation systems			15	
Advise on NOPWASD Mgt needs			30	
Sub-Total	30	30	90	60
ENGINEERING AND ENVIRONMENT				
Review existing standards			30	
Suggest code enforced system			30	
Assist constructor supervision			30	
Sub-Total	30	30	90	60
TOTAL MANMONTHS OF EFFORT	150	140	450	300

* This figure does not include the effort of the Undersecretaries and General Directors

Table (I-c)

MUNICIPAL TECHNICAL ASSISTANCE

TASK DESCRIPTION	TECHNICAL ADVISORS		GOE STAFF*	EGYPTIAN EXPERTS
	LONG TERM	SHORT TERM		
IDENTIFICATION ASSESSMENT, to include				
- Physical system				
- Human resources needs				
Sub-Total	16	2	24	
PROGRAM DEVELOPMENT, to include				
- Operating procedures				
- Training program design				
Sub-total	32	2	48	30
O&M ASSISTANCE AND TRAINING, to include				
- Start-up assistance				
- On-site and Off-site training				
Sub-Total	54	5	100	50
TOTAL MANMONTHS OF EFFORT	102	9	180	80

* This figure does not include the effort of the Undersecretaries and General Directors

Table (I-d)

MISCELLANEOUS TECHNICAL ASSISTANCE

TASK DESCRIPTION	TECHNICAL ADVISORS			EGYPTIAN EXPERTS
	LONG TERM	SHORT TERM	GOE STAFF*	
MINISTRY SUPPORT, to include				
for example:				
- Overall mgt of sector				
- Intergovernmental cooperation				
- Mobilization efforts				
Sub-Total	-	40	30	20
US INSTITUTIONAL ASSESSMENT, to				
include for example				
- AID evaluations				
- Twinning relationships				
Sub-Total	-	50	30	30
TOTAL MANMONTHS OF EFFORT	-	90	60	50

* This figure does not include the effort of the Undersecretaries and General Directors

ANNEX J

Table (J-a)

MHPU TECHNICAL ASSISTANCE
SUMMARY COST ESTIMATE
(\$ 000)

TASK DESCRIPTION	TECHNICAL ADVISORS		GDE		EGYPTIAN		USAID		TOTAL	GDE	SRAND
	LONG TERM F.X.	SHORT-TERM LOC	F.X.	LOC	STAFF	EXPERT	F.X.	LOC			
POLICY GUIDANCE AND MONITORING	390	90	165	45	72	150	555	135	690	222	912
PLAN REVIEW AND FINANCE	390	90	165	45	48	150	555	135	690	198	888
MANAGEMENT AND COORDINATION	390	90	165	45	48	150	555	135	690	198	888
TOTAL	1170	270	495	135	168	450	1665	405	2070	618	2688

NOTE: ALL COST SHOWN IN EQUIVALENT U.S.\$
(EXCHANGE RATE USED \$1.00 = L.E. 1.00)

121

Table (3-5)

PHASE TECHNICAL ASSISTANCE
SUMMARY COST ESTIMATE
(\$ 000)

TASK DESCRIPTION	TECHNICAL ADVISORS										SOE :TOTAL	GRAND :TOTAL
	LONG TERM		SHORT TERM		SOE	EGYPTIAN	USAID					
	F.X.	LOC	F.X.	LOC	STAFF	EXPERT	F.X.	LOC	TOTAL	TOTAL	TOTAL	TOTAL
POLICY AND PLANNING	390	90	330	90	144	225	720	180	900	369	1269	
MANPOWER DEVELOPMENT AND TRAINING	780	180	550	150	72	225	1330	330	1660	297	1957	
MANAGEMENT FINANCE AND ACCOUNTING	390	90	330	90	72	150	720	180	900	222	1122	
ENGINEERING AND ENVIRONMENT	390	90	330	90	72	150	720	180	900	222	1122	
TOTAL	1950	450	1540	420	360	750	3490	970	4360	1110	5470	

NOTE: ALL COST SHOWN IN EQUIVALENT U.S.\$
(EXCHANGE RATE USED \$1.00 = L.E. 1.00)

Table (J-c)

MUNICIPAL TECHNICAL ASSISTANCE
SUMMARY COST ESTIMATE
(\$ 000)

: TASK DESCRIPTION	: TECHNICAL ADVISORS				: GOE	: EGYPTIAN:	: USAID		: GOE	: GRAND	
	: LONG TERM	: SHORT TERM	: STAFF	: EXPERT			: F.X.	: LOC			: TOTAL
	: F.X.	: LOC	: F.X.	: LOC							
: IDENTIFICATION AND ASSESSMENT	: 208	: 48	: 22	: 6	: 19.2	: 0	: 230	: 54	: 284	: 19.2	: 303.2
: PROGRAM DEVELOPMENT	: 416	: 96	: 22	: 6	: 38.4	: 75	: 438	: 102	: 540	: 113.4	: 653.4
: O & M ASSISTANCE AND TRAINING	: 702	: 162	: 55	: 15	: 86.4	: 125	: 757	: 177	: 934	: 211.4	: 1145.4
: TOTAL	: 1326	: 306	: 99	: 27	: 144	: 200	: 1425	: 333	: 1758	: 344	: 2102

NOTE: ALL COST SHOWN IN EQUIVALENT U.S.\$
(EXCHANGE RATE USED \$1.00 = L.E. 1.00)

167

Table (J-d)

MISCELLANEOUS TECHNICAL ASSISTANCE
SUMMARY COST ESTIMATE
(\$ 000)

TASK DESCRIPTION	TECHNICAL ADVISORS				GDE STAFF	EGYPTIAN EXPERT	USAID		TOTAL	GDE TOTAL	GRAND TOTAL
	LONG TERM F.X.	LONG TERM LOC	SHORT TERM F.X.	SHORT TERM LOC			F.X.	LOC			
MINISTRY SUPPORT	0	0	440	120	24	50	440	120	560	74	634
U.S. INSTITUTIONAL ASSESSMENT	0	0	550	150	24	75	550	150	700	99	799
TOTAL	0	0	990	270	48	125	990	270	1260	173	1433

NOTE: ALL COST SHOWN IN EQUIVALENT U.S.\$
(EXCHANGE RATE USED \$1.00 = L.E. 1.00)

169

Table (J-e)

SUMMARY TECHNICAL ASSISTANCE
COST ESTIMATE
(\$ 000)

: TASK DESCRIPTION	: TECHNICAL ADVISGRS		: GDE		: EGYPTIAN		: USAID		: TOTAL	: GDE	: GRAND
	: LONG TERM	: SHORT TERM	: STAFF	: EXPERT	: F.X.	: LOC	: F.X.	: LOC			
	: F.X.	: LOC	: F.X.	: LOC						: TOTAL	: TOTAL
: MHPU	: 1170	: 270	: 495	: 135	: 168	: 450	: 1665	: 405	: 2070	: 618	: 2688
: NDPKASD	: 1950	: 450	: 1540	: 420	: 360	: 750	: 3490	: 970	: 4360	: 1110	: 5470
: MISCELLANEOUS	: 0	: 0	: 990	: 270	: 48	: 125	: 990	: 270	: 1260	: 173	: 1433
: MUNICIPAL	: 1326	: 306	: 99	: 27	: 144	: 200	: 1425	: 333	: 1758	: 344	: 2102
: TOTAL	: 4446	: 1026	: 3124	: 852	: 720	: 1525	: 7570	: 1878	: 9448	: 2245	: 11693

NOTE: ALL COST SHOWN IN EQUIVALENT U.S.\$
(EXCHANGE RATE USED \$1.00 = L.E. 1.00)