EG
352.6
B627

PN-AAH-192

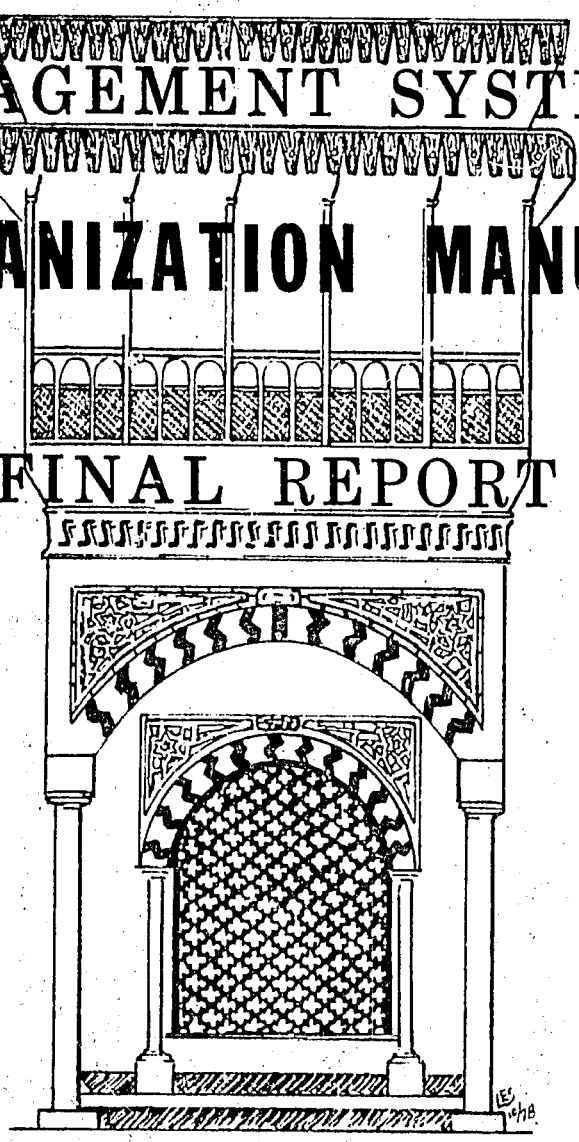
ARAB REPUBLIC OF EGYPT
MINISTRY OF DEVELOPMENT
AND NEW COMMUNITIES

MANAGEMENT AND TARIFF STUDIES
RELATIVE TO WATER/SEWERAGE SYSTEMS

MANAGEMENT SYSTEMS

ORGANIZATION MANUAL

FINAL REPORT



بسم الله الرحمن الرحيم
وجعلنا من الماء كل شيء حي
صدق الله العظيم

BVI-ATK ASSOCIATES WITH SABBOUR ASSOCIATES

BLACK & VEATCH
INTERNATIONAL
CONSULTING ENGINEERS

A.T. KEARNEY, INC.
MANAGEMENT CONSULTANTS

SABBOUR ASSOCIATES
CONSULTING ENGINEERS

OCTOBER 1979

U.S.A.I.D. GRANT NO. 263-0025

MANAGEMENT SYSTEMS

ORGANIZATION MANUAL

FINAL REPORT

The Story of Our Cover:-

On our cover is a sketch of a sybil, which is a fountain. During the Ottoman Empire these were a common source of drinking water. A well is located at ground level and a balcony on the second level where children were taught the Koran. Usually located near mosques, sybils were built and then donated to the public by various benefactors.

Beneath the sketch is a quote from the Koran, "We made from water all living things".

BLACK & VEATCH INTERNATIONAL
CONSULTING ENGINEERS

A. T. KEARNEY, INC.
MANAGEMENT CONSULTANTS

WITH SABBOUR ASSOCIATES
CONSULTING ENGINEERS

بـــلاك أندفيتش العالميـــة
استشارات هندسية
أ. ت. كارني
استشارات إدارية
المكتب الهندسي الاستشاري « صـــبور »
استشارات هندسية

OUR REF.: 79-251
YR REF:
DATE: October 8, 1979

Engineer Soliman Abd El Hai, Chairman
Advisory Committee for Reconstruction
Ministry of Development and New Communitites
1, Ismail Abaza Street
Cairo, A.R.E.

Dear Engineer Abd El Hai:

In accordance with Paragraph 6.7 of Appendix 1 to the Contract dated April 6, 1978 by and between the Ministry of Housing and Reconstruction and BVI-ATK Associates for Management and Tariff Studies Relative to Water and Sewerage Systems, we are pleased to submit the Final Organization Manual. It is responsive to Paragraph 5.3.10 of Appendix 1 to the Contract.

Your attention is directed to Section 1.0, Introduction, of this Organization Manual which summarizes the objectives, scope and methodology.

We wish to acknowledge the assistance and cooperation of the many individuals, agencies and organizations contacted during the course of the Management Studies.

We appreciate the opportunity to serve the Ministry on this important assignment.

Very truly yours,
BVI-ATK ASSOCIATES

John R. Scott

John R. Scott
Project Director

cc: USAID
TAMS
Mr. A.F. Naguib

3 Ahmed El Borei St. Mohandessin
Telephone 706727 - Telex 93845 BLAVT U.N.

٣ شارع أحمد البرعي - مدينة المهندسين
تليفون ٧٠٦٧٢٧ - تلكس ٩٣٨٤٥

TABLE OF CONTENTS

Section Reference		Page
1.0	INTRODUCTION	
1.1	Background	1-1
1.2	Objectives	1-2
1.3	Scope	1-2
1.4	Organizational Structures	1-3
1.4.1	Approach	1-3
1.4.2	Considerations	1-3
1.4.2.1	Basic considerations	1-3
1.4.2.2	Planning and policy-making	1-3
1.4.2.3	Management services	1-4
1.4.2.4	Customer service	1-4
1.4.2.5	Implementation	1-5
1.4.3	Titles of Managers	1-6
1.5	Objectives and Responsibilities	1-7
1.5.1	Water Utility Objectives	1-7
1.5.2	Sewerage Utility Objectives	1-8
1.5.2	Organization Responsibilities	1-8
1.6	Functional Descriptions	1-9
1.7	Job Descriptions	1-10
1.8	Staffing	1-11
1.8.1	Approach	1-11
1.8.2	Methodology	1-12
1.8.3	Definitions	1-13
2.0	GENERAL ORGANIZATION FOR GREATER CAIRO WATER SUPPLY	
2.1	Organization	2-1
2.2	Staffing	2-1

Section Reference		Page
3.0	GENERAL ORGANIZATION FOR GREATER CAIRO SEWERAGE AND SANITARY DRAINAGE	
3.1	Organization	3-1
3.2	Staffing	3-2
4.0	ALEXANDRIA WATER GENERAL AUTHORITY	
4.1	Organization	4-1
4.2	Staffing	4-1
5.0	GENERAL ORGANIZATION FOR ALEXANDRIA SEWERAGE AND SANITARY DRAINAGE	
5.1	Organization	5-1
5.2	Staffing	5-2
6.0	SUEZ CANAL REGION	
6.1	Organization	6-1
6.1.1	Stage One	6-1
6.1.2	Stage Two	6-1
6.1.3	Stage Three	6-2
6.2	Staffing	6-2
6.2.1	SCRWS	6-2
6.2.2	Sewerage Utilities	6-4
7.0	NATIONAL WATER AUTHORITY	
7.1	Background	7-1
7.2	Objectives	7-2
7.3	Organization	7-3
7.4	Staffing	7-3
8.0	NATIONAL SEWERAGE AUTHORITY	
8.1	Objectives	8-1
8.2	Organization	8-1
8.3	Staffing	8-2

EXHIBITS

1.1 Standards Used to Estimate Staffing Levels

2.1 Organization Chart - GOGCWS

2.2 GOGCWS - Organization Structure and Titles of Managers

2.3 Minimum Staffing Levels in 1980 for GOGCWS

3.1 Organization Chart - GCSSD

3.2 GCSSD - Organization Structure and Titles of Managers

3.3 Minimum Staffing Levels in 1980 for GOSSD

4.1 Organization Chart - AWGA

4.2 AWGA - Organization Structure and Titles of Managers

4.3 Minimum Staffing Levels in 1980 for AWGA

5.1 Organization Chart - ASSD

5.2 ASSD - Organization Structure and Titles of Manager

5.3 Minimum Staffing Levels in 1980 for ASSD

6.1 Stage One Organizagion Chart - SCRWS

6.2 Stage Two Organization Chart - SCRWS

6.3 Organization Chart - Ismailia Water and Sewerage Service Department

6.4 Organization Chart - SCRWSS

6.5 Stage Three SCRWSS- Organization Structure and Titles of Managers

6.6 Minimum staffing Levels in 1980 for SCRWS

6.7 Minimum Staffing Levels in 1980 for Suez Canal Governorate Sewerage Departments

7.1 Organization Chart - National Water Authority

7.2 National Water Authority - Organization Structure and Titles of Managers

8.1 Organization Chart - National Sewerage Authority

8.2 National Sewerage Authority - Organization Structure and Titles of Managers

APPENDICES

1 Functional Descriptions

2 Job Descriptions

ABBREVIATIONS

AWGA	Alexandria Water General Authority
ASSD	General Organization for Alexandria Sewerage and Sanitary Drainage
GCSSD	General Organization for Greater Cairo Sewerage and Sanitary Drainage
GOGCWS	General Organization for Greater Cairo Water Supply
SCRWS	General Organization for Suez Canal Region Water Supply
SCRWSS	General Organization for Suez Canal Region Water and Sewerage Service

1.0 INTRODUCTION

1.1 BACKGROUND

This Manual presents recommendations for organizational structure and staffing in the major water and sewerage utilities of Egypt. The work was performed under a Contract dated April 6, 1978 with the Ministry of Housing and Reconstruction. It fulfills Task 5.3.10 of the Scope of Work in Appendix 1 to the Contract.

This Manual is one of a series of reports, each of which recommends improvements in the management practices and tariff structures of the utilities. Two of these reports provide especially useful background to this Manual:

Management Systems: Organizational Environment and Structure

Management Systems: Personnel Systems

The first report considers the national structure and laws in which the organizations operate. Preliminary proposals were made for reorganizing the utilities. The second report proposes freezes on the number of personnel within each utility and training programs to develop the appropriate skills.

The organizations described in this Manual are those prescribed by the Advisory Committee in its response to the Organizational Environment and Structure Report. Other comments and decisions of the Advisory Committee and the Minister of Housing have been considered as well as the findings, conclusions and recommendations of the other Management Systems and Tariff Reports.

1.2 OBJECTIVES

The purpose of this Manual is to provide the following for each utility:

- Organizational charts showing lines of responsibility
- Recommended staffing level by type of skill
- Definition of the objectives and functions of each department
- Job descriptions for each category or type of key job

1.3 SCOPE

This Manual outlines the recommended organizational structures and staffing estimates for the water and sewerage utilities in the following cities:

- Alexandria
- Greater Cairo
- Ismailia
- Port Said
- Suez

The Manual also includes functional and job descriptions which were written for the utilities in the above cities but they may also be useful to other large water and sewerage organizations.

In addition, the Manual includes a brief presentation of the organizational structure and major departmental objectives and functions for two national, general organizations responsible for the planning, design and construction of water and sewerage facilities throughout Egypt, except Alexandria and Greater Cairo.

1.4 ORGANIZATIONAL STRUCTURES

1.4.1 Approach

During the past 16 months, the Management Study Team has reviewed intensively nearly all major functions of the utilities The recommendations presented here are based on the knowlege gained from those investigations and upon the comments of utility personnel regarding earlier organizational proposals.

1.4.2 Considerations

1.4.2.1 Basic considerations. The organizational charts in this Manual are based upon an analysis of the:

Major objectives of the organizations

Tasks to be performed to meet the objectives.

Degree of specialization required to accomplish each task. (Tasks requiring a high degree of specialization usually require a separate department.)

Degree of coordination required between tasks. (A high degree of coordination suggests that the two tasks should be related organizationally.)

Additionally a major effort was made to:

Emphasize planning and policy-making rules.

Clearly define responsibilities of managers.

Identify and assign responsibility for functions that are not currently being performed.

1.4.2.2 Planning and policy-making. In each of the utilities the recommended number of vice chairmen is greater than the number today. Other reports in the Management Systems

Studies have shown the need for more planning and policy-making in all sectors of the utilities. The additional vice chairmen positions should provide more top-management time for planning and policy-making. The job descriptions for these positions have been written to emphasize these roles.

1.4.2.3 Management services. Another step to increase the level of planning is the recommended establishment of a Management Services Department in each utility. The chairmen of such large organizations need a small group of people free from day-to-day operating problems that can help him analyze and research problems and prepare long-range plans.

1.4.2.4 Customer service. The key factor for long-term success of a utility is providing good service to customers. Establishment of a Customer Service Sector or Department is recommended for each utility. Such a Sector has several important advantages over the current structure:

- The customer can talk to one person (the Branch Manager) who has the authority to solve nearly all customer complaints and problems. Currently customers may have to deal with personnel from three sectors in three different offices merely to get a new connection.

  Responsibility for ensuring timely and accurate meter reading and for collecting revenues is centered in one person. He can therefore be held responsible for collecting all revenues due to the utility in his area. (There is substantial evidence that large amounts of revenues are not being collected either because meters are not working or are not being read. No one seems to be held responsible for these deficiencies.)

- Responsibility for development of comprehensive, integrated customer service policies can be clearly assigned.

- Potentially the Customer Service Sector can become a strong advocate for more attention and resources being directed to water quality, water pressure and response to complaints.

- The position of Branch Manager should offer excellent training for top management responsibilities since he must deal with the public and manage both technical and administrative functions and personnel.

1.4.2.5 Implementation. The organization structures outlined in this Manual are long-term in nature. Immediate implementation of the new structures may be delayed by:

- Lack of appropriate personnel to staff the positions.

- Job grades of existing personnel.

- Lack of space.

- Entrenched attitudes such as the artificial distinctions between administrative and technical personnel.

- Reluctance of managers to give up some of their present responsibilities and personnel.

Therefore variations of these structures may be appropriate in the near-term. Nevertheless, several steps should be taken as soon as possible:

Establishment of additional vice chairmen positions

Establishment of a Customer Service function

Establishment of a Project Management structure within the Technical Sectors.

1.4.3 Titles of Managers

Recommendations are provided for the title of the manager of each department listed in the organizational structures. In general, the titles of managers correspond to organizational level. The following grades and levels are used:

Title	Grade	Organizational Level
Chairman	Executive	Utility
Vice Chairman	Executive	Sector
General Manage	Executive	General Department
Manager	1	Department
General Supervisor	2	Group
Supervisor	3	Unit

Executive level titles were assigned to department heads who have significant responsibility for policy-making and who manage several diverse functions. Department heads who have significant decision making responsibility but who manage a homogenous function were usually designated as Managers. Department heads who operate under well-defined rules and procedures were given titles of General Supervisor or Supervisor.

The number of people managed was a secondary consideration in assigning titles. The General Manager, Personnel, for example, must make similar kinds of decisions regardless of the size of the utility.

1.5 OBJECTIVES AND RESPONSIBILITIES

The objectives and responsibilities of the water and sewerage utilities are similar. Therefore they are presented in the following paragraphs rather than being repeated in each section. Objectives for the National Water and Sewerage Authorities are presented in their respective sections (Sections 7.0 and 8.0).

1.5.1 Water Utility Objectives

The major objectives of each water utility should include:

Providing piped water (to the extent resources are available) to all people living within the service area either through house connections or by public fountains within a reasonable distance from each home.

Ensuring that the water delivered to each customer's premises meets the legal quality standards.

Ensuring that adequate levels of pressure are constantly maintained throughout the system.

Protecting water sources from pollution or contamination.

Encouraging conservation of water by customers.

Ensuring that sufficient revenues are obtained to cover costs of operation, maintenance, routine and improvements and debt service.

Responding quickly and effectively (but not necessarily affirmatively) to customer complaints, requests, and suggestions.

Applying the optimum (i.e. minimum) level of financial and human resources required to achieve the above objectives.

1.5.2 Sewerage Utility Objectives

The major objectives of each sewerage utility should include:

- Providing sewage collection service (to the extent resources are available) to all persons living within the service area.

  Ensuring that disposal of the sewage collected does not endanger public health.

  Ensuring that sufficient revenues are obtained to cover costs of operation, maintenance, routine improvements and debt service.

  Responding quickly and effectively (but not necessarily affirmatively) to customer complaints, requests, and suggestions.

  Applying the optimum (i.e. minimum) level of financial and human resources required to achieve the above objectives.

1.5.3 Organization Responsibilities

The responsibilities of each utility shall include:

- Establishing policies, rules, and procedures for:

  - Extending service to new customers.

  - Identifying and collecting all revenues due to the Utility.

  - Accounting for the use of resources.

  - Establishing financial reserves.

  - Maintaining appropriate levels of service to customers.

  - Maintaining facilities and equipment.

  - Use of the Utility's facilities by customers.

  (See Section 9.8 of the Water Utility Tariffs Final Report and Section 9.2 of the Sewerage Utility Tariffs Report for additional policy recommendations.)

- Effectively and efficiently operating and maintaining the facilities of the Utility.
- Determining the number, skills, and organization of personnel required to operate the utility.
- Acquiring, compensating and disciplining employees within the limits set by the labor laws governing general organizations.
- Determining the rules and criteria for promoting managerial personnel.
- Proposing tariffs.
- Proposing long-term financial, manpower and construction plans.
- Proposing annual capital and operating budgets.
- Executing the plans approved in the annual budgets.
- Proposing tariffs that will adequately finance the Utility.
- Contracting loans.
- Selecting, within approved budgetary limits, suppliers and contractors to serve the Utility.
- Conducting research and studies to improve the level of service provided.
- Cooperating with housing and other government agencies in providing water for new facilities.
- Publication of an annual report and final accounts.

1.6 FUNCTIONAL DESCRIPTIONS

Most of the functions to be performed are similar in all of the utilities. Therefore a common set of functional descriptions was written and is given in Appendix 1. Where important differences exist among the utilities for the same

function (e.g., the functions of a water and sewage treatment plant are different), separate descriptions have been written. The appropriate functional description is referenced in the organizational chart provided for each utility.

These descriptions are based upon personal observation, existing written descriptions provided by the utilities and descriptions obtained from U.S. utilities.

1.7 JOB DESCRIPTIONS

Job descriptions were developed and are presented in the same way as the functional descriptions. The descriptions are given in Appendix 2. Jobs for which no descriptions are given are either well-defined (e.g., security) or depend on the talents of the man and the desires of his superior (e.g., Internal Consulting)

Managerial and technical responsibilities, relationships, qualifications and measures of performance are specified for each position. Authority was not defined because it should change with time. When a person is newly promoted, his superior may wish to limit his authority. As he develops on the job, the scope of his authority should be broadened. For this reason, scope of authority is seldom mentioned in job descriptions. (For further discussion see Section 3.2.1 of the Special Report on Management Procedures - AWGA and Section 2.2.5 of the Personnel Systems Report.)

1.8 STAFFING LEVELS

Estimates of the staffing levels required in 1980 have been made for each utility. These estimates are given by sector and then by skill level.

1.8.1 Approach

The year 1980 was chosen as the point of estimation for three reasons:

- A realistic comparison can be made with the present work force and existing equipment.
- The effects of the Master Plan programs on staffing are difficult to predict. New treatment plants and new distribution lines will require additional people. On the other hand, repair and renovation of existing facilities will often significantly reduce the need for maintenance personnel.
- The enormous size of the proposed programs (expenditures of LE 311 million in 1980) suggests that many of the programs will be delayed or abandoned.

This Manual presents estimates of the minimum number of people required to operate the existing or about-to-be completed facilities. These levels do not depend on the introduction of sophisticated new equipment nor do they require that everyone is an expert in his job. They do require that management plan the work carefully and excercise discipline over the work force.

In all cases except Suez Canal Water Operations, far fewer people are required than are actually present today. Noting the legal restraints on dismissing personnel, the Personnel Systems Report recommends freezes on personnel. These freezes generally equal the 1978 budgeted personnel levels. The data in this Manual suggest that these freezes are practical and should hold for at least five years.

1.8.2 Methodology

The staffing levels presented are based upon personal visits to utilities, review of personnel guidelines for U.S. utilities, the reports of the Master Plan consultants and a detailed analysis of volume of work and pieces of equipment for each utility.

For many jobs, the estimated number of man-hours to accomplish a given task should be nearly the same in all utilities Exhibit 1.1 lists some of these jobs and the estimation standards that were used. Occasionally local conditions will require some variation in these standards.

Numerous volume statistics were obtained from the utilities. In addition the following volume statistics were obtained from the Water Utility and Sewerage Utility Tariff Reports:

- Proposed 1980 capital improvement expenditures
- Estimated operation and maintenance expense in 1980
- Number of subscriptions
- Net plant in service

Additional analyses of capital improvement expenditure were based on the reports of the Master Plan consultants. Counts of mechanical, electrical, and civil equipment and structures were obtained from the Water Utility and Sewerage Utility Inventory and Valuation Reports by BVI-ATK Associates.

For all except shift work, hours of work were assumed to be five effective hours per day, 240 days per year. Four shifts were assumed to be required for continuous operations.

The utilities presently contract out large capital improvement projects, nearly all excavation work (e.g., excavation for customer connections) and some other jobs that require hard labor (e.g., cleaning of clarifiers). These estimates assume those practices will continue.

1.8.3 Definitions

Many of the skill classifications used in the staffing analyses are self-explanatory. The others are described in the following paragraphs:

- Commercial Specialists. This classification includes lawyers, accountants, purchasing agents, personnel specialists, storekeepers, and others who have advanced knowledge of financial and administrative concepts and techniques. Most of these people should have university degrees but some may qualify on the basis of judgement, managerial ability and experience.

  Treatment Specialists. This group includes plant managers, shift foremen, chemists and others who must understand the theory and practice of water or sewage treatment. Chemists, sanitary engineers and chemical engineers are the most likely candidates with good experience, managerial ability and judgement may qualify.

Mechanical/Electrical Specialists. These people are capable of diagnosing problems and in making repair or replacement decisions concerning mechanical and electrical equipment. They may be mechanical or electrical engineers or workers who have developed good judgement through experience. Those in the Technical Sector will be knowledgeable of design and construction criteria and techniques.

Civil Engineering Specialists. These personnel are familiar with the design, construction and maintenance of structures. Technical Sector personnel will primarily be trained engineers. In the operating departments, most foremen and many manager positions can be filled by workers who have developed sufficient technical knowledge and good judgement through experience.

Secretaries. These are skilled clerks who can relieve a manager of many routine administrative matters.

Clerks. These people must be able to perform routine office procedures. Many of them must also be able to type.

Machine Operators. These personnel operate billing machines, computers and other data processing equipment.

Mechanics. These personnel are capable of disassembling and reassembling mechanical equipment under the guidance of a foreman. Except for minor jobs such as bending a metal strap, they are not fabricators of parts.

Machinists. These personnel are capable of fabricating metal parts from construction drawings or from measurements of old parts. They are highly competent in using lathes, drill presses, grinders and other machine shop equipment.

Master Builders. These personnel can perform minor carpentry, cement work and other structural repairs.

Operators. These personnel are knowledgeable in the operation of equipment assigned to them. They perform minor, every-day maintenance tasks (e.g., oiling), record operating data, and keep the area assigned to them clean and in safe operating condition.

Repairmen. These personnel are responsible for installation and repair of distribution or collection lines. They include personnel who repair pipes, make connections, construct small extensions, and install hydrants and valves on existing pipes.

Construction Foremen. These are experienced workers capable of monitoring the work of contractors. They must be familiar with common construction techniques and precautions. They work under the supervision of a Project Manager who is responsible for ensuring that the contractor properly performs the work.

STANDARDS USED TO ESTIMATE STAFFING LEVELS (1)

Department/Job Title	Standard
MATERIALS CONTROL (GOGCWS, ASSD, and CSSD)	
Requisitions Clerk	1 clerk/1,000 tranactions/ month
Receipt Clerk	1 clerk/2.5 requisitions clerks
(Most of this work is done by computer at AWGA and SCA)	
PURCHASING	
Purchasing Agents (includes manager)	1 agent/LE 2 million annual operations expenditures less wages 1 agent/LE 10 million average annual expenditures, 1980-1983
Purchasing Clerk	1 clerk/LE 7 million annual expenditures
Accountant	1 accountant/3 purchasing agents
ASSET ACCOUNTS	
Accountant (including managers and supervisors)	1 accountant/LE 100 million net plant 1 accountant/LE 5 million average annual capital expenditures, 1980-1983
Clerks	1 clerk/LE 50 million net plant 1 clerk/LE 10 million average annual capital expenditures, 1980-1983
TREASURY	
Cashiers	1 cashier/branch at branch 1 cashier/1.33 branches at headquarters
Accountants	1 accountant/LE 35 million annual expenditures
Clerk	1 clerk/LE 5 million annual expenditures

Note: (1) Managers and supervisors are not included unless specifically mentioned.

STANDARDS USED TO ESTIMATE STAFFING LEVELS(1)

Department/Job Title	Standard
BUDGET AND COST	
Accountants	1 for responsibility accounting 1/LE 2 million annual operating expenses for job accounting 1/LE 4 million annual operating expenses for planning and budgeting
ACCOUNTS PAYABLE	
Total personnel including managers	1 person/LE 10 million annual expenditures
CUSTOMER SERVICE CENTERS	
Meter Readers	3,000 meters/month/man
Collector	1,875 bills/month/man
Meter Clerks	1 clerk/4 meter readers
Collection Clerks	1 clerk/2 collectors
Repairmen and Laborers	
New connections	2 man-days each
Meter replacements	5/man/day
Disconnects	15/man/day
Reconnects	15/man/day
Customer service leaks	1 man-day/leak
Building inspections	15/man/day
New connection inspection and write-up	2/man/day

Note: (1) Managers and supervisors are not included unless specifically mentioned.

STANDARDS USED TO ESTIMATE STAFFING LEVELS (1)

Department/Job Title	Standard
WATER TREATMENT PLANTS	
Operators	2 men/shift/pump house 1 man/shift/generator house 2 men/shift/major group of clarifiers and filters
Shift Foremen	1 foreman/shift
Mechanics	1 mechanic/10 pieces of mechanical equipment
Plumbers	1 plumber/25 filters, clarifiers, floculators and reservoirs
Welders	1 welder/4 plumbers
Master Builder	1 man/50 structures
Laborers	1 man/50 pieces of equipment and structures
Alum Handlers	1 man/50,000 M^3 production per day
Foremen	1 foreman/6 maintenance workers
VEHICLE SHOP	
Vehicle Mechanics	1 mechanic/15 drivers
Laborers	1 laborer/2 mechanics
Foremen	1 foreman/ 5 workers
METER SHOP	Number recommended in the Water Utility Tariff Report divided between foremen and laborers
MECHANICAL SHOP (Water Utilities) (2)	
Mechanics	1 man/24 pieces of mechanical equipment in the utility
Electricians	1 man/24 motors, generators and transformers
Laborers	1 man/2 mechanics
Foremen	1 foreman/5 workers

Notes: (1) Managers and supervisors are not included unless specifically mentioned.
(2) Maintenance is centralized in the sewerage utilities so ratios used there are equal to those listed above for Treatment Plants.

STANDARDS USED TO ESTIMATE STAFFING LEVELS(1)

Department/Job Title	Standard
DISTRIBUTION	
Repairmen and Laborers	10 valves serviced/man-day 1 pipe repair/2 man-days 10 hydrants inspected/man-day 1 km. pipe laid/man-year 3 reservoirs operated/man/shift
TECHNICAL	
Project Engineers	
Type of Currency	
Foreign	1 engineer/LE 2 million average annual expenditures, 1980-1983
Local-Master Plan	1 engineer/LE 1 million average annual expenditures, 1980-1983
- Routine	1 engineer/LE 250,000 average annual capital expenditures, 1980-1983
Draftsmen	1 draftsmen/engineer on routine local projects
Construction Supervisor	1 supervisor/project engineer

Note: (1) Managers and supervisors are not included unless specifically mentioned.

2.0 GENERAL ORGANIZATION FOR GREATER CAIRO WATER SUPPLY

2.1 ORGANIZATION

GOGCWS could attain more effective and efficient service by reorganizing to the structure shown in Exhibit 2.1. This structure suggests the following major changes compared to the present organization:

- Establishment of five sectors (Administration, Finance, Customer Service, Operations and Technical) rather than two.
- Consolidating all activities involving customer contact into the Customer Service Sector.
- Reassigning and consolidating the staff groups that report to the Chairman.
- Combining the present revenue departments with the connections and meter replacement responsibilities of the Distribution Department (formerly Networks) to form the Customer Service Sector.
- Addition of a Training and Management Development Department and upgrading of the Personnel Department.
- Establishing Asset Accounts to control all financial transactions involving fixed assets.
- Establishing a Maintenance Department directly under the Vice Chairman, Operations.
- Reducing the rank of the Distribution Department from a sector to a General Department in light of its reduced responsibilities.

Functional and job descriptions to support the organizational structure are referenced in Exhibit 2.2 and provided in Appendices 1 and 2 respectively.

2.2 STAFFING

The minimum staffing levels for GOGCWS under the new organizational structure are summarized in Table 2.1 on the following page and listed in detail in Exhibit 2.3.

TABLE 2.1

MINIMUM STAFFING
LEVELS IN 1980 FOR GOGCWS

Department	Actual[1] 1978	Needed 1980
Chairman's Office	54	100
Administration	463	355
Finance	242	137
Customer Service		
Reading, Billing Collections	461	267
Connections, Meter Service	(2)	278
Operations		
Production	3,852	1,508
Distribution	1,801[2]	685
Facilities and Maintenance	(3)	334
Laboratories	(3)	96
Technical	108	314
Unaccounted[4]	1,904	0
Total	8,885	4,074

Notes: (1) GOGCWS was not able to supply detailed staffing data by department by job title in time to include in this Manual. These data were supplied earlier from payroll listings.
(2) Data did not permit division of existing Networks Department personnel between the new Customer Service Department and the new Distribution Department.
(3) Data did not permit separation of Facilities and Maintenance and Laboratories personnel from Production Department personnel.
(4) The department data supplied by GOGCWS do not add to the actual number of personnel said to be employed.

These estimates are based on the following assumptions:

- ES-Parsons recommendations for plant shift personnel are appropriate.

  At least one technician is always on duty at each plant laboratory.

  An average of 110 pipeline breaks are reported per day.

  Capital expenditures will average LE 77 million per year from 1980 through 1983.

  Customers' meters will be read (not estimated) and bills prepared every two months. Large customers will be billed monthly.

  Work will begin on acquiring a new computer system but in the meantime the present system will be used.

  A new cost accounting system will be installed.

The data show substantial overstaffing in every department except Technical. There appear to be twice as many people as required in production and distribution. If such double teaming is required because of incompetent people (as suggested by many managers) training programs could have large and immediate paybacks in personnel costs.

ORGANIZATION CHART -

GENERAL ORGANIZATION FOR GREATER CAIRO WATER SUPPLY

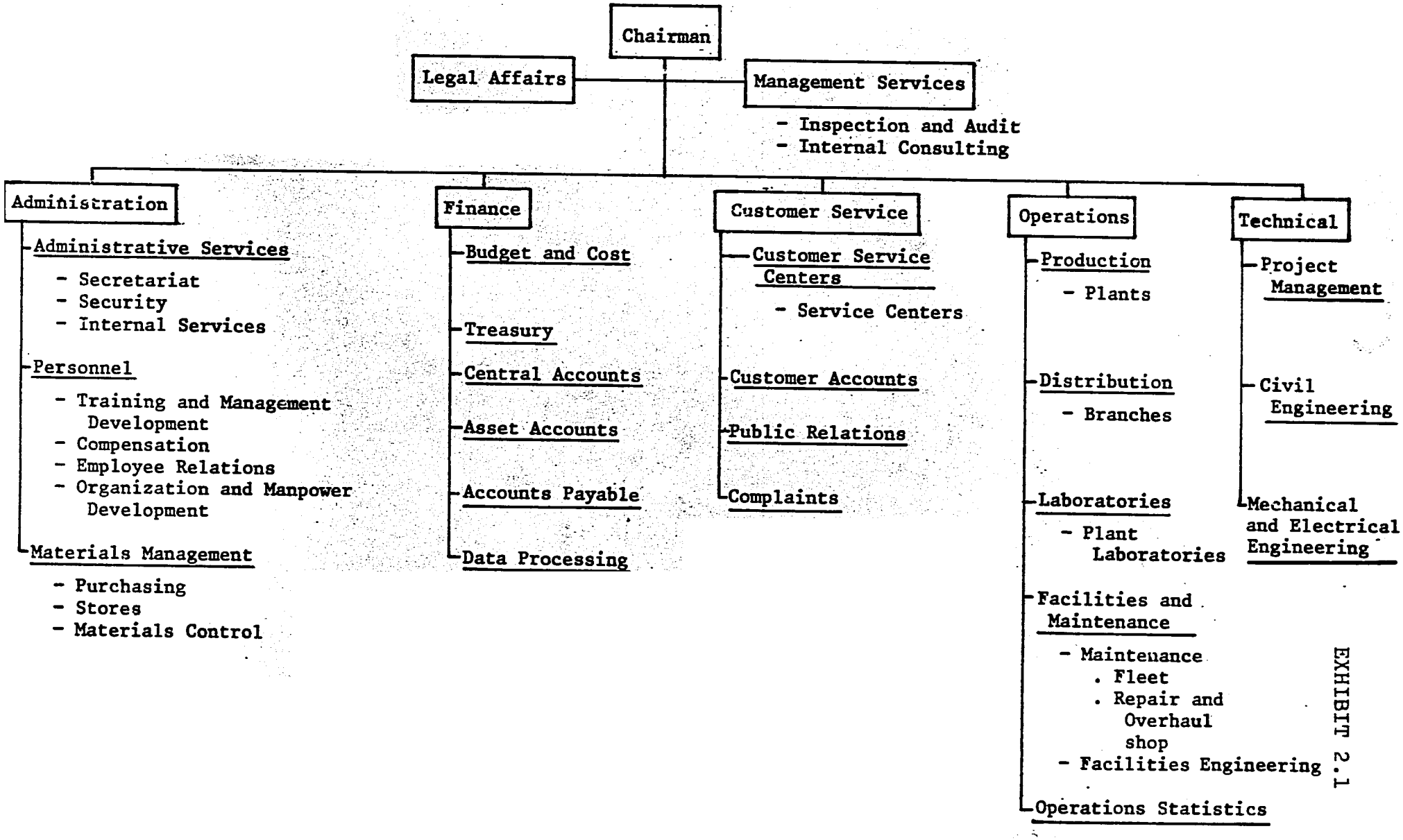


EXHIBIT 2.1

GENERAL ORGANIZATION FOR GREATER CAIRO WATER SUPPLY - ORGANIZATION STRUCTURE AND TITLES OF MANAGERS

Department	Department Level (1)	Title of Manager (2)	Description References Functional	Description References Job
Chairman's Office	S	-	-	-
Management Services	GD	GM	A1.1	A2.1
Inspection and Audit	D	M	A1.2	(3)
Internal Consulting	D	M	A1.3	(3)
Legal Affairs	D	M	A1.4	(3)
Administration	S	VC	(3)	A2.2
Administrative Services	D	M	A1.5	A2.3
Secretariat	G	S	A1.6	(3)
Security	G	GS	A1.7	(3)
Internal Services	G	GS	A1.8	(3)
Personnel	GD	GM	A1.9	A2.4
Training and Management Development	D	M	A1.10	A2.5
Compensation	D	M	A1.11	A2.6
Employee Relations	D	M	A1.12	A2.7
Organization and Manpower Planning	G	GS	A1.13	A2.8
Materials Management	GD	GM	A1.14	A2.9
Purchasing	D	M	A1.15	A2.10
Stores	D	M	A1.16	A2.11
Materials Control	D	M	A1.17	A2.12
Finance	S	VC	(3)	A2.13
Budget and Cost	GD	GM	A1.18	A2.14
Treasury	D	M	A1.19	A2.15
Central Accounts	D	M	A1.20	A2.16
Asset Accounts	GD	GM	A1.21	A2.17
Accounts Payable	G	GS	A1.22	A2.18
Data Processing	D	M	A1.23	A2.19
Customer Service	S	VC	(3)	A2.22
Customer Service Centers	GD	GM	A1.28	A2.23
Customer Service Center	D	M or GS	A1.30	A2.25
Customer Accounts	D	M	A1.31	A2.26
Public Relations	D	M	A1.32	(3)
Complaints	G	GS	A1.33	A2.27

Notes: (1) S = Sector, GD = General Department, D = Department, G = Group
(2) VC = Vice Chairman, GM = General Manager, M = Manager
GS = General Supervisor, S = Supervisor
(3) Not provided

GENERAL ORGANIZATION FOR GREATER CAIRO WATER SUPPLY - ORGANIZATION STRUCTURE AND TITLES OF MANAGERS

Department	Department Level(1)	Title of Manager(2)	Description References Functional	Description References Job
Operations	S	VC	(3)	A2.28
Production	GD	GM	A1.34	A2.29
Plant	D	M	A1.35	A2.30
Distribution	GD	GM	A1.36	A2.31
Branch	D	GS or M	A1.37	A2.32
Laboratories	GD	GM	A1.38	A2.33
Plant Laboratory	G	GS	A1.39	A2.34
Facilities and Maintenance	GD	GM	A1.49	A2.41
Maintenance	D	M	A1.50	A2.42
Fleet	G	GS	A1.51	(3)
Repair and Overhaul Shop	G	GS	A1.52	(3)
Facilities Engineering	D	M	A1.53	A2.43
Operations Statistics	G	GS	A1.54	A2.44
Technical	S	VC	(3)	A2.45
Project Management	GD	GM	A1.55	A2.46
Civil Engineering	D	M	A1.56	A2.47
Mechanical and Electrical Engineering	D	M	A1.57	A2.48

Notes: (1) S = Sector, GD = General Department, D = Department, G = Group
(2) VC = Vice Chairman, GM = General Manager, M = Manager, GS = General Supervisor, S = Supervisor
(3) Not provided

MINIMUM STAFFING LEVELS IN 1980 FOR
THE GENERAL ORGANIZATION FOR
GREATER CAIRO WATER UPPLY

Job Classification	Chairman's Office	Finance	Administration	Customer Service	Operations					Total
					Production (1)	Distribution	Facilities and Maintenance	Laboratories	Technical	
Specialists										
Commercial										
Managers	7	9	17	13		0				46
Foremen	5	9	32	20		0				66
Employees	35	30	26	37		16		1	2	147
Treatment										
Managers					15			2		17
Foremen					98			11		109
Employees								22		22
Mechanical/Electrical										
Managers	0				11		10	0	1	22
Foremen	0				29		43	0	3	75
Employees	3				0		2	2	17	24
Civil Engineering										
Managers	1			0	0	8	3		3	15
Foremen	0			20	25	83	4		8	140
Employees	3			0	0	0	2		45	50
Office/Clerical										
Secretaries	6	2	13	2	2		1		2	28
Meter Readers, Collectors and Cashiers	0	14	0	111	0		0			125
Clerks	20	46	125	74	27	8	9	3	12	324
Telephone Operators		0	11	0	1	6				18
Machine Operators		11	0	0	0	0				11
Key Punchers		4	0	14	0	0				18

(1) Includes Vice Chairman and Operations Statistics

EXHIBIT 2.3
Page 1 of 2

MINIMUM STAFFING LEVELS IN 1980 FOR
THE GENERAL ORGANIZATION FOR
GREATER CAIRO WATER SUPPLY

ob Classification	Chairman's Office	Finance	Adminis-tration	Customer Service	Operations				Tech-nical	Total
					Production (1)	Distribution	Facilities and Maintenance	Labora-tories		
killed Workers										
Laboratory Technicians					0	0		50		50
Plumbers/Fitters					25	66	12	0		103
Mechanics					147	0	51	0		198
Welders					6	16	3			25
Electricians					29	0	26			55
Machinists					0	0	12			12
Master Builders					35	0	6			41
Operators					756	0	0			756
Repairmen				155	0	200	0			355
Draftsmen			0						18	18
Construction Foremen			0						73	73
Printers			6						0	6
thers										
Drivers	15	7	40	54	45	100	25	4	37	327
Guards	0	0	18	0	100	30	0	0	60	208
Laborers	0	0	58	32	144	150	125	0	30	539
Messengers	5	5	9	13	13	2	0	1	3	51
Total	100	137	355	545	1508	685	334	96	314	4074

Note: (1) Includes headquarters and booster station personnel.

3.0 GENERAL ORGANIZATION FOR GREATER CAIRO SEWERAGE AND SANITARY DRAINAGE

3.1 ORGANIZATION

Cairo sewerage operations are presently under the direction of the General Organization for Sewerage and Sanitary Drainage (GOSSD). GOSSD is also responsible for running sewerage operations in Alexandria and designing sewerage facilities for all of Egypt. Nevertheless, because of its size and proximity, Cairo sewerage operations occupy the bulk of the time and effort of nearly every department at GOSSD headquarters.

This Paragraph presents a structure for an independent organization for operating the Cairo sewerage system. The chart, shown in Exhibit 3.1, suggests that:

- The company be a general organization.
- Four operating sectors (Finance, Administration, Operation and Technical) and a Chairman's office be formed.
- The Operations Sector be further divided into Sewage Collection, Booster Stations, Treatment, and Facilities and Maintenance Departments.
- Several new functions be established:

  Management Services

  Training and Management Development

  Asset Accounts

  Data Processing

  Customer Services

  Project Management

This organization structure will clearly focus responsibilities but will still permit coordination of work.

Functional and job descriptions to support the new organization are referenced in Exhibit 3.2 and presented in Appendices 1 and 2 respectively.

3.2 STAFFING

GOSSD headquarters and Cairo sewerage operations presently support 8,861 employees and workers. The level needed for 1980 operations for GCSSD is only 7,128. A comparison of actual and needed staffing levels is presented in Table 3.1. Details of the minimum levels are given in Exhibit 3.3.

TABLE 3.1

MINIMUM STAFFING LEVELS IN 1980 FOR GCSSD

Sector	Actual 1979(1)	Needed 1980
Chairman's Office	74	95
Administration	191	239
Finance	121	286
Operations	8,268	6,086
Technical	207	422
	8,861	7,128

Note: (1) Includes all personnel at GOSSD headquarters plus Cairo operations.

Source: Detailed department by type of worker list provided by GOSSD. Allocation to sectors by BVI-ATK.

The minimum level of staffing was based on the following assumptions:

- The average level of capital expenditures will be LE 164 million per year from 1980 through 1983.
- Connections will average 8,000 per year.
- Tariffs and fees will be levied through GOGCWS for most customers and directly to industrial companies generating high strength sewage.
- The Stores Department will conduct an average of 5,400 transactions per month.
- Additional jet and bucket rodding equipment will not be purchased but existing equipment will be used two shifts per day.
- An average of one manual rodder will be required for each two km of collection lines.
- Booster stations will be manned by at least two men, 24 hours per day. Two men will be required for each five ejector stations per shift.

  GOSSD will undertake to make all of the existing treatment stations fully operational.

  All mechanical maintenance will be performed by the Facilities and Maintenance Department. On the average one mechanic or electrician will be required for every five pieces of mechanical or electrical equipment.

The increases in personnel in the Finance, Administration and Technical departments are almost solely due to the growth expected in capital expenditures.

The analysis of personnel provided by GOSSD does not permit a detailed comparison with the recommended number of people in the four main departments of the Operations Sector. The data appear to indicate substantial declines in all areas except booster stations. All of the excess appears to be in the laborer classification. Substantial increases are needed in the number of managers and foremen.

Despite the apparent excess in 1980, cuts should not be made in the staff. The Taylor, Binnie Cairo Wastewater Master Plan estimates that an additional 4,102 personnel will be needed in 1983 if the Master Plan is fully implemented. GCSSD should concentrate on training the present staff so that such a large increase can be absorbed.

ORGANIZATION CHART -
GENERAL ORGANIZATION FOR GREATER CAIRO SEWERAGE AND SANITARY DRAINAGE

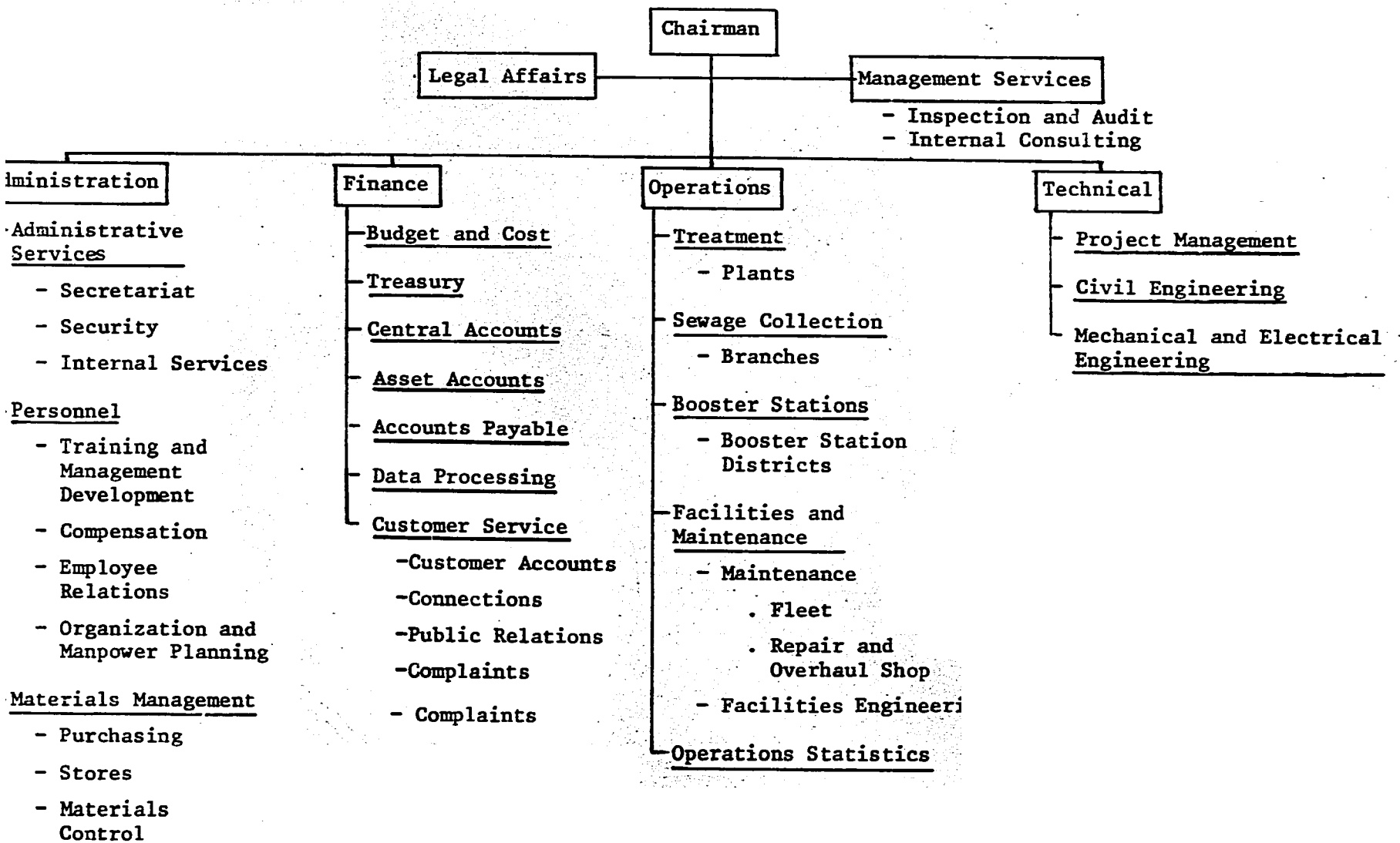


EXHIBIT 3.1

GENERAL ORGANIZATION FOR GREATER CAIRO SEWERAGE AND SANITARY DRAINAGE - ORGANIZATION STRUCTURE AND TITLES OF MANAGERS

Department	Department Level (1)	Title of Manager (2)	Description References Functional	Description References Job
Chairman's Office	-	-	-	-
Management Services	GD	GM	A1.1	A2.1
Inspection and Audit	D	M	A1.2	(3)
Internal Consulting	D	M	A1.3	(3)
Legal Affairs	D	M	A1.4	(3)
Administration	S	VC	(3)	A2.2
Administrative Services	D	M	A1.5	A2.3
Secretariat	G	S	A1.6	(3)
Security	G	GS	A1.7	(3)
Internal Services	G	GS	A1.8	(3)
Personnel	GD	GM	A1.9	A2.4
Training and Management Development	D	M	A1.10	A2.5
Compensation	D	M	A1.11	A2.6
Employee Relations	D	M	A1.12	A2.7
Organization and Manpower Planning	G	GS	A1.13	A2.8
Materials Management	GD	GM	A1.14	A2.9
Purchasing	D	M	A1.15	A2.10
Stores	D	M	A1.16	A2.11
Materials Control	D	M	A1.17	A2.12
Finance	S	VC	(3)	A2.13
Budget and Cost	GD	GM	A1.18	A2.14
Treasury	G	GS	A1.19	A2.15
Central Accounts	G	GS	A1.20	A2.16
Asset Accounts	GD	GM	A1.21	A2.17
Accounts Payable	G	GS	A1.22	A2.18
Data Processing	D	M	A1.24	A2.20
Customer Service	GD	GM	A1.25	A2.21
Customer Accounts	G	GS	A1.26	(3)
Connections	G	M	A1.27	(3)
Public Relations	G	GS	A1.32	(3)
Complaints	G	GS	A1.33	A2.27

Notes: (1) S = Sector, GD = General Department, D = Department, G = Group
(2) VC = Vice Chairman, GM = General Manager, M = Manager, GS = General Supervisor, S = Supervisor
(3) Not provided

GENERAL ORGANIZATION FOR GREATER CAIRO SEWERAGE AND SANAITARY DRAINAGE - ORGANIZATION STRUCTURE AND TITLES OF MANAGERS

Department	Department Level(1)	Title of Manager(2)	Description References Functional	Description References Job
Operations	S	VC	(3)	A2.28
Treatment	GD	GM	A1.42	A2.36
Plant	D	M	A1.43	A2.37
Sewage Collection	GD	GM	A1.44	A2.38
Branch	D	M	A1.45	A2.39
Booster Stations (Headquarters)	GD	GM	A1.46	(3)
Booster Station	D	M	A1.47	(3)
Facilities and Maintenance	GD	GM	A1.49	A2.41
Maintenance	D	M	A1.50	A2.42
Fleet	G	GS	A1.51	(3)
Repair and Overhaul Shop	G	GS	A1.52	(3)
Facilities Engineering	D	M	A1.53	A2.43
Operations Statistics	G	GS	A1.54	A2.44
Technical	S	VC	(3)	A2.45
Project Management	GD	GM	A1.55	A2.46
Civil Engineering	D	M	A1.56	A2.47
Mechanical and Electrical Engineering	GD	GM	A1.57	A2.48

Notes: (1) S = Sector, GD = General Department, D = Department, G = Group
(2) M = Manager, GS = General Supervisor, S = Supervisor
(3) Not provided

MINIMUM STAFFING LEVELS IN 1980 FOR
THE GENERAL ORGANIZATION FOR
GREATER CAIRO SEWERAGE AND SANITARY DRAINAGE

Job Classification	Chairman's Office	Finance	Administration	Operations: Sewage Collection (1)	Operations: Booster Stations	Operations: Treatment	Operations: Facilities and Maintenance	Technical	Total
Specialists									
Commercial									
Managers	6	17	12			0	1		36
Foremen	1	26	27			0	0		54
Employees	31	48	31			4	6		120
Treatment									
Managers						13			13
Foremen						32			32
Employees						4			4
Mechanical/Electrical									
Managers	0			1	20	6	14	1	42
Foremen	0				122	0	68	9	199
Employees	2			2	4		2	35	45
Civil Engineering									
Managers	1			83			1	3	88
Foremen	0			451			1	19	471
Employees	4			5		2	2	74	87
Office/Clerical									
Secretaries	5	3	4			1	1	2	16
Meter Readers, Collectors and Cashiers	0	6	0				0	0	6
Clerks	24	114	118	131	20	8	22	18	455
Telephone Operators	0	0	5	0	0	13	0	0	18
Machine Operators									
Key Punchers	0	0	0	0	0	0	0	0	0

Note: (1) Includes Operations headquarters personnel

MINIMUM STAFFING LEVELS IN 1980 FOR
THE GENERAL ORGANIZATION FOR
GREATER CAIRO SEWERAGE AND SANITARY DRAINAGE

Job Classification	Chairman's Office	Finance	Administration	Operations: Sewage Collection (1)	Operations: Booster Stations	Operations: Treatment	Operations: Facilities and Maintenance	Technical	Total
Skilled Workers									
Laboratory Technicians				0		3	0		3
Plumbers/Fitters				80		0	10		90
Mechanics				1		0	188		188
Welders			0	17			3		20
Electrician			2				84		86
Machinists			0				24		24
Master Builders				80 (2)	0	0	16		96
Operators					731	220	0		951
Repairmen				979	0	0	0		979
Draftsmen								0	0
Construction Foremen								137	137
Others									
Drivers	14	19	24	360	142	14	82	45	700
Guards	0	0	28	20	16	36	0	60	60
Laborers	0	0	27	1666	43	164	37	15	1952
Messengers	7	6	8	20	1	8	2	4	56
Total	95	239	286	3895	1099	528	564	422	7128

Notes: (1) Includes Operations headquarters personnel.
(2) Masonry skills are most important for these personnel.

4.0 ALEXANDRIA WATER GENERAL AUTHORITY

4.1 ORGANIZATION

AWGA could benefit by reorganizing to the structure shown in Exhibit 4.1. This structure recommends the following major changes compared with the present structure:

- Establishing five sectors (Administration, Finance, Customer Service, Operation and Technical) rather than two
- Consolidating all activities involving direct customer contact into a new Customer Service Sector
- Reassigning and consolidating the staff groups reporting to the Chairman
- Adding a Training and Management Development Department and upgrading the Personnel Department
- Establishing Asset Accounts to control all financial transactions involving fixed and physical assets.
- Establishing a Maintenance Department directly under the Vice Chairman, Operations
- Establishing the Western Desert as a General Department reporting to the Vice Chairman, Operations

Functional and job descriptions to support the organization structure are referenced in Exhibit 4.2 and provided in Appendices 1 and 2 respectively.

4.2 STAFFING

The minimum staffing levels for AWGA under the new organization structure are summarized in Table 4.1 and listed in detail in Exhibit 4.3.

TABLE 4.1

MINIMUM STAFFING
LEVELS IN 1980 FOR AWGA[1]

Department	Number of People: Actual[2] 1979	Number of People: Needed 1980
Chairman's Office	81	63
Administration	768[3]	265
Finance	100	73
Customer Service	1,078	516
Operations		
Plants		663
Maintenance	936	177
Laboratories		50
Distribution (Networks)	96[4]	98
Western Desert	149	163
Technical	99	149
Total	3,307	2,217

Notes: (1) Assumptions include:
- Manshia extension is not staffed in 1980.
- Changeover to NCR 499 type billing machines is made
- Meters are read and bills prepared every two months for all but large customers.
- New accounting system is installed.
- LE 15 million is spent for projects.

(2) A fully accurate count was never obtained.

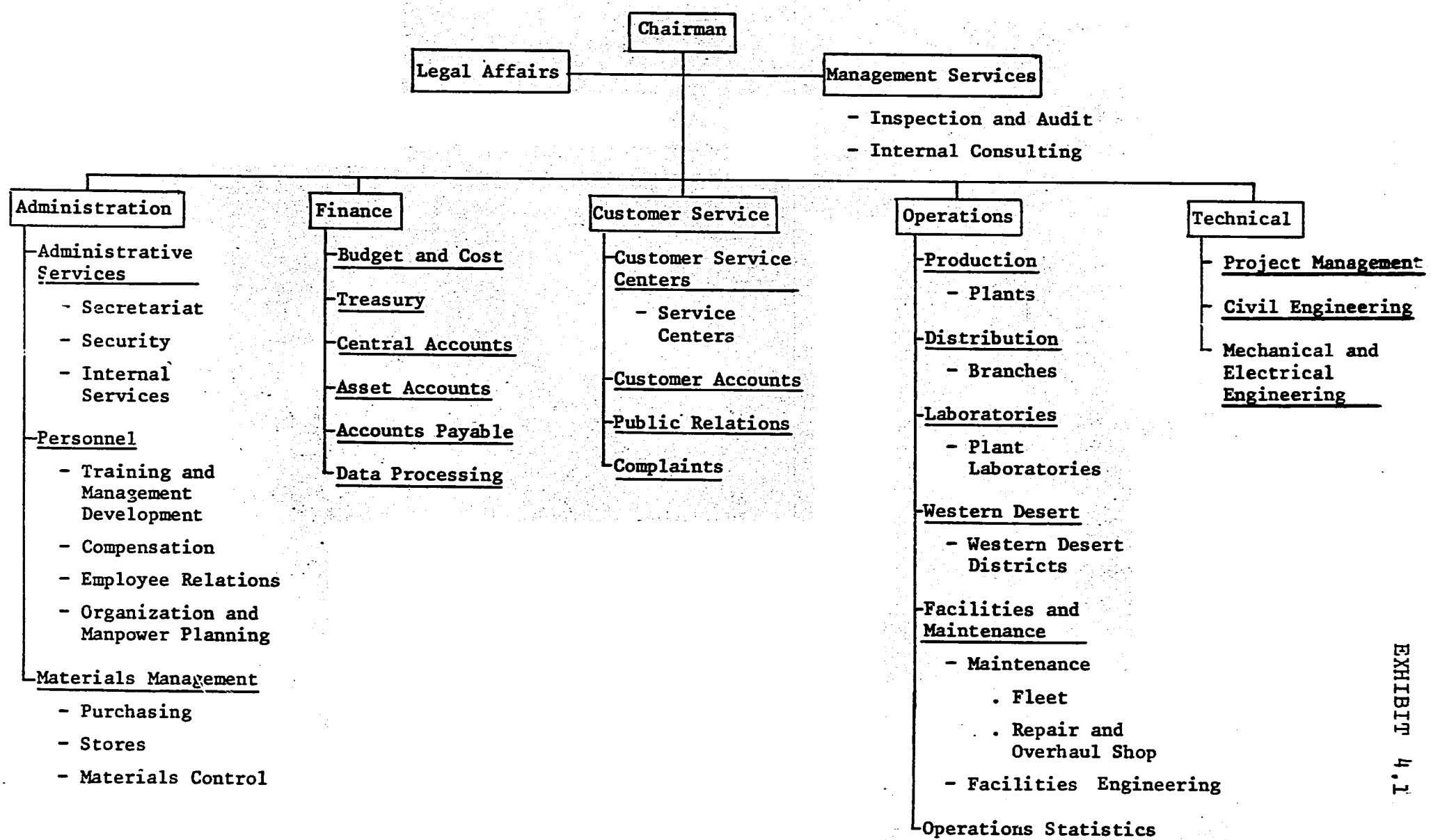
(3) Includes all guards, drivers and messengers whereas these are assigned by sector in the needed staffing.

(4) Of the personnel presently in this Department, 297 were assigned to Customer Service as it appears they are performing that type of work.

The data suggest that AWGA has about 50% more staff than required. The existing Networks (Customer Service), Revenues and Security Departments have the largest numbers of excess personnel.

EXHIBIT 4.1

ORGANIZATION CHART - ALEXANDRIA WATER GENERAL AUTHORITY



ALEXANDRIA WATER GENERAL AUTHORITY - ORGANIZATION STRUCTURE AND TITLES OF MANAGERS

Department	Department Level(1)	Title of Manager(2)	Description Reference Functional	Description Reference Job
Chairman's Office	-	-	-	-
Management Services	GD	GM	A1.1	A2.1
Inspection and Audit	D	M	A1.2	(3)
Internal Consulting	D	M	A1.3	(3)
Legal Affairs	D	M	A1.4	(3)
Administration	S	VC	(3)	A2.2
Administrative Services	D	M	A1.5	A2.3
Secretariat	G	S	A1.6	(3)
Security	G	GS	A1.7	(3)
Internal Services	G	GS	A1.8	(3)
Personnel	GS	GM	A1.9	A2.4
Training and Management Development	D	M	A1.10	A2.5
Compensation	D	M	A1.11	A2.6
Employee Relations	D	M	A1.12	A2.7
Organization and Manpower Planning	G	GS	A1.13	A2.8
Materials Management	GD	GM	A1.14	A2.9
Purchasing	D	M	A1.15	A2.10
Stores	D	M	A1.16	A2.11
Materials Control	D	M	A1.17	A2.12
Finance	S	VC	(3)	A2.13
Budget and Cost	GD	GM	A1.18	A2.14
Treasury	G	GS	A1.19	A2.15
Central Accounts	G	GS	A1.20	A2.16
Asset Accounts	GD	GM	A1.21	A2.17
Accounts Payable	G	GS	A1.22	A2.18
Data Processing	D	M	A1.23	A2.19
Customer Service	S	VC	(3)	A2.22
Customer Service Centers	GD	GM	A1.28	A2.23
Customer Service Center	G	M or GS	A1.30	A2.25
Customer Accounts	D	M	A1.31	A2.26
Public Relations	G	GS	A1.32	(3)
Complaints	G	GS	A1.33	A2.27

Notes: (1) S = Sector, GD = General Department, D = Department, G = Group
(2) VC = Vice Chairman, GM = General Manager, M = Manager, GS = General Supervisor, S = Supervisor
(3) Not provided

ALEXANDRIA WATER GENERAL AUTHORITY - ORGANIZATION STRUCTURE AND TITLES OF MANAGERS

Department	Department Level(1)	Title of Manager(2)	Description Functional	Reference Job
Operations	S	VC	(3)	A2.28
Production	GD	GM	A1.34	A2.29
Plant	D	M	A1.35	A2.30
Distribution	GD	GM	A1.36	A2.31
Branch	G	M or GS	A1.37	A2.32
Laboratories	GD	GM	A1.38	A2.33
Plant Laboratory	G	GS	A1.39	A2.34
Western Desert	GD	GM	A1.40	A2.35
Western Desert District	D	M	A1.41	(3)
Facilities and Maintenance	GD	GM	A1.49	A2.41
Maintenance	D	M	A1.50	A2.42
Fleet	G	GS	A1.51	(3)
Repair and Overhaul Shop	G	GS	A1.52	(3)
Facilities Engineering	D	M	A1.53	A2.43
Operations Statistics	G	GS	A1.54	A2.44
Technical	S	VC	(3)	A2.45
Project Management	GM	GM	A1.55	A2.46
Civil Engineering	D	M	A1.56	A2.47
Mechanical and Electrical Engineering	D	M	A1.57	A2.48

Notes: (1) S = Sector, GD = General Department, D = Department, G = Group
(2) VC = Vice Chairman, GM = General Manager, M = Manager, GS = General Supervisor, S = Supervisor
(3) Not provided

EXHIBIT 4.3
Page 1 of 2

MINIMUM STAFFING LEVELS IN 1980 FOR ALEXANDRIA WATER GENERAL AUTHORITY

Job Classification	Chairman's Office	Finance	Administration	Customer Service	Technical	Operations: Production (1)	Operations: Distribution	Operations: Facilities and Maintenance	Operations: Labs.	Operations: Western Desert (2)	Total
Specialists											
Commercial											
Managers	5	5	10	13						0	33
Foremen	4	9	15	19						1	48
Employees	19	9	42	32						0	102
Treatment											
Managers						9			1		10
Foremen						37			7		44
Employees						0			16		16
Mechanical/Electrical											
Managers	0				2	6		4		1	13
Foremen	1				3	19		16		6	45
Employees	2				10	0		1		3	16
Civil Engineering											
Managers	0			0	1	0	1	1			3
Foremen	0				3	6	5	3			33
Employees	2			0	10	0	0	1			13
Office/Clerical											
Secretaries	5	1	10	2	2	1	0	1	1	0	23
Meter Readers, Collectors and Cashiers	0	14	0	100	0	0	0	0	0	1	115
Clerks	17	19	65	79	4	16	2	4	1	4	211
Telephone Operators		0	9	0		2	0		0	0	11
Machine Operators		4	0	32		0	0		0	0	36
Key Punchers		3	0	0		0	0		0	0	3

Notes: (1) Includes operations headquarters and booster station personnel.
(2) Excludes Maryut plant.

MINIMUM STAFFING LEVELS IN 1980 FOR
ALEXANDRIA WATER GENERAL AUTHORITY

Job Classification	Chairman's Office	Finance	Administration	Customer Service	Technical	Operations					Total
						Production (1)	Distribution	Facilities and Maintenance	Labs.	Western Desert (2)	
Skilled Workers											
Laboratory Technicians						0		0	19	0	19
Plumbers/Fitters						11		0	0	3	14
Mechanics						59		28	2	21	110
Welders						2		2		3	7
Electrician						20		13		0	33
Machinists						0		6		0	6
Master Builders						8	0	2		0	10
Operators						345	0	0		95	440
Repairmen				149		0	27	0		3	179
Draftsmen					11			0			11
Construction					20			4			24
Printers					0			0			6
Others											
Drivers	4	4	27	30	20	30	25	10	3	19	172
Guards	0	0	14	0	30	36	16	0	0	0	96
Laborers	0	0	63	31	30	47	20	80		2	273
Messengers	4	5	4	13	3	9	2	1		1	42
Total	63	73	265	516	149	663	98	177	50	163	2217

Notes: (1) Includes Operations headquarters and booster stations personnel.
(2) Excludes Maryut plant.

EXHIBIT 4.3
Page 2 of 2

5.0 GENERAL ORGANIZATION FOR ALEXANDRIA SEWERAGE AND SANITARY DRAINAGE

5.1 ORGANIZATION

The organization structure shown in Exhibit 5.1 would properly clarify responsibilities within ASSD. This structure includes the following changes compared with the present structure:

- Identifies one person as being in charge of all activities at ASSD.
- Establishes four sectors (Administration, Finance, Operations and Technical). At present there are at least five operating groups and four staff groups, not all of which the Director General fully controls.
- Consolidates and expands the staff available to the Chairman (presently Director General).
- Establishes the following new functions:
  - . Inspection and Audit
  - . Internal Consulting
  - . Asset Accounts
  - . Data Processing
  - . Materials Management
  - . Operations Statistics

  Establishes a central maintenance department for servicing all mechanical and electrical equipment.

Functional and job descriptions to support the organizatior structure are referenced in Exhibit 5.2 and are provided in Appendices 1 and 2 respectively.

5.2 STAFFING

A total staff of 1,526 is required to operate and maintain the Utility in 1980. This is only 85% of the 1,817 personnel reported for the Utility in December 1978. Complete statistics for all workers in all departments were not obtained, but Table 5.1 presents an estimated comparison of current and needed staff by sector:

TABLE 5.1

MINIMUM STAFFING LEVELS IN 1980 AT ASSD

Department	Staffing Level Actual(1) 1979	Needed 1980
Chairman's Office	15	33
Finance	53	76
Administration	153	146
Operations		
Sewage Collection	672	672
Booster Stations	312	265
Treatment	122(2)	78
Facilities and Maintenance	315(2)	151
Technical	48	105
Subtotal	1,692	
Unaccounted	127	
Total	1,817(2)	1,526

Notes: (1) Based on counts of people by job title provided in early June 1979 unless noted otherwise.
(2) Based on departmental totals provided in December 1978. The number of persons by job title was not provided by these departments.

The following assumptions affected the development of these estimates:

- All functions required to operate, maintain, finance and expand ASSD will be performed in Alexandria.
- Capital expenditures will average LE 54 Million per year from 1980 through 1983.
- Contractors will be hired for all major expansions and renovations.
- Consultants will be hired to do nearly all design work.
- The West Treatment Plant will not be staffed in 1980.

Table 5.1 suggests that ASSD has exactly the right number of people in the Sewage Collection Department. That is so only because the Utility is far behind in sewer maintenance. Only 400 people will be needed in this Department after all of the following tasks have been accomplished:

- Sewer cleaning is up-to-date.
- Equipment recommended in the Master Plan has been put into use.
- Skills of the labor force have been upgraded.
- Sewers are operated at appropriate levels and flow rates.

The increase in the Finance Department is required to provide better cost data and to account for the large sums of capital expenditures as well as staff a Customer Service function. The increase in the Technical Department will be required to monitor properly, the large capital construction program.

ORGANIZATION CHART -
GENERAL ORGANIZATION FOR ALEXANDRIA SEWERAGE AND SANITARY DRAINAGE

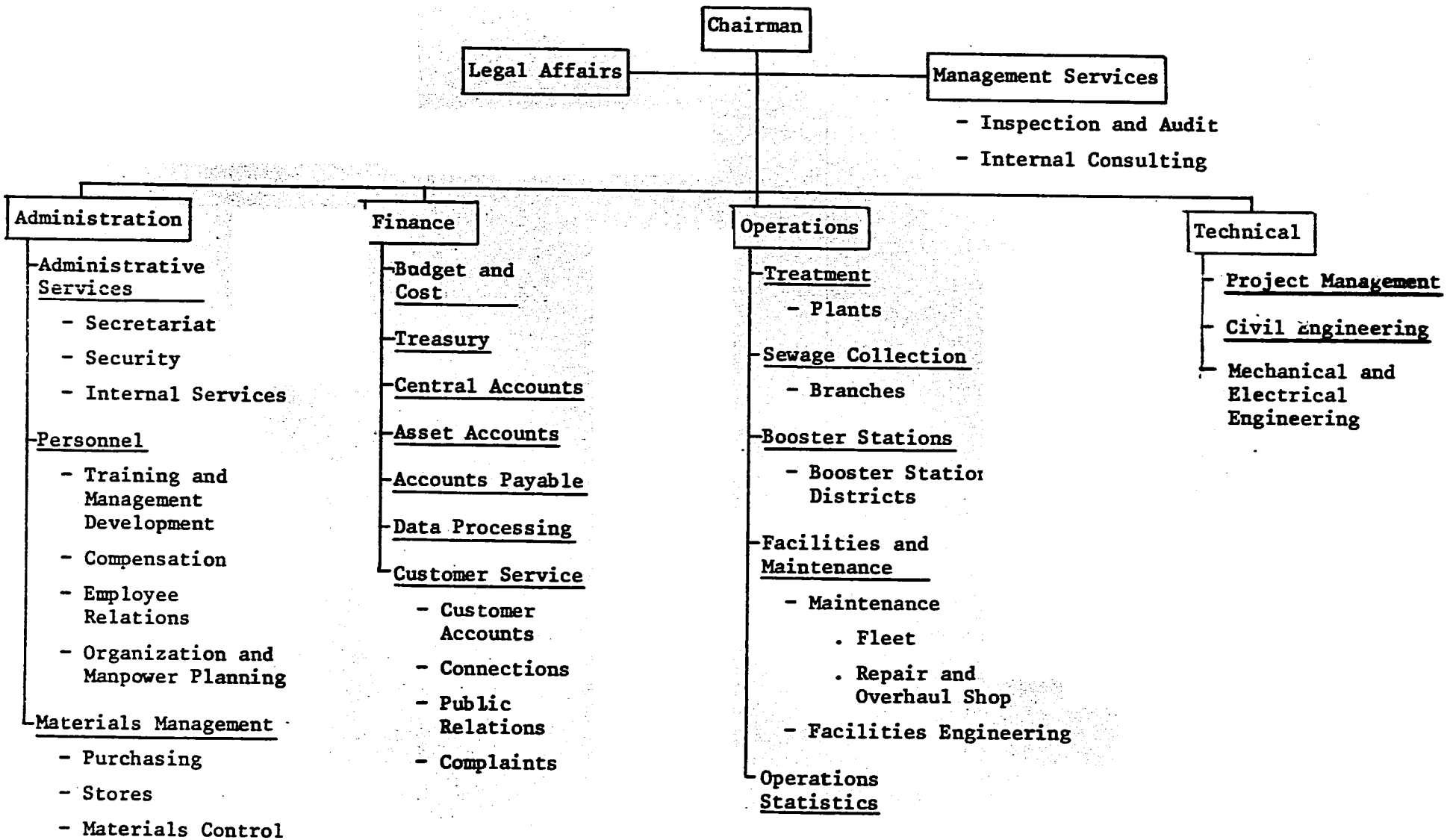


EXHIBIT 5.1

GENERAL ORGANIZATION FOR ALEXANDRIA SEWERAGE AND SANITARY DRAINAGE - ORGANIZATION STRUCTURE AND TITLES OF MANAGERS

Department	Department Level(1)	Title of Manager(2)	Description Reference Functional	Description Reference Job
Chairman's Office	-	-	-	-
Management Services	GD	GM	A1.1	A2.1
Inspection and Audit	D	M	A1.2	(3)
Internal Consulting	D	M	A1.3	(3)
Legal Affairs	D	M	A1.4	(3)
Administration	S	VC	(3)	A2.2
Administrative Services	D	M	A1.5	A2.3
Secretariat	G	S	A1.6	(3)
Security	G	GS	A1.7	(3)
Internal Services	G	GS	A1.8	(3)
Personnel	GD	GM	A1.9	A2.4
Training and Management Development	D	M	A1.10	A2.5
Compensation	D	M	A1.11	A2.6
Employee Relations	D	M	A1.12	A2.7
Organization and Manpower Planning	G	GS	A1.13	A2.8
Materials Management	GD	GM	A1.14	A2.9
Purchasing	D	M	A1.15	A2.10
Stores	G	GS	A1.16	A2.11
Materials Control	D	M	A1.17	A2.12
Finance	S	VC	(3)	A2.13
Budget and Cost	GD	GM	A1.18	A2.14
Treasury	G	GS	A1.19	A2.15
Central Accounts	G	GS	A1.20	A2.16
Asset Accounts	GD	GM	A1.21	A2.17
Accounts Payable	G	GS	A1.22	A2.18
Data Processing	D	M	A1.24	A2.20
Customer Service	GD	GM	A1.25	A2.21
Customer Accounts	G	GS	A1.26	(3)
Connections	G	GS	A1.27	(3)
Public Relations	G	GS	A1.32	(3)
Complaints	G	GS	A1.33	A2.27

Notes: (1) S = Sector, GD = General Department, D = Department, G = Group
(2) VC = Vice Chairman, GM = General Manager, M = Manager, GS = General Supervisor, S = Supervisor
(3) Not provided

GENERAL ORGANIZATION FOR ALEXANDRIA SEWERAGE AND SANITARY DRAINAGE - ORGANIZATION STRUCTURE AND TITLES OF MANAGERS

Department	Department Level(1)	Title of Manager(2)	Description Reference Functional	Description Reference Job
Operations	S	VC	(3)	A2.28
Treatment	GD	GM	A1.42	A2.36
Plant	D	M	A1.43	A2.37
Sewage Collection	GD	GM	A1.44	A2.38
Branch	D	M	A1.45	A2.39
Booster Stations (Headquarters)	D	M	A1.46	(3)
Booster Station District	G	GS	A1.47	(3)
Facilities and Maintenance	GD	GM	A1.49	A2.41
Maintenance	D	M	A1.50	A2.42
Fleet	G	GS	A1.51	(3)
Repair and Overhaul Shop	G	GS	A1.52	(3)
Facilities Engineering	D	M	A1.53	A2.43
Operations Statistics	G	GS	A1.54	A2.44
Technical	S	VC	(3)	A2.45
Project Management	GD	GM	A1.55	A2.46
Civil Engineering	D	M	A1.56	A2.47
Mechanical and Electrical Engineering	D	M	A1.57	A2.48

Notes: (1) S = Sector, GD = General Department, D = Department, G = Gr
(2) VC = Vice Chairman, GM = General Manager, M = Manager, GS = General Supervisor, S = Supervisor
(3) Not provided

MINIMUM STAFFING LEVELS IN 1980 FOR
THE GENERAL ORGANIZATION FOR
ALEXANDRIA SEWERAGE AND SANITARY DRAINAGE

Job Classification	Chairman's Office	Finance	Administration	Operations				Technical	Total
				Sewage Collection[1]	Booster Stations	Treatment	Facilities and Maintenance		
Specialists									
Commercial									
Managers	4	9	12	0					25
Foremen	0	5	14	0					19
Employees	10	26	15	16					67
Treatment									
Managers						2			2
Foremen						4			4
Employees						2			2
Mechanical/Electrical									
Managers					5		2	1	8
Foremen					16		15	1	32
Employees					1		2	8	11
Civil Engineering									
Managers				9			1	4	14
Foremen				64			4	3	71
Employees				8			1	29	38
Office/Clerical									
Secretaries	4	2	4	2	0	0	1	1	14
Meter Readers, Collectors and Cashiers	0	3	0	0	0	0	0	0	3
Clerks	5	35	48	19	5	2	4	6	124
Telephone Operators			5	16					21
Machine Operators		0	2	0					2

Note: (1) Includes Operations headquarters personnel.

EXHIBIT 5.3
Page 1 of 2

MINIMUM STAFFING LEVELS IN 1980 FOR
THE GENERAL ORGANIZATION FOR
ALEXANDRIA SEWERAGE AND SANITARY DRAINAGE

Job Classification	Chairman's Office	Finance	Administration	Operations				Technical	Total
				Sewage Collection	Booster Stations	Treatment	Facilities and Maintenance		
Skilled Workers									
Laboratory Technicians				0		2	0		2
Plumbers/Fitters				32		1	4		37
Mechanics				0		3	15		18
Welders						0	2		2
Electrician						1	20		21
Machinists						0	6		6
Master Builders				16 (1)	0	0	6		22
Operators				0	130	16			146
Repairmen				200	0	0			200
Draftsmen								5	5
Construction Foremen								42	42
Others									
Drivers	6	8	9	170	21	2	22	15	253
Guards	0	0	13	16	8	8	0	0	45
Laborers	0	0	25	102	78	34	23	10	272
Messengers	4	3	3	2	1	1	2	2	18
Total	33	91	150	672	265	78	130	127	1546

Note: (1) Masonary skills are most important for these personnel.

6.0 SUEZ CANAL REGION

6.1 ORGANIZATION

In a letter to the Advisory Committee for Reconstruction dated April 26, 1979, the Minister of Housing stated that a combined water and sewerage operating agency should be established for the Suez Canal Region. That structure could be achieved in three stages.

6.1.1 Stage One

During the first stage, the water operations of the Suez Canal Authority should be detached from the Works Division and combined to form the General Organization for Suez Canal Region Water Supply (SCRWS). This Organization should remain part of the SCA under arrangements similar to the Timsah Shipbuilding Company and other SCA subsidiary companies. (See Exhibit 6.1 for the initial recommended organizational structure.)

The sewerage operations should remain under the jurisdiction of the Governorates during this stage.

6.1.2 Stage Two

After SCRWS has become well-established and is functioning properly (probably three to five years after reorganization), the sewerage operations in Ismailia should be merged into the company. The new organization is shown in Exhibit 6.2. The only change is that the Ismailia Water Service Department absorbs the sewerage operations and becomes the Ismailia Water and Sewerage Services Department. Exhibit 6.3 shows the

recommended organization of this enlarged department. Merger of the Ismailia sewerage operations is recommended during this stage because top management of the company will be immediately available to solve the problems that might arise from the merger.

The sewerage operations of Port Said and Suez should continue under the Governorate jurisdictions during this stage.

6.1.3 Stage Three

After the merger with the Ismailia sewerage service has been successfully completed, the organization should become independent of the SCA (although some arrangement should be made to continue to use the SCA shops because of their excellent capability to fabricate parts). After that has been successfully completed the sewerage operations of Port Said and Suez and other governorates in the region should be merged with the utility. Its new name should be the General Organization for Suez Canal Region Water and Sewerage Service. The recommended organization structure is shown in Exhibit 6.4.

Appropriate functional and job descriptions for the new organization are referenced in Exhibit 6.5.

6.2 STAFFING

6.2.1 SCRWS

The minimum staffing levels for SCRWS in 1980 are summarized in Table 6.1 on the following page and presented in detail in Exhibit 6.6. Modest increases are required in Port Said and Ismailia staffing. Suez presently has more staff than needed

but these extra people will be required when the new Bamag treatment facilities are completed. Approximately 230 additional people will be required to establish the headquarter operations of SCRWS.

TABLE 6.1

MINIMUM STAFFING LEVELS IN 1980 FOR THE GENERAL ORGANIZATION FOR SUEZ CANAL REGION WATER SUPPLY

Department	Actual 1978	Needed 1980
Chairman's Office	-	18
Finance	(1)	41
Administration	(1)	61
Customer Service	(1)	16
Operations		
Headquarters	(1)	31
Port Said	139(2)	158
Ismailia	106(3)	149
Suez	166(4)	136
Technical	(1)	61
Total	411	671

Notes: (1) These functions are carried as overhead among SCA headquarters staff. In most cases, individuals perform the same or related functions for both the water operations and other SCA departments.

(2) Source: Hazen and Sawyer, Port Said Water and Wastewater Master Plan, Draft Final Report, Volume 2, Water Facilities January 1979.

(3) Source: Metcalf and Eddy, Inc. Ismailia Waterworks and Wastewater Facilities Master Plan, Part I, Volume II, Waterworks, November 1978.

(4) Source: Pirnie-Harris International, Suez Water and Wastewater Facilities Master Plan, Water Facilities, Volume 2, Draft. February 1979.

6.2.2 Sewerage Utilities

SCRWS must be organized and operating efficiently before the Suez Canal sewerage departments are merged into it. The minimum time to accomplish the merger is three years. Therefore, staffing plans for 1980 for the sewerage departments must assume they will remain within the governorates for three to five years.

The Master Plan consultants have provided estimates of staffing levels required in each city. They have been carefully studied and adopted with some changes.

An important change for each city is the addition of an Administration Department. This Department is recommended for three reasons:

> It will permit the process of separation from the governorate to begin. When the time for separation does come, the administrative functions will already be separated from the governorates.
>
> It will permit the acquisition and development of administrative skills that will be required within the new Utility after the merger.
>
> With the addition of an Administrative Department, the sewerage utilities can be evaluated as economic entities rather than as services. The imposition of sewer use fees makes this evaluation both necessary and feasible.

The 1980 staffing plans presented here assume that these functions are fully staffed. In practice, enough people with requisite skills probably can not be obtained within such a short time. Therefore, some of the work may have to continue to be done by governorate staff in 1980.

- Port Said. The Master Plan consultants, Hazen and Sawyer, prepared detailed staffing plans for 1983 through 2000. Therefore adjustments had to be made to reflect both the addition of the administrative function and the needs of 1980. These are summarized in Table 6.2.

TABLE 6.2

ADJUSTMENTS TO HAZEN AND SAWYER RECOMMENDATIONS FOR STAFFING IN PORT SAID

Position	1983(1)	1980(2)	Reason
Administration			
Manager	0	6	To facilitate the eventual merger of water and sewerage utilities.
Foremen/Supervisors	1	4	
Employees	3	10	
Cashiers	0	1	
Clerks	0	14	
Laborers	2	2	
Treatment Plant			
Supervisors	10	5	Second plant will not be in service in 1980.
Operators	15	10	
Laborers	25	10	
Connections			
Foremen	4	1	BVI-ATK estimates only 300 connections in 1980.
Laborers	16	3	
Guards	0	15	These positions were not listed by Hazen and Sawyer.
Messengers	0	3	

Notes: (1) Recommended by Hazen and Sawyer.
(2) Recommended by BVI-ATK Associates.
Net increase recommended by BVI-ATK Associates = 8.

Table 6.3 presents the minimum staffing levels for Port Said classified by department. Levels for 1983 are also presented to illustrate the additional personnel required when the recommended plants are operational.

TABLE 6.3

MINIMUM STAFFING LEVELS FOR
PORT SAID WASTEWATER DEPARTMENT

Department	Actual 1978	Minimum 1980	Minimum 1983
Director's Office	3	3	4
Administration	0(2)	37	37
Treatment(1)	207	151	176
Sewage Collection	180	78	94
Maintenance	110(2)	52	52
Technical	0	8	8
Total	500	329	371

Note: (1) Source: Hazen and Sawyer, Immediate Phase Draft Final Report and Status Report No. 2, Volume 3 Wastewater Facilities. Interviews by BVI-ATK Associates indicated a staff of 452 which was not divided by department.

(2) Storekeepers and stores laborers may be included in the Maintenance Department count.

Hazen and Sawyer estimate that as late as the year 2000 only 461 people will be required to staff the sewerage operations. Therefore the number in the department today can be significantly reduced.

Ismailia. The staffing estimates prepared by the Master Plan consultants, Metcalf and Eddy were carefully examined but not used because:

- They appeared too low compared to Port Said and Suez.
- No justification was presented.

Instead comparisons were made between Port Said and Ismailia treatment plants and networks. The Port Said estimates were then extrapolated to Ismailia. Estimates were also made for the number of administrative personnel required. These estimates are summarized in Table 6.4 and presented in greater detail in Exhibit 6.7.

TABLE 6.4

MINIMUM STAFFING LEVELS IN 1980 FOR ISMAILIA WASTEWATER DEPARTMENT

Department	Actual 1978(1)	Minimum 1980
Director's Office	3	3
Administration	3	40
Treatment	23	60
Pump Stations	61	67
Sewage Collection	83	67
Maintenance	9	47
Technical	0	8
Total	182(2)	292

Note: (1) Source: Metcalf and Eddy, Waterworks and Wastewater Facilities, Master Plan, February 1979. Interview by BVI-ATK Associates indicated a staff of 218 which was not allocated by department.

(2) Does not include the Electrical Power Station reported by Metcalf and Eddy.

The table indicates the need for a 60% increase in personnel in 1980 compared with today. If the Administration Department is not added, an increase of 41% would still be required. The treatment plant is not now in operation but is assumed to be fully operational in 1980. Therefore, the next largest increase is in the Treatment Department. Pump Station manning is based on two men at each station each shift rather than the lesser manning recommended in Port Said by Hazen and Sawyer. The maintenance staff should be increased to support plant operations and to give better service to the booster stations.

Suez. The Suez Master Plan consultants, Pirnie-Harris International, present a detailed analysis of staffing in their draft report. The recommended numbers appear appropriate for all but the Administration Department.

A small technical department is required to handle connections and small extensions.

Pirnie-Harris also believe that an Administration Department should be established to provide the Sewerage Department with more independence. Their estimates of the number of people required to meet these needs appear too low for the following reasons:

- More accountants will be required to account for the average capital expenditures of LE 22 million per year.
- They apparently did not include stores personnel anywhere (now included under Materials Management).
- Additional people will be required in Customer Services (Public Services in the Pirnie-Harris estimate) to manage the billing system recommended in the Sewerage Utility Tariff Report.
- No guards or messengers were recommended.

The recommended changes are summarized on Table 6.5.

TABLE 6.5

ADJUSTMENTS TO THE PIRNIE-HARRIS
INTERNATIONAL RECOMMENDED STAFFING LEVELS FOR SUEZ - 1980

Function	Pirnie-Harris	BVI-ATK
Administration		
Manager	1	1
Personnel	8	7
Accounting	6	16
Materials Management	4(1)	14
Legal	1	1
Public Services	2	4
Guards	0	15
Messengers	0	3
Total	22	61

Note: (1) Only purchasing personnel were listed.

The Treatment Plant at Suez is not in operation at present nor is it expected to operate in 1980. It is expected to be operating by 1985 so more people will be required by then. Staffing levels for 1980 and 1985 are compared with existing levels in Table 6.6:

TABLE 6.6

MINIMUM STAFFING LEVELS FOR SUEZ

Department	Actual 1978(1)	Mininum 1980	Mininum 1985
Director's Office	NA	3	4
Administration	NA	61	63
Treatment	13	27	221
Booster Stations	NA	73	93
Maintenance	NA	46	48
Sewage Collection	NA	75	94
Technical	NA	8	8
Total	235	293	531

Note:(1) Source: Pirnie-Harris International Draft Report.

The table suggests a modest increase to meet 1980 needs followed by a substantial increase by 1985. Nearly all of the increase between 1980 and 1985 is required to staff the proposed treatment plants.

Pirnie-Harris International provided skill level classifications only for the year 2000. Therefore, estimates of skills by department were made for 1980 which are summarized in Exhibit 6.7.

STAGE ONE ORGANIZATION CHART -
GENERAL ORGANIZATION FOR
SUEZ CANAL REGION WATER SUPPLY

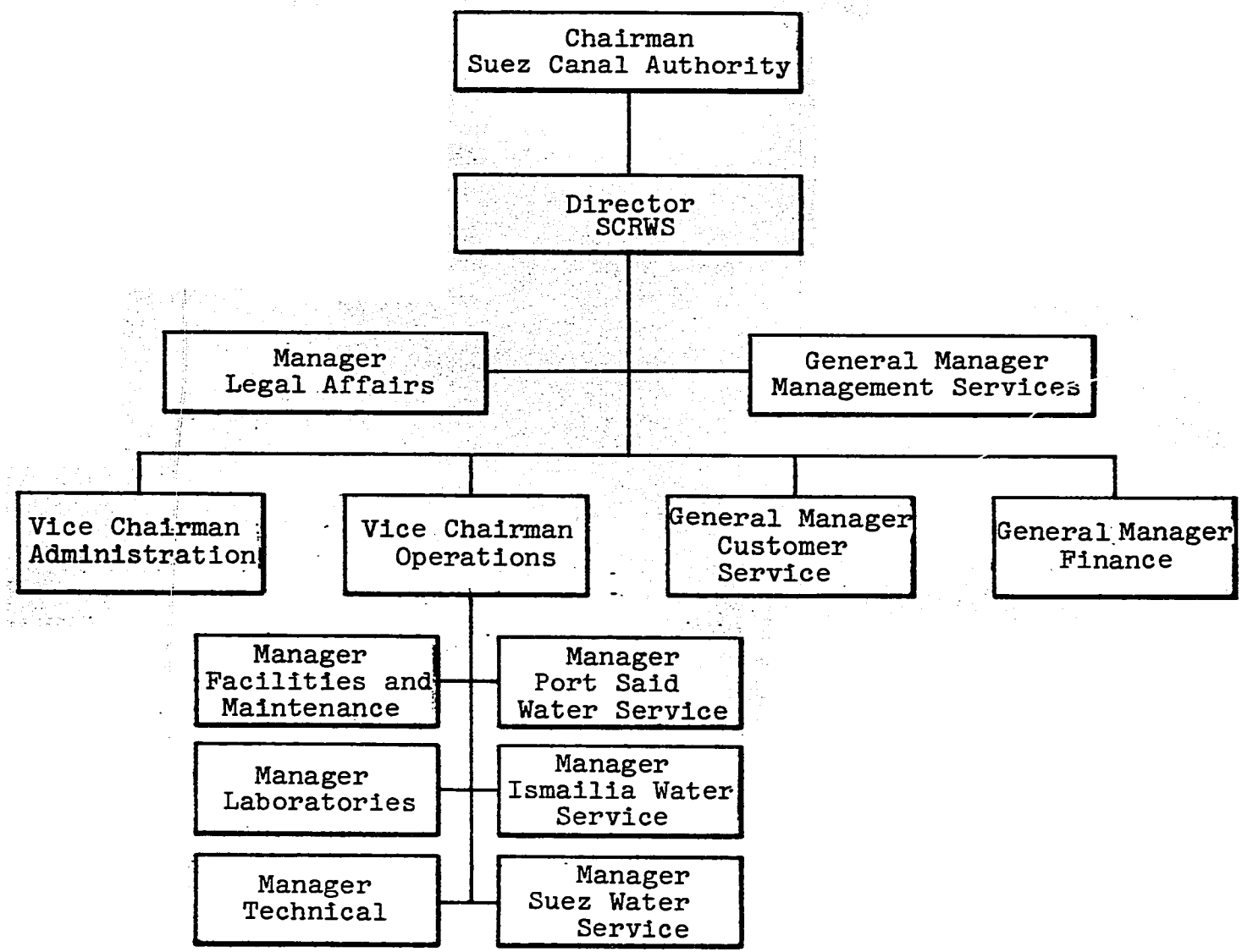


EXHIBIT 6.1

STAGE TWO ORGANIZATION CHART -
GENERAL ORGANIZATION FOR
SUEZ CANAL REGION WATER SUPPLY

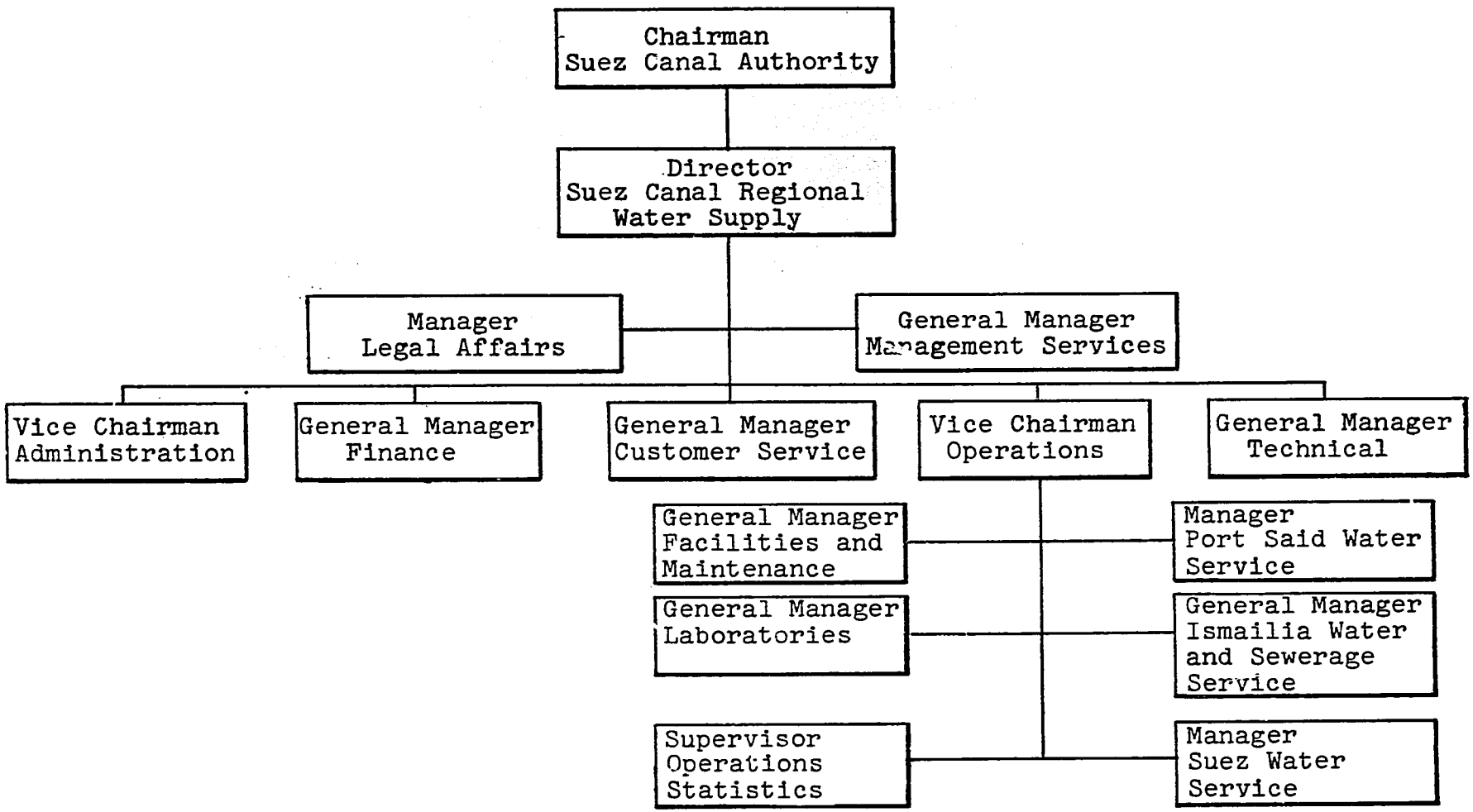


EXHIBIT 6.2

EXHIBIT 6.3

ORGANIZATION CHART -
ISMAILIA WATER AND SEWERAGE
SERVICES DEPARTMENT

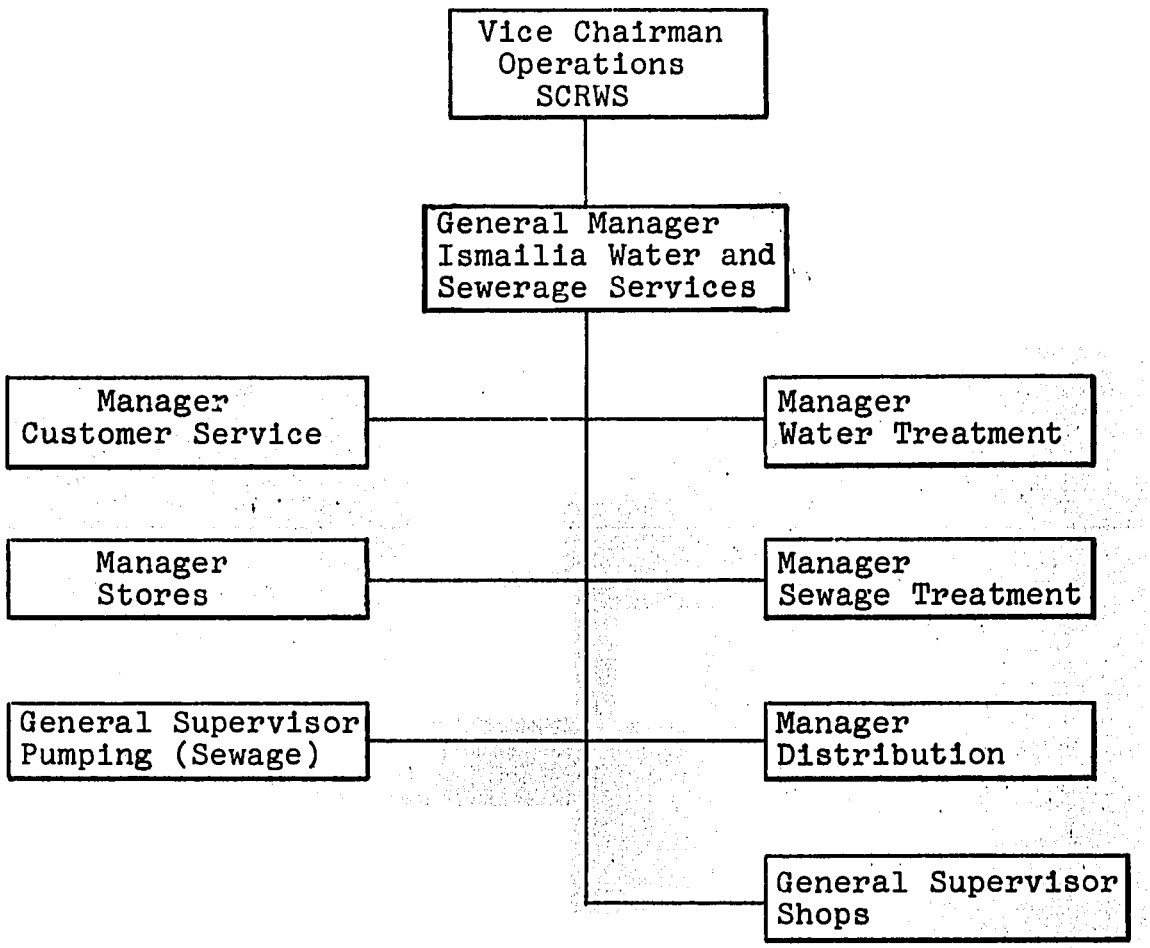
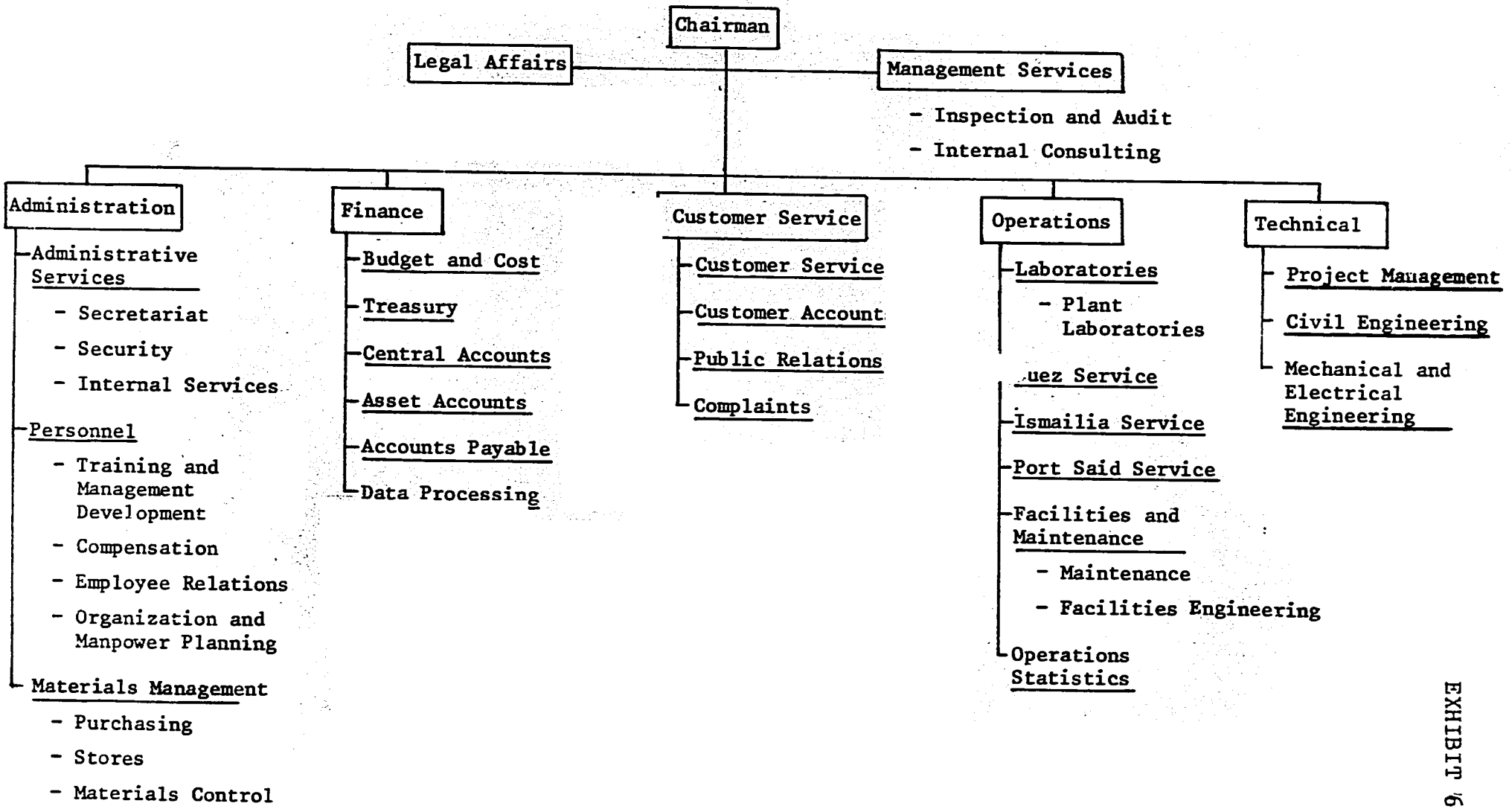


EXHIBIT 6.4

ORGANIZATION CHART -

GENERAL ORGANIZATION FOR SUEZ CANAL REGION WATER AND SEWERAGE SERVICE



STAGE THREE
GENERAL ORGANIZATION FOR SUEZ CANAL REGION WATER AND SEWERAGE SERVICE - ORGANIZATION STRUCTURE AND TITLES OF MANAGERS

Department	Department Level(1)	Title of Manager(2)	Description Reference Functional	Description Reference Job
Chairman's Office	-	-	-	-
Management Services	GD	GM	A1.1	A2.1
Inspection and Audit	D	M	A1.2	(3)
Internal Consulting	D	M	A1.3	(3)
Legal Affairs	D	M	A1.4	(3)
Administration	S	VC	(3)	A2.2
Administration Services	D	M	A1.5	A2.3
Secretariat	G	S	A1.6	(3)
Security	G	GS	A1.7	(3)
Internal Services	G	GS	A1.8	(3)
Personnel	GD	GM	A1.9	A2.4
Training and Management Development	D	M	A1.10	A2.5
Compensation	D	M	A1.11	A2.6
Employee Relations	D	M	A1.12	A2.7
Organization and Manpower Planning	G	GS	A1.13	A2.8
Materials Management	GD	GM	A1.14	A2.9
Purchasing	D	M	A1.15	A2.10
Stores	D	GS	A1.16	A2.11
Materials Control	D	M	A1.17	A2.12
Finance	S	VC	(3)	A2.13
Budget and Cost	GD	GM	A1.18	A2.14
Treasury	G	GS	A1.19	A2.15
Central Accounts	G	GS	A1.20	A2.16
Asset Accounts	GD	GM	A1.21	A2.17
Accounts Payable	G	GS	A1.22	A2.18
Data Processing	D	M	A1.24	A2.20
Customer Service	S	VC	(3)	A2.22
Customer Service	D	M	A1.29	A2.23
Customer Accounts	D	M	A1.31	A2.26
Public Relations	G	GS	A1.32	(3)
Complaints	G	GS	A1.33	A2.27

Notes: (1) S = Sector, GD = General Department, D = Department, G = Group
(2) VC = Vice Chairman, GM = General Manager, M = Manager, GS = General Supervisor, S = Supervisor
(3) Not provided.

STAGE THREE
GENERAL ORGANIZATION FOR SUEZ CANAL REGION WATER AND SEWERAGE SERVICE - ORGANIZATION STRUCTURE AND TITLES OF MANAGERS

Department	Department Level(1)	Title of Manager(2)	Description reference Functional	Job
Operations	S	VC	(3)	A2.28
Laboratories	GD	GM	A1.38	A2.33
Plant Laboratory	G	GS	A1.39	A2.34
City Service - Suez	GD	GM	A1.48	A2.40
City Service - Ismailia	GD	GM	A1.48	A2.40
City Service - Port Said	GD	GM	A1.48	A2.40
Operations Statistics	G	GS	A1.54	A2.44
Facilities and Maintenance	GD	GM	A1.49	A2.41
Maintenance	D	GS	A1.50	A2.42
Facilities Engineering	D	GS	A1.53	A2.43
Technical	S	VC	(3)	A2.45
Project Management	GD	GS	A1.55	A2.46
Civil Engineering	D	M	A1.56	A2.47
Mechanical and Electrical Engineering	D	M	A1.57	A2.48

Notes: (1) S = Sector, GD = General Department, D = Department, G = Group
(2) VC = Vice Chairman, GM = General Manager, M = Manager
(3) Not provided

MINIMUM STAFFING LEVELS IN 1980 FOR
GENERAL ORGANIZATION FOR
SUEZ CANAL REGION WATER SUPPLY

Job Classification	Chairman's Office	Finance	Adminis-tration	Customer Service	Operations	Technical	City Services			Total
							Port Said	Ismailia	Suez	
Specialists										
Commercial										
Managers	4	7	11	4	0		4	4	4	38
Foremen	0	2	2	2	1		0	0	0	7
Employees	7	6	8	2	0		1	1	1	26
Treatment										
Managers					2		2	2	2	8
Foremen							8	5	5	18
Employees							1	1	1	3
Mechanical/Electrical										
Managers					2	2	1	1	1	7
Foremen					2	1	3	2	2	10
Employees						9	0	0	0	9
Civil Engineering										
Managers					1	1	1	1	1	5
Foremen						2	6	6	5	19
Employees						10	0	0	0	10
Office/Clerical										
Secretaries	3	4	3	3	1	3	2	2	2	23
Meter Readers, Collectors and Cashiers	0	1	0	0	0		4	4	4	13
Clerks	1	14	14	3	1		7	7	7	54
Telephone Operators	0	0	6	0	0		4	4	4	18
Key Punchers	0	1	0	0	0		0	0	0	1

MINIMUM STAFFING LEVELS IN 1980 FOR
GENERAL ORGANIZATION FOR
SUEZ CANAL REGION WATER SUPPLY

Job Classification	Chairman's Office	Finance	Adminis-tration	Customer Service	Operations	Technical	City Services			Total
							Port Said	Ismailia	Suez	
Skilled Workers										
Laboratory Technicians							2	2	2	6
Plumbers/Fitters							10	10	9	29
Mechanics					15		9	6	5	35
Welders							1	1	1	3
Electrician							3	1	1	5
Machinists							1	1	1	3
Master Builders							2	2	1	5
Operators							40	40	32	112
Repairmen							15	15	14	44
Draftsmen						5				5
Construction Foremen						18				18
Others										
Drivers	1	4	4	1	3	4	9	9	9	44
Guards	0	0	8	0	0	0	8	8	8	32
Laborers	0	0	2	0	0	3	11	11	11	38
Messengers	2	2	3	1	3	3	3	3	3	23
Total	18	41	61	16	31	61	158	149	136	671

EXHIBIT 6.6
Page 2 of 2

MINIMUM STAFFING LEVELS IN 1980 FOR SUEZ CANAL GOVERNORATE SEWERAGE DEPARTMENTS

Job Classification	Port Said	Ismailia	Suez
Specialists			
Commercial			
Managers	6	6	7
Foremen	4	4	5
Employees	10	12	12
Treatment			
Managers	7	7	1
Foremen	6	6	3
Employees	0	0	0
Mechanical/Electrical			
Managers	1	1	1
Foremen	18	13	13
Employees	1	0	0
Civil Engineering			
Managers	2	2	2
Foremen	11	11	9
Employees	5	5	0
Office/Clerical			
Secretaries	1	1	
Meter Readers, Collectors and Cashiers	1	1	1
Clerks	[illegible]	15	23
Telephone Operators		0	0
Key Punchers		0	0

MINIMUM STAFFING LEVELS IN 1980 FOR SUEZ CANAL GOVERNORATE SEWERAGE DEPARTMENTS

Job Classification	Port Said	Ismailia	Suez
Skilled Workers			
Laboratory Technicians	1	1	1
Plumbers/Fitters	0	0	0
Mechanics	4	4	21
Welders	2	2	0
Electricians	3	3	5
Machinists	0	0	0
Master Builders	7(1)	7(	6(1)
Operators	50	46	68
Repairmen	9	9	20
Draftsmen	2	2	
Construction Foremen	0	0	
Others			
Drivers	21	16	22
Guards	15	15	15
Laborers	123	100	46
Messengers	3	3	3
Total	329	292	85

Note: (1) Masonry skills are most important for these personnel.

7.0 NATIONAL WATER AUTHORITY

7.1 BACKGROUND

A single national, general organization responsible for planning and building major water and sewer facilities throughout the nation except Cairo and Alexandria was recommended in the Organizational Environment and Structure Report. The Advisory Committee later decided that two such organizations, one for water and one for sewerage, should be established.

With this decision in mind, the recommendations made in the Interim Report of the Provincial Water Supply Project and subsequent work of the consultants have been reviewed. They have recommended that four types of organizations be established:

High Council for Utilities. This Council consisting of the representatives of GOGCWS, AWGA, National Water Authority (NWA) and others would recommend sector-wide policies, targets, and resource commitments to the Minister responsible for water utilities.

High Committee on Water. The Committee would set standards for water quality and advise the Minister of Health and the Minister responsible for the utilities on issues affecting public health.

National Water Authority. This Authority would report to the Minister responsible for water utilities. It would have responsibility for:

- Compilation of sector master plans
- Advising the minister on resource requirements of Public Water Companies (PWCs).
- Monitoring the financial and operating performance of PWCs.
- Providing assistance to PWCs in manpower training, design and construction, and purchasing.

It would not have any responsibility or authority for water systems in Alexandria and Cairo.

Public Water Companies. At least one Public Water Company would be created in each governorate. The Chairman would report to the Governor. It would be responsible for the operation and maintenance of the water systems within the governorate.

The above recommendations appear to be appropriate. The structure and functions recommended for the National Water Authority closely meet the requirements of the Advisory Board for an entity responsible for "...planning (physical, financial and human), research development, design allocation and supervision of new projects; setting standards on performance and quality and setting general policies...". Therefore, the comments that follow closely resemble the recommendations for the National Water Authority contained in the Provincial Water Supply Project Report.

7.2 OBJECTIVES

The objectives of the National Water Authority would include:

- Preparation of master plans for the water supply sector of Egypt (excluding Cairo and Alexandria) that accurately identify major needs and allocate resources equitably.
- Prudent supervision of the State subsidies, grants and loans to the Public Water Companies.
- Provision of services such as project design, construction supervision, manpower planning, training and foreign purchasing that cannot be done economically by the Public Water Companies themselves.
- Ensuring that the Public Water Companies meet the quality and service standards established by the State.
- Research into technology promising significant benefits for water treatment and distribution in Egypt.

7.3 ORGANIZATION

The National Water Authority would consist of a headquarters office and four regional offices. The proposed organization chart is shown in Exhibit 7.1. Functional descriptions and titles of managers are referenced in Exhibit 7.2.

Initially only the national office would be established. Regional offices would be organized only when qualified people are available to staff them.

7.4 STAFFING

The staffing level of the National Water Authority should never exceed several hundred people. The period of greatest need is the present. As the Public Water Companies grow in competence and size, the need for central services should decline. A good estimate of how many people are required was not made because the Scope of Work of this Contract did not include a detailed examination of water systems and needs outside of Alexandria, Greater Cairo and the Suez Canal Region.

ORGANIZATION CHART -
NATIONAL WATER AUTHORITY

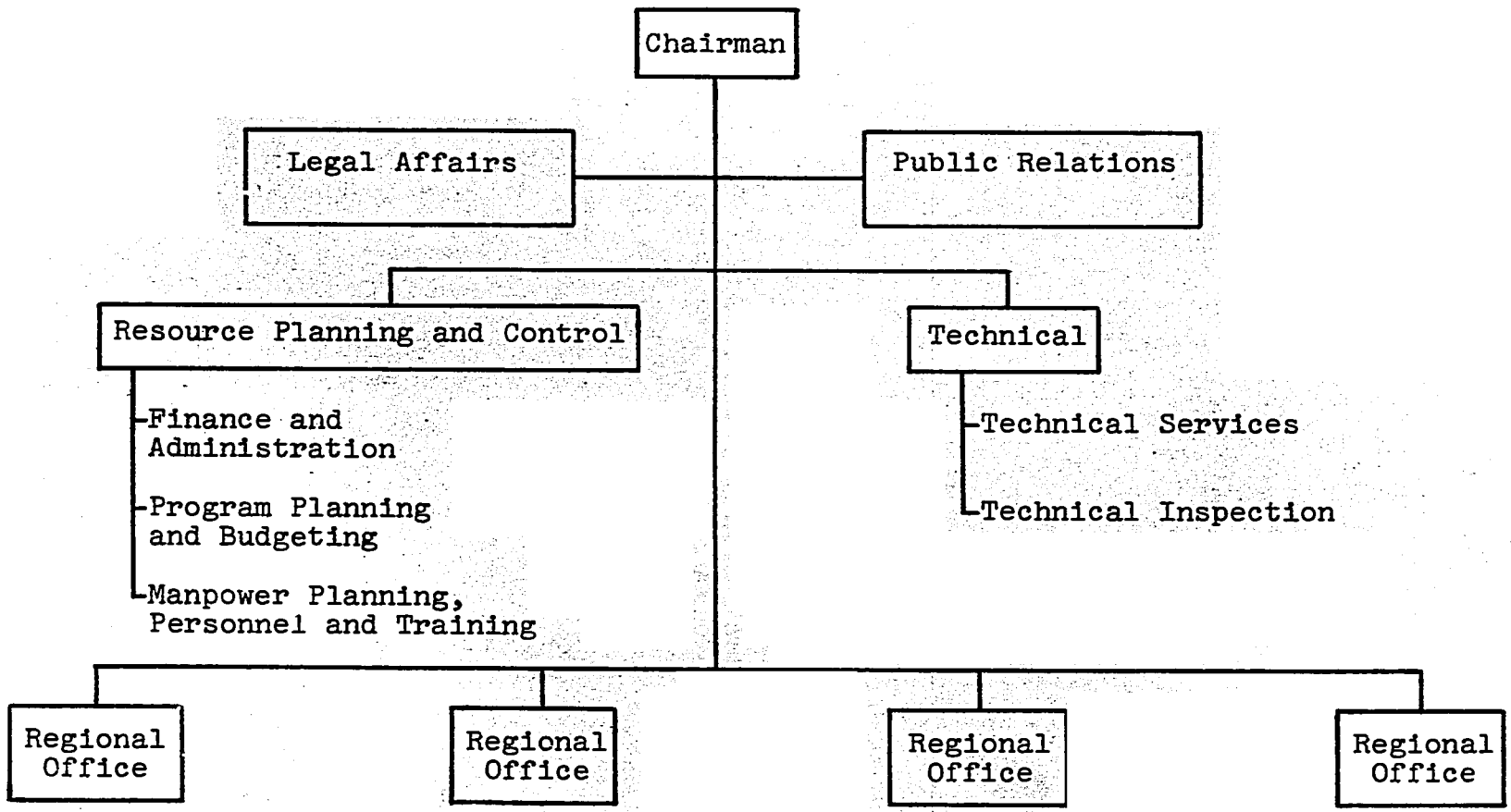


EXHIBIT 7.1
Page 1 of ?

ORGANIZATION CHART -
NATIONAL WATER AUTHORITY

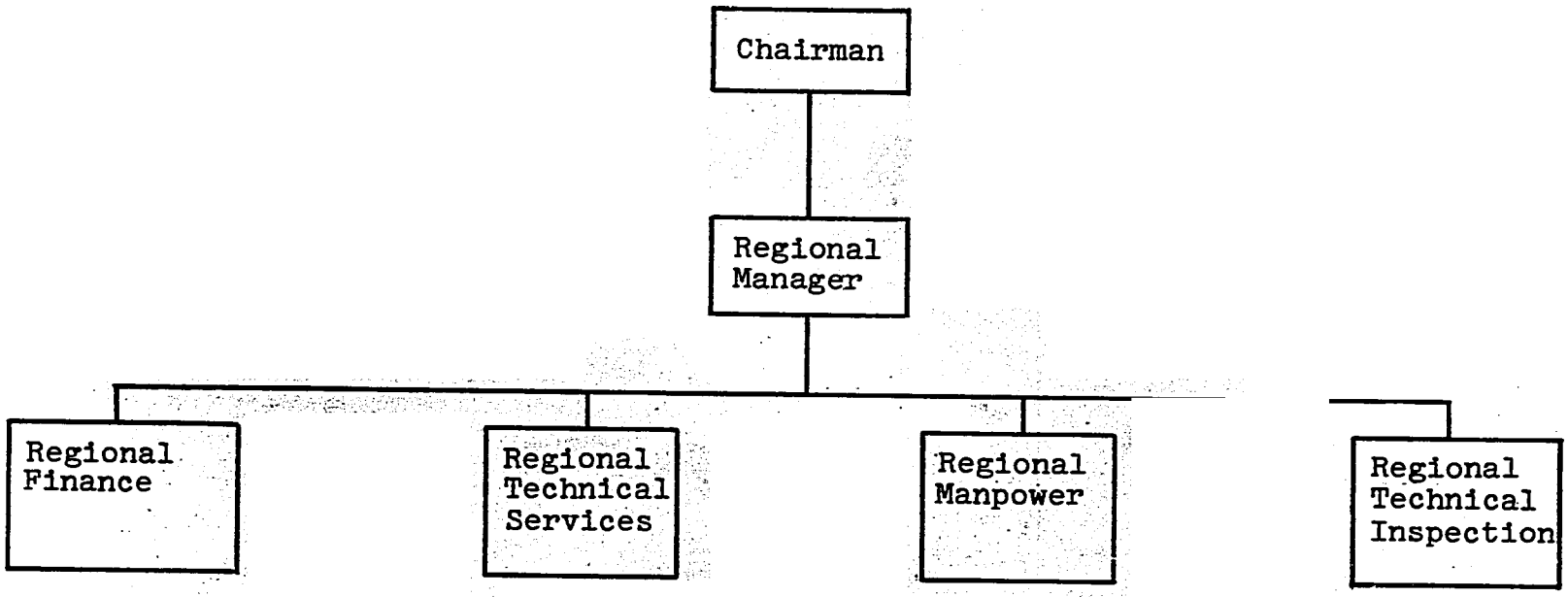


EXHIBIT 7.2

NATIONAL WATER AUTHORITY

ORGANIZATION STRUCTURE AND TITLES OF MANAGERS

Department	Department Level(1)	Title of Manager(2)	Functional Description Reference
Public Relations	D	M	A1.32
Legal Affairs	GD	GD	A1.58
Resource Planning and Control	S	VC	A1.59
Finance and Administration	GD	GM	A1.60
Programs, Planning and Budgeting	GD	GM	A1.61
Manpower Planning, Personnel and Training	GD	GM	A1.62
Technical	S	VC	A1.63
Technical Service	GD	GM	A1.64
Technical Inspection	GD	GM	A1.65
Regional Office	GD	GM	A1.66
Regional Finance	D	M	A1.67
Regional Technical Services	D	M	A1.68
Regional Manpower	D	M	A1.69
Regional Technical Inspection	D	M	A1.70

Notes: (1) S = Sector, GD = General Department, D = Department, G = Group

(2) VC = Vice Chairman, GM = General Manager, M = Manager, GS = General Supervisor, S = Supervisor

8.0 NATIONAL SEWERAGE AUTHORITY

8.1 OBJECTIVES

A National Sewerage Authority would be established to plan, build sewerage collection and treatment facilities and oversee sewerage organizations outside of Cairo and Alexandria. It would closely resemble the National Water Authority described in Section 7.0 with respect to objectives, functions, and organizational structure.

The objectives of the National Sewerage Authority would include:

- Preparation of master plans for sewerage facilities throughout Egypt (except Cairo and Alexandria) that accurately identify major needs and allocate resources equitably.
- Prudent supervision of State subsidies, grants, and loans to Public Sewerage Companies (i,e., sewerage companies comparable to the Public Water Companies described in Section 7.0).
- Provision of services such as project design, construction supervision, manpower planning, training and foreign purchasing that cannot be done economically by the Public Sewerage Companies.
- Ensuring that Public Sewerage Companies meet the service standards set by the State Government.
- Research into technology promising significant benefits for sewage collection and treatment in Egypt.

8.2 ORGANIZATION

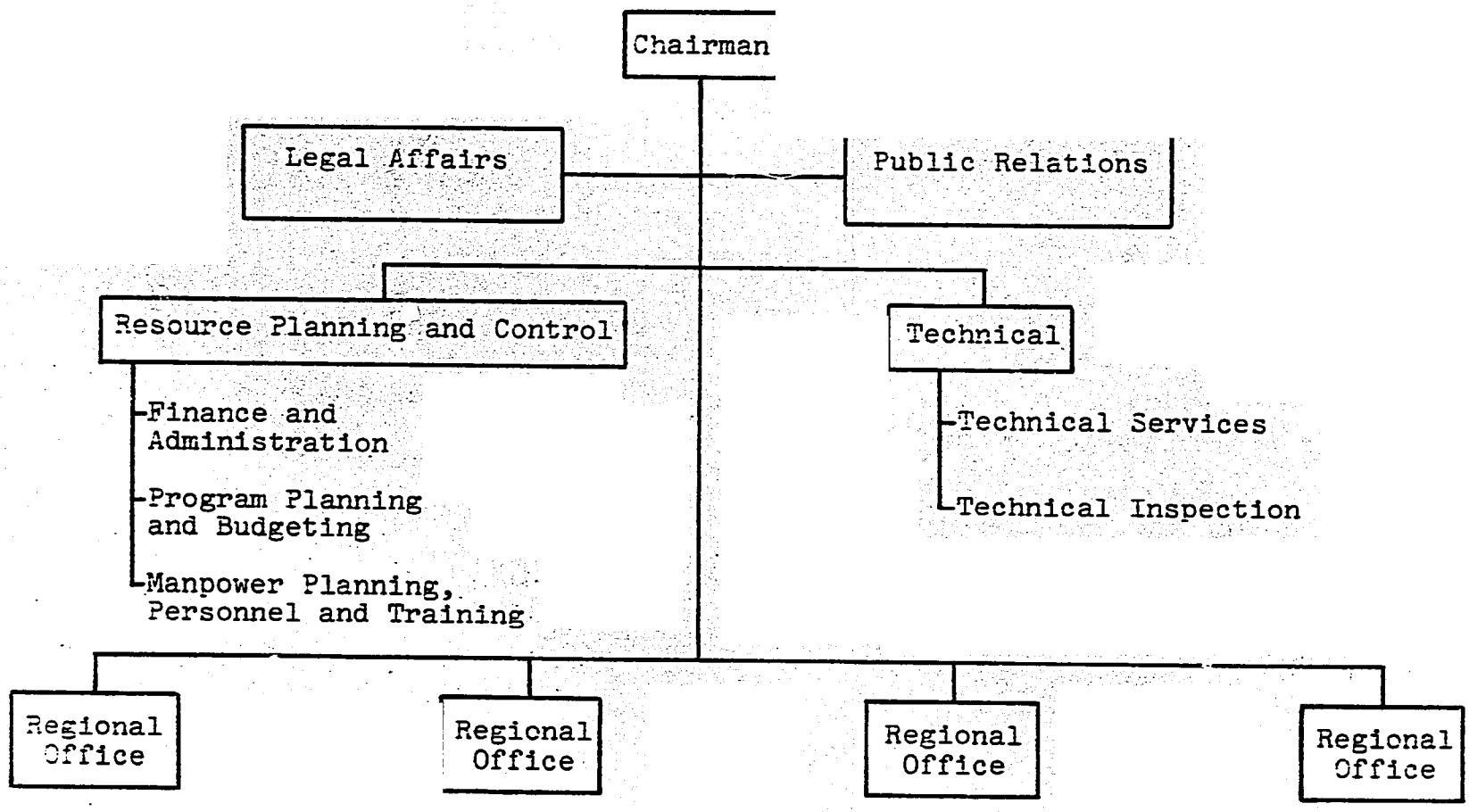
The proposed long-term organization chart for the National Sewerage Authority is shown in Exhibit 8.1. Titles of managers and references to appropriate functional descriptions are shown in Exhibit 8.2.

There are few operating city sewer systems outside of the six cities covered by this study. Therefore, only the national office of the National Sewerage Authority should be established in the short-term. Later, when additional systems begin to be developed and as personnel capable of staffing the offices are recruited and trained, regional offices should be opened.

8.3 STAFFING

Since the National Sewerage Authority would have no operating responsibilities, its staff should never exceed several hundred people, A reasonable estimate could not be made of staffing levels as the Scope of Work of this Contract did not include a detailed examiniation of sewerage systems and needs outside of Alexandria, Greater Cairo and the Suez Canal Region.

ORGANIZATION CHART -
NATIONAL SEWERAGE AUTHORITY



ORGANIZATION CHART -
NATIONAL SEWERAGE AUTHORITY

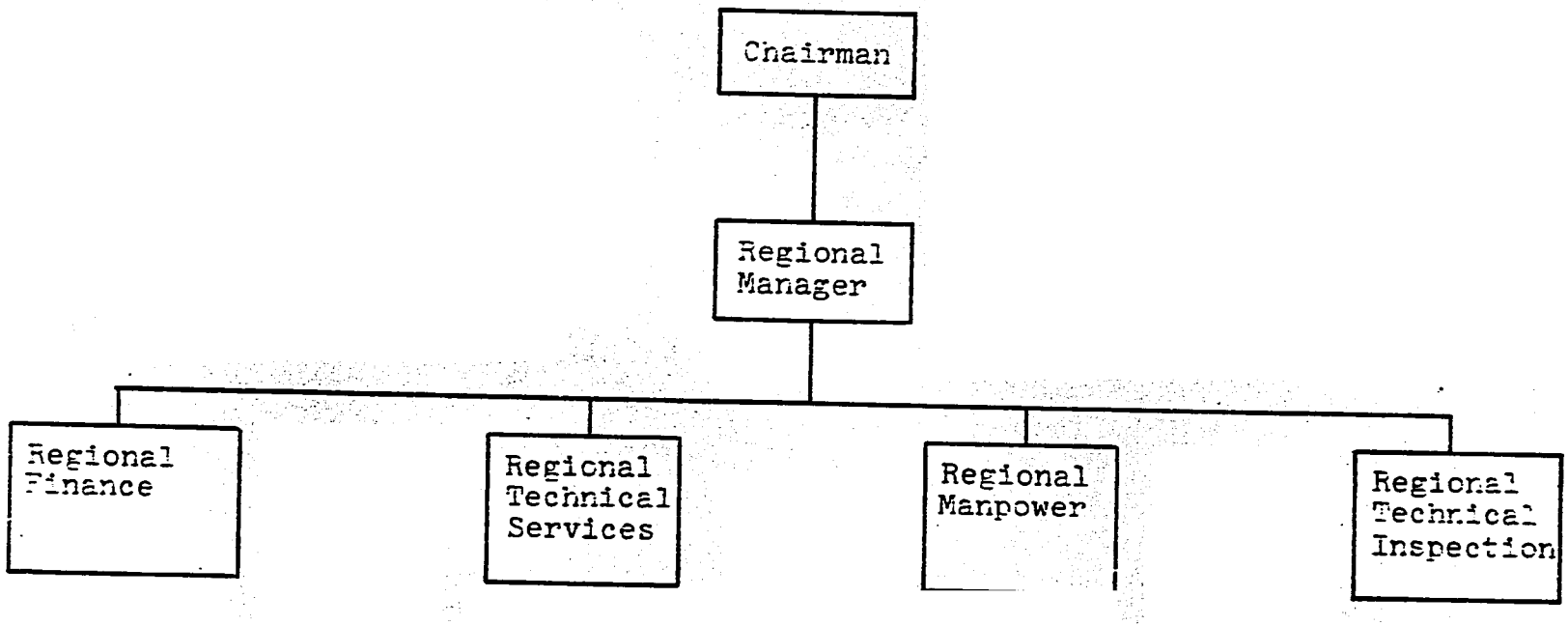


EXHIBIT 8.2

NATIONAL SEWERAGE AUTHORITY

ORGANIZATION STRUCTURE AND TITLES OF MANAGERS

Department	Department Level(1)	Title of Manager(2)	Functional Description Reference
Public Relations	D	M	A1.32
Legal Affairs	GD	GM	A1.58
Resource Planning and Control	S	VC	A1.59
Finance and Administration	GD	GM	A1.60
Programs, Planning and Budgeting	GD	GM	A1.61
Manpower Planning, Personnel and Training	GD	GM	A1.62
Technical	S	VC	A1.63
Technical Service	GD	GM	A1.64
Technical Inspection	GD	GM	A1.65
Regional Office	GD	GM	A1.66
Regional Finance	D	M	A1.67
Regional Technical Services	D	M	A1.68
Regional Manpower	D	M	A1.69
Regional Technical Inspection	D	M	A1.70

Notes: (1) S = Sector, GD = General Department, D = Department, G = Group

(2) VC = Vice Chairman, GM = General Manager, M = Manager, GS = General Supervisor, S = Supervisor

FUNCTIONAL DESCRIPTIONS

TABLE OF CONTENTS

Exhibit	Department
	CHAIRMAN'S OFFICE
A1.1	Management Services
A1.2	Inspection and Audit
A1.3	Internal Consulting
A1.4	Legal Affairs
	ADMINISTRATION SECTOR
A1.5	Administrative Services
A1.6	Secretariat
A1.7	Security
A1.8	Internal Services
A1.9	Personnel
A1.10	Training and Management Development
A1.11	Compensation
A1.12	Employee Relations
A1.13	Organization and Manpower Planning
A1.14	Materials Management
A1.15	Purchasing
A1.16	Stores
A1.17	Materials Control
	FINANCE SECTOR
A1.18	Budget and Cost
A1.19	Treasury

FUNCTIONAL DESCRIPTIONS

TABLE OF CONTENTS (Cont'd)

Exhibit	Department
	FINANCE SECTOR (Cont'd.)
A1.20	Central Accounts
A1.21	Asset Accounts
A1.22	Accounts Payable
A1.23	Data Processing (For utilities that operate their own data processing facilities)
A1.24	Data Processing (For utilities that contract the actual processing of data out to others)
A1.25	Customer Service (For sewerage utilities only)
A1.26	Customer Accounts (For sewerage utilities only)
A1.27	Connections (For sewerage utilities only)
	CUSTOMER SERVICE SECTOR
A1.28	Customer Service Centers
A1.29	Customer Service (For Suez Canal Region Water Supply)
A1.30	Customer Service Center
A1.31	Customer Accounts
A1.32	Public Relations
A1.33	Complaints
	OPERATIONS SECTOR
A1.34	Production
A1.35	Treatment Plant (Water)
A1.36	Distribution (Water Networks)
A1.37	Branch (Water Networks)
A1.38	Laboratories
A1.39	Plant Laboratory

FUNCTIONAL DESCRIPTIONS

TABLE OF CONTENTS (Cont'd)

Exhibit	Department
	OPERATIONS SECTOR (Cont'd)
A1.40	Western Desert (AWGA only)
A1.41	Western Desert District (AWGA only)
A1.42	Sewage Treatment
A1.43	Sewage Treatment Plant
A1.44	Sewage Collection
A1.45	Branch (Sewerage Networks)
A1.46	Booster Stations (Headquarters)
A1.47	Booster Station District
A1.48	City Service (For Suez Canal Region)
A1.49	Facilities and Maintenance
A1.50	Maintenance
A1.51	Fleet
A1.52	Repair and Overhaul
A1.53	Facilities
A1.54	Operations Statistics
	TECHNICAL SECTOR
A1.55	Project Management
A1.56	Civil Engineering
A1.57	Mechanical and Electrical Engineering

FUNCTIONAL DESCRIPTIONS

TABLE OF CONTENTS (Cont'd)

Exhibit	Department
	NATIONAL AUTHORITIES
A1.58	Legal Affairs
A1.59	Resource Planning and Control
A1.60	Finance and Administration
A1.61	Programs, Planning and Budgeting
A1.62	Manpower Planning, Personnel and Training
A1.63	Technical
A1.64	Technical Service
A1.65	Technical Inspection
A1.66	Regional Office
A1.67	Regional Finance
A1.68	Regional Technical Services
A1.69	Regional Manpower
A1.70	Regional Technical Inspection

FUNCTIONAL DESCRIPTION
-MANAGEMENT SERVICES

SECTOR: CHAIRMAN'S OFFICE

DIVISION OF: CHAIRMAN'S OFFICE

OBJECTIVE

The principal objective of the Management Services Department is to perform planning, monitoring, research and investigative tasks requested by the Chairman.

FUNCTIONS

The Management Services Department is the Chairman's staff group. Therefore not all of its functions can be explicitly described in advance. The following functions are representative:

- Planning:
  - To assist the various Sectors in preparing their long-range plans.
  - To consolidate the Sector plans into a unified Utility plan.
  - To represent the Utility before outside agencies when plans are discussed.
- Control:

  To review the control systems of the utility and recommend improvements.

  To conduct audits to ensure that administrative, financial and technical laws and regulations are followed.

  To conduct periodic audits of the financial accounts.

  To conduct audits to ensure that cash and inventories actually on hand match the amounts recorded in the books.

FUNCTIONAL DESCRIPTION
- MANAGEMENT SERVICES

FUNCTIONS (Cont'd.)

- Information and Statistics:

  . To prepare statistical reports requested by the Chairman, Board of Directors, or outside agencies.

  . To review periodically the usefulness of the information systems of the Utility.

Internal Consulting:

  . At the request of the Chairman, to examine and recommend improvements in the Utility's organization, policies and procedures.

FUNCTIONAL DESCRIPTION
- INSPECTION AND AUDIT

SECTOR: CHAIRMAN'S OFFICE

DIVISION OF: MANAGEMENT SERVICES

OBJECTIVE

The Inspection and Audit Department is responsible for ensuring that the rules, regulations and specifications governing the operations and construction work of the Utility are met.

FUNCTIONS

The principal functions of the Inspection and Audit Department are to:

- Periodically audit compliance with the administrative procedures governing the Utility's operations.
- Audit all financial transactions involving more than LE 2,000 in funds.
- Audit other financial transactions based on a written sampling process.

  At irregular and unannounced intervals audit the following for conformance with written records:

  . Meter readings.

  . Bills and Summary Collection Lists.

  . Cash on hand.

  . Unpaid bills held by service centers

  . Selected commodity inventories (especially alum, chlorine and fuels).
- Audit all construction projects costing more than LE 5,000 for conformance to specifications before allowing final acceptance by the Utility.

FUNCTIONAL DESCRIPTION
- INSPECTION AND AUDIT

FUNCTIONS (Cont'd.)

- Conduct an annual physical inventory of all items held in the stores.
- Conduct an annual physical inventory of all physical and fixed assets.
- Periodically review and recommend improvements in the control systems of the Utility with special consideration to:

  Appropriateness.

  Ease of application.

  Timeliness.

FUNCTIONAL DESCRIPTION
- INTERNAL CONSULTING

SECTOR: CHAIRMAN'S OFFICE

DIVISION OF: MANAGEMENT SERVICES

OBJECTIVE

The Internal Consulting Department shall provide staff support to the Chairman, Management Committee and the Board of Directors.

FUNCTIONS

The functions of the Department will change as the problems and opportunities facing the Utility change. Nearly all of the work will be done on a "task" basis. A task will be defined by the Chairman; General Manager, Management Services; or other managers of the Utility. Staff of this Department will then be assigned to perform the task. The following tasks are representative of those they may be asked to perform:

- Supervise the preparation of the Utility's long-range plan including:

  Developing guidelines for the process.

  Assisting operating managers define their plans.

  Consolidating Sector plans into a Utility plan.

  Presenting the plan to outside agencies.

  Recommending revisions to the plan.

FUNCTIONAL DESCRIPTION
- INTERNAL CONSULTING

FUNCTIONS (Cont'd.)

- Improve the control systems of the Utility.
  - Review reports and recommend improvements in their content, format, and distribution.
  - Review and recommend improvements in existing procedures and forms.
  - Develop new systems, procedures and forms.
- Prepare special reports including:

  Recommendations for new policies of the Utility.

  Specific recommendations to remedy operational problems.

  Statistical or other material requested by outside agencies.

Prepare the monthly agenda of the Management Committee.

FUNCTIONAL DESCRIPTION
- LEGAL AFFAIRS

SECTOR: CHAIRMAN'S OFFICE

DIVISION OF: CHAIRMAN'S OFFICE

OBJECTIVE

The Legal Affairs Department provides legal advice and assistance to the management of the Utility.

FUNCTIONS

The principal functions of the Legal Affairs Department are to:

- Prepare legal opinions regarding:
  - Actual or proposed State laws or regulations affecting the Utility.
  - Court decisions or other rulings affecting the Utility.
  - Policies or regulations proposed by the Utility.
  - Complaints by employees, customers, suppliers or others against the Utility.
  - Any other subject requested by management.
- Prepare and execute calls for tenders and contracts with suppliers (in cooperation with the Technical and Purchasing Departments).
- Prepare any other contracts required by the Utility.
- Recruit and supervise external legal assistance as required.
- Represent the Utility before:
  - Courts of all kinds.
  - Arbitration committees.
  - Legislative bodies.
  - Legal committees.

FUNCTIONAL DESCRIPTION
- LEGAL AFFAIRS

FUNCTIONS (Cont'd.)

- Conduct investigations concerning:
  - Infractions of financial or administrative regulations within the Utility.
  - Infraction of Utility regulations or policies by persons or organizations outside the Utility.
  - Complaints or other matters raised by the Public Prosecutor or other legal or regulatory bodies.
- Propose penalties for offenses within the Utility including:
  - Suspension of work.
  - Reduction of pay or rank.
  - Commitment to the Public Prosecutor or other legal authority.
- Conduct litigation on behalf of the Utility.
- Conduct such legal procedures as:
  - Sending legal notifications.
  - Taking depositions.
  - Making distraints.
  - Expropriation and assignation.
  - Execution of judicial judgements

FUNCTIONAL DESCRIPTION
- ADMINISTRATIVE SERVICES

SECTOR: ADMINISTRATION

DIVISION OF: ADMINISTRATION SECTOR

OBJECTIVE

The objective of the Administrative Services Department is to provide administrative, clerical and security support to the other departments of the Utility.

FUNCTIONS

The functions of the Administrative Services Department are to plan and coordinate the provision of the following services to other departments of the utility:

- Security
- Secretarial assistance
- Communications
- Printing
- Transportation
- Space and office equipment
- Janitorial services

FUNCTIONAL DESCRIPTION
- SECRETARIAT

SECTOR: ADMINISTRATION

DIVISION OF: ADMINISTRATIVE SERVICES

OBJECTIVE

The objective of the Secretariat is to provide typing and mailroom services to the other departments of the Utility.

FUNCTIONS

The principal functions of the Secretariat are to:

- Administer all mail services of the Utility including:
  - . Receipt and distribution of mail.
  - . Collection, stamping and dispatch of mail.
  - . Collection and distribution of internal mail.
- Provide typing services to absorb unusual typing loads within the other departments.
- Maintain the central files of the organization.

FUNCTIONAL DESCRIPTION
- SECURITY

SECTOR: ADMINISTRATION

DIVISION OF: ADMINISTRATIVE SERVICES

OBJECTIVE

The objective of the Security Group is to ensure that the Utility's operations are conducted without physical interference

FUNCTIONS

The principal functions of the Security Department are to:

- Conduct investigations and recommend steps to protect the Utility from harm.
- Guard the major facilities of the Utility.
- Admit authorized visitors to the Utility's major facilities.
- Make plans for civil defense.
- Establish and implement procedures for preventing and combating fires.
- Ensure the safe transfer of the Utility's funds from offices to banks.
- Encourage all members of the Utility to be security conscious.

FUNCTIONAL DESCRIPTION
- INTERNAL SERVICES

SECTOR: ADMINISTRATION

DIVISION OF: ADMINISTRATIVE SERVICES

OBJECTIVE

The objective of the Internal Services Group is to provide administrative support to the other departments of the Utility.

FUNCTIONS

The functions of this Group will change with the needs of the Utility. At least the following should remain as part of the Group:

- Arrange for the installation of telephones and the manning of switch boards.
- Arrange the staffing of the base station and the acquisition and deployment of the Utility's radio network (if any).
- Provide printing services or arrange for external printing as required.
- Acquire, assign and manage:
  - . Office equipment.
  - . Transportation equipment.
  - . Office space.
- Manage the janitorial services at headquarters and at other assigned locations.

FUNCTIONAL DESCRIPTION
- PERSONNEL

SECTOR: ADMINISTRATION

DIVISION OF: ADMINISTRATION SECTOR

OBJECTIVE

The Personnel Department is responsible for assuring that the personnel required by the Utility are acquired, motivated and retained.

FUNCTIONS:

The principal functions of the Personnel Department are to:

- Prepare plans showing how many people of various skills will be required in the future.
- Hire, train or transfer people to meet the plans.
- Maintain a file on each employee.
- Maintain time records of work performed, vacations and holidays.
- Plan the compensation programs of the Utility.
- Prepare the payrolls.
- Maintain an account of payments and deductions for each employee.
- Manage and administer the benefit programs of the utility.
- Review the working conditions of employees and make recommendations to improve them.
- Develop and implement effective safety programs.

FUNCTIONAL DESCRIPTION
- TRAINING AND MANAGEMENT DEVELOPMENT

SECTOR: ADMINISTRATION

DIVISION OF: PERSONNEL

OBJECTIVE

The principal objective of the Training and Management Development Department is to provide the skills required by the Utility through training and development of existing personnel.

FUNCTIONS

The principal functions of the Department are to:

- Determine the training needs of the Utility (in cooperation with the Organization and Manpower Planning Department).
- When feasible and economical, develop and conduct training programs to meet the needs. Both classroom and on-the-job training should be considered when developing these programs.
- Survey and select training programs outside of the Utility that can economically provide needed training.
- Select employees for the training courses (in cooperation with departmental managers).
- Represent the Utility within the management of the Central Training Center for water and sewerage utilities.
- Evaluate the benefits of training programs on the basis of performance of the trained employees.
- Design programs of transfers and promotions that will provide appropriate experience for potential top managers.
- Design and conduct safety training programs.

FUNCTIONAL DESCRIPTION
-COMPENSATION

SECTOR: ADMINISTRATION

DIVISION OF: PERSONNEL

OBJECTIVE:

The principal objective of the Department is to ensure that the employees and workers of the Utility are appropriately compensated for their work.

FUNCTIONS:

The principal functions of this Department are to:

- Plan the compensation programs of the Utility. Ensure full use is made of all legal provisions for allowances, benefits and special pay.
- Develop and administer a system for awarding productivity bonuses.
- Develop and administer the time reporting system.
- Review and respond to all requests for vacation time and leaves of less than two weeks.
- Prepare the payrolls.
- Maintain accounting books including:
  - . Payroll Journal.
  - . Personnel Payroll Accounts Ledger.
  - . Wages by Responsibility Center.
  - . Wages by Job Number.
- Prepare regular reports including:
  - . Payroll Analysis.
  - . Job Analysis.
  - . Number of Personnel by Responsibility Center.

FUNCTIONAL DESCRIPTIONS
- EMPLOYEE RELATIONS

SECTOR: ADMINISTRATION

DIVISION OF: PERSONNEL

OBJECTIVE

The objective of the Employee Relations Department is to hire appropriate personnel and administer the employee benefit programs.

FUNCTIONS:

The principal functions of the Employee Relations Department are to:

- Select people to fill approved positions through:
  - . Requests to the State for new hires.
  - . Open advertising for new hires.
  - . Internal transfers or promotions.
- Review and approve all transfers and promotions.
- Review and respond to all requests for transfer or for leaves longer than two weeks.
- Review, approve and classify all separations.
- Administer the Utility's benefit programs including:

  Medical care.

  Disability and death benefits.

  Retirement pay.

  Clubs and social organizations

  Employee loans.

FUNCTIONAL DESCRIPTIONS
- EMPLOYEE RELATIONS

FUNCTIONS (Cont'd.)

- Maintain a master file for each member of the Utility that includes (at a minimum):

  . Employee's name, address and birth date.
  . Completed original job application.
  . Listing of current skills.
  . Promotion and transfer record.
  . Record of annual evaluations.
  . Record of yearly compensation and deductions.
  . Present salary rate.
  . Loan record.

Administer the system for preparing and recording performance evlauations.

Prepare a monthly report of new hires, promotions, transfers and other statistics requested by the General Manager Personnel.

Develop and administer effective discipline and employee grievance procedures.

Develop and implement an effective safety program. (Safety training should be coordinated with the Training and Management Development Department.)

FUNCTIONAL DESCRIPTION
- ORGANIZATION AND MANPOWER PLANNING

SECTOR: ADMINISTRATION

DIVISION OF: PERSONNEL

OBJECTIVE

The principal objective of this Group is to anticipate the future needs for personnel in the Utility.

FUNCTIONS

The principal functions of this Group are to:

- Develop the Five-Year Manpower Plan for the Utility.

  Develop the detailed, annual manpower Plan and coordinate the development of Part 1 of the budget to meet the requirements of the Plan.

  Periodically review the organizational structure of the Utility and recommend improvements.

  Develop and periodically review functional and job descriptions for all departments and jobs in the Utility.

  Review and approve all requests for replacement or addition of personnel (regardless of whether the replacement or addition is by new hire, transfer or promotion).

FUNCTIONAL DESCRIPTION
- MATERIALS MANAGEMENT

SECTOR: ADMINISTRATION

DIVISION OF: ADMINISTRATION SECTOR

OBJECTIVE

The Materials Management Department shall be responsible for the acquisition, control, disbursement and distribution of supplies and equipment necessary for the effective operation of the Utility.

FUNCTIONS

Materials Management shall:

- Initiate policies regarding:
  - . Purchasing authorization.
  - . Requisitions authorization.
  - . Storage practices.
  - . Levels of inventories to be maintained by the Utility.
- Establish and ensure compliance with procedures for:
  - . Purchasing.
  - . Receiving and inspecting orders.
  - . Storing commodities and equipment.
  - . Issuing commodities and equipment.
- Contact official agencies (e.g., customs) concerned to facilitate the attainment by the utility of its requirements.
- Execute the decisions of the Tender, Technical and Receiving Committees.

FUNCTIONAL DESCRIPTION
- MATERIALS MANAGEMENT

FUNCTION (Cont'd.)

- Study the commodities market and respond for the benefit of the Utility.
- Determine annual requirements in terms of quantity and value.
- Participate on committees concerning procurement, receipt and negotiations.

FUNCTIONAL DESCRIPTION
- PURCHASING

SECTOR: ADMINISTRATION

DIVISION OF: MATERIALS MANAGEMENT

OBJECTIVES

The Purchasing Department shall procure the Utility's supplies, equipment and services in due time and in appropriate quantities to ensure efficient operations.

FUNCTIONS

The Purchasing Department shall:

- Fulfull pre-purchasing requirements:
  - . Obtain authorization for the fund allocations.
  - . Determine the means of purchasing.
  - . Prepare the conditions for purchase
  - . Maintain a register of vendors and suppliers.
- Follow the procedures for procurement:
  - . Prepare public announcements.
  - . Receive bids and bid bonds.
  - . Supervise the examination and evaluation of bids.
  - . Receive performance bonds.
  - . Conduct or monitor negotiations.
  - . Execute purchase orders.
- Fulfill delivery procedures:
  - . Release purchase orders.
  - . Receive materials.
  - . Establish committees for received goods inspection.

FUNCTIONAL DESCRIPTION
- PURCHASING

FUNCTIONS (Cont'd.)

- Follow payment procedures including preparation and/or review of:
  - . Supplier's original invoice.
  - . Purchase order.
  - . Inspection reports.
  - . Laboratory analysis, if required.
  - . Receiving ticket.
  - . Statement of delay penalty, if any.
  - . Tax notification.

FUNCTIONAL DESCRIPTION
- STORES

SECTOR: ADMINISTRATION

DIVISION OF: MATERIALS CONTROL

OBJECTIVE

The Stores Department shall maintain an inventory of articles of all kinds for fulfillment of the Utility's needs.

FUNCTIONS

The Stores Department shall:

- Store materials in accordance with sound warehouse methods and provide protection and control against deterioration, loss or theft.
- Cooperate with the Inspection and Audit Department in taking annual inventories of all stores.
- Determine and recommend needs for the coming year to Materials Control.
- Receive and inspect all materials.
- Ensure that the details of the packing slip and/or invoice match the material supplied.
- Participate in bid reviews, negotiations and special studies as required.
- Prepare and maintain records of all receipts, disbursements, and any damaged or obsolete materials.
- Dispose of obsolete or damaged material on a timely basis.
- Maintain adequate stock levels of all materials for the benefit of the Utility.
- Notify Materials Control of any stocks which are below the minimum level required.
- Fulfill requests for material in an effective and timely manner.

FUNCTIONAL DESCRIPTION
- MATERIALS CONTROL

SECTOR: ADMINISTRATION

DIVISION OF: DEPARTMENT

TITLE OF MANAGER: MANAGER

OBJECTIVE

The Materials Control Department shall be responsible for establishing and maintaining financial and locational control of the Utility's inventories.

FUNCTIONS

The Materials Control Department shall:

- Cooperate with the Technical, Stores and Operations Departments in:
  - . Planning the utility's needs for commodities.
  - . Estimating the annual budget needs.
  - . Establishing maximum, minimum and re-order points for each inventory item.

  Control all purchases of inventory items including:
  - . Determination of need for a purchase.

    Approval or preparation of all purchase requisitions.

    Review and filing of all documents related to each purchase.

    Ensuring compliance with the budget by limiting purchases, arranging inter-item transfers and applying for additional budget.

UNCTIONAL DESCRIPTION
- MATERIALS CONTROL

FUNCTIONS (Cont'd.)

- Maintain a perpetual inventory by:

  . Establishing two stock cards for each inventory item. One card should show total quantity and value on hand and the other should show quantity held at each physical location.

  . Updating the stock cards as transactions occur.

  . Cooperating with the Inspection and Audit Department in the annual physical inventory.

  . Periodically conducting unannounced audits of stores.

- Maintain appropriate accounting books including (but not limited to):

  . Domestic Commodities Purchases Journal.

  . Foreign Commodities Purchases Journal.

  . Commodities Usage Journal.

  . Value of Inventory Items Ledger.

  . Inventories by Stores Analysis Book

  . Commodities Usage by Responsibility Center Analysis Book.

  . Commodities Usage by Job Analysis Book.

- Prepare reports and other accounting information including:

  . Accounting Entry Statements.

  . Trial Balance.

  . Commodities Usage by Job Number.

  . Commodities Usage by Responsibility Center.

FUNCTIONAL DESCRIPTION
- BUDGET AND COST

SECTOR: FINANCE

DIVISION OF: FINANCE SECTOR

OBJECTIVES

The Budget and Cost Department is responsible for encouraging managers to be cost conscious and for providing them with the information they require to evaluate costs.

FUNCTIONS

The Budget and Cost Department shall:

- Cooperate with the Management Committee in supervising preparation of the budget by:
  - Preparing a budget manual.
  - Assisting managers to prepare their budget estimates.
  - Consolidating expense estimates received from managers of responsibility centers.
  - Developing estimates of revenues and general expenses.
  - Preparing detailed analyses of revenues and costs for management review.
  - Developing the Utility's draft budget.
- Assist in negotiations with State ministries regarding the budget.
- Obtain the Chairman's approval of the final budget requests.
- Transpose the approved budget request into the format prescribed by the Ministry of Finance, and submit copies to the Governorate, the Local Assembly, the Ministry or other designated authorities.
- Receive the approved budget and adjust the budgets of responsibility centers to reflect the changes made by governmental authorities.

FUNCTIONAL DESCRIPTION - BUDGET AND COST

FUNCTIONS (Cont'd.)

- Give each manager his approved budget with particular reference to the adjusted estimates of monthly revenues and expenses.

- Collect and process data of actual revenues and expenses.

- Provide each manager with a monthly report indicating actual (revenues and expenses) vs. budget and totals for the year-to-date.

- Receive responses and initiate action for budget revision, inter-item transfers or obtaining additional funds.

- Prepare the end-of-year budget statement to be included in the Utility annual report.

- Initiate a program of cost reduction by:

  Investigating the needs of managers for cost information.

  Collecting, classifying and summarizing cost data pertinent to the operations of each responsibility center.

  Suggesting measures for cost reduction.

  Preparing monthly statements of job costs.

FUNCTIONAL DESCRIPTION
- TREASURY

SECTOR: FINANCE

DIVISION OF: FINANCE SECTOR

OBJECTIVE

The Treasury Department is responsible for collection of the Utility's moneys, disbursement of authorized payments and control over cash funds.

FUNCTIONS

The Treasury Department shall:

- Participate in planning the Utility's needs for cash throughout the fiscal year.
- Prepare statements of cash flow for management review including:
  - . Daily actual.
  - . Monthly actual and three months projected.
  - . Annual actual and twelve months projected.
- Maintain necessary cash balances to meet day-by-day needs with a reasonable margin for emergencies.
- Initiate timely action to obtain bank overdrafts to meet any anticipated needs of current operations.
- Advise top management on the adequacy of cash balances to meet the Utility's obligations for capital projects so that timely action can be taken to obtain long-term loans.
- Collect all moneys due to the Utility in accordance with issued bills.
- Deposit cash balances with designated depositaries and keep documentary evidence.
- Disburse properly authorized vouchers in cash or by check.

FUNCTIONAL DESCRIPTION
-CUSTOMER SERVICE(1)

SECTOR: CUSTOMER SERVICE

DIVISION OF: CUSTOMER SERVICE SECTOR

OBJECTIVE

This Department is responsible for coordinating the following activities of the city services - meter reading, collections, connections, meter service and meter repair.

FUNCTIONS

The principal functions of the Customer Service Department are to:

FUNCTIONAL DESCRIPTION
- TREASURY

FUNCTIONS (Cont'd.)

- Arrange for the disbursement of payroll and prepare a payroll exception report.

- Supervise and control the use of petty cash funds in all locations.

- Maintain properly itemized books of original entry for recording such receipts and disbursements. These include, but may not be limited to:

  . Bank Payments Journal.

  . Cash Payments Journal.

  . Receipts Journal (Cash and Non-Cash).

  . Long-Term Loans (Repayments) Ledger.

  . Bidders Deposits Ledger.

  . Services Ledger

- Provide Customer Service and Central Accounts with summaries of collections by type of water, customers' deposits, prepayment for connections and other collections properly classified.

- Track documentary credits, keep an individual record of each and prepare a periodical report on their status.

- Establish physical controls for the protection of cash.

FUNCTIONAL DESCRIPTION
- CENTRAL ACCOUNTS

SECTOR: FINANCE

DIVISION OF: FINANCE SECTOR

OBJECTIVE

The Central Accounts Group shall provide an accurate and meaningful financial picture of the Utility to top management and external agencies.

FUNCTIONS

Central Accounts shall:

- Maintain the following books of accounts:
  - . General Journal
  - . General Ledger
  - . Miscellaneous Receipts by Responsibility Center analysis book
  - . Miscellaneous Expenses by Responsibility Center analysis book
- Prepare the following statements on a timely basis:
  - . Balance Sheet
  - . Profit and Loss Statement
  - . Sources and Uses of Funds Statement
  - . Monthly Expense Statement
- Compile a monthly trial balance through which all accounting books are reconciled.
- Prepare any special reports requested by top management.

FUNCTIONAL DESCRIPTION
- ASSET ACCOUNTS

SECTOR: FINANCE

DIVISION OF: FINANCE SECTOR

OBJECTIVES

The objectives of the Asset Accounts Department are to:

- Account for the acquisition, retirement, disposal and depreciation of fixed assets
- Provide financial information related to both short-term and long-term planning of capital expenditures

FUNCTIONS

The Asset Accounting Department shall:

Assist in the preparation of a cost and benefit analysis for each capital project and the preparation, review and updating of the long - range plan.

Participate in the preparation of the annual capital budget and the statement of sources and uses of funds.

In cooperation with the Technical Sector, present an updated plan for Capital Project Implementation to the Board of Directors at the beginning of each fiscal year.

Commit the appropriate item(s) of the capital budget for purchasing fixed assets or contracting for capital projects.

Control capital expenditures in conformity with capital budget appropriations and initiate action for obtaining additional funds necessary to meet over-runs.

Review and approve requests for advance, interim and final payments for fixed asset construction, prepare appropriate vouchers and accounting entry statements.

Maintain permanent files of Fixed Assets Purchase Orders and Capital Projects Contracts.

FUNCTIONAL DESCRIPTION
- ASSET ACCOUNTS

FUNCTIONS (Cont'd.)

- Handle accounting procedures pertinent to Investment Expenditures (Advance Payments and Documentary Credits).

  Cooperate with Project Managers in charge to prepare Capital Projects Progress Reports.

  On receiving Certificates of Acceptance of purchased fixed assets or completed capital projects, transfer total cost from Fixed Asset Under Construction Cards to the account(s) of corresponding fixed assets.

  Assume responsibility for Depreciation Accounting and provide Central Accounts with account balances and other pertinent data for the preparation of end-of-year accounting statements and annual report.

  Maintain the following books:

  Capital Expenditures Journal

  Fixed Assets Under Construction Ledger

  Fixed Assets Ledger

  Asset Retirements Journal

FUNCTIONAL DESCRIPTION - ACCOUNTS PAYABLE

SECTOR: FINANCE

DIVISION OF: FINANCE SECTOR

OBJECTIVE

The principal objectives of the Accounts Payable Group are to:

Ensure timely payment of creditors.

Maintain an updated record for each individual creditor.

FUNCTIONS

The Accounts Payable Group shall:

- Maintain a group of subsidiary ledgers that corresponds to the classification of SAS Creditors and Credit Balances. These include:
  - Bank Overdrafts
  - Domestic Suppliers (classified by public and private sector)
  - Foreign Suppliers
  - Other Creditors
  - Miscellaneous Credit Accounts
- Check the legitimacy and accuracy of the amounts to be credited to each account by ensuring that all invoices and bills have been approved by the appropriate manager.
- Maintain adequate records of payment to creditors.
- Prepare a monthly trial balance, by individual creditor.
- Reconcile the subsidiary ledger with general ledger control accounts on a monthly basis.

FUNCTIONAL DESCRIPTION
- ACCOUNTS PAYABLE

FUNCTIONS (Cont'd.)

- Suggest a plan for the order and timing in which various types of creditors should be paid.

  Prepare a monthly report of outstanding credit balances, classified by account (or group), for management review and action.

  Investigate claims and complaints of creditors about unpaid credit balances.

  Provide Central Accounts with a statement of outstanding credit balances to be included in the Utility annual report.

FUNCTIONAL DESCRIPTION - DATA PROCESSING(1)

SECTOR: FINANCE

DIVISION OF: FINANCE SECTOR

OBJECTIVE

The Data Processing Department shall provide data processing services for other departments of the Utility speedily, accurately, punctually and economically.

FUNCTIONS

The functions of the Data Processing Department are to:

- Assist managers to define their data processing needs.
- Supervise the development and implementation of applications systems.
- Receive data from other departments and check its acceptability.
- Key punch data onto computer-readable media.
- Process data on in-house facilities.
- Supply processed information to appropriate departments.
- Recommend and select equipment and software as needed and within the constraints of the budget.
- Maintain liaison with other data processing organizations to ensure back-up in case of equipment failure and to identify new applications, techniques or equipment.
- Operate and maintain data processing equipment.

Note: (1) For utilities that operate their own data processing facilities.

FUNCTIONAL DESCRIPTION
-DATA PROCESSING(1)

SECTOR: FINANCE

DIVISION OF: FINANCE SECTOR

OBJECTIVE

The objective of the Data Processing Department is to provide data processing for other departments of the Utility accurately, punctually and economically

FUNCTIONS

The basic functions of this Department include

Assisting managers to define their data processing requirements.

Supervising the development (which may be done by outside firms) and implementation of applications systems.

Receiving data from other departments and checking its applicability.

Submitting the data to the external vendor for processing.

Maintaining strict control of what has been shipped to and received from outside processing vendors.

Reviewing returned data for accuracy and completeness and sending it to the originating department.

Reviewing and selecting external companies that are willing and able to provide computer service to the Utility.

Note: (1) For utilities that contract the actual processing of data out to others.

FUNCTIONAL DESCRIPTION - CUSTOMER SERVICE(1)

SECTOR: FINANCE

DIVISION OF: FINANCE SECTOR

OBJECTIVE

The Customer Service General Department is responsible for all collections from users, authorizing new connections, and resolution of customer complaints.

FUNCTIONS

The principal functions of this Department are to:

- Assist the Technical Sector in estimating future demand for sewerage services.
- Recommend rates for the Utility's services (in cooperation with Budget and Cost).
- Develop and implement policies and procedures to ensure that all revenues for services due the organization are billed, collected and accounted.
- Receive and resolve customer complaints.

Note: (1) For sewerage utilities only.

FUNCTIONAL DESCRIPTION
- CUSTOMER ACCOUNTS

SECTOR: FINANCE

DIVISION OF: CUSTOMER SERVICE

OBJECTIVE

The principal objective of this Department is to bill and collect the service revenues due to the Utility.

FUNCTIONS:

The principal functions of this Department are to:

Prepare bills for:

- Industrial sewer use permits and fees.
- Connections.
- Septic tank pumping.

Issue and collect the above bills (giving special attention to past due bills).

Manage the collection of ordinary sewer use fees through:

- Ensuring that the water utility has a current list of sewer accounts.
- Examining the accounts of billing and collections provided by the Water Utility.
- Maintaining accounting records that reflect both collections and past due amounts.

Note: (1) For sewerage utilities only.

FUNCTIONAL DESCRIPTION
- CUSTOMER ACCOUNTS

FUNCTIONS (Cont'd.)

- Maintain the following accounting books:
  - Sewer Use Fees Journal
  - Connections Journal
  - Customer Accounts Ledgers
    - Sewer Use Fees
    - Connections and other services
  - Connections Sales by Branch
  - Past Due Bills

FUNCTIONAL DESCRIPTION - CONNECTIONS (1)

SECTOR: FINANCE

DIVISION OF: CUSTOMER SERVICE

OBJECTIVE

The objective of this Department is to ensure that all sewer users are identified.

FUNCTIONS

The principal functions of this Department are to:

- Assist the Technical Sector prepare estimates of future demand for sewers by area.
- Receive applications for sewer connections from potential users and assign priorities to this work.
- Recommend extensions in sewer mains when suggested by customer demand.
- Conduct investigations to discover:
  - Unauthorized connections.
  - Illegal use of sewers.
- Maintain an up-to-date list of sewer users.

Note: (1) For sewerage utilities only.

FUNCTIONAL DESCRIPTION
- CUSTOMER SERVICE CENTERS

SECTOR: CUSTOMER SERVICE

DIVISION OF: CUSTOMER SERVICE SECTOR

OBJECTIVE

This Department is responsible for all meter reading, collections, new connections, meter service and meter replacement

FUNCTIONS

The Customer Service Centers Department shall:

- Prepare detailed one-year and five-year estimates of demand for water and services.
- Recommend policies for
  - . Extension of service.
  - . Frequency of meter reading.
  - . Shutoff and restoration of service.
- Prepare plans for systematic inspection and replacement of meters.
- Prepare and ensure compliance with procedures for:
  - . Meter reading.
  - . Bill collection.
  - . New connections.
  - . Meter service and replacement.
  - . Shutoff and restoration of service.
  - . Customer complaints.
- Make special efforts to collect large past due bills.
- Investigate customer complaints.

FUNCTIONAL DESCRIPTION
-CUSTOMER SERVICE(1)

SECTOR: CUSTOMER SERVICE

DIVISION OF: CUSTOMER SERVICE SECTOR

OBJECTIVE

This Department is responsible for coordinating the following activities of the city services - meter reading, collections, connections, meter service and meter repair.

FUNCTIONS

The principal functions of the Customer Service Department are to:

- Prepare detailed one-year and five-year estimates of demand for water and sewerage services.
- Recommend policies concerning:
  - . Frequency of meter reading.
  - . Extension of service.
  - . Shutoff and restoration of service
- Develop, implement and ensure compliance with procedures concerning:
  - Meter reading.
  - Bill collection
  - New connections.
  - Meter service and replacement.
  - Shutoff and restoration of service.
  - . Customer complaints.
- Regularly review the performance of each city customer service unit and recommend action to overcome deficiencies to the City Service Manager.

Note: (1) For the General Organization for Suez Canal Region Water Supply.

FUNCTIONAL DESCRIPTION
CUSTOMER SERVICE CENTER

SECTOR: CUSTOMER SERVICE

DIVISION OF: CUSTOMER SERVICE CENTERS

OBJECTIVE

A Customer Service Center is responsible for all meter reading, collections, new connections, meter service and meter replacement in its area

FUNCTIONS

For its area, the Customer Service Center shall:

- Prepare detailed one-year estimates of demand.
- Read all meters.
- Collect all bills
- Make special efforts to collect past due bills.
- Accept customer applications for new connections, estimate the cost of connection and make the connection.
- In accordance with Utility policy, repair leaks or other problems in lines connecting the customer to the street main.
- Inspect, clean and replace meters according to a plan.
- Investigate customer complaints.
- Investigate illegal connections, wasteful use of water or other misuse of the water system.

FUNCTIONAL DESCRIPTION
- CUSTOMER ACCOUNTS

SECTOR: CUSTOMER SERVICE

DIVISION OF: CUSTOMER SERVICE SECTOR

OBJECTIVE

The Customer Accounts Department is responsible for maintaining an accurate record of each customer's account and for providing the required accounting and statistical data needed from billing and collections.

FUNCTIONS

- Supervise the preparation of customers' bills for connections, water consumption and non-payment penalties.
- Maintain complete records of customer payments and accounts.
- Maintain the following accounting books:
  - . Water Sales Journal
  - . Connections Journal
  - . Customer Accounts Ledgers
  - . Water Sales and Collections by Service Center Analysis Book
  - . Service Sales by Responsibility Center Analysis Book
  - . Past Due Bills Analysis Book
- Prepare statistics as required for planning or control.

FUNCTIONAL DESCRIPTION - PUBLIC RELATIONS

SECTOR: CUSTOMER SERVICE[1]

DIVISION OF: CUSTOMER SERVICE SECTOR

OBJECTIVE:

The principal objective of the Public Relations Group is to instill an understanding of the Utility's goals and plans among the public.

FUNCTIONS:

The functions of the Group include:

- Preparing programs and campaigns that stress the need for water conservation.
- Preparing press releases and speeches for the Chairman that stress the accomplishments and goals of the Utility.
- Answering inquiries from the press and the general public.
- Preparing press releases concerning emergencies involving Utility services or facilities.

Note: (1) In sewerage utilities Public Relations is a part of the Customer Service General Department in the Finance Sector.

In the National Water Authority and National Sewerage Authority, Public Relations reports to the Chairman. The word "Utility" in the above description should then be replaced by "Authority".

FUNCTIONAL DESCRIPTION - COMPLAINTS

SECTOR: CUSTOMER SERVICE

DIVISION OF: CUSTOMER SERVICE SECTOR

BASIC FUNCTION

The Complaints Group is responsible for settling all customer complaints that cannot be settled at the Service Center level.

FUNCTIONS

The principal functions of the Complaints Group are to:

- Receive all complaints sent by mail.

  Receive all complaints received in person or by telephone at headquarters.

  Receive complaints referred to the Department by other departments of the Utility.

  Catalogue all complaints received.

  Refer any actions or information needs to the appropriate departments in the Utility.

  Follow-up with the department if an answer is not provided within ten days.

  Report findings (and action, if any) to the customer and attempt to solve any remaining issues.

  Prepare a monthly report cataloguing all complaints received and submit it to the Vice Chairman of the Customer Service Sector.

FUNCTIONAL DESCRIPTION - PRODUCTION

SECTOR: OPERATIONS

DIVISION OF: OPERATIONS SECTOR

OBJECTIVE

The Production Department shall produce and pump water for subscribers at suitable pressure and quantity.

FUNCTIONS

The Production Department shall:

Plan, supervise and review the activity of all Utility treatment plants and pumping stations.

Develop effective work plans for the production of treated water.

Contribute to Utility planning of general policy of the Utility with respect to water production.

Initiate requests for studies and projects for treatment plant replacement, renovation, modification and expansion.

Optimize the utilization of equipment and labor in the production of treated water.

Provide assistance to the Projects Group for long-range planning needs.

Provide assistance to other departments in supporting Utility responsibilities and duties.

Coordinate in the development of training programs for personnel advancement.

Prepare and issue production reports on a timely basis.

Prepare and submit operations budgets on a timely basis.

FUNCTIONAL DESCRIPTION
- TREATMENT PLANT (WATER)

SECTOR: OPERATIONS

DIVISION OF: PRODUCTION

OBJECTIVE

The Treatment Plant shall operate and maintain all equipment to provide subscribers with the required pressure and quantity of treated water.

FUNCTIONS

The Treatment Plant shall:

Operate and maintain all units in the plant for optimum production at the most economical level.

Operate and maintain pumping stations, boosters and reservoirs under the jurisdiction of the Treatment Plant.

Plan, organize, staff and supervise plant operation, maintenance and related water treatment plant functions.

Prepare and submit reports on a timely basis.

Prepare and submit budgets on a timely basis.

Develop effective work plans for the treatment of water.

Initiate requests for projects for the replacement, renovation, modification and expansion of the water treatment plant and pumping stations.

FUNCTIONAL DESCRIPTION - DISTRIBUTION

SECTOR: OPERATIONS

DIVISION OF: OPERATIONS SECTOR

OBJECTIVE

The principal objective of the Distribution Department is to ensure safe and economical distribution of water from plants to customers.

FUNCTIONS

The principal functions of the Distribution Department are to:

- Establish policies for:
  - Extension of mains (in cooperation with the Customer Service Sector)
  - Placement of hydrants.
  - Placement of valves.
  - Replacement of equipment (based on maintenance costs and length of use).
- Prepare plans for:

  Level and skill of personnel required

  Development of the distribution system including minor extensions. (Major projects are the responsibility of the Technical Sector.)

  Use of personnel and equipment.

  Replacement of mains based on cost and frequency of repair data.

FUNCTIONAL DESCRIPTION
- DISTRIBUTION

FUNCTIONS (Cont'd.)

- Establish, implement and ensure compliance with procedures for:

  Initiating and completing work orders.

  Maintaining equipment (with special attention to preventive maintenance procedures).

  Locating, inspecting and setting priorities for the repair of leaks and broken lines.

  Maintaining and replacing of hydrants, valves and public fountains.

  Installing valves and hydrants.

  Installing and maintaining anti-corrosion devices.

  Repaving streets dug up for the Water Utility.

  Check-out and check-in of tools and equipment.

  Emergency shut-down of the system.

  Using the communications system.

  Updating system maps.

  Reporting personnel, operating and system performance data.

Continually analyze the statistics reported through the job order system and Monthly Branch Reports to identify opportunities for reducing costs and working more efficiently.

Maintain a complete set of system maps and provide branches with an up-to-date copy for their area.

Maintain an efficient communications system.

Periodically check the quality and completeness of work in the branches.

Prepare a monthly report for top management summarizing the work of the Department.

Select and supervise contractors to assist in the work of the Department.

Supervise the work of the branches.

FUNCTIONAL DESCRIPTION - BRANCH(1)

SECTOR: OPERATIONS

DIVISION OF: DISTRIBUTION

OBJECTIVE

The principal objective of a Branch is to ensure safe and economical distribution of water from plants to customers.

FUNCTIONS

Within its defined area, the principal functions of a Branch are to:

- Detect and repair all leaks in the system.
- Undertake anti-corrosion measures where required.
- Maintain all reservoirs.
- Install and maintain valves, hydrants and public fountains.
- Operate and maintain booster stations (if assigned to this department).
- Make short extensions to mains as directed by headquarters.
- Conduct inspections of the system to identify:
  - . Areas where the pressure is chronically low.
  - . Actual or potential areas of infiltration.
  - . Unauthorized connections.
  - . Other misuse of the system.
- Assist work crews from other companies or agencies locate pipes when trenching is planned.
- Follow the maintenance procedures defined by the Distribution Department.

Note: (1) Water networks branch.

FUNCTIONAL DESCRIPTION - LABORATORIES

SECTOR: OPERATIONS

DIVISION OF: OPERATIONS SECTOR

OBJECTIVE

The Laboratories Department is responsible for recommending treatment procedures that produce water of acceptable quality at minimum cost.

FUNCTIONS

The principal functions of the Laboratories General Department are to:

- Develop internal water quality standards for the Utility.
- Adopt known water treatment methods to the special conditions faced by the Utility.
- Conduct tests of raw water, water being treated and plant effluent to:
  - Advise plant management on the optimum treatment procedure.
  - Advise management of actual or potential equipment failures.
  - Assure management and the public that the water meets legal quality standards.
  - Advise management of upstream pollution problems that significantly affect treatment efficacy and cost.
- Prepare and implement a systematic program of testing water throughout the distribution system. The purposes of this program are to:
  - Assure the public of the safety of the water.
  - Identify leaks, cross connections to wastewater or other problems in the distribution system.

FUNCTIONAL DESCRIPTION
- LABORATORIES

FUNCTIONS (Cont'd.)

Conduct training programs to assure adequate numbers of trained staff to perform the work of the Department.

Encourage a concern for quality among the operating staff.

In conjunction with the Technical Sector, propose standards for private water systems and hardware that safeguard the water supply.

Perform special tests required by prospective industrial users of water (at the user's expense).

FUNCTIONAL DESCRIPTION
- PLANT LABORATORY

SECTOR: OPERATIONS

DIVISION OF LABORATORIES

BASIC FUNCTION

For each plant, the Plant Laboratory is responsible for recommending treatment procedures and chemical dosages that produce water that meets the internal standards of the Utility.

FUNCTIONS

For each plant, principal functions of the Plant Laboratory are to:

- Conduct tests of raw water, water being treated and plant effluent in order to:
  - Advise plant management of actual or potential equipment failures.
  - Assure management and the public that the water meets legal quality standards.
  - Advise management of upstream pollution problems that significantly affect treatment efficacy and cost.

  Participate in training programs for laboratory staff personnel.

  Encourage operating staff to be concerned about water quality.

  Perform other tasks as directed by the General Manager, Laboratories.

FUNCTIONAL DESCRIPTION - WESTERN DESERT(1)

SECTOR: OPERATIONS

DIVISION OF: OPERATIONS SECTOR

OBJECTIVE

The objective of the Western Desert Department is to furnish potable water economically to the people living along the AWGA distribution lines from Alexandria to Mersa Matrouh.

FUNCTIONS

The principal functions of the Western Desert Department include:

- Establishing policies for:
  - Quantity of water that may be drawn by customers.
  - Frequency and method of billing.
  - Hours of work of personnel.
- Preparing plans that:
  - Estimate the quantity of water required by Western Desert customers.
  - Guide the distribution of men and equipment in the system.
  - Establish schedules for annual overhaul of major pieces of equipment.
  - Establish the need and timetable for changes in the system configuration.
- Operating and maintaining the Maryut plant.

Note: (1) For AWGA only.

FUNCTIONAL DESCRIPTION
- WESTERN DESERT

FUNCTIONS (Cont'd.)

Establish, implement and ensure compliance with procedures for:

- Initiating and completing a work order.
- Maintaining system maps.
- Check-in and check-out of tools and equipment.
- Monitoring system performance.
- Using the communications system.
- Maintaining equipment.
- Emergency shut-down of the system.
- Minimizing leaks.
- Assigning priorities to leak repairs.

Maintaining an efficient communication system.

Maintaining an up-to-date system map.

Maintaining round-the-clock capability to respond to major breaks or breakdowns.

Collecting all bills.

Preparing a monthly report of water delivered and level of maintenance activities.

FUNCTIONAL DESCRIPTION
- WESTERN DESERT DISTRICT(1)

SECTOR: OPERATIONS

DIVISION OF: WESTERN DESERT

OBJECTIVE

The objective of this Department is to operate and maintain all water facilities in the District.

FUNCTIONS

The principal functions of this Department include:

- Operating and maintaining the booster stations in the District.
- Maintaining the pipelines in the District defined by AWGA.
- Executing procedures and plans defined by Western Desert and AWGA headquarters for:
  - . Maintenance of equipment, lines and facilities.
  - . Initiating and completing work orders.
  - . Maintaining system maps.
  - . Use and maintenance of tools and equipment.
  - . Use of the communications system.
  - . Minimizing leaks.
  - . Assigning priorities for leak repairs.
  - . Emergency shut-down of the system.
  - . Meter reading.
  - . Collection of bills.
  - . Shut-off of service to customers.
  - . Connection of service to customers.
  - . Recording and reporting of personnel, time and equipment and system performance.

Note:(1) For AWGA only.

FUNCTIONAL DESCRIPTION
- SEWAGE TREATMENT

SECTOR: OPERATIONS

DIVISION OF: OPERATIONS SECTOR

OBJECTIVE

The Sewage Treatment Department shall ensure that all effluents of the Utility meet the health and environmental requirements of the public.

FUNCTIONS

The Sewage Treatment Department shall:

- Operate and maintain the sewage treatment plants that fulfill health and environmental standards.
- Plan, supervise and review the activity of the assigned treatment plants on a continuous basis.
- Coordinate treatment plant functions regarding upkeep of grounds, operation and maintenance of facilities and equipment, personnel training and evaluation, and the purchase of equipment, supplies and machinery.
- Contribute to the planning of general policy of the Utility with respect to sewage treatment.

  Initiate studies and projects for treatment plant replacement, renovation, modification and expansion

  Coordinate and develop effective work plans for sewage treatment programs.

  Prepare and issue production reports on a timely basis.

  Prepare and submit operations budgets on a timely basis.

FUNCTIONAL DESCRIPTION
- SEWAGE TREATMENT PLANT

SECTOR: OPERATIONS

DIVISION OF SEWAGE TREATMENT

OBJECTIVE

The Sewage Treatment Plant shall operate and maintain all equipment to ensure that sewage is treated in compliance with health and environmental standards for the public and subscribers

FUNCTIONS

The Treatment Plant shall:

- Operate and maintain all units in the plant for optimum production at the most economical conditions.

  Operate and maintain pumping stations and other facilities under the jurisdiction of the treatment plant.

  Develop effective work plans for the treatment of sewage.

  Initiate requests for projects for the replacement, renovation, modification and expansion of the sewage treatment plant and pumping station.

  Prepare and submit reports on a timely basis.

  Prepare and submit budgets for operations and maintenance on a timely basis.

FUNCTIONAL DESCRIPTIONS
- SEWAGE COLLECTION

SECTOR: OPERATIONS

DIVISION OF OPERATIONS SECTOR

OBJECTIVE

The principal objective of this Department is the effective and efficient collection of sewage.

FUNCTIONS

The principal functions of the Sewage Collection Department are to:

- Establish policies for:
  - Short extensions of lateral sewers.
  - Replacement of equipment (based on maintenance cost history and length of use).
  - Frequency of sewer cleaning.
  - Priority given to blockages.
  - Collection of wastes unfit for sewers.
- Prepare plans for:
  - Level and skill of personnel.

    Improvement of the sewage collection system. (Major projects are the responsiblity of the Technical Sector.)

    Distribution of people and equipment.

    Replacement of equipment and facilities.

    Major maintenance of facilities and equipment.

    Major sewer cleaning projects.

FUNCTIONAL DESCRIPTION
-SEWAGE COLLECTION

FUNCTIONS (Cont'd.)

- Develop, implement and ensure compliance with rocedures for:

  . Initiating and completing work orders.

  . Preventive maintenance of all equipment and facilities.

  . Sewer cleaning.

  . Maintaining appropriate levels and flow rates in the sewer lines (in cooperation with the pumping stations).

  . Inspection, adjustment and repair of manhole covers, manholes and valves.

  . Repaving of streets dug up on behalf of the Utility and resetting of manholes.

  . Making connections to the sewers.

  . Installing manholes, valves, Wyes and Tees in the existing system.

  . Reporting, inspecting, setting priorities and cleaning of blocked lines.

  . Locating, inspecting, setting priorities and repairing leaks and broken or collapsed sewers.

  . Pumping sewage from septic tanks.

  . Collection of garbage.

  . Collection of industrial wastes unfit for sewers.

  . Updating system maps.

  . Recording and reporting of time worked and equipment and system performance.

- Recommend the establishment of new branches when needed.

- Coordinate the work of the branches and allocate resources among them.

FUNCTIONAL DESCRIPTION
- SEWAGE COLLECTION

FUNCTIONS (Cont'd.)

- Continually analyse the statistics reported through the job order system and Monthly Branch Reports to identify opportunities for reducing costs and working more efficiently.

- Maintain an effective communications system.

- Maintain a continuous capability to respond to emergencies.

FUNCTIONAL DESCRIPTION - BRANCH(1)

SECTOR: OPERATIONS

DIVISION OF: SEWAGE COLLECTION

OBJECTIVE

The principal objective of a Branch is to collect effectively and efficiently the sewage within its assigned area.

FUNCTIONS

The principal functions of a Branch are to operate and maintain the sewers in the area served by the Branch according to the policies and procedures established by the Sewage Collection General Department. The principal tasks include:

- Maintaining equipment and facilities assigned to the Branch.
- Cleaning the sewers.
- Maintaining appropriate levels and flow rates in the sewers.
- Inspecting, adjusting, repairing or replacing manhole covers, manholes and valves.
- Repairing streets and resetting manhole covers.
- Making connections to the sewers.
- Installing manholes, valves, Wyes and Tees.
- Unblocking clogged sewers.
- Repairing leaks and broken sewers.
- Pumping out septic tanks.
- Collecting garbage and industrial wastes.

Note: (1) Sewerage Networks Branch.

FUNCTIONAL DESCRIPTION - BOOSTER STATIONS

SECTOR: OPERATIONS

DIVISION OF: OPERATIONS SECTOR

OBJECTIVE

The principal objective of the Booster Stations Department is to ensure that the stations maintain appropriate levels and rates of flow through the sewerage system.

FUNCTIONS

The functions of the Booster Stations Department are to:

- Establish policies for:
  - Level of manning at each station.
  - Desired level and rate of flow of sewage into and out of each station.
  - Replacement of facilities and equipment.
- Prepare plans for:

  Number of people and skills required to operate the stations.

  Distribution of personnel and equipment.

  Major maintenance activities.

  Replacement of major pieces of equipment and facilities (in cooperation with the Technical Sector).

FUNCTIONAL DESCRIPTION
- BOOSTER STATIONS

FUNCTIONS (Cont'd.)

- Establish procedures for:
  - . Operation of equipment.
  - . Preventive maintenance of equipment.
  - . Steps to be taken in the event of overflows.
  - . Emergency shut-down.
  - . Recording and reporting time worked and system performance.
  - . Initiating and completing work orders.
- Recommend establishment of new stations and abandonment of existing stations.
- Coordinate the operation of the various stations.
- Analyze the statistics reported through the job order system and from operating reports to identify opportunities for cost reductions.
- Conduct all major maintenance activities at the booster stations (i.e., major maintenance at the stations will be performed by a headquarters based group).

FUNCTIONAL DESCRIPTION
- BOOSTER STATION DISTRICT

SECTOR: OPERATIONS

DIVISION OF: BOOSTER STATIONS

OBJECTIVE

The objective of these Groups is to ensure that the booster stations maintain appropriate levels and rates of flow through the sewerage system.

FUNCTIONS

The principal functions of these Groups are to:

- Operate the booster stations in the districts according to the policies and procedures of headquarters.
- Implement the procedures for:
  - Preventive maintenance.
  - Recording and reporting of time worked and system performance.

FUNCTIONAL DESCRIPTION
- CITY SERVICE

SECTOR: OPERATIONS

DIVISION OF: OPERATIONS SECTOR

OBJECTIVE

The objective of this Department shall be to provide effective and economical water and sewer service to the city within the constraints of the existing system.

FUNCTIONS

The principal functions of this Department are to:

- Operate and maintain water and sewage treatment plants.
- Operate and maintain the water distribution network and the sewage collection network.
- Read all water meters.
- Collect bills from customers for water, sewage collection and other services provided by the Utility.
- Respond promptly to customer complaints.
- Receive applications and install new connections.
- Construct minor extensions to the water and sewer networks.
- Maintain all equipment of the Utility in the city except for water meters which will be repaired at headquarters in Ismailia.
- Manage the local stores.
- Prepare plans and budgets for all aspects of city operations except major construction projects.
- Prepare reports required by the Utility's headquarters.

Note:(1) For SCRWS and SCRWSS only.

FUNCTIONAL DESCRIPTION
- FACILITIES AND MAINTENANCE

SECTOR: OPERATIONS

DIVISION OF: OPERATIONS SECTOR

OBJECTIVE

The Facilities and Maintenance Department shall be responsible for coordinating the maintenance and custodial care of Utility buildings, facilities and equipment.

FUNCTIONS

Facilities and Maintenance shall:

- Plan, assign, coordinate and inspect the custodial and maintenance operations within the Utility.
- Set policies and provide guidance and assistance in establishing preventive maintenance programs for all facilities and equipment within the Utility.
- Coordinate the requisitioning of materials and equipment needed for the accomplishment of duties.
- Establish and maintain relevant records and files on supplies, equipment, personnel and assets.
- Develop long-range plans for facilities and maintenance requirements.
- Administer effective personnel policies for Utility facilities and maintenance functions.
- Submit reports on a timely basis.
- Coordinate departmental budgets and submit them on a timely basis.

FUNCTIONAL DESCRIPTION
- MAINTENANCE

SECTOR: OPERATIONS

DIVISION OF: FACILITIES AND MAINTENANCE

OBJECTIVE

The Maintenance Department shall be responsible for keeping service machinery and treatment equipment in satisfactory condition for fulfilling the requirements of service to customers.

FUNCTIONS

The Maintenance Department shall:

- Prepare long-range plans for maintenance programs.
- Provide an effective maintenance program (including preventive maintenance) within the limits of budgetary requirements.
- Issue job orders for maintenance activities as required.(1)
- Review all job orders (after completion) for appropriateness, cost and improvement potential.
- Prepare and issue standard practice instructions for maintenance activities.
- Establish an effective system of daily work planning and scheduling.
- Establish inspection methods and schedules.
- Prepare and maintain effective maintenance records.
- Assist Materials Management to maintain an adequate store of spare parts and supplies to support the maintenance functions.
- Administer effective personnel policies to maintenance staff.
- Prepare and issue required reports on a timely basis.
- Prepare and submit recommendations concerning equipment, processes or procedures.
- Prepare and submit budgets for maintenance activities on a timely basis.

Note: (1) Plant and Branch Managers may also issue job orders.

FUNCTIONAL DESCRIPTION - FLEET

SECTOR: OPERATIONS

DIVISION: MAINTENANCE

OBJECTIVE

The principal objective of the Fleet Group is to maintain the transportation equipment of the Utility.

FUNCTIONS

The principal functions of this Group are to:

- Recommend the purchase, lease or hire of sufficient transportation equipment to meet the requirements of the Utility.
- Recommend policies and procedures governing the use of transportation equipment.
- Cooperate with the Manager of Internal Services in assigning equipment to appropriate personnel.
- Maintain records of use of equipment by person, purpose and extent (kilometers driven or hours of use).
- Operate a central repair facility for transportation equipment.
- Prepare and implement procedures for:
  - Ensuring that routine maintenance is done.
  - Deciding when to scrap individual items of equipment.
  - Maintaining records.
  - Selection of new equipment to minimize inventory and repair problems.
  - Prepare regular reports of equipment available, use and cost of repair.

FUNCTIONAL DESCRIPTION
- REPAIR AND OVERHAUL

SECTOR: OPERATIONS

DIVISION OF: MAINTENANCE

OBJECTIVE

The principal objective of the Repair and Overhaul Group is to provide skilled, economical maintenance service to the Operations Sector.

FUNCTIONS

The functions of this Group include:

- Operating a central maintenance facility.
- Cooperating with the Maintenance Manager in planning annual overhaul schedules and repair parts required.
- Planning for adequate skilled manpower to staff the Group.
- Providing the following capabilities to operating units:
  - On-site consultation on reasons for equipment failure and the necessary steps, cost and time for repair.

    Repair of engines, pumps and other mechanical equipment.

    Repair of electrical equipment (including all rewinding).

    Fabrication of parts (all fabrication of parts except minor operations such as bending straps or drilling holes should be done by this Department).

    Maintaining a detailed record of all jobs undertaken (preferably through a job order system).

FUNCTIONAL DESCRIPTION - FACILITIES

SECTOR: OPERATIONS

DIVISION OF: FACILITIES AND MAINTENANCE

OBJECTIVE

The Facilities Department shall be responsible for the maintenance and custodial care of Utility buildings and facilities.

FUNCTIONS

The Facilities Department shall:

- Be responsible for the maintenance of buildings, grounds, housekeeping, roads and surfaced areas, walls, fences, site irrigation and drainage.

  Plan, assign, inspect and supervise the maintenance and custodial activities concerning these facilities.

  Provide guidance, direction and assistance in establishing an effective maintenance program.

  Develop effective work plans for plant facilities maintenance.

  Effectively utilize personnel and equipment in fulfilling the duties of facilities maintenance.

  Develop long-range plans for requirements of facilities maintenance.

  Provide effective administration of personnel policies and programs.

  Submit reports on a timely basis.

  Develop and submit budgets on a timely basis.

FUNCTIONAL DESCRIPTION
- OPERATIONS STATISTICS

SECTOR: OPERATIONS

DIVISION OF: OPERATIONS SECTOR

OBJECTIVE

To prepare analyses of operations that assist managers to become more effective and efficient through planning and control.

FUNCTIONS

The principal functions of the Operations Statistics Group are to:

- Gather data from operating groups. (A copy of all regular reports prepared by operating managers is to be sent to Operations Statistics.)
- Review all completed job orders originating in the Operations Sector with the purpose of identifying potential cost savings.
- Prepare reports including:
  - Daily Operations Report (Water Utilities).
  - Monthly Production Report (Water Utilities).
  - Monthly Treatment Report (Sewerage Utilities).
  - Materials and Energy Efficiency Report.
  - Days of Non-Functioning Class A Equipment.
  - Monthly Booster Station Analysis.
  - Monthly Wellfield Report (Water Utilities).
- Prepare any special analyses directed by the Vice Chairman, Operations.

FUNCTIONAL DESCRIPTION
- PROJECT MANAGEMENT

SECTOR: TECHNICAL

DIVISION OF: TECHNICAL SECTOR

OBJECTIVE

The Project Management Department shall manage the planning, design, construction, installation and start-up of all major physical projects.

FUNCTIONS

The functions of the Project Management Department shall include:

- Assisting the Long-Range Planning Manager assemble:
  - Estimates of amount of water required by area.
  - Estimates of the needs for new facilities by area.
  - Estimates of the needs for major renovation or renovation of existing facilities.
- Preparation of conceptual designs and estimated costs for facilities defined in the above activity.
- Detailed design of approved projects.
- Selection of consultants and contractors (The Department must work with Purchasing and Legal Affairs to ensure compliance with purchasing laws and regulations.
- Supervision of consultants and contractors.
- Approval of payments to consultants and contractors.
- Supervision of start-up of new facilities and installations.
- Technical acceptance of completed projects.
- Preparation of budget estimates for expenditures for plant and equipment.
- Preparation of regular reports showing progress on each project.

'UNCTIONAL DESCRIPTION - PROJECT MANAGEMENT

Note: Each project should be assigned a Project Manager when planning for it starts. He should continue to manage the project through each successive stage (planning, detailed design, contractor selection, construction, start-up and technical acceptance). He will draw upon staff engineers from the Civil and Mechanical and Electrical Engineering Departments as they are needed.

The Project Manager may be administratively assigned to Civil or Mechanical and Electrical Engineering but he is responsible to the Project Management Department for all aspects of the project. At the same time, he is subject to design guidelines and specifications set by the Civil and Mechanical and Electrical Engineering Departments.

FUNCTIONAL DESCRIPTION
- CIVIL ENGINEERING

SECTOR: TECHNICAL

DIVIDION OF: TECHNICAL SECTOR

OBJECTIVE

The Civil Engineering Department shall supervise the design of the structures and networks distribution or collection systems of the Utility.

FUNCTIONS

The Civil Engineering Department shall:

- Set policies, standards, and specifications concerning the design and construction of structures and networks.
- Review and recommend changes in building and Utility codes.
- Evaluate long-range plans and cost estimates for expansion, renovation or major repair of the facilities of the Utility.
- Evaluate the condition of specific structures and networks when requested by operating departments.
- Prepare plans for minor expansions, renovations or repairs to be performed by the operating departments.
- Review and approve all aspects of design related to civil engineering before any plan is released for construction.
- Monitor structural testing of components to ensure compliance with codes and standards.
- Evaluate and recommend consultants and contractors to be used by the Utility.
- Provide technical advice and assistance to Project Managers and to operating departments when requested.
- Prepare and maintain as-built drawings and maps of all structures and networks of the Utility.
- Submit status reports periodically.
- Prepare budget estimates and recommend changes to achieve efficient and effective operations.

FUNCTIONAL DESCRIPTION
MECHANICAL AND ELECTRICAL ENGINEERING

SECTOR: TECHNICAL

DIVISION OF: TECHNICAL SECTOR

OBJECTIVE

The Mechanical and Electrical Engineering Department shall supervise the design of mechanical and electrical systems of the Utility.

FUNCTIONS

The Mechanical and Electrical Engineering Department shall:

- Set policies, standards, and specifications for the design and construction of mechanical and electrical equipment and systems.
- Review and recommend changes in building and utility codes.
- Evaluate long-range plans and cost estimates for expansion, renovation or major repairs to the mechanical and electrical equipment and systems of the Utility.
- Evaluate the condition of mechanical and electrical systems when requested by operating departments.
- Prepare plans for minor expansions, renovations or repairs to mechanical or electrical equipment or systems by the operating departments.
- Review and approve all aspects of design related to mechanical or electrical engineering before any plan is released for construction.
- Evaluate and recommend suppliers, consultants and contractors to be used by the Utility.
- Provide technical advice and assistance to Project Managers and to operating departments when requested.
- Prepare and maintain as-built drawings of all mechanical and electrical systems.
- Submit status reports periodically.
- Prepare budget estimates and recommend changes to achieve efficient and effective operations.

FUNCTIONAL DESCRIPTION - LEGAL AFFAIRS(1)

SECTOR: CHAIRMAN'S OFFICE

DIVISION OF: CHAIRMAN'S OFFICE

OBJECTIVE

The Legal Affairs Department provides legal advice and assistance to the management of the Authority and acts as Secretary to the Board of Directors.

FUNCTIONS

The principal functions of the Legal Affairs Department are to:

- Prepare legal opinions regarding:
  - Actual or proposed State laws or regulations affecting the Authority or the provincial Public Companies(2)

    Court decisions or other rulings affecting the Authority or the provincial water Public Companies.

    Policies or regulations proposed by the Authority.

    Complaints by employees, customers, suppliers or others against the Authority.

    Any other subject requested by management or by Public Companies.

- Prepare and execute calls for tenders and contracts with suppliers (in cooperation with the Technical and Purchasing Departments).

- Prepare any other contracts required by the Authority.

- Recruit and supervise external legal assistance as required.

Note: (1) For the National Water Authority and National Sewerage Authority.
(2) Public Water Companies or Public Sewerage Companies.

FUNCTIONAL DESCRIPTION
LEGAL AFFAIRS(1)

FUNCTIONS (Cont'd)

- Represent the Authority before:
  - . Courts of all kinds.
  - . Arbitration committees.
  - . Legislative bodies.
  - . Legal committees.
- Conduct investigations concerning:

  Infractions of financial or administrative regulations within the Authority or, when directed by the Chairmen, within the Public Companies.

  Infraction of Authority regulations or policies by persons or organizations outside the Authority.

  Complaints or other matters raised by the Public Prosecutor or other legal or regulatory bodies.
- Propose penalties for offenses within the Authority including:
  - . Suspension of work.
  - . Reduction of pay or rank.
  - . Commitment to the Public Prosecutor or other legal authority.
- Conduct litigation on behalf of the Authority.
- Conduct such legal procedures as:
  - . Sending legal notifications.
  - . Taking depositions.
  - . Making distraints.
  - . Expropriation and assignation.
  - . Execution of judicial judgements.

FUNCTIONAL DESCRIPTION
- LEGAL AFFAIRS(1)

FUNCTIONS (Cont'd)

- Arrange meetings of the Board of Directors, prepare draft agendas for the Chairman, take minutes of the meetings and distribute copies of minutes to Board members.

- Keep all statutory minute books, memoranda of articles and registers required of the Board of Directors.

FUNCTIONAL DESCRIPTION
- RESOURCE PLANNING AND CONTROL

SECTOR: RESOURCE PLANNING AND CONTROL

DIVISION OF: NOT APPLICABLE

OBJECTIVE

The principal objective of the Resource Planning and Control Sector is to coordinate the use of financial and human resources in the Authority and among the Public Companies.(1)

FUNCTIONS(2)

The principal sector level functions are to:

- Prepare policy proposals for the Chairman and Board of Directors regarding financial performance, tariff rates, accounting principles, and administrative practices to be applied to the Authority and/or to the Public Companies.

- Recommend to the Chairman and Board of Directors criteria for allocating capital resources among the Public Companies.

- Supervise the selection of auditors and other external expertise required by the Sector.

Notes: (1) Public Water Companies or Public Sewerage Companies.
(2) See Exhibits A1.60 - A1.62 for descriptions of the functions of the departments of this Sector.

FUNCTIONAL DESCRIPTION
- FINANCE AND ADMINISTRATION

SECTOR: RESOURCE PLANNING AND CONTROL

DIVISION OF: RESOURCE PLANNING AND CONTROL

OBJECTIVE

The Finance and Administration Department shall ensure that the financial resources of the Authority and the Public Companies(1) are used appropriately.

FUNCTIONS

The principal functions of the Finance and Administrative Department include:

- Keeping up-to-date financial books and records for the Authority.
- Preparing the financial reports required of the Authority.
- Ensuring that adquate financial controls are installed and used throughout the Authority.
- Ensuring that these controls are periodically reviewed for effectiveness and efficiency.
- Recommending to the Chairman, Board of Directors and Public Companies accounting standards and practices to be used in the Authority and in the Public Companies.
- Planning, acquiring and controlling the working capital and cash needs of the Authority.
- Monitoring the working capital and cash needs of the Public Companies and assisting them in in planning, acquiring and controlling sufficient funds.
- Assisting in negotiations with external funding agencies.

Note: (1) Public Water Companies or Public Sewerage Companies.

FUNCTIONAL DESCRIPTION
- PROGRAMS, PLANNING AND BUDGETING

SECTOR: RESOURCE PLANNING AND CONTROL

DIVISION OF: RESOURCE PLANNING AND CONTROL

OBJECTIVE

The Programs, Planning and Budgeting Department is responsible for preparing master plans and for reviewing the annual budgets of the Public Companies(1)

FUNCTIONS

The principal functions of the programs, Planning and Budgeting Department include:

- Formulating a long-range planning process to be used by the Authority and Public Companies and assisting all units in carrying through the process.
- Reviewing the long-range plans with regard to the performance, investment and financial criteria of the Authority and the resources potentially available and recommending changes to the Chairman and to the Public Companies.
- Establishing a process for annual budgeting to be used by the Authority and the Public Companies.
- Reviewing the annual budgets of the Public Companies in light of long-range plans and the performance, investment and financial criteria specified by the Authority. The recommendations arising from these reviews shall be submitted to the Ministries of Planning and Finance for consideration in establishing the approved budget.

Note:(1) Public Water Companies or Public Sewerage Companies.

FUNCTIONAL DESCRIPTION - MANPOWER PLANNING, PERSONNEL AND TRAINING

SECTOR: RESOURCE PLANNING AND CONTROL

DIVISION OF: RESOURCE PLANNING AND CONTROL

OBJECTIVE

The objective of the Manpower Planning, Personnel and Training Department is to plan, acquire and train the personnel resources required by the Authority and the Public Companies.(1)

FUNCTIONS

The principal functions of the Manpower Planning, Personnel and Training Departments include:

- Preparing an annual national inventory of personnel and personnel needs in the Authority and Public Companies.
- Annually preparing a five-year plan to meet the personnel needs identified in the inventory giving specific attention to training, internal promotion, external recruiting, and the use of domestic and foreign consultants.
- Annually preparing a detailed one-year plan including:
  - The number of people and skills to be recruited.
  - Training programs to be offered.
- Preparing a set of standard job descriptions that can be used by the Authority and Public Companies.

Note: (1) Public Water Companies or Public Sewerage Companies

FUNCTIONAL DESCRIPTION - MANPOWER PLANNING, PERSONNEL AND TRAINING

FUNCTIONS (Cont'd)

- Recommending policies and programs to the Chairman of the Authority and to the Public Companies concerning:
  - . Compensation and incentive systems.
  - . Employee benefit programs.
  - . Work and safety rules.
  - . Promotion and career development.
  - . Standards of proficiency required of personnel in key jobs.
  - . Work standards to be used in developing personnel requests.
  - . Priority to be given to training for each category of personnel.
  - . Use of domestic and foreign consultants.
- Recommending methods of motivating employees to the Authority Chairman and the Public Companies.
- Developing effective channels of communication among:
  - . National Water (Sewerage) Authority.
  - . Public Companies.
  - . Ministry of Manpower and Training.
  - . Ministry of Education.
  - . Training institutions.
  - . Sources of foreign assistance personnel.

Developing and operating effective training progams for the benefit of the Public Companies.

FUNCTIONAL DESCRIPTION - TECHNICAL

SECTOR: TECHNICAL

DIVISION OF: NOT APPLICABLE

OBJECTIVE

The objective of the Technical Sector is to plan and provide technical assistance to the Public Companies.

FUNCTIONS(2)

The principal Sector level functions are to:

- Propose technical standards for the design and operation of treatment plants and distribution (or collection) systems to the Chairman and Board of Directors of the Authority.
- Issue regulations and procedures for the operations of existing facilities by the Public Companies in conformity with the guidelines established by the Board of Directors of the Authority.
- Establish and maintain a technical inspectorate to monitor and advise Public Companies in the construction of new works and operation of existing facilities.
- Establish a national research program to improve the design and operation of water (or sewerage) facilities.
- Supervise the selection of technical consultants required by the Authority and recommend their appointment to the Chairman.
- Ensure that the Authority can provide adequate technical support to the Public Companies.

Notes: (1) Public Water Companies or Public Sewerage Companies.
(2) Other functions of the Sector are described in Exhibits A1.64 and A1.65.

FUNCTIONAL DESCRIPTION
- TECHNICAL SERVICE

SECTOR: TECHNICAL

DIVISION OF: TECHNICAL

OBJECTIVE

The objectives of the Technical Service Department are to formulate technical design standards and operating procedures and assist the Public Companies(1) in applying them.

FUNCTIONS

The principal functions of the Technical Service Department are to:

- Prepare recommendations to the Vice Chairman, Technical concerning:
  - . The research programs to be undertaken by the Authority.
  - . Technical standards for design and operation of facilities to be issued by the Authority.
  - . The level of design assistance to the Public Companies to be offered by the Authority.
- Conduct the research program of the Authority. This program may include work performed by:
  - . The Authority itself.
  - . Universities or other Egyptian agencies.
  - . Foreign experts.
- Communicate the results of research done for the Authority and other relevant research to the Public Companies.
- Assist the Manpower Planning, Personnel and Training Department prepare technical training programs.
- Provide specialized expertise to the Public Companies that cannot be provided by the Public Companies themselves or by the Regional Offices of the Authority.

Note: (1) Public Water Companies or Public Sewerage Companies.

FUNCTIONAL DESCRIPTION
- TECHNICAL INSPECTION

SECTOR: TECHNICAL

DIVISION OF TECHNICAL

OBJECTIVE

The objective of the Technical Inspection Department is to assist the Public Companies(1) meet or exceed national operating standards.

FUNCTIONS

The principal functions of the Technical Inspection Department are to:

- Propose systems and procedures for regular inspection of the facilites and operations of the Public Water Companies to the Vice Chairman, Technical.
- Ensure that the Regional Offices of the Authority conduct inspections in a timely and comprehensive manner.
- Ensure that the Public Companies conform to existing standards. Significant exceptions should be referred to the Vice Chairman, Technical with a recommendation for remedial action.
- Propose revisions in operating standards to the Vice Chairman, Technical.
- Establish and maintain a system of collecting operating information from the Public Companies that is needed by the Authority for national planning research.

Review the technical aspects of the Public Companies plans at the request of the General Manager, Programs, Planning and Budgeting or the General Manager, Manpower Planning, Personnel and Training.

Advise individual Public Companies of ways of improving their operations or solving technical problems when requested by the Public Company or by the Authority's Regional Offices.

Recruit and train inspectorate staff members.

Note: (1) Public Water Companies or Public Sewerage Companies.

FUNCTIONAL DESCRIPTION
- REGIONAL OFFICE

SECTOR: REGIONAL OFFICES

DIVISION OF: NOT APPLICABLE

OBJECTIVE

The objective of the Regional Office is to ensure that the work of the Regional Managers fulfills the objectives and plans set by the Authority's headquarters.

FUNCTIONS(1)

The principal functions of the Regional Office include:

- Coordinating the work of the Regional Managers.
- Preparing regular reports to the Chairman of the Authority outlining the activities and results of the Regional Office.
- Preparing estimates of the resources required to support the work of the Regional Office and submitting them to the Chairman.
- Serving as the secretariat to the Regional Advisory Committee.

Note: (1) Additional functions of the Regional Office are described in Exhibits A1.67 - A1.70.

FUNCTIONAL DESCRIPTION
- REGIONAL FINANCE

SECTOR: REGIONAL OFFICES

DIVISION OF: REGIONAL OFFICE

OBJECTIVE

The objective of the Regional Finance Department is to ensure that the Public Companies(1) of the Region and the Regional Office are properly funded and that their financial affairs are well-controlled.

FUNCTIONS

The principal functions of the Regional Finance Departments include:

- Assisting the Public Companies in planning and budgeting by:
  - Keeping them fully informed of planning and budgeting criteria and procedures used by the Authority.
  - Providing expert assistance in planning and budgeting, especially in the use of the Authority's forms and procedures.
  - Consolidating and commenting upon the Public Companies' budgets before forwarding them to the Authority's headquarters.
- Administering loans, subsidies, and grants to the Public Companies. Activities include:
  - Reviewing and commenting upon all applications for funds.

    Reviewing critically the periodic financial reports of the Public Companies.

    Maintaining up-to-date records on all loans.

    Reporting delayed payments and violation of loan terms to the General Manager, Finance and Administration at Authority headquarters.
  - Periodically verifying that funds provided to the Public Companies are being used as expected.

Note: (1) Public Water Companies or Public Sewerage Companies.

FUNCTIONAL DESCRIPTION
- REGIONAL TECHNICAL SERVICES

SECTOR: REGIONAL OFFICES

DIVISION OF: REGIONAL OFFICE

OBJECTIVE

The Regional Technical Services Departments in each Region is responsible for planning, managing and coordinating the Authority's technical services to the Public Companies.(1)

FUNCTIONS

The principal functions of the Regional Technical Services Department include:

- Assisting the Programs, Budget and Finance Department define the capital requirements of the Public Companies.
- Preparing detailed designs and cost estimates for projects approved by the Authority and the Public Companies.
- When requested by a Public Company, supervising the preparation of tender documents and the selection of contractors and suppliers.
- When requested by a Public Company, supervising construction, including:
  - On-site monitoring of work.
  - Testing of materials.
  - Verification of payment vouchers.
  - Preparation of progress reports.
  - Recommending acceptance of completed work.

Note: (1) Public Water Companies or Public Sewerage Companies.

FUNCTIONAL DESCRIPTION
REGIONAL TECHNICAL SERVICES

FUNCTIONS (Cont'd)

- Providing other forms of assistance to Public Water Companies when requested. Examples include:
  - Purchasing commodities from foreign sources.
  - Making repairs that require a high level of technical expertise.

FUNCTIONAL DESCRIPTION - REGIONAL MANPOWER

SECTOR: REGIONAL OFFICES

DIVISION OF REGIONAL OFFICE

OBJECTIVE

The objective of the Regional Manpower Department is to define the requirements for manpower and training in its Region and to implement programs to meet those requirements.

FUNCTIONS

The principal functions of the Regional Manpower Departments include:

- Preparing and submitting to the General Manager, Manpower Planning, Personnel and Training plans that identify the manpower requirements of the Public Companies(1) in the Region and recommend steps toward meeting the requirements.
- Assisting management of Public Companies draw up and implement recruiting and training plans.
- Operating the Regional Training Center(s).
- Ensuring that personnel and training programs at Public Companies in the Region meet national policies and standards.
- Submitting regular reports concerning regional and Public Company personnel and training programs to the General Manager, Manpower Planning, Personnel and Training.
- Establishing useful relationships with other regional and national training institutions.

Note: (1) Public Water Companies or Public Sewerage Companies.

FUNCTIONAL DESCRIPTION
- REGIONAL TECHNICAL INSPECTION

SECTOR: REGIONAL OFFICES

DIVISION OF: REGIONAL OFFICE

OBJECTIVE

The objective of Regional Technical Inspection Department is to ensure that the Public Companies(1) in the Region meet national standards of operations.

FUNCTIONS

The principal functions of the Regional Technical Inspection Department include:

- Preparation of schedules of inspection of the Public Companies.
- Preparation of instructions to inspectors for use during inspections.
- Analysis of inspection results.
- Preparation of reports and recommendations to the General Manager, Technical Inspection and to appropriate personnel in the Public Companies concerning the results of inspections.
- Reviewing and commenting upon proposed capital investments of Public Companies.
- Upon request, advising the Public Companies on technical problems.
- Operating the regional laboratory.
- Inspecting capital projects undertaken by Public Companies that are not being supervised by the Technical Services Department.
- Cooperating with and assisting personnel of the Ministry of Health whenever any threat to public health appears in the water supply.

Note: (1) Public Water Companies or Public Sewerage Companies.

JOB DESCRIPTIONS

TABLE OF CONTENTS

Exhibit	Title of Manager
	CHAIRMAN'S OFFICE
A2.1	General Manager, Management Services
	ADMINISTRATION SECTOR
A2.2	Vice Chairman, Administration
A2.3	Manager, Administrative Services
A2.4	General Manager, Personnel
A2.5	Manager, Training and Management Development
A2.6	Manager, Compensation
A2.7	Manager, Employee Relations
A2.8	General Supervisor, Organization and Manpower Planning
A2.9	General Manager, Materials Management
A2.10	Manager, Purchasing
A2.11	Manager, Stores
A2.12	Manager, Materials Control
	FINANCE SECTOR
A2.13	Vice Chairman, Finance
A2.14	General Manager, Budget and Cost
A2.15	Manager, Treasury
A2.16	General Supervisor, Central Accounts
A2.17	General Manager, Asset Accounts
A2.18	General Supervisor, Accounts Payable
A2.19	Manager, Data Processing (For utilities that manage their own data processing facilities)

JOB DESCRIPTIONS

TABLE OF CONTENTS

Exhibit	Title of Manager
A2.20	Manager, Data Processing (For utilities that contract the actual processing of data out to others).
A2.21	General Manager, Customer Service (For sewerage utilities only).
	CUSTOMER SERVICE SECTOR
A 2.22	Vice Chairman, Customer Service
A2.23	General Manager, Customer Service Centers
A2.24	Manager, Customer Service (For Suez Canal Region Water Supply).
A2.25	General Supervisor, Customer Service Center
A2.26	Manager, Customer Accounts
A2.27	General Supervisor, Complaints
	OPERATIONS SECTOR
A2.28	Vice Chairman, Operations
A2.29	General Manager, Production
A2.30	Manager, Treatment Plant (Water)
A2.31	General Manager, Distribution
A2.32	General Supervisor, Branch (Water)
A2.33	General Manager, Laboratories
A2.34	General Supervisor, Plant Laboratory
A2.35	General Manager, Western Desert
A2.36	General Manager, Sewage Treatment
A2.37	Manager, Sewage Treatment Plant

JOB DESCRIPTIONS

TABLE OF CONTENTS

Exhibit	Title of Manager
A 2.38	General Manager, Sewage Collection
A2.39	Manager, Branch (Sewerage Networks)
A2.40	General Manager, City Service
A2.41	General Manager, Facilities and Maintenance
A2.42	Manager, Maintenance
A2.43	Manager, Facilities Engineering
A2.44	General Supervisor, Operations Statistics
	TECHNICAL SECTOR
A2.45	Vice Chairman, Technical
A2.46	General Manager, Project Management
A2.47	Manager, Civil Engineering
A2.48	Manager, Mechanical and Electrical Engineering

JOB DESCRIPTION - GENERAL MANAGER, MANAGEMENT SERVICES

REPORTS TO: CHAIRMAN

GRADE: EXECUTIVE

SALARY RANGE: LE 1,320 - 1,920 per annum

BASIC RESPONSIBILITY

The principal responsibilities of the General Manager, Management Services are to:

- Ensure that the Chairman receives high quality and timely staff assistance.
- Ensure that the appropriate quantity and quality of internal auditing is performed.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the General Manager, Management Services are to:

- Recommend decisions, reports, problem areas or opportuntities that require the Chairman's personal attention.
- Supervise the preparation of the Utility's long-range plan (assuming the Chairman appoints him as the Long-Range Planning Manager).
- Review the reports of the various departments of the Utility and request additional information when actual results vary significantly from planned results.
- Report significant infractions or discrepancies found in audits to the Chairman or the Board of Directors.
- Prepare plans and budgets for the Management Services Department that assure improvement and control of its functions.
- Set specific, measurable goals for subordinate managers
- Ensure that the Department operates within its approved budget.

JOB DESCRIPTION -
GENERAL MANAGER, MANAGEMENT SERVICES

MANAGERIAL RESPONSIBILITIES (Cont'd)

- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.

- Contribute to the improvement of the Utility through suggestions, cooperation with other managers and leadership example.

- Personally supervise projects of high importance to the Chairman, Management Committee, or Board of Directors.

- Supervise the following personnel:

  . Manager, Inspection and Audit.

  . Manager, Internal Consulting.

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the General Manager, Management Services include:

- Defining the policies and informational needs of the Chairman, Management Committee and Board of Directors.

- Defining the process and timetable to be used in preparing the long-range plan of the Utility.

- Preparing plans (objectives, scope of work methodology and man-hour estimates) for tasks referred to Management Services.

- Defining and drafting the policies and procedures governing the Audit Department.

- Serving as the secretary to the Management Committee.

- Defining and approving the contents of reports submitted to outside agencies.

JOB DESCRIPTION - GENERAL MANAGER, MANAGEMENT SERVICES

RELATIONSHIPS

The General Manager, Management Services must develop and maintain a close working relationship with the Chairman. He must also be able to work smoothly with the Vice Chairmen. He should maintain contact with personnel responsible for planning in the Governorates in which the Utility operates, and in the Ministries of Housing, Planning, Finance and Irrigation. The General Manager, Management Services should also serve as the representative of the Central Agency for Public Mobilization and Statistics within the Utility.

QUALIFICATIONS

The qualifications of the General Manager, Management Services should include:

- The personal trust and confidence of the Chairman.
- The ability to conceive, organize and supervise project type work.
- The ability to use and analyze numerical data, especially financial data.
- Knowledge of the laws, regulations and theory of auditing.
- A general knowledge of all aspects of the Utility's operations.
- The ability to work cooperatively with managers of other departments.

JOB DESCRIPTION - GENERAL MANAGER, MANAGEMENT SERVICES

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures will significantly affect the General Manager's annual evaluation:

- Timeliness of reports prepared by the Department.
- Usefulness of reports prepared by the Department.
- Percent achievement of the planned audit activities.

JOB DESCRIPTION - VICE CHAIRMAN, ADMINISTRATION

REPORTS TO: CHAIRMAN

GRADE: EXECUTIVE

SALARY RANGE: LE 1,500 - 2,040 per annum

BASIC RESPONSIBILITY

The Vice Chairman, Administration shall ensure that sufficient human and material resources are available to perform all tasks of the Utility.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the Vice Chairman, Administration are to:

- Anticipate the personnel needs of the utility and ensure they are met.

  Anticipate the needs of the Utility for material resources and ensure they are met.

  Determine the appropriate level of inventories to be maintained.

  Develop the potential of people in his Sector so that the present and future needs of the Sector are met.

  Regularly review and act upon the reports submitted by the various departments of the Sector.

  Ensure that the Sector's budget is not exceeded.

  Direct and supervise the following departments:

  Personnel

  Materials Management

  . Administration

  Set specific, measurable goals for subordinate managers

JOB DESCRIPTION - VICE CHAIRMAN, ADMINISTRATION

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the Vice Chairman, Administration are:

- To provide advice to the Board of Directors concerning matters of personnel, stores, purchasing, security and communications.
- To supervise the development of a long-term personnel plan and to ensure steps are taken to meet the plan.
- To establish policies regarding the:
  - Hiring, training, promotion, transfer and discipline of employees.
  - Level and location of stores.
  - Security procedures to be used in the Utility.
  - Use and maintenance of vehicles.
  - Acquisition and use of communication equipment.
- To review and amend the Sector's annual budget request.
- To establish and chair the Personnel Committee.

RELATIONSHIPS

The Vice Chairman, Administration shall:

- Serve on the Management Committee.
- Maintain personal relationships with the Ministry of Manpower and Training Institutes.
- Serve as the Chairman of the Personnel Committee.

QUALIFICATIONS

The qualifications of a potential Vice Chairman, Administration should include:

- An in-depth knowledge of either materials management or personnel.
- The ability to formulate and justify long-range plans.

JOB DESCRIPTION -
VICE PRESIDENT, ADMINISTRATION

QUALIFICATIONS (Cont'd)

- At least five years of managerial experience.
- Demonstrated capability to evaluate and develop people.
- Outstanding performance in his present job.

MEASURES OF PERFORMANCE

Achievement of the goals set for the following measures will affect the Vice Chairman's annual evaluation:

- Percent of materials requisitions filled when submitted
- Compliance with maximum budget guidelines for value of inventory
- Percent of open positions filled during the year
- Number of man hours involved in training
- Compliance with budgeted costs of running the Sector

JOB DESCRIPTION - MANAGER, ADMINISTRATIVE SERVICES

REPORTS TO:	VICE CHAIRMAN, ADMINISTRATION
GRADE:	ONE
SALARY RANGE:	LE 960 - 1,680 per annum

BASIC RESPONSIBILITY

The Manager, Administrative Services, shall supervise support services for the Utility including security, secretariat, communications, transportation and other assigned by the Chairman.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the Manager, Administrative Services are to:

- Supervise the heads of the following departments:
  - . Security
  - . Secretariat
  - . Internal Service (which include services such as janitorial service, printing and transportation).
- Recommend policies for the use of:
  - . Communications equipment.
  - . Transportation equipment.
  - . Secretarial pool.
  - . Records of the Utility.
  - . Security.
- Allocate and monitor the usage of transporation equipment to ensure that it is used efficiently and effectively.

JOB DESCRIPTION-
MANAGER, ADMINISTRATIVE SERVICES

MANAGERIAL RESPONSIBILITIES (Cont'd)

- Prepare plans and budgets for the Department that assure improvement and control of its functions.
- Ensure that the Department operates within its approved budget.
- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain, or dismiss personnel who are not performing up to standard.
- Regularly review and act upon managerial reports.
- Contribute to the improvement of the Utility through suggestions, cooperation with other managers and leadership example.

TECHNICAL RESPONSIBILITIES

- Prepare plans to ensure the security of the utility from:
  - Natural disaster.
  - Fire.
  - Sabotage.
- Establish effective communications systems that permit:
  - Customers to contact the utility in case of emergency.
  - Coordination of work units within the Utility.
- Prepare requests for additional transportation equipment when required.
- Establish and manage an effective record system for the Utility.

RELATIONSHIPS

The principal contacts of the Manager, Administration Services outside of the Utility are the telephone company, the local police and printing companies. His range of contacts within the Utility includes all department heads.

JOB DESCRIPTION - MANAGER, ADMINISTRATIVE SERVICES

QUALIFICATIONS

The qualifications of a potential Manager, Administrative Services should include:

- Demonstrated ability to deal gracefully with requests of other Managers.
- Ability to supervise diverse functions simultaneously.
- Ability to organize and set priorities on his own work while ensuring response to all requests.
- Ability to manage many small tasks and keep track of them.
- Sense of urgency.

MEASURES OF PERFORMANCE

Achievement of the goals set for the following measures will affect the Manager's annual evaluation:

- Number of complaints from other managers.
- Security breaches.
- Average time from submission of a letter to the typing pool until returned to writer.
- Cleanliness of facilities.

JOB DESCRIPTION - GENERAL MANAGER, PERSONNEL

REPORTS TO:	VICE CHAIRMAN, ADMINISTRATION
GRADE:	GENERAL MANAGER
SALARY RANGE:	LE 1,320 per annum

BASIC RESPONSIBILITY

The General Manager, Personnel shall be responsible for providing all services necessary for the most effective management of the Utility's human resources and for the proper application of all laws regulations and instructions governing the relation of the Utility with its personnel.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the General Manager, Personnel are to:

- Develop and oversee application of policies for:
  - Employment of all needed personnel.
  - Training and development of personnel.
  - Retaining and motivating personnel.
  - The most effective management of personnel.
- Prepare plans and budgets for the Department that assure continued improvement and proper execution of its responsibilities.
- Ensure that the Department operates within the approved budget.
- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.
- Set specific, measurable goals for subordinate managers.

JOB DESCRIPTION - GENERAL MANAGER, PERSONNEL

MANAGERIAL RESPONSIBILITIES (Cont'd)

- Regularly review and act upon managerial reports.
- Contribute to the improvement of the Sector through suggestions, cooperation with other managers, leadership example, and the continual upgrading and development of the Department and the services it provides.

TECHNICAL RESPONSIBILITIES

The General Manager, Personnel will:

Assure the proper design of all procedures, documents, and records for use by the Department and other managers in the effective utilization and management of the Utility's human resources.

Ensure that these procedures, documents and records are followed.

Participate in all major personnel decisions and ensure that all personnel decisions and actions are consistent with the best management of human resources Provide counsel and advice to management in all areas of general personnel and ensure that his subordinate managers do the same in their respective functional areas.

Ensure compliance with all personnel laws and regulations.

Assure the development and execution of all department personnel plans and the Utility-wide manpower plan, the proper training and full development of all Utility human resources, the development of systems and procedures for the proper discipline, motivation and direction of personnel, and that all needed services are provided to all personnel.

RELATIONSHIPS

The General Manager, Personnel works closely with all members of management and the leadership of the employee syndicate.

JOB DESCRIPTION - GENERAL MANAGER, PERSONNEL

QUALIFICATIONS

Qualifications of the General Manager, Personnel should include:

A complete understanding of all Egyptian labor law and its application to the Utility.

A general technical competence in the disciplines of personnel and human resources management.

Demonstrated ability to motivate and develop personnel.

The ability to provide effective counsel and make good judgements in sensitive personnel issues.

Demonstrated ability and determination to improve continually the management of the Utility's human resources.

MEASURES OF PERFORMANCE

Achievement of the goals set for the following measures will affect the General Manager's annual evaluation:

Timeliness of all personnel management reports

The absence of any violations of the relevant labor laws

Number of persons in the Department qualified for promotion

Development of the skills and systems needed in the Department.

Continued improvement in the Utility's human resource management problems.

JOB DESCRIPTION - MANAGER, TRAINING AND MANAGEMENT DEVELOPMENT

REPORTS TO:	GENERAL MANAGER, PERSONNEL
GRADE:	MANAGER
SALARY RANGE	LE 960 - 1,680 per annum

BASIC RESPONSIBILITY

The Manager, Training and Management Development is responsible for planning, executing and directing all programs and activities for the training and development of appropriate job skills for all utility personnel.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the Manager, Training and Management Development are to:

- Determine the training needs of the Utility.
- Assure the proper design and execution of effective training and management development programs.
- Represent the Utility within the management of the Central Training Center to assure that the Center's programs meet the Utility needs as fully as possible.
- Prepare plans and budgets for the Department that assure provision of needed training and development activities and programs.
- Ensure that the Department operates within the approved budget.
- Develop the potential of personnel reporting to him and motivate retrain or dismiss personnel who are not performing up to standard.
- Set specific, measurable goals for subordinates.
- Contribute to the improvement of the entire human resources management function, particularly the training and development portion of the function.

JOB DESCRIPTION - MANAGER, TRAINING AND MANAGEMENT DEVELOPMENT

TECHNICAL RESPONSIBILITIES

The Manager, Training and Management Development will:

Develop the detailed plans necessary for meeting the training requirements of the Utility.

Provide the training expertise needed by the various operating departments to fulfill their training and development needs.

Design and coordinate programs to assure active use of transfers and promotions in developing the skills of potential higher level managers.

RELATIONSHIPS

The Manager, Training and Management Development works closely with the other members of the management in the Personnel Sector. He also works closely with the managers of the various departments in planning and fulfilling the training needs of their departments.

QUALIFICATIONS

Qualifications of the Manager, Training and Management Development should include:

- A thorough understanding of the pyschological, sociological and practical principles of training and developing personnel.
- A good knowledge of the various types of training and the effectiveness and application of each,
- Good skills in the planning and execution of projects to develop and administer high quality, effective training programs.
- Outstanding communications skills, both verbal and written.

JOB DESCRIPTION
MANAGER, TRAINING AND MANAGEMENT DEVELOPMENT

MEASURES OF PERFORMANCE

Achievement of the goals set for the following measures will affect the Manager's annual evaluation:

- Execution of effective training programs on a timely basis.

  Achievement of the various segments of the annual training plan.

  The number of developmental tranfers and promotions executed each year.

  Operation within the Department budget.

JOB DESCRIPTION - MANAGER, COMPENSATION

REPORTS TO:	GENERAL MANAGER, PERSONNEL
GRADE:	MANAGER
SALARY RANGE:	LE 960 - 1,680 oer annum

BASIC RESPONSIBILITY

The Manager, Compensation is responsible for the design, execution and management of compensation programs which will help attract, motivate and retain personnel and the management of the time reporting and payroll systems.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the Manager, Compensation, are to:

- Manage the time reporting and payroll systems and personnel.

  Prepare plans and budgets for the Department to assure proper execution of department responsibilities.

  Ensure that the Department operates within that budget.

  Develop the potential of personnel reporting to him and retain or dismiss personnel not performing up to standard.

  Set specific, measurable goals for subordinates.

  Contribute to the improvement of the Personnel Sector in general and the compensation functions in particular.

JOB DESCRIPTION - MANAGER, COMPENSATION

TECHNICAL RESPONSIBILITIES

The Manager, Compensation will:

- Evaluate the needs for improvements in the various aspects of the Utility's compensation programs.

  Design and implement compensation plans that attract, motivate and retain effective personnel.

  Supervise the design of employee benefit programs that draw upon the full allowances provided by government personnel laws and regulations.

  Develop and administer a system for awarding productivity bonuses.

  Develop a time reporting system that permits proper compensation to personnel and provides information needed to control the tasks of the Utility.

  Assure the timely preparation of payrolls, related accounting books and reports.

RELATIONSHIPS

The Manager, Compensation works closely with all memebers of the management group of the Personnel Department. He has periodic contact with members of management and supervision in all departments. He also works closely with appropriate accounting personnel.

QUALIFICATIONS

Qualifications of the Manager, Compensation should include:

- A complete understanding of all aspects of Egyptian labor law relating to compensation.

- An understanding of the psychological and practical principles related to personnel motivation.

- A thorough knowledge of the various methods of compensating and motivating personnel and the ability to apply these creatively to solve problems of motivating and reatining personnel

JOB DESCRIPTION - MANAGER, COMPENSATION

QUALIFICATIONS (Cont'd)

- A good facility with mathematics.
- A strong concern for accuracy and thoroughness.
- A demonstrated ability to direct, motivate and develop personnel.

MEASURES OF PERFORMANCE

Achievement of the goals set for the following measures will affect the Manager's annual evaluation:

Timely preparation of all payrolls

Timely preparation of accounting books and related reports

Measured improvements in the productivity and retention of personnel which could be attibutable to improved compensation programs

Development of the skills and systems needed in the Department

JOB DESCRIPTION - MANAGER, EMPLOYEE RELATIONS

REPORTS TO:	GENERAL MANAGER, PERSONNEL
GRADE:	MANAGER
SALARY RANGE:	LE 960 - 1,680 per annum

BASIC RESPONSIBILITY

The Manager, Employee Relations is responsible for the management of effective programs for the selection, placement and the evaluation of performance of personnel in addition to managing the personnel files and benefits plans and programs.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the Manager, Employee Relations are to:

- Develop and direct programs to recruit, select and employ appropriately qualified personnel to meet the Utility's needs.
- Assure that the Utility's benefits programs effectively meet the employees and workers needs and that the plans are efficiently administered.
- Develop and oversee a safety program.
- Prepare the plans and budgets that assure proper execution of Department responsibilities.
- Ensure that the Department operates within the approved budget.
- Develop the potential of personnel reporting to him and motivate, retain or dismiss personnel who are not performing up to standard.
- Set specific measurable goals for subordinates.
- Contribute to the improvement of the Personnel Department in general and employee relations function in particular.

JOB DESCRIPTION - MANAGER, EMPLOYEE RELATIONS

TECHNICAL RESPONSIBILITIES

The Manager, Employee Relations will:

- Review and approve all promotions, transfers and separations.
- Assure that a proper response is made to all requests for transfer or leaves longer than two weeks, and that all separations are reviewed and properly classified.
- Direct the maintenance of an up-to-date personnel master file for each member of the Utility.
- Develop and administer effective performance evaluation program and make sure that Managers and Supervisors have had proper training in the use of the program and that they administer it consistently and effectively.
- Oversee preparation of a monthly personnel transaction report.

RELATIONSHIPS

The Manager, Employee Relations works closely with all members of management, many members of supervision and leadership of the employee syndicate.

QUALIFICATIONS

Qualifications of the Manager, Employee Relations should include:

- A complete understanding of all Egyptian labor law and its application to the Utility.
- Technical competence in the disciplines of personnel and human resources management.
- Demonstrated ability to direct, motivate and develop personnel.
- Very good interpersonal skills.
- Appreciation for employee and worker problems and concerns and the ability to gain the trust and confidence of the work force.

MEASURES OF PERFORMANCE

Achievement of the goals set for the following measures will affect the Manager, Employee Relations annual evaluation:

- Timely placement of qualified personnel in approved job vacancies through effective recruitment selection, transfers and promotions.

- Implementation and maintenance of effective programs for performance evaluation and counselling, discipline and employee grievance processing. (After effective discipline and employee grievance processing programs are in place, the position should be measured on a progressive decline in the number of employee discipline and employee grievance cases.)

JOB DESCRIPTION - GENERAL SUPERVISOR, ORGANIZATION AND MANPOWER PLANNING

REPORTS TO:	GENERAL MANAGER, PERSONNEL
GRADE:	GENERAL SUPERVISOR
SALARY RANGE:	LE 660 - 1,500 per annum

BASIC RESPONSIBILITY

The General Supervisor, Organization and Manpower Planning is responsible for determining the future personnel requirements of the Utility and developing plans and appropriate organization structures to meet those requirements.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the General Supervisor, Organization and Manpower Planning are to:

Direct the evaluation of the manpower requirements of the Utility and development of five-year and one-year Manpower Plans.

Prepare plans and budgets for the Department that assure proper execution of its responsibilities.

Ensure that the Department operates within the approved budget.

Develop the potential of personnel reporting to him and motivate, retain or dismiss personnel who are not performing up to standard.

Contribute to the improvement of the Personnel Department in general and the organization and manpower planning group in particular.

JOB DESCRIPTION - GENERAL SUPERVISOR, ORGANIZATION AND MANPOWER PLANNING

TECHNICAL RESPONSIBILITIES

The General Supervisor, Organization and Manpower Planning will:

- Coordinate the development of Part 1 of the budget to assure proper execution of the Manpower Plan.
- Assure that each department within the Utility has an organization structure and staffing plan which will help it effectively meet its responsibilities.
- Assure that all functional and job descriptions in the Utility are kept up-to-date.
- Review and approve all requests for replacement or addition of personnel

RELATIONSHIPS

The General Supervisor, Organization and Manpower Planning works closely with managers periodically. He also works very closely with the management of departments undergoing revision of organization structure.

QUALIFICATIONS

Qualifications of the General Supervisor, Organization and Manpower Planning should include:

- Demonstrated skills in data gathering, analysis, creative problem solving and planning.

  A thorough understanding of the principles of organization, motivation and management of human resources.

  Demonstrated ability to direct, motivate and develop personnel, both in an on-going departmental group and a project team basis.

JOB DESCRIPTION - GENERAL SUPERVISOR, ORGANIZATION AND MANPOWER PLANNING

MEASURES OF PERFORMANCE

Achievement of the goals set for the following measures will affect the General Supervisor's annual evaluation:

- The timely development of effective Manpower Plans and Part 1 of the budget.
- Maintenance of up-to-date functional and job descriptions.

JOB DESCRIPTION - GENERAL MANAGER, MATERIALS MANAGEMENT

REPORTS TO:	VICE CHAIRMAN, ADMINISTRATION
GRADE:	EXECUTIVE
SALARY:	LE 1,320 - 1,920 per annum

BASIC RESPONSIBILITY

The General Manager, Materials Management shall provide effective management for the planning, acquisition, inventory, storage and issuance of materials.

MANAGERIAL FUNCTIONS

The General Manager, Materials Management shall:

Develop realistic schedules which permit economical and efficient materials acquisition.

Be responsible for the development of materials requirements, economic order quantities, schedules of material delivery date requirements, and maintain a price-quality relationship consistent with budgetary requirements.

Develop realistic materials budgets for operations and networks.

Develop proper control of inventories to obtain turnover in accordance with planned objectives.

Develop the potential of personnel reporting to him. Motivate, train or dismiss personnel not performing up to requirements.

Supervise the managers of:

- Purchasing.
- Stores.
- Materials Control.

Set specific, measurable goals for subordinate managers.

JOB DESCRIPTION - GENERAL MANAGER, MATERIALS MANAGEMENT

TECHNICAL RESPONSIBILITIES

The General Manager, Materials Management shall:

- Supervise the establishment of realistic, attainable schedules after reviewing the needs of operations and other functions.
- Supervise the acquisition of all materials required by operations and other functions.
- Supervise the management responsibilities for materials:
  - Handling.
  - Warehousing.
  - Disposal.
  - Accounting.
  - Budgets.
  - Fiscal and financial requirements.

RELATIONSHIPS

The General Manager, Materials Management shall:

- Maintain close contact with Managers of Production, Distribution and Project Management.
- Work with General Managers, Materials Management of other utilities to maintain up-to-date transfer of information.
- Be prepared to provide aid and information to top management.

QUALIFICATIONS

The qualifications of the General Manager, Materials Management should include:

- A thorough knowledge of and experience in Materials Management.
- Experience in managing and developing people.
- An ability to develop and improve Materials Management concepts and techniques.
- The capability to develop and implement improved systems and procedures.

JOB DESCRIPTION - GENERAL MANAGER, MATERIALS MANAGEMENT

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures shall affect the General Manager's annual evaluation:

- Attainment of planned schedules for material acquisition and delivery
- Maintenance of a price-quality relationship consistent with budgeting requirements
- Minimization of critical stockouts
- Timeliness of departmental budgets and reports
- Development of departmental personnel

JOB DESCRIPTION - MANAGER, PURCHASING

REPORTS TO:	GENERAL MANAGER, MATERIALS MANAGEMENT
GRADE:	ONE
SALARY RANGE:	LE 960 - 1,680 per annum

BASIC RESPONSIBILITY

The Manager, Purchasing shall be responsible for procuring economically and in due time the supplies, equipment and service required by the Utility.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the Manager, Purchasing are to:

- Supervise the work of the purchasing agents and supporting staff.
- Recommend changes in purchasing policies and procedures to improve the effectiveness and efficiency of the Department.
- Ensure that purchasing laws, regulations and procedures are followed by the Utility.
- Prepare plans and budgets for the Purchasing Department that assure improvement and control of its functions.
- Ensure that the Department operates within its approved budget.
- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.
- Regularly review and act upon managerial reports.
- Contribute to the improvement of the Utility through suggestions, cooperation with other managers and leadership example.

JOB DESCRIPTION - MANAGER, PURCHASING

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the Manager, Purchasing are to:

- Search for alternative and more economical sources of commodities and services.
- Maintain a log showing the status of each purchase request.
- Personally review all requests for bids with a potential value greater than LE 5,000.
- Personally conduct negotiations for tenders with a value exceeding LE 10,000.
- Arrange for inspection of foreign-produced goods before they are shipped.
- Appoint inspection committees for goods received.
- Personally follow-up on items on the critical stock-out list.
- Prepare annual estimates (during the budget development process) of future prices of commodities and services purchased by the Utility.
- Develop procedures and work standards to increase the efficiency of the Purchasing Department.
- Ensure that proper accounts are kept of purchasing expenses.
- Prepare reports required by management.
- Decide which purchasing procedures should be used.

JOB DESCRIPTION - MANAGER, PURCHASING

RELATIONSHIPS

The Manager, Purchasing shall maintain a close working relationship with the Manager, Materials Control. He shall also maintain personal contact with:

- Major suppliers to the Utility.
- Purchasing managers at other large utilities in Egypt.

QUALIFICATIONS

The qualifications of a potential Manager, Purchasing shall include:

Knowledge of laws, regulations and procedures governing purchasing by General Organizations.

Outstanding performance as a purchasing agent.

Ability to decide which orders should be expedited and which should follow normal procedures.

Ability to negotiate effectively with major suppliers.

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures will affect the annual evaluation of the Manager, Purchasing:

- Actual prices of principal commodities and services as a percent of forecasted prices.
- Average time between preparation of purchase requisitions and receipt of goods.
- Number of items returned to suppliers because they did not meet specifications.

JOB DESCRIPTION
MANAGER, STORES

REPORTS TO:	GENERAL MANAGER, MATERIALS MANAGEMENT
GRADE:	ONE
SALARY RANGE:	LE 960 - 1,680 per annum

BASIC RESPONSIBILITY

The Manager, Stores shall be responsible for receiving, safeguarding and issuing supplies, commodities, spare parts, loose tools and uninstalled equipment of the Utility.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the Manager, Stores are to:

- Supervise the store managers
- Ensure that actual inventory levels do not exceed planned levels.
- Recommend policies concerning:
  - Authorization of requisitions.
  - Reporting of chemical usage.
  - Hours of store operation.
  - Identification and disposal of obsolete inventory.
  - Transfers between stores.
  - Establishment of reorder points, safety stock and economic order quantities.
- Assign personnel to the various stores based on the workload.
- Ensure that policies and procedures for receipt and disbursement of goods are followed.

JOB DESCRIPTION -
MANAGER, STORES

MANAGERIAL RESPONSIBILITIES (Cont'd.)

- Periodically inspect stores personally to ensure that:

  . Stores are kept clean and orderly.

  . Record-keeping procedures are followed.

  . All items are properly safeguarded and protected from weather.

  . Obsolete items are sold or discarded.

- Prepare plans and budgets for the Stores Department that assure improvement and control of its functions.

- Ensure that the Department operates within its approved budget.

- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.

- Regularly review and act upon managerial reports.

- Contribute to the improvement of the Materials Management Department through suggestions, cooperation with other managers and leadership example.

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the Manager, Stores include:

Preparing plans to ensure that goods can be safely stored.

Preparing procedures governing warehouse operations.

Assisting operating managers and the Materials Control Department determine appropriate levels of inventory.

Participating on receiving and bid review committees.

Preparing reports for higher management.

Assisting the Audit Department conduct the annual inventory.

JOB DESCRIPTION
MANAGER, STORES

RELATIONSHIPS

The Manager, Stores should establish a close working relationship with the Manager, Materials Control.

QUALIFICATIONS

The qualifications of a potential Manager, Stores should include:

Knowledge of good storekeeping practices.

Ability, knowledge and experience to develop policies and procedures for stores operations.

Demonstrated managerial ability

Experience as a storekeeper.

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures will affect the Manager's annual evaluation:

- Shortages found during the annual inventory.
- Losses due to exposure or theft.
- Stock-outs due to lack of timely notice to Materials Control.
- Actual levels of inventories.

JOB DESCRIPTION - MANAGER, MATERIALS CONTROL

REPORTS TO:	GENERAL MANAGER, MATERIALS MANAGEMENT
GRADE:	ONE
SALARY RANGE:	LE 960 - 1,680 per annum

BASIC RESPONSIBILITY

The Manager, Materials Control shall be responsible for ensuring financial and locational control over all items held in the stores.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the Manager. Materials Control are to:

Ensure that the budgeted expenditures for inventories are not exceeded.

Ensure that adequate quantities of critical and strategic items are always on hand.

Search for opportunities to reduce the cost of inventories while still meeting service goals.

Prepare plans and budgets for the Materials Control Department that assure improvement and control of its functions.

Ensure that the Department operates within its approved budget.

Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.

Regularly review and act upon managerial reports.

Contribute to the improvement of the Materials Management Department through suggestions, cooperation with other managers and leadership example.

JOB DESCRIPTION -
MANAGER, MATERIALS CONTROL

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the Manager, Materials Accounting include:

- Developing and implementing procedures and forms for receiving and issuing items from stores.
- Setting reorder points and quantities (after consultation with the Manager, Stores and appropriate technical personnel).
- Preparing Purchase Requisitions.
- Supervising the updating of the:
  - . Commodities Purchases Journals.
  - . Commodities Usage Journal.
  - . Value of Inventory Items Ledger
  - . Inventories by Store Analysis book
  - . Commodities Usage by Responsibility Center Analysis book
  - . Commodities Usage by Job Analysis book
- Preparing Purchase Requisitions.
- Supervising preparation of monthly reports.
- Supervising preparation of Accounting Entry statements and the monthly Trial Balance.
- Initiating and cooperating in the annual inventory of stores.

RELATIONSHIPS

The Manager, Materials Accounting must maintain working relationships with the personnel in the various stores, with Purchasing, and with the Manager, Budget and Cost.

JOB DESCRIPTION -
MANAGER, MATERIALS CONTROL

QUALIFICATIONS

The qualifications of a potential Manager, Materials Control should include:

- A thorough knowledge of the Egyptian Standard Accounting System.
- A working knowledge of the rules and regulations governing purchase, storage and use of inventories.
- The ability to manage and develop a small group of people.
- A persistant concern for accuracy.

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures will affect the Manager's annual evaluation:

Number of critical stockouts

Percent of requisitions filled when presented.

Number of errors found during the annual inventory that could be attributed to Materials Control

Delay in completing monthly postings, reports and the Trial Balance

Number of people in the Department who are qualified for promotion (as determined by the General Manager, Materials Management)

JOB DESCRIPTION - VICE CHAIRMAN, FINANCE

REPORTS TO:	CHAIRMAN
GRADE:	EXECUTIVE
SALARY RANGE:	LE 1,500 - 2,040 per annum

BASIC RESPONSIBILITY

The Vice Chairman, Finance shall ensure that adequate financial resources, controls and information are available to fulfill the responsibilities of the Utility.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the Vice Chairman, Finance are to:

Anticipate the financial needs of the Utility and plan for the acquisition of funds to meet them.

Monitor actual revenues and expenses to see that they meet the plan and take remedial action when they do not.

Ensure that the funds of the Utility are expended wisely and are correctly accounted.

Develop policies for the accounting and control of funds within the Utility.

Regularly review and act upon the managerial reports submitted by departments of the sector.

Develop the potential of the personnel in his Sector so that the Utility is assured of an adequate supply of qualified personnel to meet future changes.

Set specific, measurable goals for subordinate managers.

JOB DESCRIPTION-
VICE CHAIRMAN, FINANCE

MANAGERIAL RESPONSIBILITIES (Cont'd)

- Direct and supervise the personnel reporting to him. These include:

  . Manager, Data Processing.

  . Manager, Budget and Cost.

  . General Supervisor, Central Accounts.

  . Manager, Treasury.

  . Manager, Asset Accounts.

  . General Supervisor, Accounts Payable.

  Ensure that accounting groups in other parts of the Utility (Materials Control, Payroll Accounting and Customer Accounts) follow approved accounting policies and procedures.

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the Vice Chairman, Finance are:

- Preparing a long-range financial plan that takes adequate account of the future needs and resources of the Utility.

- Supervising the preparation of an annual budget that anticipates market demand, revenues and costs.

- Ensuring that the financial and administrative controls of the Utility adequately account for the acquisition and use of resources and deter misuse.

- Ensuring that adequate and accurate reports of the Utility's financial position are prepared and distributed to management and the public.

  Assisting in negotiations with bankers, funding agencies and other sources of capital.

  Personally approving all expenditures exceeding LE 2,000.

  Maintaining an up-to-date knowledge of accounting rules and methodologies.

  Recommending changes in the tariff structure of the Utility when necessary or desirable.

JOB DESCRIPTION - VICE CHAIRMAN, FINANCE

RELATIONSHIPS

The Vice Chairman, Finance shall:

- Serve on the Management Committee.
- Maintain close contact with the other vice chairmen so as to communicate and understand the financial needs of the Utility.
- Maintain close contact with appropriate personnel in the Ministries of Finance, Housing and Planning.
- Serve as the executive in charge of outside auditors.

QUALIFICATIONS

The qualifications of a potential Vice Chairman, Finance should include:

- A college degree in accounting or equivalent work experience.
- A thorough knowledge of the Egyptian Standard Accounting System.
- A thorough knowledge of the regulations governing accounting, purchasing, financing, auditing and expenditure control systems and procedures.
- The ability to conceive and perform detailed analyses of financial information.
- At least five years of supervisory experience, preferably in water utility accounting and finance.
- A demonstrated capability to develop people.
- An outstanding performance in his present job.

MEASURES OF PERFORMANCE

Achievement of the goals set for the following measures will affect the Vice Chairman's annual evaluation:

- Completion of the budget on time
- Percent deviation of Utility's total income and expense from the budget
- Number of prosecutions for misuse of resources (the fewer the better)
- Manpower utilization throughout the Sector

JOB DESCRIPTION - GENERAL MANAGER, BUDGET AND COST

REPORTS TO:	VICE CHAIRMAN, FINANCE
GRADE:	ONE
SALARY RANGE:	LE 1,320 - 1,920 per annum

BASIC RESPONSIBILITY

The General Manager, Budget and Cost is responsible for helping managers of the Utility reduce or contain costs.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the General Manager, Budget and Cost are to:

- Determine and supply the Utility's needs for cost accounting information.
- Prepare plans and budgets for the Budget and Cost Department that assure improvement and control of its functions.
- Ensure that the Department operates within its approved budget.
- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.
- Regularly review and act upon managerial reports.
- Contribute to the improvement of the Financial Sector through suggestions, cooperation with other managers and leadership example.

JOB DESCRIPTION - GENERAL MANAGER, BUDGET AND COST

TECHNICAL RESPONSIBILITIES

- With the agreement of the Chairman, determines which departments and groups will prepare and be measured against budget estimates.

  Establishes the procedures to be used in developing the budget estimates.

  Reviews all budget proposals and requests additional justification if necessary.

  Supervises the analysis of the Utility budget and prepares it for submission to the Management Committee, Board of Directors and State Government offices.

  Supervises the monthly preparation and distribution of Budget versus Actual Costs, Budget versus Actual Revenues and Job Analysis statements.

  Supervises the preparation of other cost and revenue analyses as required by management.

  Conducts seminars and inspections and prepares questions regarding cost statements to develop the cost consciousness of managers.

RELATIONSHIPS

The General Manager, Budget and Cost must maintain a working relationship with the heads of all major departments of the Utility.

QUALIFICATIONS

The qualifications of a potential General Manager, Budget and Cost should include:

- A thorough knowledge of the Egyptian Standard Accounting Systems.
- The ability to gather and analyze data in order to produce realistic budgets and cost statements.
- The ability to analyze financial and operating data so as to determine opportunities for cost savings.
- A basic knowledge of water (or sewage) treatment and distribution (collection) equipment, procedures and methods.

JOB DESCRIPTION - GENERAL MANAGER, BUDGET AND COST

QUALIFICATIONS (Cont'd)

- The ability to write clear instructions and develop good forms.
- Demonstrated ability to manage and develop people.
- Demonstrated ability to work cooperatively with other managers.

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures will affect the General Manager's annual evaluation:

- Utility's cost per cubic meter of water produced
- Actual results compared to budgeted results (for the whole Utility and for the Cost and Budget Department)
- Timeliness of reports
- Number of cost reduction proposals submitted and accepted:
  - By the General Manager, Budget and Cost
  - By other managers
- Number of people in his department who are qualified for promotion (as determined by the Vice Chairman, Finance)

JOB DESCRIPTION - MANAGER, TREASURY(1)

REPORTS TO:	VICE CHAIRMAN, FINANCE
GRADE:	ONE
SALARY RANGE:	LE 960 - 1,680 per annum

BASIC RESPONSIBILITY

The Manager, Treasury supervises the receipt and disbursement of the Utility's funds.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the Manager, Treasury are to:

- Initiate and implement policies for:
  - . Maintenance of minimum balances.
  - . Frequency of deposits.
  - . Use of petty cash.
- Prepare plans and budgets for the Treasury Department that assure improvement and control of its functions.
- Ensure that the Department operates within its approved budget.
- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.
- Regularly review and act upon managerial reports.
- Contribute to the improvement of the Financial Sector through suggestions, cooperation with other managers and leadership example.

Note:(1) In smaller utilities the title is General Supervisor, Treasury. The responsibilities remain the same.

MANAGERIAL RESPONSIBILITIES (Cont'd)

- Supervise the following personnel:
  - . General Supervisor, Cashiers.
  - . General Supervisor, Payments Accounting.
  - . General Supervisor, Receipts Accounting.

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the Manager, Treasury are to:

- Develop and implement procedures for:
  - . Receiving cash.
  - . Receiving checks.
  - . Disbursing checks and cash.
  - . Depositing checks and cash.
  - . Maintaining accounting books.
- Supervise the maintenance of the
  - . Cash Receipts Journal.
  - . Non-cash Receipts Journal.
  - . Cash Payments Journal.
  - . Bank Payments Journal.
  - . Services Ledger.
  - . Long term Loans Ledger.
  - . Bidders Deposits Ledger.
  - . Services by Responsibility Center Analysis Book.
- Prepare a monthly projection of cash flows.
- Select the banks to be used for Utility funds and manage the relationship between them and the Utility.
- Advise top management on monetary matters.
- Arrange transfers of Government loans and subsidies as required.

TECHNICAL RESPONSIBILITIES (Con.'d)

- Ensure that interest and principal on loans are paid on time.
- Prepare annual budget estimates for the expenses of the Department.
- Prepare estimates of cash flows and debt service requirements for the long-range plan and the annual budget.

RELATIONSHIPS

The Manager, Treasury will:

- Have principal responsibility for maintaining the Utility's banking relationships.
- Maintain contact with the personnel in the Ministry of Finance responsible for disbursing funds.

QUALIFICATIONS

The potential Manager, Treasury should have:

- A thorough understanding of government rules and procedures for handling money.
- A general understanding of utility accounting procedures.
- The ability to analyze and project cash flows.
- The ability to negotiate with bankers and other suppliers of capital.
- Demonstrated ability to manage and develop personnel.
- A working knowledge of English.

MEASURES OF PERFORMANCE

Achievement of the goals set for the following measures will affect the Manager's annual evaluation:

- Number of days in which bank balances are below the planned minimum
- Amount of cash for which an adequate accounting cannot be made
- Timeliness of Trial Balance and other reports
- Number of personnel at Grades Two and Three in the Department who are qualified for promotion (determined by the Chairman, Finance)

JOB DESCRIPTION - GENERAL SUPERVISOR, CENTRAL ACCOUNTS(1)

REPORTS TO:	VICE CHAIRMAN, FINANCE
GRADE:	TWO
SALARY RANGE:	LE 660 - 1,500 per annum

BASIC RESPONSIBILITY

The General Supervisor, Central Accounts shall supervise the maintenance of the General Journal and the General Ledger and direct the preparation of the financial statements of the Utility.

MANAGERIAL RESPONSIBILITIES

The General Supervisor, Central Accounts shall:

- Contribute to the improvement of the Financial Sector through suggestions, cooperation with other managers and leadership example.
- Develop the potential of personnel reporting to him. Motivate, retrain, or dismiss personnel in the Central Accounts Department who are not performing up to standard.
- Prepare plans and budgets for the Central Accounts Department that assure improvement and control of the Department's functions.

Note: (1) In a large utility, the title of Manager (Grade One, Salary Range LE 960 - 1,600 per annum) may be used.

JOB DESCRIPTION - GENERAL SUPERVISOR, CENTRAL ACCOUNTS(1)

TECHNICAL RESPONSIBILITIES

The General Supervisor, Central Accounts shall:

- Supervise the preparation of all financial statements of the Utility.
- Supervise maintenance of the following books of accounts:
  - General Journal
  - General Ledger
  - Miscellaneous Receipts by Responsibility Center
  - Miscellaneous Expenses by Responsibility Center
- Coordinate the monthly reconciliation of the books of accounts of the Utility and supervise preparation of the final trial balance.
- Improve his personal knowledge of accounting and management and apply his knowledge to improve the efficiency and effectiveness of the Department.
- Assume any other responsibilities assigned by the Vice Chairman, Finance.

RELATIONSHIPS

The General Supervisor, Central Accounts shall:

- Maintain close contact with personnel of the Ministry of Finance responsible for reviewing and approving the financial statements of the Utility.
- Serve as the principal day-to-day contact with the external auditors.
- Work with managers of other accounting departments of the Utility to ensure adequate reporting of all transactions.

JOB DESCRIPTION - GENERAL SUPERVISOR, CENTRAL ACCOUNTS(1)

QUALIFICATIONS

The qualifications of the General Supervisor, Central Accounts should include:

- A thorough knowledge of the Egyptian Standard Accounting System.
- Experience in managing and developing people.
- A well-developed ability to analyze numerical data.
- A persistent concern for accuracy.
- Desire and imagination to improve the existing system.

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures will affect the General Supervisor's annual evaluations:

- Timeliness of reports (total days late)
- Accuracy and completeness of reports (number of errors and omissions identified by auditors or others)
- Manpower utilization (number of accounting entries per man-day of group personnel)
- Increase in number of personnel qualified for immediate promotion (number of personnel in the group identified by the Vice Chairman, Finance as promotable)

JOB DESCRIPTION - GENERAL MANAGER, ASSET ACCOUNTS

REPORTS TO:	VICE CHAIRMAN, FINANCE
GRADE:	ONE
SALARY RANGE:	LE 1,320 - 1,920 per annum

BASIC RESPONSIBILITY

The General Manager, Asset Accounts, shall be responsible for maintaining accounting and locational control of the physical and fixed assets of the Utility

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the General Manager, Asset Accounts are to:

- Develop polices for:
  - . Definition of physical and fixed assets.
  - . Depreciation of assets,
  - . Disposition and write-off of obsolete, unneeded or worn out assets.
  - . Estimation of project costs.
- Prepare plans and budgets for the Asset Accounts Department that assure improvement and control of its functions.
- Ensure that the Department operates within its approved budget.
- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain, or dismiss personnel who are not performing up to standard.
- Regularly review and act upon managerial reports.
- Contribute to the improvement of the Sector through suggestions, cooperation with other managers and leadership example.

JOB DESCRIPTION - GENERAL MANAGER, ASSET ACCOUNTS

TECHNICAL RESPONSIBILITIES

The General Manager, Asset Accounts will:

- Design procedures and records to ensure that the value and location of the Utility's physical and fixed assets can be determined individually.
- Ensure that these procedures are followed.
- Design and implement procedures for accounting for work in progress.
- Ensure that projects that are physically complete are transferred from the Work in Progress Ledger to the Fixed Assets Ledger.
- Supervise the maintenance of the:
  - Capital Expenditures Journal.
  - Asset Retirements Journal.
  - Fixed Assets Ledger.
  - Fixed Assets Under Construction Ledger.
- Prepare monthly management reports summarizing the status of all projects under construction.
- Approve all payments in excess of LE XXXX to contractors and suppliers of capital goods.
- Assist in estimating the costs of projects proposed in the Long-Range Plan and in the Annual Budget.

RELATIONSHIPS

The General Manager, Asset Accounts must coordinate the work of his Department with the Project Engineers, Purchasing and Accounts Payable Departments.

QUALIFICATIONS

The qualifications of a potential General Manager, Asset Accounts should include:

- A thorough understanding of the Egyptian Standard Accounting System and its applicability to utilities.

JOB DESCRIPTION -
GENERAL MANAGER, ASSET ACCOUNTS

QUALIFICATIONS (Cont'd)

- Familiarity with the major types of equipment found in a treatment plant, booster station and among field crews.
- Demonstrated ability to motivate and develop personnel.

MEASURES OF PERFORMANCE

Achievement of the goals set for the following measures will affect the General Manager's annual evaluation:

- Existence of ledger records for individual assets
- Timeliness of the Top Management Project Summary
- Degree of participation in project costing
- Timeliness of accounting documents (Accounting Entry Statements, Trial Balance)
- Number of people who are qualified for promotion (as determined by the Vice Chairman, Finance)

JOB DESCRIPTION - GENERAL SUPERVISOR, ACCOUNTS PAYABLE

REPORTS TO:	VICE CHAIRMAN, FINANCE
GRADE	TWO
SALARY RANGE:	LE 660 - 1,500 per annum

BASIC RESPONSIBILITY

The General Supervisor, Accounts Payable is responsible for timely payment of creditors and for maintaining adequate records of those payments.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the General Supervisor, Accounts Payable are to:

- Develop policies determining the order and timing in which creditors are paid.
- Prepare plans and budgets for the Group that assure improvement and control of its functions.
- Ensure that the Group operates within its approved budget.
- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.
- Regularly review and act upon managerial reports.
- Contribute to the improvement of the Financial Sector through suggestions, cooperation with other managers and leadership example.

JOB DESCRIPTION - GENERAL SUPERVISOR, ACCOUNTS PAYABLE

TECHNICAL RESPONSIBILITIES

The technical responsibilities of the General Supervisor, Accounts Payable include:

- Maintaining an accurate record of amounts owed to all creditors of the Utility. (i.e., Supervise the updating of the Suppliers Ledger.)
- Payment of all creditors at the appropriate time.
- Maintaining an account of payments by creditor.

RELATIONSHIPS

The General Supervisor, Accounts Payable must maintain close contact with the Manager, Treasury to ensure coordination of money supply and demand.

The General Supervisor shall also be responsible for all correspondence with creditors concerning payments and payment terms.

QUALIFICATIONS

The qualifications of a potential General Supervisor, Accounts Payable should include:

- A thorough knowledge of the Egyptian Standard Accounting System.
- A persistent concern for accuracy and timeliness when dealing with accounting data.
- Ability to manage and motivate people.

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures will affect the Manager's annual evaluations:

- Number of complaints from creditors concerning slow payment
- Prompt preparation of the Trial Balance at the end of the month

JOB DESCRIPTION -
GENERAL SUPERVISOR, ACCOUNTS PAYABLE

MEASURES OF PERFORMANCE (Cont'd)

- Backlog of unprocessed invoices or Accounting Entry Statements

- Number of people in the Group who are qualified for promotion (as determined by the Vice Chairman, Finance)

JOB DESCRIPTION - MANAGER, DATA PROCESSING

REPORTS TO:	VICE CHAIRMAN, FINANCE
GRADE:	ONE
SALARY:	LE 960 - 1,680 per annum

BASIC RESPONSIBILITY

The basic responsibilities of the Manager, Data Processing are to:

- Plan, coordinate, monitor and control the work of data processing within the Utility so that services are provided speedily, accurately, punctually and economically.
- Promote the effective use of data processing within the Utility.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the Manager, Data Processing are:

- Administration, discipline and development of Department employees.
- Monitoring and controlling the performance of work in the Department.
- Planning for improvement in the performance of work.

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the Manager, Data Processing include:

- Ensure that the data processing equipment is maintained in operational condition.
- Ensure that an appropriate supply of skilled personnel is available to carry out the necessary work.

JOB DESCRIPTION - MANAGER, DATA PROCESSING

TECHNICAL RESPONSIBILITIES (Cont'd)

- Establish checking procedures to ensure that the quality and quantity of the processed work is acceptable and in line with planned achievement.
- Ensure that new developments in data processing are monitored with a view to applying new technology when it becomes useful and economical to do so.
- Initiate and supervise new applications of data processing within the Utility.

RELATIONSHIPS

The Manager, Data Processing must maintain good relations with:

- All users and potential users within the Utility.
- Suppliers of data processing equipment used by the Utility.
- Potential suppliers of data processing equipment.
- Data processing managers of other organizations.

QUALIFICATIONS

The qualifications of a potential Manager, Data Processing should include:

- Understanding of the basic operations of a computer.
- Knowledge of commercial business procedures and the applicability of computers to this work.
- Ability to analyze procedures in computer terms.
- Ability to administer and control skilled computer staff.
- Desire to extend the scope of effective data processing within the Utility.

JOB DESCRIPTION - MANAGER, DATA PROCESSING

MEASURES OF PERFORMANCE

Achivement of goals for the following measures will significantly affect the Manager's annual performance evaluation

- Cost per bill, salary slips, and other prepared by the Department

  For each type of work, delay between receiving data and providing processed results

  Time spent in reworking incorrectly processed data.

JOB DESCRIPTION - MANAGER, DATA PROCESSING[1]

REPORTS TO:	VICE CHAIRMAN, FINANCE
GRADE:	ONE
SALARY:	LE 960 - 1,680 per annum

BASIC RESPONSIBILITY

The basic responsibilities of the Manager, Data Processing are to:

- Plan, coordinate, monitor and control data preparation within the Utility and processing by the service bureau[2] so that services are provided accurately, punctually and economically.
- Promote the effective use of data processing within the Utility.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the Manager, Data Processing are to:

- Establish policies regarding:
  - . Priority of jobs.
  - . Processing of data received after normal deadlines.
  - . Responsibilities of user departments for data accuracy and control.
- Monitor and control the work performed in the Department.
- Monitor and control the work performed by the service bureau. Ensure that accurate records are kept of data submitted and received and of errors found.
- Prepare plans and budgets for the Data Processing Department that assure improvement and control of its functions.

Notes: (1) For utilities that contract the actual processing of data out to another organization.
(2) The organization that provides data processing services to the Utility.

JOB DESCRIPTION - MANAGER, DATA PROCESSING(1)

MANAGERIAL RESPONSIBILITIES (Cont'd.)

- Ensure that the Department operates within its approved budget.
- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.
- Regularly review and act upon managerial reports.
- Contribute to the improvement of the Utility through suggestions, cooperation with other managers and leadership example.

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the Manager Data Processing include:

- Ensuring that the data preparation equipment is maintained in operational condition.
- Ensuring that an adequate supply of skilled personnel is available to carry out the work.
- Maintaining detailed records of equipment and personnel performance for evaluation and establishment of standards.
- Establishing checking procedures to ensure that the quality and quantity of the processed work is acceptable and in line with planned achievement.
- Ensuring that new developments in data processing are monitored with a view to applying new technology when it becomes useful and economical to do so.
- Initiating and supervising new applications of data processing within the Utility.

Note: (1) For utilities that contract the actual processing of data out to another organization.

JOB DESCRIPTION - MANAGER, DATA PROCESSING(1)

RELATIONSHIPS

The Manager, Data Processing must maintain good relations with:

- All users and potential users within the Utility.
- Service bureaus, especially the one being used.
- Present and potential suppliers of data preparation equipment to the Utility.
- Data processing managers of other organizations.

QUALIFICATIONS

The qualifications of a potential Manager, Data Processing should include:

- Understanding of the basic operations of a computer.
- Knowledge of commercial business procedures and the applicability of computers to this work.
- Ability to analyze procedures in computer terms.
- Ability to administer and control skilled computer staff.
- Desire to extend the scope of effective data processing within the Utility.

MEASURES OF PERFORMANCE

Achievement of goals for the following measures will significantly affect the Manager's annual performance evaluation:

- Cost per bill, salary slip, and other prepared by the Department
- For each type of work, delay between receiving data and providing processed results
- Time spent in reworking incorrectly processed data

Note: (1) For utilities that contract the actual processing of data out to another organization.

JOB DESCRIPTION - GENERAL MANAGER, CUSTOMER SERVICE(1)

REPORTS TO:	VICE CHAIRMAN, FINANCE
GRADE:	EXECUTIVE
SALARY RANGE:	LE 1,320 - 1,920 per annum

BASIC RESPONSIBILITY

The General Manager, Customer Service shall be responsible for collections from users, authorizing new connections and resolution of customer complaints.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the General Manager, Customer Service are to:

- Prepare long-term plans to accomplish the mission of the Customer Service Department.
- Ensure that adequate policies exist for:
  - Extension of service to customers.
  - Prosecution of illegal connections.
  - Establishing rates.
  - Methods of collection.
- Develop the potential of personnel within the Department to ensure an adequate supply of well-trained personnel at all levels.
- Set specific measurable goals for subordinate managers.

Note:(1) For sewerage utilities only.

JOB DESCRIPTION -
GENERAL MANAGER, CUSTOMER SERVICE(1)

MANAGERIAL RESPONSIBILITIES (Cont'd)

- Regularly review and act upon managerial reports.
- Prepare an annual budget request to meet the expenses of the Department.
- Supervise the following people:
  - . General Supervisor, Customer Accounts
  - . General Supervisor, Connections
  - . General Supervisor, Complaints
  - . General Supervisor, Public Relations

  Conduct negotations with the water utility regarding billing of sewer use fees.

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the General Manager, Customer Service are:

- Preparing detailed estimates of the future demand for sewerage service.
- Recommending rates for the Utility's services (in cooperation with the Budget and Cost Department).
- Ensuring that the following procedures are well defined and followed:
  - . Application for new connections
  - . Installation of connections

  Transfer of customer list to the water utility

  Rate setting for industrial customers

  Billing and collections for other services (e.g., septic tank pumping and garbage hauling)

  Detection and prosecution of illegal connections (in cooperation with the Legal Affairs Department

Note: (1) For sewerage utilities only.

JOB DESCRIPTION -
GENERAL MANAGER, CUSTOMER SERVICE(1)

TECHNICAL RESPONSIBILITIES (Cont'd)

- Detection and prosecution of illegal use of the sewers (in cooperation with the Legal Affairs Department)
- Receipt and resolution of customer complaints
- Accounting for billing and collection of fees
- Advising the Chairman on customer service issues
- Personally calling on customers that have large past due accounts
- Preparing monthly report summarizing the activities of the Department

RELATIONSHIPS

The General Manager, Customer Service should maintain close contact with the Vice Chairman, Customer Service and Manager, Customer Accounts at the water utility.

He may, on occasion, serve as the Utility's spokesman to the press or other members of the public.

QUALIFICATIONS

The qualifications of a potential General Manager, Customer Service should include:

- An understanding of the accounting procedures required for billing and collecting.
- Experience in at least one branch of customer service.
- Ability to analyze data and work flows to improve departmental efficiency.
- Demonstrated ability to supervise people.
- Willingness to call on customers with past due accounts.
- Willingness and ability to deal with irate customers.

Note: (1) For sewerage utilities only.

JOB DESCRIPTION - GENERAL MANAGER, CUSTOMER SERVICE(1)

MEASURES OF PERFORMANCE

Achievement of the goals set for the following measures will affect the General Manager's annual evaluation:

- Accuracy of customer accounts (as determined by internal and external auditors)
- Days outstanding of accounts receivable
- Ratio of revenue collected to budgeted revenues
- Average days delay in resolving customer complaints
- Ratio of Department actual expenses to budgeted expenses

Note: (1) For sewerage utilities only.

JOB DESCRIPTION - VICE CHAIRMAN, CUSTOMER SERVICE

REPORTS TO: CHAIRMAN

GRADE: EXECUTIVE

SALARY RANGE: LE 1,500 - 2,040 per annum

BASIC FUNCTION

The Vice Chairman, Customer Service is responsible for billing and collecting all of the monies due the Utility from customers. He is also responsible for all direct services to customers.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the Vice Chairman, Customer Service are to:

- Prepare long-term plans to accomplish the mission of the Customer Service Sector.
- Ensure that adequate policies exist for:
  - . Extension of service to customers.
  - . Frequency and methods of billing.
  - . Shutting off service to customers.
- Develop the potential of personnel within the Sector to ensure an adequate supply of well-trained personnel at all levels.
- Set specific measurable goals, for subordinate managers
- Regularly review and act upon the managerial reports submitted by the departments of the Sector.
- Prepare an annual budget request to meet the expenses of the Department.

JOB DESCRIPTION -
VICE CHAIRMAN, CUSTOMER SERVICE

MANAGERIAL RESPONSIBILITIES (Cont'd)

- Supervise the following personnel
  - . General Manager, Customer Service Centers
  - . Manager, Customer Accounts
  - . General Supervisor, Public Relations
  - . General Supervisor, Complaints

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the Vice Chairman, Customer Service are:

- Ensuring that the following procedures are adequate and well performed:
  - . Meter reading
  - . Billing
  - . Updating of customer accounts
  - . Collecting current bills
  - . Follow-up and collection of past due bills
  - . Service shut-offs
  - . Installation of new connections
  - . Investigation and resolution of complaints.
- Initiating the revision of tariffs.
- Conception of public relations campaigns.
- Advising the chairman on public relations.
- Calling on major delinquent accounts.
- Regularly touring the Service Centers and personally inspecting the work.
- Negotiating with potential large customers.
- Maintaining an up-to-date knowledge of accounting practices followed by the Utility.

RELATIONSHIPS

The Vice Chairman, Customer Service shall:

- Supervise the Utility's response to questions raised by the press or public.
- Personally visit major delinquent accounts.
- Serve as a member of the Management Committee.

QUALIFICATIONS

The qualifications of a potential Vice Chairman, Customer Service should include:

- Significant experience in one of the following areas:
  - . Networks.
  - . Accounting.
  - . Customer service operations.
- An understanding of the accounting procedures required for billing and collections.
- Demonstrated ability in supervising and developing personnel.
- Five years of managerial experience.
- Outstanding record of performance in his current position.
- Demonstrated ability to analyze and solve problems.

MEASURES OF PERFORMANCE

Achievement of the goals set for the following measures will affect the Vice Chairman's annual evaluation:

- Percent of meters actually read during a reading cycle
- Collections made as a percent of billings
- Average delay in making connections
- Average delay in resolving customer complaints

JOB DESCRIPTION - GENERAL MANAGER, CUSTOMER SERVICE CENTERS

REPORTS TO:	VICE CHAIRMAN, CUSTOMER SERVICE
GRADE:	EXECUTIVE
SALARY RANGE:	LE 1,320 - 1,920 per annum

BASIC RESPONSIBILITY

The General Manager, Customer Service Centers shall be responsible for all meter reading, bill collections, new connections, meter service and meter replacement.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the General Manager, Customer Service Centers are to:

- Initiate policies regarding:
  - Frequency of meter reading
  - Meter replacement.
  - Shut-off of service.
  - New connections priority.
- Prepare plans and budgets for the Customer Service Centers Department that assure improvement and control of its functions.
- Ensure that the Department operates within its approved budget.
- Allocate personnel among the Service Centers to minimize backlogs.
- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain, or dismiss personnel who are not performing up to standard.
- Set specific, measurable goals for subordinate managers.

JOB DESCRIPTION -
GENERAL MANAGER, CUSTOMER SERVICE CENTERS

MANAGERIAL RESPONSIBILITIES (Cont'd)

- Regularly review and act upon managerial reports.
- Contribute to the improvement of the Customer Service Sector through suggestions, cooperation with other managers and leadership example.
- Supervise the Customer Service Center General Supervisors.

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the General Manager, Customer Service Centers include:

- Establishing procedures for
  - . Meter reading.
  - . Current bill collection.
  - . Past due bill collection.
  - . New connections.
  - . Meter shut-off and replacement.
- Personally visiting large accounts.
- Personally collecting past due accounts that are larger than LE 100.
- Preparing statistics and reports concerning the operation of the Service Centers.
- Preparing detailed estimates of the location and size of growth in demand for the Utility's services.
- Personally inspecting the Service Centers and selected customers from time to time.

RELATIONSHIPS

The General Manager, Customer Service Centers will maintain working relationships with:

- Large customers.
- Governorate personnel responsible for planning, housing and industry.
- Networks branch managers.

JOB DESCRIPTION - GENERAL MANAGER, CUSTOMER SERVICE CENTERS

QUALIFICATIONS

The qualifications of a potential General Manager, Customer Services should include:

- At least three years experience in one of the following areas:
  - Networks.
  - Accounting.
  - Customer service operations.
- A basic understanding of accounting concepts.
- An ability to draw conclusions based on an analysis of numerical data.
- The ability to deal calmly with irate customers.
- A willingness personally to request payment from past due accounts.
- Demonstrated ability to manage and develop people.

MEASURES OF PERFORMANCE

Achievement of the goals set for the following measures will affect the Manager's annual evaluation:

- Percent of meters actually read (not estimated) during each reading cycle
- Percent of current bills collected
- Percent of past due bills collected
- Average delay in making new connections
- Average man-hours per connection
- Average number of Service Center personnel per 1,000 customers

JOB DESCRIPTION - MANAGER, CUSTOMER SERVICE(1)

REPORTS TO:	VICE CHAIRMAN, CUSTOMER SERVICE
GRADE:	ONE
SALARY RANGE:	LE 960 - 1,680 per annum

BASIC RESPONSIBILITY

The Manager, Customer Service shall be responsible for developing policies, plans and procedures regarding meter reading, bill collection, new connections, meter service and meter replacement and monitoring their implementation in the Suez Canal Region.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the Manager, Customer Service are to:

- Recommend policies regarding:
  - . Frequency of meter reading.
  - . Meter replacement.
  - . Shut-off of service.
  - . New connections priority.

  Prepare plans and procedures for the Customer Service Departments of each city that assure improvement and control of their functions.

  Monitor implementation of customer service policies plans and procedures in each city and work through the Manager, City Service, to correct deviations.

  Ensure that the Department operates within its approved budget.

  Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain, or dismiss personnel who are not performing up to standard.

Note: (1) For Suez Canal Region Water Supply.

JOB DESCRIPTION - MANAGER, CUSTOMER SERVICE(1)

MANAGERIAL RESPONSIBILITIES (Cont'd.)

- Set specific, measurable goals for subordinate managers.
- Regularly review and act upon managerial reports.
- Contribute to the improvement of the Customer Service Sector through suggestions, cooperation with other managers and leadership example.

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the Manager, Customer Service include:

- Establishing procedures for
  - . Meter reading.
  - . Current bill collections.
  - . Past due bill collections.
  - . New connections.
  - . Meter shut-off and replacement.
- Personally visiting large accounts.
- Personally collecting past due accounts that owe more than LE 500.
- Preparing statistics and reports concerning the operation of the Customer Service Departments in each city.
- Preparing detailed estimates of the location and size of growth in demand for the Utility's services.
- Personally inspecting the Customer Service Departments in each city from time to time.

Note: (1) For Suez Canal Region Water Supply.

JOB DESCRIPTION - MANAGER, CUSTOMER SERVICE(1)

RELATIONSHIPS

The Manager, Customer Service will maintain working relationships with:

- Large customers.
- Governorate personnel responsible for planning, housing and industry.
- Managers, City Service.

QUALIFICATIONS

The qualifications of a potential Manager, Customer Services should include:

- At least three years experience in either accounting or customer service.
- A basic understanding of accounting concepts.
- An ability to draw conclusions based on an analysis of numerical data.
- The ability to deal calmly with irate customers.
- A willingness personally to request payment from past due accounts.
- Demonstrated ability to manage and develop people.

MEASURES OF PERFORMANCE

Achievement of the goals set for the following measures will affect the Manager's annual evaluation:

- Percent of meters actually read (not estimated) during each reading cycle.
- Percent of current bills collected.
- Percent of past due bills collected.
- Percent of complaints resolved each month.
- Average number of Customer Service personnel per 1,000 customers.

Note: (1) For Suez Canal Region Water Supply.

JOB DESCRIPTION - GENERAL SUPERVISOR, CUSTOMER SERVICE CENTER(1)

REPORTS TO: GENERAL MANAGER, CUSTOMER SERVICE CENTERS

GRADE: TWO

SALARY RANGE: LE 660 - 1,500 per annum

BASIC RESPONSIBILITY

The General Supervisor, Customer Service Center, is responsible for all contact with customers in his area. These contacts include meter reading, collections, new connections, meter service and replacement and receipt of complaints.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the General Supervisor, Customer Service Center are to:

- Resolve customer complaints originating in his area.
- Ensure that meter reading and collecting policies and procedures are followed.
- Ensure that all activities of the Service Center are performed on time.
- Prepare plans and budgets for the Service Center that assure improvement and control of its functions.
- Ensure that the Center operates within its approved budget.
- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.

Note:(1) The head of larger service centers may carry the title of Manager Grade One, Salary Range LE 960 - 1,680 rather than General Supervisor.

JOB DESCRIPTION - GENERAL SUPERVISOR, CUSTOMER SERVICE CENTER

MANAGERIAL RESPONSIBILITIES (Cont'd)

- Regularly review and act upon managerial reports.
- Contribute to the improvement of the Customer Service Sector through suggestions, cooperation with other managers and leadership example.
- Supervise the work of the following personnel:
  - . Supervisor, Meter Reading
  - . Supervisor, Collections
  - . Supervisor, New Connections
  - . Supervisor, Meter Service

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the General Supervisor, Customer Service Center are:

- Ensuring that the work load is properly distributed among the people of the Service Center.
- Diagnosing and remedying the causes of any delays in the work.
- Conducting occasional personal checks to ensure that the work is being done accurately.
- Personally receiving customer complaints.
- Personally visiting large accounts to ensure they are receiving proper service.
- Personally and regularly calling on past due accounts that are larger than LE 50.
- Preparing statistics and reports as required by management.

RELATIONSHIPS

The General Supervisor, Customer Service Center shall maintain working relationships with the Manager, Customer Accounts; General Supervisor, Branch (in his area); large customers and large debtors in the area.

JOB DESCRIPTION - GENERAL SUPERVISOR, CUSTOMER SERVICE CENTER

QUALIFICATIONS

The qualifications of a potential General Supervisor, Customer Service Center should include:

- At least one year of experience in one of the following areas:
  - . Networks.
  - . Accounting.
  - . Customer service center operations.
- A basic understanding of accounting concepts.
- The ability to deal calmly with irate customers.
- A willingness to request personally payment from past due accounts.
- Demonstrated ability to motivate first line personnel.
- Demonstrated ability to manage and develop people.

MEASURES OF PERFORMANCE

Achievement of the goals set for the following measures will affect the Manager's annual evaluation:

- Percent of meters read (not estimated) during each reading cycle
- Percent of current bills collected
- Percent of past due bills collected
- Average delay in making new connections
- Average number of meters read per meter reader
- Average number of bills collected per collector
- Number of meters serviced
- Average backlog in number of meters to be replaced
- Total Service Center personnel per 1,000 customers
- Percent of Customer complaints resolved within 30 days
- Percent of bill listings and reports received on time

JOB DESCRIPTION - MANAGER, CUSTOMER ACCOUNTS

REPORTS TO: VICE CHAIRMAN, CUSTOMER SERVICE

GRADE: ONE

SALARY: LE 960 - 1,680

BASIC RESPONSIBILITY

The basic responsibilities of the Manager, Customer Accounts are to prepare accurate bills, maintain accurate customer accounts, and account for all water and service sales.

MANAGERIAL RESPONSIBILITIES

Managerial responsibilities of the Manager, Customer Accounts include:

- Administration, discipline and development of department employees.
- Monitoring and controlling the performance of work.
- Planning for improvement in the performance of work.

TECHNICAL RESPONSIBILITIES

The technical responsibilities of the Manager, Customer Accounts include:

- Maintenance of accuracy in the meter-reading and recording process (in cooperation with the Customer Service Centers Managers).
- Ensuring that reliable records of readings, bills and payments are maintained for each customer.
- Allocation of appropriate water rates to customers, as defined by current Utility policy.
- Ensuring that legible and accurate information is provided to the Data Processing Department for bill and account preparation.
- Ensuring that bills provided to customers are accurate and that all customers are provided with bills.

JOB DESCRIPTION -
MANAGER, CUSTOMER ACCOUNTS

TECHNICAL RESPONSIBILITIES (Cont'd)

- Informing Customer Service Centers of meters that appear to be inoperative or inaccurate on the basis of reported readings.
- Maintaining accounts of all service sales and associated costs.
- Preparation of significant statistics concerning the billing and collection processes.
- Maintenance of the following accounting books:
  - Water Sales Journal
  - Sewer Use Fees (Sewerage Companies)
  - Connections Journal
  - Customer Accounts Ledgers
  - Water Sales and Collections by Service Center.
  - Connection sales by Service Center
  - Past Due Bills

RELATIONSHIPS

The Manager, Customer Accounts must maintain good relations with:

- Data Processing Manager, for bill and account processing.
- Customer Service Center managers, for functional liaison.

QUALIFICATIONS

The qualifications of a potential Manager, Customer Accounts should include:

- Working knowledge of the Egyptian Standard Accounting System requirements for billing and collections.

JOB DESCRIPTION - MANAGER, CUSTOMER ACCOUNTS

QUALIFICATIONS (Cont'd)

- Ability to administer and control large numbers of semi-skilled staff.
- Willingness to delegate authority as required.
- Desire to improve the effectiveness of operations under his control.

MEASURES OF PERFORMANCE

Achievement of goals for the following measures will significantly affect the Manager's annual performance evaluation:

- Labor and processing cost per bill presented and collected
- Delay between actual meter reading data and date of preparation of bill
- Timeliness of reports
- Accuracy of books (number of errors found by internal audit or through customer complaints)

JOB DESCRIPTION - GENERAL SUPERVISOR, COMPLAINTS

REPORTS TO: VICE CHAIRMAN, CUSTOMER SERVICE(1)

GRADE: TWO

SALARY RANGE: LE 660 - 1,500 per annum

BASIC RESPONSIBILITY

The General Supervisor, Complaints is responsible for resolving all customer complaints that cannot be resolved at the Service Center level.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the General Supervisor, Complaints are to:

- Ensure that complaints referred to other departments are acted upon.
- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.
- Contribute to the improvement of the Sector through suggestions, cooperation with other managers and leadership example.

TECHNICAL RESPONSIBILITIES

The principal technical responsiblities of the General Supervisor, Complaints are to:

- Receive all complaints delivered by mail, telephone or in person at the Utility headquarters.
- Receive complaints referred to the Group by the Service Centers.

Note: (1) In sewerage utilities the General Supervisor, Complaints reports to the General Manager, Customer Service.

JOB DESCRIPTION - GENERAL SUPERVISOR, COMPLAINTS

TECHNICAL RESPONSIBILITIES (Cont'd.)

- Resolve the complaints personally (or by another member of the Group) whenever possible.
- When necessary, refer complaints to other departments for action or information.
- Ensure that all persons who submit complaints receive an answer.
- Prepare a monthly report summarizing all complaints received.
- Inform the Chairman of all complaints regarding:
  - Potential health or safety hazards to the public.
  - Conditions that might attract the attention of the press or high government officials.

QUALIFICATIONS

The qualifications of a potential General Supervisor, Complaints should include:

- Knowledge of the Utility's activities, structure and management personnel.
- Ability to reason with irate customers.
- Ability to obtain action from other managers in the Utility.
- Sympathy for people who find it difficult to express their complaint clearly or who are afraid of office personnel.

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures will significantly affect the annual evaluation of the General Supervisor's performance:

- Percent of complaints resolved to the satisfaction of the customer
- Percent of complaints resolved within one week of receipt by the complaints department
- Timeliness of the monthly report

JOB DESCRIPTION - VICE CHAIRMAN, OPERATIONS

REPORTS TO:	CHAIRMAN
GRADE:	EXECUTIVE
SALARY RANGES:	LE 1,500 - 2,040 per annum

BASIC RESPONSIBILITY

The Vice Chairman, Operations shall be responsible for the operation and maintenance of the treatment plants, networks, laboratories and shops.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the Vice Chairman, Operations are to:

- Prepare near-term plans for the operation and maintenance of plants and networks.
- Ensure that adequate policies exist and are followed for:
  - Quality of water produced (or sewage discharged).
  - Pressure to be maintained in the lines.
  - Preventive maintenance.
  - Repair vs. replacement of major items of equipment.
- Ensure that adequate safety measures are taken in all activities.
- Regularly review and act upon the managerial reports submitted by departments of the Sector.
- Develop the potential of personnel within the Sector to ensure an adequate supply of people to meet present and future needs.
- Set specific measurable goals for subordinate managers.

JOB DESCRIPTION - VICE CHAIRMAN, OPERATIONS

MANAGERIAL RESPONSIBILITIES (Cont'd.)

- Manage the following personnel:
  - General Manager, Production
  - General Manager, Distribution
  - General Manager, Laboratories
  - General Manager, Facilities and Maintenance
  - General Supervisor, Operations Statistics

TECHNICAL RESPONSIBILITIES

The Vice Chairman, Operations will:

- Advise the Chairman and the Vice Chairman, Technical of potential capacity and engineering problems in operations and maintenance.
- Work with Materials Management to ensure purchase and storage of the right quantities and qualities of materials and parts.
- Personally supervise the resolution of major crises (e.g., bursting of a high pressure main).
- Regularly tour the plants and branches to inspect the level and quality of operation.
- Persistently search for means and methods of reducing costs.
- Maintain an up-to-date personal knowledge of operations and maintenance equipment and methods.
- Approve all project plans before they are released for bidding and construction.
- Ensuring that all personnel of the department follow proper procedures for job reporting and for map control.

JOB DESCRIPTION - VICE CHAIRMAN, OPERATIONS

RELATIONSHIPS

The Vice Chairman, Operations will:

- Work with the Ministry of Irrigation to ensure an adequate flow of water to the Utility.
- Personally visit potential sources of upstream water pollution to discourage actions that would harm the Utility water supply.
- Serve as a member of the Management Committee.

QUALIIFICATIONS

The qualifications of a potential Vice Chairman, Operations should include:

- Ability to understand and improve treatment and network operations. (Previous experience in water or sewerage systems is not required.)
- An understanding of the importance and principles of preventive maintenance.
- Ability to analyze and solve complex engineering problems.
- Clear demonstration of personal initiative and creativity in previous positions.
- At least five years of managerial experience.
- A working knowledge of English.

MEASURES OF PERFORMANCE

Achievement of the goals set for the following measures will affect the Vice Chairman's annual evaluation:

- Quality of water produced (or of sewage outfall)
- Pressure maintained in the system
- Number of days of non-functioning Class A equipment
- Minimization of the number of blockages (sewerage utilities
- Completion of planned maintenance programs

JOB DESCRIPTION - GENERAL MANAGER, PRODUCTION

REPORTS TO:	VICE-CHAIRMAN, TECHNICAL
GRADE:	EXECUTIVE
SALARY:	LE 1,320 - LE 1,920 per annum

BASIC RESPONSIBILITY

The General Manager, Production shall provide effective management over all functions involving the production of the treated water.

MANAGERIAL RESPONSIBILITIES

The General Manager, Production shall:

- Be responsible for all water treatment plants.
- Develop effective work plans for the production of treated water and ensuring uninterrupted service to subscribers at suitable pressure and quantity.
- Contribute to the effectiveness of the operations sector through direction, guidance, motivation and leadership of production personnel reporting to him.
- Develop the potential of personnel reporting to him. Motivate, train or discipline personnel not performing up to requirements.
- Set specific measurable goals for subordinate managers
- Propose remuneration and promotion within the limits of the prevailing laws, regulations and decisions.

JOB DESCRIPTION - GENERAL MANAGER, PRODUCTION

TECHNICAL RESPONSIBILITIES

The General Manager, Production shall:

- Participate in the planning of general policy of the Utility with respect to water production.

- Supervise the planning and execution of operation (work) programs for all functional divisions of treatment plants.

Review water treatment plant operating reports and direct follow-up action.

Propose studies and projects for replacement, renovation, modification and expansion in coordination with the Technical Sector.

Sign-off on all project designs affecting the plant before they are put out for bid or construction.

Monitor maintenance activities to ensure optimum production capabilities are maintained.

Develop programs for the optimum utilization of equipment and labor in the production of water.

Maintain an up-to-date knowledge of water treatment methods and equipment.

Provide input and direction for technical committees concerning new projects and existing programs.

Prepare an annual budget for the Department.

RELATIONSHIPS

The General Manager, Production shall:

Work with organizations, authorities, companies and firms to maintain and supervise quality and quantity of service being provided.

Be prepared to provide assistance and input to top management.

Maintain close contact with managers of Distribution, Project Management and Materials Management.

QUALIFICATIONS

The qualifications of the General Manager, Production should include:

- A thorough knowledge of and experience in water treatment, production and management.
- Experience in the supervision and development of employees.
- An ability to develop and improve water treatment processes and procedures.
- Experience in the development and implementation of policies and procedures.

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures shall affect the General Manager's annual evaluation:

- Attainment of planned goals for water treatment production
- Maintenance of quality of service to subscribers
- Timeliness of departmental budget and reports
- Development of departmental personnel

JOB DESCRIPTION - MANAGER, TREATMENT PLANT (WATER)

REPORTS TO:	GENERAL MANAGER, PRODUCTION
GRADE:	ONE
SALARY RANGE:	LE 960 - 1,680 per annum

BASIC RESPONSIBILITY

The Manager, Treatment Plant, shall provide effective management of the operation and maintenance of the water treatment plant for which he is responsible.

MANAGERIAL RESPONSIBILITIES

The Manager, Treatment Plant shall;

- Supervise all activities concerned with the production of treated water.
- Be responsible for effective operations and maintenance to ensure optimum utilization of equipment and labor within the treatment plant.
- Be responsible for the operation and maintenance of all pumping stations and reservoirs within his treatment plant responsibility.
- Develop realistic schedules and work programs for operations and maintenance.
- Develop the potential of personnel reporting to him. Motivate, train or dismiss personnel not performing up to requirements.

TECHNICAL RESPONSIBILITIES

The Manager, Treatment Plant shall:

- Supervise the operation and maintenance of all treatment plant equipment to ensure optimum utilization of equipment and labor within the treatment plant
- Prepare programs and plans for increasing the effectiveness of treatment plant operations and maintenance.

JOB DESCRIPTION - MANAGER, TREATMENT PLANT (WATER)

TECHNICAL RESPONSIBILITIES (Cont'd.)

- Review and comment on operations and maintenance reports.
- Maintain an up-to-date knowledge of water treatment methods and equipment.
- Prepare and submit on a timely basis Treatment Plant reports to the General Manager, Production.
- Monitor operations and maintenance work programs for purposes of controlling treatment processes and determining efficiency of operations.

RELATIONSHIPS

The Manager, Treatment Plant shall:

- Work with supervision of all departments of the treatment facility and networks to ensure effective quality and quantity of service.
- Serve as the principal contact for all matters concerning the Treatment Plant.
- Maintain close contact with Treatment Plant Laboratory personnel to ensure quality of service is maintained.
- Be responsible to Headquarters for all matters concerning water quality, quantity, pressures and service.

QUALIFICATIONS

The qualifications of the Manager, Treatment Plant should include:

- Extensive knowledge of the engineering principles and practices as applied to water treatment operations, maintenance and repair.
- Extensive knowledge of water purification methods.
- Ability to plan, direct and evaluate plant operation and maintenance functions.

JOB DESCRIPTION - MANAGER, TREATMENT PLANT (WATER)

QUALIFICATIONS (Cont'd.)

- Understanding of managerial, administrative and accounting practices required for successful plant operation.
- Ability to evaluate present effectiveness of plant operations and to make recommendations for improvements and long-range plans.
- At least three years of supervisory experience.
- Ability to evaluate, interpret and apply technical information from manuals, books or other formats.
- Interest and enjoyment in motivating and developing personnel under his directions.

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures will affect the Manager's annual evaluations:

- Timeliness of reports
- Effectiveness of Treatment Plant operations
- Manpower utilization
- Quality and quantity of service
- Ability to maintain an effective plant operation within budget
- Development of departmental personnel

JOB DESCRIPTION
GENERAL MANAGER, DISTRIBUTION

REPORTS TO:	VICE CHAIRMAN, OPERATIONS
GRADE:	EXECUTIVE
SALARY RANGE:	LE 1,320 - 1,920 per annum

BASIC RESPONSIBILITY

The General Manager, Distribution shall be responsible for maintaining the water mains and reservoirs of the Utility.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the General Manager, Distribution are to:

- Supervise the branch managers and a small headquarters staff.
- Supervise contractors hired to assist the Department.
- Allocate people and equipment according to area requirements.
- Ensure that all leaks are repaired within one month of being detected.
- Personally supervise the repair of Class I leaks.
- Recommend policies regarding:
  - . Short extensions of mains.
  - . Placement and operation of public fountains.
  - . Placement of fire hydrants.
  - . Operation of the non-potable water network.
  - . Setting priorities on leak repairs.
  - . Replacement of equipment.
- Prepare plans and budgets for the Distribution Department that assure improvement and control of its functions.

JOB DESCRIPTION
GENERAL MANAGER, DISTRIBUTION

MANAGERIAL RESPONSIBILITIES (Cont'd.)

- Ensure that the Department operates within its approved budget.
- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.
- Hold subordinates responsible for specific measurable goals.
- Regularly review and act upon managerial reports.
- Contribute to the improvement of the Operations Sector through suggestions, cooperation with other managers and leadership example.

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the General Manager, Distribution include:

- Preparing plans for:
  - . Major maintenance projects.
  - . Major replacements of equipment and facilities.
- Recommending the establishment of new branches.
- Establishing work standards for maintenance crews.
- Establishing, implementing and ensuring compliance with procedures for:
  - . Maintaining mains through regular programs for leak detection, corrosion control and flushing.
  - . Inspecting and setting priorities for the repair of leaks and broken lines.
  - . Maintaining and replacing hydrants, valves and public fountains.
  - . Initiating and completing work orders.
  - . Maintaining equipment (with special attention to preventive maintenance procedures).
  - . Installing valves and hydrants.
  - . Repaving streets dug up for the Water Utility.

JOB DESCRIPTION
GENERAL MANAGER, DISTRIBUTION

TECHNICAL RESPONSIBILITIES (Cont'd.)

- Check-out and check-in of tools and equipment.
- Emergency shut-down of the system.
- Using the communications system.
- Updating and distributing system maps.
- Reporting personnel, operating and system performance data.

- Regularly reviewing reports and methods of work with the objective of establishing new procedures to improve effectiveness and efficiency.
- Recommending purchase of tools and equipment that would improve the effectiveness and efficiency of the Distribution Department.
- Maintaining an efficient communications system among headquarters, branches and work crews.
- Periodically checking personally on the quality and efficiency of work done by the branches.
- Recommending extensions of mains.
- Recommending replacement of mains.
- Evaluating and selecting contractors to work for the Department.
- Preparing a monthly report for top management summarizing the work of the Department.

JOB DESCRIPTION
GENERAL MANAGER, DISTRIBUTION

RELATIONSHIPS

The General Manager, Distribution should maintain working relationships with:

- Contractors who have the capability to assist the Distribution Department.
- The heads of fire departments located with the Utility's service area.
- The heads of street maintenance departments located within the Utility's service area.
- The General Manager, Sewage Collection at the sewerage utility.
- Managers of distribution in other Egyptian water departments.

QUALIFICATIONS

The qualifications of a potential General Manager, Distribution should include:

- Knowledge of the engineering principles governing operation of a water distribution network.
- Ability to formulate plans, methods and procedures to improve the effectiveness and efficiency of the department.
- Ability to evaluate the condition of distribution facilities in order to recommend replacement or repair.
- Desire to improve the Department's effectiveness and efficiency.
- Demonstrated ability to motivate and develop personnel reporting to him.

JOB DESCRIPTION
GENERAL MANAGER, DISTRIBUTION

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures will affect the General Manager's annual evaluation:

- Average backlog of unrepaired leaks at the end of the month
- Actual number of inspections of hydrants, valves, fountains, mains and reservoirs
- Number of installations of hydrants, valves and fountains
- Meters of mains laid
- Meters of mains flushed
- Actual expenses
- Percent of total expenses accounted for under work orders
- Overtime as a percent of total worktime in the Department

JOB DESCRIPTION - GENERAL SUPERVISOR, BRANCH (1)(2)

REPORTS TO:	GENERAL MANAGER, DISTRIBUTION
GRADE:	TWO
SALARY RANGE:	LE 660 - 1,500 per annum

BASIC RESPONSIBILITY

The General Supervisor, Branch shall be responsible for maintaining the water mains and reservoirs in his service area.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the General Supervisor are to:

- Supervise the branch foremen.
- Supervise the work of contractors within his area.
- Allocate personnel among the crews according to the demand of the work.
- Personally supervise major emergencies.
- Supervise minor extensions and replacements of mains.
- Prepare plans and budgets for the Branch that assure improvement and control of its functions.
- Ensure that the branch operates within its approved budget.
- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.
- Regularly review and act upon managerial reports.
- Contribute to the improvements of the Distribution Department through suggestions, cooperation with other managers and leadership example.

Notes: (1) For water utilities.
(2) The manager of a large branch may be given the title of Manager (Grade One, Salary LE 960 - 1,680 per annum)

JOB DESCRIPTION - GENERAL SUPERVISOR, BRANCH(1)(2)

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the General Supervisor, Branch are to:

- Implement the policies, plans and procedures of Distribution Headquarters regarding:
  - . Inspection and installation of hydrants, valves and fountaints.
  - . Inspection of mains and reservoirs.
  - . Operation of reservoirs.
  - . Detection of leaks.
  - . Control of corrosion.
  - . Flushing of mains.
  - . Operation of booster stations (if assigned).
- Implement policies and procedures of Distribution Headquarters regarding:
  - . Establishment of priorities on leak repairs.
  - . Preparation and assignment of work orders.
- Supervise inspections and tests to identify:
  - . Areas where pressure is chronically low.
  - . Actual or potential areas of infiltration.
  - . Unauthorized connections.
  - . Other misuse of the system.
- Coordinate the use of vehicles, tools and other equipment to ensure maximum efficiency.
- Assist other agencies locate mains when trenching is planned.

Note: (1) For water utilities.
(2) The manager of a large branch may be given the title of Manager (Grade One, Salary LE 960 - 1,680 per annum)

JOB DESCRIPTION - GENERAL SUPERVISOR, BRANCH(1)(2)

RELATIONSHIPS

The General Supervisor should maintain contact with:

- Plant managers primarily responsible for providing water to the area.
- Contractors working for the Utility within the area.
- Other agencies that frequently dig trenches in the area.
- The branch manager(s) at the sewerage utility who has responsibility for sewers in the area.

QUALIFICATIONS

The qualifications of a potential General Supervisor, Branch should include:

- Knowledge of the principles and methods of water network operation and maintenance.
- Ability to set priorities when there are not enough personnel and equipment to do all of the work.
- Ability to personally supervise emergency repairs to the system.
- Willingness to follow the policies, plans and procedures established by headquarters.
- Ability to motivate a low caliber work force.

Note: (1) For water utilities.
(2) The manager of a large branch may be given the title of Manager (Grade One, Salary LE 960 - 1,680 per annum).

JOB DESCRIPTION - GENERAL SUPERVISOR, BRANCH (1)(2)

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures will affect the General Supervisor's annual evaluation:

- Average backlog of unrepaired leaks at the end of the month
- Actual number of inspections of hydrants, valves, fountains, mains and reservoirs
- Number of installations of hydrants, valves and fountains
- Meters of mains laid
- Meters of mains flushed
- Percent of total expenses accounted for by work orders
- Overtime as a percent of total work time in the Branch

Note: (1) For water utilities.
(2) The manager of a large branch may be given the title of Manager (Grade One, Salary LE 960 - 1,680 per annum).

JOB DESCRIPTION - GENERAL MANAGER, LABORATORIES

REPORTS TO:	VICE CHAIRMAN, OPERATIONS
GRADE:	EXECUTIVE
SALARY RANGE:	LE 1,320 - 1,920 per annum

BASIC RESPONSIBILITY

The General Manager, Laboratories is responsible for recommending treatment procedures that produce water of acceptable quality at minimum cost.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the General Manager, Laboratories are to:

- Propose internal water quality standards for the Utility.
- Review laboratory results carefully to ensure the water meets internal and legal standards of quality.
- Set policies for:
  - . Frequency of samples.
  - . Origin of samples.
  - . Tests to be performed.
- Prepare plans and budgets for the Laboratories Department that assure improvement and control of its functions.
- Ensure that the Laboratories operate within the approved budget.
- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.
- Set specific, measurable goals for subordinate managers.

MANAGERIAL RESPONSIBILITIES (Cont'd.)

- Regularly review and act upon managerial reports.

- Contribute to the improvement of the Operations Sector through suggestions, cooperation with other managers and leadership example.

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the General Manager, Laboratories are to:

- Establish sampling and testing timing, procedures and methodologies.

- Ensure that each plant laboratory follows the sampling and testing policies, timing, procedures and methodologies.

- Personally investigate when plant laboratory results fall outside of internal specifications.

- Personally inspect each plant at least once each quarter to ensure compliance with good treatment practices.

- Personally advise plant management on difficult treatment problems.

- Assist the Vice Chairman, Operations in identifying and correcting upstream sources of pollution that significantly affect the efficacy or cost of treatment.

- Supervise the sampling, analysis and evaluation of water in the distribution system.

- Direct the research work of the laboratories.

- Prepare cost analyses of alternative sources of treatment and implement those that prove beneficial.

- Establish training programs for laboratory personnel to ensure high quality work and to develop personnel.

- Promote a strong concern for water quality among operating personnel through activities such as:

  . Posters.

  . Seminars.

  . Inspections.

- Maintain an up-to-date knowledge of laboratory tests, procedures and equipment.

JOB DESCRIPTION - GENERAL MANAGER, LABORATORIES

RELATIONSHIPS

The General Manager, Laboratories must develop a good working relationship with the General Manager, Production and with the plant managers.

He should also maintain contact with the heads of laboratories at other water companies and with appropriate personnel in the Ministry of Health.

QUALIFICATIONS

The qualifications of a potential General Manager, Laboratories should include:

- A thorough knowledge of the chemical, physical and bacteriological processes involved in water treatment.
- A working knowledge of the equipment used in water treatment.
- The ability to interpret the results of all water treatment tests and the skill to perform all major tests personally.
- Demonstrated ability to analyze and solve difficult treatment problems.
- An understanding of the economics of water treatment
- The ability to analyze the costs associated with alternative methods of treatment.
- The ability to conceive and direct a small research program.
- A persistent concern for finding a more efficient way to obtain water of acceptable quality.
- The ability to train and develop people.
- A strong sense of personal integrity coupled with concern for consumers.

JOB DESCRIPTION - GENERAL MANAGER, LABORATORIES

MEASURES OF PERFORMANCE

Achievement of the goals set for the following measures will affect the General Manager's annual evaluation:

- Percent of water that meets class A and B standards
- Percent of the planned sampling and testing program that is completed
- Cost per cubic meter of treated water

JOB DESCRIPTION - GENERAL SUPERVISOR, PLANT LABORATORY

REPORTS TO:	GENERAL MANAGER, LABORATORIES
GRADE:	TWO
SALARY RANGE:	LE 660 - 1,500 per annum

BASIC RESPONSIBILITY

The General Supervisor, Plant Laboratory is responsible for recommending treatment procedures and chemical dosages that produce water that meets the internal standards of the Utility.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the General Supervisor, Plant Laboratory are to:

- Review laboratory results carefully to ensure the water meets internal and legal standards of quality
- Ensure that the Laboratory operates within its approved budget.
- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.
- Regularly review and act upon managerial reports.
- Contribute to the improvement of the Operations Sector through suggestions, cooperation with other managers and leadership example.

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the General Supervisor, Plant Laboratory are to:

- Ensure that the policies, timing, procedures and methodologies for sampling and testing of water are followed.
- Interpret the results of tests.
- Recommend treatment procedures and chemical dosages to the Plant Manager.

JOB DESCRIPTION -
GENERAL SUPERVISOR, PLANT LABORATORY

TECHNICAL RESPONSIBILITIES (Cont'd.)

- Advise the Plant Manager when difficult or unusual treatment problems are encountered.
- Conduct training programs to improve the capability of the laboratory staff.
- Promote concern for water quality among operating personnel through activities such as:
  - Personal inspections.
  - Publication of good results.
  - Encouraging concerned operators.
- Maintain an up-to-date knowledge of laboratory tests, procedures and equipment.

RELATIONSHIPS

The General Supervisor, Plant Laboratory should develop working relationships that encourage a free flow of information and advice with plant foremen and managers.

QUALIFICATIONS

The qualifications of a potential General Supervisor, Plant Laboratory should include:

- A thorough knowledge of the chemical, physical and bacteriological processes involved in water treatment.
- A working knowledge of the equipment used in water treatment.
- The ability to interpret the results of all water treatment tests and the skill to perform all normal tests personally.
- Ability to analyze and solve normal treatment problems.
- A persistent concern for effective and efficient water treatment.
- The ability to train and develop people.
- A sense of personal integrity coupled with concern for consumers.

JOB DESCRIPTION -
GENERAL SUPERVISOR, PLANT LABORATORY

MEASURES OF PERFORMANCE

The achievement of the goals set for the following measures will affect the General Supervisor's annual evaluation:

- Percent of water that meets class A and B standards
- Percent of the planned sampling and testing program that is completed
- Cost per cubic meter of treated water

JOB DESCRIPTION - GENERAL MANAGER, WESTERN DESERT

REPORTS TO:	VICE CHAIRMAN, OPERATIONS
GRADE:	EXECUTIVE
SALARY RANGE:	LE 1,320 - 1,920 per annum

BASIC RESPONSIBILITY

The General Manager, Western Desert shall be responsible for all operations in the Western Desert.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the General Manager, Western Desert are to:

- Supervise the:
  - . District Managers.
  - . Maryut Plant Manager.
  - . Western Desert Headquarters staff.
  - . Contractors hired to assist the Department.
- Allocate people and equipment according to the needs of the Western Desert Districts.
- Recommend policies concerning:
  - . Placement and operation of public fountains.
  - . Extensions of service.
  - . Overhaul and replacement of equipment.
  - . Frequency and method of billing Western Desert customers.
  - . Hours of work of personnel.

JOB DESCRIPTION -
GENERAL MANAGER, WESTERN DESERT

MANAGERIAL RESPONSIBILITIES (Cont'd.)

- Prepare plans and budgets for the Western Desert Department that assure improvement and control of its functions.
- Ensure that the Department operates within its approved budget.
- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.
- Set specific measurable goals for subordinate managers.
- Regularly review and act upon managerial reports.
- Contribute to the improvement of the Operations Sector through suggestions, cooperation with other managers and leadership example.

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the General Manager, Western Desert include:

- Preparing plans for:
  - . Major maintenance projects.
  - . Major replacements of equipment and facilities.
- Preparing plans that:
  - . Estimate the quantity of water required by Western Desert customers.
  - . Guide the distribution of men and equipment in the system.
  - . Establish schedules for annual overhaul of major pieces of equipment.
  - . Establish the need and timetable for changes in the system configuration.
  - . Justify additional districts when needed.

JOB DESCRIPTION
GENERAL MANAGER, WESTERN DESERT

TECHNICAL RESPONSIBILITIES (Cont'd.)

- Establishing, implementing and ensuring compliance with procedures for:

  . Maintaining mains through regular programs for leak detection, corrosion control and flushing.

  . Minimizing leaks.

  . Inspecting and setting priorities for the repair of leaks and broken lines.

  . Reading and maintaining meters in the system.

  . Installing valves and hydrants.

  . Maintaining and replacing hydrants, valves and public fountains.

  . Initiating and completing work orders.

  . Maintaining equipment (with special attention to preventive maintenace procedures).

  . Repaving streets and roads dug up for the Utility.

  . Check-out and check-in of tools and equipment.

  . Emergency shut-down of the system.

  . Using the communications system.

  . Updating and distributing system maps.

  . Reporting personnel, operating and system performance data.

- Establishing standards for work crews.

- Regularly reviewing reports and methods of work with the objective of establishing new procedures to improve effectiveness and efficiency.

- Recommending purchase of tools and equipment that would improve the effectiveness and efficiency of the Western Desert Department.

- Ensuring that an efficient communications system is maintained among headquarters, districts and work crews.

JOB DESCRIPTION - GENERAL MANAGER, WESTERN DESERT

TECHNICAL RESPONSIBILITIES (Cont'd.)

- Periodically checking personally on the quality and efficiency of work done by the districts.
- Recommending extensions of mains.
- Recommending replacement of mains.
- Evaluating and selecting contractors to work for the Department.
- Preparing a monthly report for top management summarizing the work of the Department.

RELATIONSHIPS

The General Manager, Western Desert should maintain working relationships with:

- Governors of the governorates served by the Western Desert lines.
- Heads of towns along the line.
- Heads of water systems connected to the Western Desert lines.
- Police and security officials in towns along the lines.
- Contractors who have the capability to assist the Department.

QUALIFICATIONS

The qualifications of a potential General Manager, Distribution should include:

Knowledge of the engineering principles governing operation of a water distribution network.

Ability to formulate plans, methods and procedures to improve the effectiveness and efficiency of the department.

Ability to evaluate the condition of distribution facilities in order to recommend replacement or repair.

JOB DESCRIPTION -
GENERAL MANAGER, WESTERN DESERT

QUALIFICATIONS (Cont'd.)

- Desire to improve the Department's effectiveness and efficiency.
- Demonstrated ability to motivate and develop personnel reporting to him.
- A high level of personal stamina and energy to meet the demands of continual travel and long hours of overtime in the Desert.

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures will affect the General Manager's annual evaluation:

- Volume of water delivered to customers
- Hours of low pressure at Mersa Matrouh
- Average backlog of unrepaired leaks at the end of the month
- Actual number of inspections of hydrants, valves, fountains, mains and reservoirs
- Meters of mains flushed
- Average percent of meters read during each billing cycle
- Average value of outstanding accounts receivable
- Actual expenses
- Percent of total expenses accounted for under work orders
- Overtime as a percent of total worktime in the Department

JOB DESCRIPTION
GENERAL MANAGER, SEWAGE TREATMENT

REPORTS TO:	VICE-CHAIRMAN, TECHNICAL
GRADE:	EXECUTIVE
SALARY:	LE 1,320 - 1,920 per annum

BASIC RESPONSIBILITY

The General Manager, Treatment shall provide effective management over all functions involving the treatment of sewage.

MANAGERIAL RESPONSIBILITIES

The General Manager, Treatment shall:

- Be responsible for all sewage treatment plants.
- Develop effective work plans for the production of treated sewage ensuring uninterrupted service.
- Contribute to the effectiveness of the Sewage Treatment Department through direction, guidance, motivation and leadership of treatment personnel reporting to him.
- Develop the potential of personnel reporting to him. Motivate, train or discipline personnel not performing up to requirements.
- Set specific measurable goals for subordinate managers
- Propose remuneration and promotion for employees within the limits of the prevailing laws, regulations and decisions.

TECHNICAL RESPONSIBILITIES

The General Manager, Treatment shall:

- Participate in the planning of general policy of the Utility with respect to sewage treatment.
- Supervise the planning and execution of operation (work) programs in all functional divisions for the general administration of treatment plants.

JOB DESCRIPTION - GENERAL MANAGER, SEWAGE TREATMENT

TECHNICAL RESPONSIBILITIES (Cont'd.)

- Review sewage treatment plant operating reports and direct follow-up action.
- Propose studies and projects for replacement, renovation, modification and plans in coordination with the Technical Sector.
- Monitor maintenance activities to ensure optimum treatment capabilities are maintained.
- Develop programs for the optimum utilization of equipment and labor in the treatment of sewage.
- Maintain an up-to-date knowledge of sewage treatment methods and equipment.
- Provide input and direction for technical committees concerning new projects and existing programs.
- Prepare and review budgets for the General Department.

RELATIONSHIPS

The General Manager, Treatment shall:

- Work with organizations, utilities, companies and firms to maintain and improve quality and quantity of service being provided.
- Be prepared to provide assistance and input to top management.
- Maintain close contact with the Managers of Sewage Collection, Project Management and Materials Management.

QUALIFICATIONS

The qualifications of a potential General Manager, Production should include:

- A thorough knowledge of and experience in sewage treatment production and management.
- At least five years experience in the supervision and development of employees.
- An ability to develop and improve sewage treatment processes and procedures.
- Experience in the development and implementation of policies and procedures.

JOB DESCRIPTION - GENERAL MANAGER, SEWAGE TREATMENT

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures shall affect the General Manager's annual evaluation:

- Attainment of planned goals for sewage treatment
- Maintenance of quality of service
- Timeliness of departmental budgets and reports
- Development of departmental personnel

JOB DESCRIPTION - MANAGER, SEWAGE TREATMENT PLANT

REPORTS TO:	GENERAL MANAGER, TREATMENT
GRADE:	ONE
SALARY RANGE:	LE 960 - 1,680 per annum

BASIC RESPONSIBILITY

The Manager, Sewage Treatment Plant shall provide effective management of the operation and maintenance of a sewage treatment plant.

MANAGERIAL RESPONSIBILITIES

The Manager, Treatment Plant shall:

- Supervise all activities concerned with sewage treatment.
- Be responsible for effective operations and maintenance to ensure optimum utilization of equipment and labor within the treatment plant.
- Be responsible for the operation and maintenance of all pumping stations and resources within the treatment plant responsibility.
- Develop realistic schedules and work programs for operations and maintenance.
- Develop the potential of personnel reporting to him. Motivate, train or dismiss personnel not performing up to requirements.

TECHNICAL RESPONSIBILITIES

The Manager, Treatment Plant shall:

- Supervise the operations and maintenance of all treatment plant equipment.
- Supervise the Treatment Plant Laboratory.
- Prepare programs and plans for increasing the effectiveness of treatment plant operations and maintenance.

JOB DESCRIPTION - MANAGER, SEWAGE TREATMENT PLANT

TECHNICAL RESPONSIBILITIES (Cont'd.)

- Review and comment on operations and maintenance reports.
- Prepare and submit on a timely basis treatment plant reports to the General Manager, Production.
- Maintain an up-to-date knowledge of sewage treatment methods and equipment.
- Monitor operations and maintenance work programs for purposes of controlling treatment processes and determining efficiency of operations.

RELATIONSHIPS

The Manager, Treatment Plant shall:

- Work with supervision of all departments of the treatment facility and sewage collection to ensure effective quality and quantity of service.
- Serve as the principal contact for all matters concerning the Treatment Plant.
- Be responsible to Headquarters for all matters concerning quality, quantity and service.

QUALIFICATIONS

The qualifications of a potential manager, Treatment Plant should include:

- Extensive knowledge of engineering principles and practices as applied to sewage treatment operations, maintenance and repair.
- Extensive knowledge of sewage treatment methods.
- Ability to plan, direct and evaluate plant operation and maintenance functions.
- Understanding of managerial, administrative and accounting practices, required for successful plant operation.
- Ability to plan, coordinate and supervise the work of others.

JOB DESCRIPTION - MANAGER, SEWAGE TREATMENT PLANT

QUALIFICATIONS (Cont'd.)

- Ability to evaluate present effectiveness of plant operations and to make recommendations for improvements and long-range plans.
- Ability to evaluate, interpret and apply technical information from manuals, books or other formats.
- Interest and enjoyment in motivating and developing personnel under his direction.

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures will affect the Manager's annual evaluation:

- Effectiveness of treatment plant operations (i.e., quality of outfall sewage)
- Timeliness of reports
- Manpower utilization
- Ability to maintain an effective plant operation within budget
- Development of departmental personnel

JOB DESCRIPTION - GENERAL MANAGER, SEWAGE COLLECTION

REPORTS TO: VICE CHAIRMAN, OPERATIONS

GRADE: EXECUTIVE

SALARY RANGE: LE 1,320 - 1,920 per annum

BASIC RESPONSIBILITY

The General Manager, Sewage Collection shall be responsible for maintaining the sewers of the Utility.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the General Manager, Sewage Collection are to:

- Supervise the branch managers and a small headquarters staff.
- Allocate people and equipment on the basis of need.
- Supervise contractors hired to assist the Department.
- Recommend policies for:
  - Extension of service.
  - Frequency of sewer cleaning.
  - Priority given to blockages.
  - Collection of wastes unfit for sewers.
  - Replacement of tools and equipment.
- Prepare plans and budgets for the Department that assure improvement and control of its functions.
- Ensure that the Department operates within its approved budget.

JOB DESCRIPTION - GENERAL MANAGER, SEWAGE COLLECTION

MANAGERIAL RESPONSIBILITIES (Cont'd.)

- Develop the potential of personnel reporting to him to meet the present and future requirements of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.
- Hold subordinates responsible for specific, measurable goals.
- Regularly review and act upon managerial reports.
- Contribute to the improvement of the Operations Sector through suggestions, cooperation with other managers and leadership example.

TECHNICAL RESPONSIBILITIES

The principle technical responsibilities of the General Manager, Sewage Collection are to:

- Prepare plans for:
  - Major maintenance projects.
  - Major replacements.
  - Introduction of new equipment.
- Recommend the establishment of new branches.
- Establish work standards for maintenance crews.
- Develop, implement and ensure compliance with procedures for:
  - Initiating and completing work orders.
  - Preventive maintenance of all equipment and facilities.
  - Sewer cleaning.
  - Maintaining appropriate levels and flow rates in the sewer lines (in cooperation with the pumping stations).
  - Inspection, adjustment and repair of manhole covers, manholes and valves.

JOB DESCRIPTION -
GENERAL MANAGER, SEWAGE COLLECTION

TECHNICAL RESPONSIBILITIES (Cont'd.)

- Develop, implement and ensure compliance with procedures for:
  - Repaving of streets dug up on behalf of the Utility and resetting of manholes.
  - Making connections to the sewers.
  - Installing manholes, valves, Wyes and Tees in the existing system.
  - Reporting, inspecting, setting priorities and cleaning of blocked lines.
  - Locating, reporting, inspecting and setting priorities for leaks and broken or collapsed sewers.
  - Pumping sewage from septic tanks.
  - Collection of garbage.
  - Collection of industrial wastes unfit for sewers.
  - Updating and distributing system maps.
  - Reporting personnel, operating and system performance data.
- Utilize reports, articles and personal knowledge to develop plans and procedures that will improve the effectiveness and efficiency of the Department.
- Recommend purchase of tools and equipment that will improve the effectiveness and efficiency of the Department.
- Ensure that an effective communications system among headquarters, branches and work crews is maintained.
- Select contractors to assist the Department.
- Periodically inspect personally the quality and efficiency of branches.
- Recommend extensions and replacements to the existing sewers.
- Prepare a monthly report for top management summarizing the work of the Department.

JOB DESCRIPTION - GENERAL MANAGER, SEWAGE COLLECTION

RELATIONSHIPS

The General Manager, Sewage Collection should maintain working relationships with:

- Contractors who have the capability to assist the Department.
- The heads of street maintenance departments located in the Utility's service area.
- The General Manager, Distribution at the water utility.
- Managers of sewage collection in other large Egyptian sewerage utilities.

QUALIFICATIONS

The qualifications of a potential General Manager, Sewage Collection should include:

- Knowledge of the engineering principles governing operation of a sewer network.
- Ability to formulate plans, methods and procedures to improve the effectiveness and efficiency of the department.
- Ability to evaluate the condition of sewers in order to recommend cleaning, repair or replacement.
- Desire to improve the Department's effectiveness and efficiency.
- Demonstrated ability to motivate and develop personnel reporting to him.

JOB DESCRIPTION - GENERAL MANAGER, SEWAGE COLLECTION

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures will affect the General Manager's annual evaluation:

- Average delay in opening blocked sewers
- Meters of sewer cleaned
- Number of manholes inspected and cleaned
- Number of manhole covers raised
- Meters of sewers laid
- Actual expenses
- Percent of total expenses accounted for by work orders
- Overtime as a percent of total work time of the Department

JOB DESCRIPTION - MANAGER, BRANCH(1)

REPORTS TO:	GENERAL MANAGER, SEWAGE COLLECTION
GRADE:	ONE
SALARY RANGE:	LE 960 - 1,680 per annum

BASIC RESPONSIBILITY

The Branch Manager shall be responsible for maintaining the sewers in his service area.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the Branch Manager are to:

- Supervise the branch foremen.
- Allocate personnel and equipment among the work crews according to the demands of the work.
- Supervise contractors hired to assist the Sewage Collection Department in his area.
- Supervise small extensions and replacements of sewers.
- Personally supervise large emergency repairs.
- Prepare plans and budgets for the Branch that assure improvement and control of its functions.
- Ensure that the Branch operates within its approved budget.
- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.
- Regularly review and act upon managerial reports.
- Contribute to the improvement of the Sewage Collection Department through suggestions, cooperation with other managers and leadership example.

Note: (1) For sewerage utilities.

JOB DESCRIPTION - MANAGER, BRANCH (1)

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the Branch Manager, Sewage Collection are to:

- Implement the policies, plans and procedures of headquarters controlling:
  - Extension of service
  - Sewer cleaning
  - Removal of blockages
  - Pumping out of septic tanks
  - Collection of industrial and solid wastes
  - Repair of leaking or broken sewers
  - Inspection, adjustment and repair of manholes and valves
  - Repair of streets
  - Connections
  - Reporting of personnel, operating and system performance date
  - Installation of valves, Wyes and Tees
  - Check-out and check-in of tools and equipment
  - Maintenance of tools and equipment
  - Preparation, assignment and update of work orders
- Coordinate the use of vehicles and equipment to maximize their efficiency.
- Assist other agencies locate sewer lines when trenching is planned.
- Assist in identifying unauthorized connections.

Note: (1) For sewerage utilities.

JOB DESCRIPTION - MANAGER, BRANCH(1)

RELATIONSHIPS

The Branch Manager should maintain contact with:

- Contractors that frequently work in the area.
- Managers of factories in the area that produce heavy loads of sewage.
- Branch manager(s) of the water utility with responsibility for the area.

QUALIFICATIONS

The qualifications of a potential Branch Manager should include:

- Knowledge of the principles and methods of sewerage network operation and maintenance.
- Ability to set priorities when there are not enough people and equipment to do the necessary work.
- Ability to supervise personally emergency repairs to the system.
- Willingness to follow the policies, plans and procedures established by headquarters.
- Ability to motivate a low caliber work force.

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures will affect the Manager's annual evaluation:

- Average delay in opening blocked sewers
- Meters of sewers cleaned
- Number of manholes inspected and cleaned
- Number of manhole covers raised
- Meters of sewers laid

Note: (1) For sewerage utilities.

JOB DESCRIPTION
MANAGER, BRANCH(1)

MEASURES OF PERFORMANCE (Cont'd.)

- Actual expenses of the branch
- Percent of total expenses accounted for by work orders
- Overtime as a percent of total worktime of the department
- Utilization of major equipment

Note: (1) For sewerage utilities.

JOB DESCRIPTION - GENERAL MANAGER, CITY SERVICE

REPORTS TO:	VICE CHAIRMAN, OPERATIONS
GRADE:	EXECUTIVE
SALARY RANGE:	LE 1,320 - 1,920 per annum

BASIC RESPONSIBILITY

The General Manager, City Service shall be responsible for all aspects of water and sewerage service except capital projects in the city to which he is assigned(1). These services will be provided according to the policies, plans and procedures set forth by SCRWSS headquarters.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the General Manager, City Service are to:

- Supervise the heads of the following departments:
  - Water treatment
  - Sewage treatment
  - Distribution
  - Shops
  - Customer Service
  - Stores
  - Pumping
- Supervise contractors assisting the operation of the City Service.

Note: (1) In the first two stages of the development of the Suez Canal Region Water and Sewerage Service, he may only have responsibility for water service.

JOB DESCRIPTION -
GENERAL MANAGER, CITY SERVICE

MANAGERIAL RESPONSIBILITIES (Cont'd.)

- Recommend policies for the city concerning:

  . Meter reading, billing and collection practices.

  . Rates charged to customers.

  . Extension of service.

  . Cut-off of service.

  . Repair and replacement of equipment.

  . Provision of benefits to employees (e.g., housing

Represent the Utility at local governmental meetings and to the local press.

Approve extensions and replacements of the networks (if sufficient money is available in the budget).

Personally supervise repairs during major emergencies.

Ensure that approved policies, plans and procedures of SCRWSS headquarters are followed.

Prepare plans and budgets for the City Service that assure improvement and control of its functions.

Ensure that the City Service operates within its approved budget.

Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.

Hold subordinates responsible for specific, measurable goals.

Regularly review and act upon managerial reports.

Contribute to the improvement of the Utility through suggestions, cooperation with other managers and leadership example.

JOB DESCRIPTION - GENERAL MANAGER, CITY SERVICE

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the General Manager, City Service are to:

- Ensure that the plans of the Utility are coordinated with the plans of other governmental units.
- Prepare regular reports requested by Headquarters.

RELATIONSHIPS

The General Manager, City Service shall maintain working relationships with:

- The Governor.
- Advisors to the Governor, especially those responsible for health, housing and industry.
- Large users of water in the city.
- Reporters for the local press.
- Department chiefs in charge of repair shops at the local branch of the Suez Canal Authority.
- Functional department heads at SCRWSS headquarters.

QUALIFICATIONS

The qualifications of a potential General Manager, City Service should include:

Ability to provide executive direction to managers outside of his own speciality.

Ability to make good judgements concerning people or policies without reference to higher authority.

Ability to represent the Utility to the local government and to the public.

Willingness to follow the policies and plans of SCRWSS headquarters.

Demonstrated ability to develop people.

JOB DESCRIPTION - GENERAL MANAGER, CITY SERVICE

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures will affect the General Manager's annual evaluation:

- Total revenues
- Total receipts
- Total expenses
- Volume of water produced
- Low pressure water as a percent of total water produced
- Class A and B water as a percent of total water produced
- Water billed ÷ water produced
- Volume of sewage collected
- Volume of sewage treated
- Number of connections (water and sewer) made
- Meters of sewer cleaned
- Hours of non-functioning Class A equipment
- Percent of water samples from the distribution system that do not meet the Utility's internal quality standards
- Value of accounts receivable
- Average months of inventory on hand
- Number of man-days lost due to accidents

JOB DESCRIPTION - GENERAL MANAGER, FACILITIES AND MAINTENANCE

REPORTS TO: VICE-CHAIRMAN

GRADE: EXECUTIVE

SALARY: LE 1,320 - 1,920 per annum

BASIC RESPONSIBILITY

The General Manager, Facilities and Maintenance shall be responsible for the general maintenance and custodial care of all Utility buildings and facilities.

MANAGERIAL RESPONSIBILITIES

The General Manager, Facilities and Maintenance shall:

- Be responsible for planning, assigning, coordinating and supervising the work of all facilities and maintenance programs of the Utility.
- Develop effective long-range programs for improvement in facilities and maintenance capabilities.
- Develop the potential of facilities and maintenance personnel through training, placement and job assignments.
- Set specific, measurable goals for subordinate managers.
- Discipline and/or dismiss department personnel not performing up to standard or not following instructions or orders assigned.
- Ensure that the Facilities and Maintenance Department operates within its budget.
- Review and comment upon the expenses of the various maintenance groups.

JOB DESCRIPTION - GENERAL MANAGER, FACILITIES AND MAINTENANCE

TECHNICAL RESPONSIBILITIES

The General Manager, Facilities and Maintenance shall:

- Be responsible for the development of effective schedules for facilities and maintenance programs.
- Ensure adequate supplies of materials and equipment needed for effective facilities and maintenance projects.
- Evaluate and select contractors to provide specialized maintenance services.
- Supervise the preparation and maintenance of relevant records and files on supplies, equipment and personnel.
- Supervise the development and implementation of relevant procedures for fulfillment of facilities and maintenance functions.
- Perform periodic inspection of facilities and maintenance programs to determine compliance with instruction, quality of workmanship and acceptability of work.
- Ensure readiness to react in event of emergencies or unexpected problems.

RELATIONSHIPS

The General Manager, Facilities and Maintenance shall:

- Coordinate programs and activities with Distribution (or Sewage Collection), Project Management, Production and Materials Departments.
- Serve as the principal contact for all Utility facilities and maintenance activities.
- Maintain contact with contractors capable of supplying maintenance services to the Utility.
- Be prepared to respond to requests for information from top management.
- Provide liaison with departmental supervisors to ensure effective facilities and maintenance programs.

JOB DESCRIPTION - GENERAL MANAGER, FACILITIES AND MAINTENANCE

QUALIFICATIONS

The qualifications of a potential General Manager, Facilities and Maintenance should include:

- Considerable experience in facilities engineering, trades, materials and methods involved in building maintenance and repair work.
- Considerable experience in the operation, maintenance and repair requirements for treatment equipment.
- Ability to plan, lay out and supervise the work of others in a manner conducive to full performance and high morale.
- Ability to establish and maintain effective working relationships with superiors, subordinates contractors and others.

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures shall affect the General Manager's annual evaluation:

- Attainment of planned programs and schedules for facilities and maintenance projects

  Timeliness of departmental budgets and reports

  Ability to maintain an effective facilities and maintenance program within budget

  Effective personnel development and utilization

  Actual hours of equipment downtime versus plan

JOB DESCRIPTION - MANAGER, MAINTENANCE

REPORTS TO:	GENERAL MANAGER, FACILITIES AND MAINTENANCE
GRADE:	ONE
SALARY RANGE:	LE 960 - 1,680 per annum

BASIC RESPONSIBILITY

The Manager, Maintenance shall provide effective management and coordination of the maintenance of treatment plants within the Utility.

MANAGERIAL RESPONSIBILITIES

The Manager, Maintenance shall:

- Coordinate all maintenance activities between headquarters and plant operations.
- Provide assistance for development of plant maintenance programs.
- Inspect work of maintenance groups to evaluate compliance, quality and acceptability of work being performed.
- Coordinate requests for material and equipment to ensure optimum utilization.
- Assist Maintenance Department supervisors in personnel matters.

TECHNICAL RESPONSIBILITIES

The Manager, Maintenance shall:

- Be responsible for the effective coordination of maintenance schedules and programs.
- Initiate and monitor preventive maintenance programs, ensuring compliance with established procedures.
- Be prepared to provide assistance to the plant maintenance groups on technical and administrative problems.

JOB DESCRIPTION - MANAGER, MAINTENANCE

TECHNICAL RESPONSIBILITIES (Cont'd.)

- Supervise the development of maintenance procedures of plant and headquarters.
- Develop guidelines for setting work assignments for plant maintenance groups.
- Monitor job order system effectiveness.
- Assist plant maintenance groups in preparing annual department budgets.

RELATIONSHIPS

The Manager, Maintenance shall:

- Serve as principal contact for all Utility maintenance activities.
- Be prepared to respond to requests for information from top management.
- Provide liaison with departmental supervisors to ensure effective and coordinated maintenance programs.
- Work with the Manager, Facilities to ensure coordinated maintenance efforts.
- Develop and maintain liaison with Treatment Plant managers, Materials Management and Accounting managers.

QUALIFICATIONS

The qualifications of a potential Manager, Maintenance should include:

- At least two years experience in the operation, maintenance and repair requirements for treatment equipment.
- Ability to plan, lay out and support the work of others in a manner conducive to optimum utilization of personnel.

JOB DESCRIPTION -
MANAGER, MAINTENANCE

QUALIFICATIONS (Cont'd.)

- Ability to coordinate effective working relationships with superiors, subordinates, contractors and others.
- Experience in the development and utilization of personnel.
- Ability to write maintenance procedures.
- Ability to train personnel in maintenance procedures.

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures shall affect the Manager's annual evaluation:

Attainment of planned programs and schedules for maintenance programs

Timeliness of departmental budgets and reports

Effective coordination of maintenance groups for overall achievement of utility goals

Day of non-functioning Class A mechanical equipment compared to plan

Maintenance cost per item of Class A mechanical equipment

Total mechanical maintenance expenses as a percent of planned expenses

Number of personnel in the department qualified for promotion

JOB DESCRIPTION - MANAGER, FACILITIES ENGINEERING

REPORTS TO:	GENERAL MANAGER, FACILITIES AND MAINTENANCE
GRADE:	ONE
SALARY RANGE:	LE 960 - 1.680 per annum

BASIC RESPONSIBILITY

The Manager, Facilities Engineering shall be responsible for the coordination of general maintenance and custodial care of Utility buildings and facilities

MANAGERIAL RESPONSIBILITIES

The Manager, Facilities Engineering shall:

Provide technical coordination between the Facilities Engineering staff at each plant and the headquarters facilities engineering staff.

Develop programs for the Facilities Engineering staff at each plant which contribute to the effectiveness of the function.

Provide direction, guidance, motivation and leadership of facilities personnel reporting to him.

Develop potential of facilities personnel through training, placement and assignment of work.

Discipline and/or dismiss Department personnel not performing up to standard or not following instructions or orders assigned.

JOB DESCRIPTION - MANAGER, FACILITIES ENGINEERING

TECHNICAL RESPONSIBILITIES

The Manager, Facilities Engineering shall:

- Provide technical coordination for the maintenance of:
  - . Buildings.
  - . Housing.
  - . Grounds.
  - . Housekeeping.
  - . Roads and surfaced areas.
  - . Walls and fences
  - . Site irrigation and drainage.

  Coordinate requests for supplies of materials and equipment for facilities projects.

  Direct and coordinate the preparation and maintenance of relevant records and files on supplies, equipment and personnel.

  Assist in the development and implementation of procedures for fulfillment of facilities functions.

  Perform periodic inspection of facilities engineering programs to determine compliance with instructions, quality of workmanship and acceptability of work.

RELATIONSHIPS

The Manager, Facilities Engineering shall:

- Coordinate programs with Distribution (or Sewage Collection), Project Management, Production, Materials Management and Facilities Engineering staffs.
- Serve as the principal contact for all Facilities Engineering programs.
- Supervise the selection and work of maintenance contractors.
- Be prepared to respond to requests from Facilities Engineering staff at plant or headquarters levels.

JOB DESCRIPTION - MANAGER, FACILITIES ENGINEERING

QUALIFICATIONS

The qualifications of a potential Manager, Facilities Engineering should include:

- Experience in facilities engineering, skills, materials and methods used in building maintenance and repair work.
- Broad experience in the operation, maintenance and repair requirements for treatment plants.
- Capability to plan, lay out and support the work of others in a manner which promotes full performance and morale.
- Ability to promote effective working relationships with superiors, subordinates, contractors and others.

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures will affect the annual evaluation of the Manager:

- Achievement of planned programs and schedules for facilities projects
- Effectiveness of coordination of facilities staff functions
- Contributions provided in support of departmental budgets and reports
- Effectiveness of the budgetary monitoring
- Support of personnel development and utilization programs
- Maintenance cost per facility vs. plan
- Total facilities maintenance expenses as a percent of planned expenses

JOB DESCRIPTION - GENERAL SUPERVISOR, OPERATIONS STATISTICS

REPORTS TO:	CHAIRMAN
GRADE:	TWO
SALARY RANGE	LE 660 - 1,500 per annum

BASIC RESPONSIBILITY

The principal responsibility of the General Supervisor, Operations Statistics is to collect operations data and convert it to information useful for planning and control.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the General Supervisor, Operations Statistics are to:

- Advise the Vice Chairman, Operations of reports or conditions meriting his attention.
- Develop the potential of people reporting to him. Motivate, retrain or dismiss those who do not meet the standard.
- Contribute to the improvement of the Operations Sector through suggestions, cooperation with other managers and leadership example.

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the General Supervisor, Operations Statistics are to:

- Determine the needs for information concerning operations.
- Develop forms and procedures for collection and analysis of the data required to meet the information needs.
- Prepare and distribute both regular reports and specially requested reports.

JOB DESCRIPTION -
GENERAL SUPERVISOR, OPERATIONS STATISTICS

TECHNICAL RESPONSIBILITIES (Cont'd.)

- Analyze available data to suggest more effective or efficient methods of operations.
- Maintain files of the principal reports originating in the Operations Sector.
- Respond (with approval of the Chairman or other authorized manager) to requests for operations information from people or agencies outside of the Utility.
- Supervise the work of a small number of employees and clerks.

RELATIONSHIPS

The General Supervisor must develop working relationships with managers and general supervisors in the Operations Sector.

QUALIFICATIONS

The qualifications of a potential General Supervisor, Operations Statistics, should include:

- Demonstrated ability to analyze data (both verbal and quantitative).
- A general knowledge of treatment, distribution and maintenance equipment, procedures and measures of results.
- The potential to rise to the next higher level of management (e.g., treatment plant manager, branch manager, or maintenance manager) within two years.
- A strong desire to improve operations efficiency.

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures will affect the General Supervisor's annual evaluation:

- Timeliness and accuracy of regular reports issued by the department
- Value of cost-saving ideas submitted and accepted
- Usefulness of special reports

JOB DESCRIPTION - VICE CHAIRMAN, TECHNICAL

REPORTS TO:	CHAIRMAN
GRADE:	EXECUTIVE
SALARY RANGE:	LE 1,500 - 2,000

BASIC RESPONSIBILITY

The Vice Chairman, Technical shall be responsible for planning, design and construction of facilities for the Utility.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the Vice Chairman, Technical are to:

- Develop long-term facility needs of the Utility.
- Establish policies for specification of materials, equipment and construction.
- Regularly review progress on all projects and act to resolve major obstacles.
- Develop the potential of personnel in the sector to ensure an adequate supply of people for all needs
- Manage the following personnel:
  - General Manager, Project Management
  - Manager, Civil Engineering
  - Manager, Mechanical and Electrical Engineering
- Set specific measurable goals for subordinate managers.
- Ensure that his Sector operates within its approved expense and expenditure budgets.

JOB DESCRIPTION - VICE CHAIRMAN, TECHNICAL

TECHNICAL RESPONSIBILITIES

Technical responsibilities include:

- Supervision of the preparation of technical proposals for the long-range plan.
- Setting the major design parameters of all large projects.
- Assignment of engineers to projects.
- Reviewing and approving the detailed designs of all projects costing more than LE 2,000.
- Personally inspecting all projects costing more than LE 5,000 before approving them as completed.
- Conceiving and/or authorizing research projects that may benefit either operations or future design work.
- Preparing the monthly report of Technical Sector activities.
- Preparation of an annual budget for both the expenses of the Sector and for Capital Expenditures.

RELATIONSHIPS

The Vice Chairman, Technical shall establish and maintain contact with:

- Major suppliers of equipment.
- Major contractors.
- Engineering consultants to the Utility.

He shall also serve on the Management Committee.

JOB DESCRIPTION
VICE CHAIRMAN, TECHNICAL

QUALIFICATIONS

Qualifications of a potential Vice Chairman, Technical should include:

- Advanced knowledge of the concepts required for design and construction of water (sewage) treatment and distribution systems.
- Demonstrated ability to supervise design engineers.
- Demonstrated ability to supervise projects so that they are completed on time and within budget.
- Demonstrated ability to develop the potential of personnel in the sector.
- Clear demonstration of personal initiative and creativity in previous positions.
- A working knowledge of English.

MEASURES OF PERFORMANCE

Achievement of the goals set for the following measures will affect the Vice Chairman's annual evaluation:

- Amount of time projects are delayed
- Value of budget overruns
- Degree to which completed projects meet design goals
- Number of people suitable for promotion in the two grades immediately below the Vice Chairman (The Chairman must make this evaluation.)

JOB DESCRIPTION - GENERAL MANAGER, PROJECT MANAGEMENT

REPORTS TO:	VICE CHAIRMAN, TECHNICAL
GRADE:	EXECUTIVE
SALARY RANGE:	LE 1,320 - 1,920 per annum

BASIC RESPONSIBILITY

The General Manager, Project Management shall be responsible for anticipating and meeting the Utility's needs for plant and equipment.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the General Manager, Project Management are to:

- Participate in development of long-term plans for the Utility's facilities and equipment (He may be asked to manage this activity on a day-by-day basis).
- Ensure that all projects are properly designed, constructed and documented.
- Assign projects to Project Managers.
- Regularly review progress on all projects and act to resolve obstacles or delays.
- Develop the potential of personnel in the Department to ensure an adequate supply of skills required by the Sector.
- Manage the Project Managers.
- Regularly review progress on all projects and act to resolve obstacles or delays.
- Develop the potential of personnel in the Department to ensure an adequate supply of skills required by the Sector.
- Ensure that the Project Management Department operates within its expense budget.

JOB DESCRIPTION - GENERAL MANAGER, PROJECT MANAGEMENT

TECHNICAL RESPONSIBILITIES

Technical responsibilities of the General Manager, Project Management shall include:

- Providing technical advice to top management concerning:
  - . Needs for new facilities and equipment.
  - . Replacement and renovation needs of the Utility.
  - . Feasibility of proposed projects.
  - . Costs of proposed projects.
  - . Selection of consultants and contractors.
- Ensuring that a formal Project Proposal is prepared for every proposed project costing more than LE 1,000.
- Ensuring that all phases of projects are subdivided into clearly defined tasks that permit good technical, managerial and cost control.
- Making major design decisions.
- Resolving differences of opinion between Project Managers or consultants and the Managers of Civil or Mechanical and Electrical Engineering.
- Preparing Requests for Proposal or Invitations for Bid that permit:
  - . Adequate and accurate response by consultants and contractors.
  - . Adequate analysis of the responses by the Utility.
- Conducting negotiations with consultants and contractors on technical and cost issues.
- Resolving disputes with contractors concerning:
  - . Adherence to specifications.
  - . Obstacles encountered (e.g., delays in delivery of equipment).
  - . Progress payments.
  - . All other technical disputes.

JOB DESCRIPTION -
GENERAL MANAGER, PROJECT MANAGEMENT

TECHNICAL RESPONSIBILITIES (Cont'd)

- Regularly reviewing progress of projects through:
  - . Monthly review of the Project Task Analysis Reports.
  - . Monthly review of the Top Management Project Summary.
  - . Personal inspections of work in progress.
- Personally inspecting all major projects at completion.
- Personally accepting on behalf of the Utility the completion of all projects costing less than LE 1 million. (The Vice Chairman, Technical must approve completion of all larger projects.

RELATIONSHIPS

The General Manager, Project Management must work cooperatively and closely with:

- The Long-Range Planning Manager.
- The Management Services Department.
- Managers of Civil and Mechanical Engineering.
- Engineering consultants.
- Contractors.

He should maintain contact with potential local contractors and with the General Manager, Project Management at the other water or wastewater utility in the city. He should also participate in national technical associations concerned with water and/or wastewater engineering and construction.

QUALIFICATIONS

The qualifications of a potential General Manager should include:

- At least five years of successful project management experience.
- Ability to apply project management techniques such as Critical Path Method and PERT.

JOB DESCRIPTION -
GENERAL MANAGER, PROJECT MANAGEMENT

QUALIFICATIONS (Cont'd)

- Knowledge and sound understanding of the concepts, issues and practices concerning water and wastewater planning and engineering.
- Excellent understanding of practices in water and wastewater facilities construction.
- The ability to analyze project work into separate tasks for which:
  - . Beginning and ending points can be clearly defined.
  - . Quality of technical performance can be measured.
  - . Costs can be accurately estimated.
- The ability to develop alternative courses of actions if the planned actions are blocked.
- The ability to deal with and motivate consultants and contractors effectively.

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures of performance will affect the General Managers annual evaluations:

- Actual completion dates of project tasks versus planned completion dates
- Actual costs of projects versus planned costs
- Number and cost of engineering changes required of projects:
  - . During construction
  - . During start-up
  - . Within two years of acceptance

JOB DESCRIPTION - MANAGER, CIVIL ENGINEERING

REPORTS TO:	VICE CHAIRMAN, TECHNICAL
GRADE:	ONE
SALARY RANGE:	LE 960 - 1,680 per annum

BASIC RESPONSIBILITY

The Manager, Civil Engineering shall be responsible for establishing and enforcing good civil engineering practices in the design and construction of facilities for the Utility.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the Manager, Civil Engineering are to:

- Establish standards concerning:
  - . Design methodologies and parameters.
  - . Components and equipment.
- Assign civil engineers to projects taking due account of their skills and the demands of the project.
- Monitor design work to ensure standards are observed.
- Supervise preparation of plans for minor expansions, renovations or repairs to be performed by the operating departments.
- Periodically visit major construction sites to ensure that good civil engineering practices are being observed.
- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.
- Regularly review and act upon managerial reports.
- Contribute to the improvement of the Technical Sector through suggestions, cooperation with other managers and leadership example.

JOB DESCRIPTION - MANAGER, CIVIL ENGINEERING

TECHNICAL RESPONSIBILITIES

The Principal technical responsibilities of the Manager, Civil Engineering are to:

- Review and recommend changes in building and Utility codes.
- Evaluate long-range plans and cost estimates for expansion, renovation or major repair of the facilities of the Utility.
- Evaluate the condition of specific structures and networks when requested by operating departments.
- Review and approve all aspects of design related to civil engineering before major plans are released for construction.
- Monitor structural testing of components to ensure compliance with codes and standards.
- Evaluate and recommend consultants and contractors to be used by the Utility.
- Provide technical advice and assistance to Project Managers and to operating departments when requested.

RELATIONSHIPS

The Manager, Civil Engineering must work cooperatively and closely with:

- The General Manager, Project Management.
- The Long-Range Planning Manager.
- Project Managers.
- Engineering consultants.

He should also maintain contact with the Manager, Civil Engineering at the other water or wastewater utility in the city. He should participate in national technical associations concerned with water and wastewater engineering and construction.

JOB DESCRIPTION - MANAGER, CIVIL ENGINEERING

QUALIFICATIONS

The qualifications of a potential Manager, Civil Engineering should include:

- Successful water or wastewater civil engineering experience.
- Knowledge and sound understanding of the concepts, issues and practices concerning water or wastewater planning and engineering.
- The ability to evaluate the condition of existing facilities and recommend appropriate rennovation or repair.
- The ability to deal effectively with engineering consultants.

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures of performance will affect the Manager's annual evaluation:

- Number of civil engineering changes required during construction of projects
- Timeliness, cost and effectiveness (compared to plan) of minor projects designed for the operating departments

JOB DESCRIPTION - MANAGER, MECHANICAL AND ELECTRICAL ENGINEERING

REPORTS TO:	VICE CHAIRMAN, TECHNICAL
GRADE:	ONE
SALARY RANGE:	LE 960 - 1,680 per annum

BASIC RESPONSIBILITY

The Manager, Mechanical and Electrical Engineering shall be responsible for establishing and enforcing good engineering practices in the design, selection and construction of mechanical and electrical equipment and systems.

MANAGERIAL RESPONSIBILITIES

The principal managerial responsibilities of the Manager, Mechanical and Electrical Engineering are to:

- Establish standards concerning:
  - . Design methodologies and parameters.
  - . Equipment standards.
- Assign mechanical and electrical engineers to projects taking into account their skills and the requirements of the project.
- Monitor design work to ensure standards are observed.
- Supervise preparation of plans for minor expansions, renovations or repairs to be performed by the operating departments.
- Periodically visit major construction sites to ensure that good mechanical and electrical engineering practices are being observed.
- Develop the potential of personnel reporting to him to meet the present and future needs of the Utility. Motivate, retrain or dismiss personnel who are not performing up to standard.

JOB DESCRIPTION - MANAGER, MECHANICAL AND ELECTRICAL ENGINEERING

MANAGERIAL RESPONSIBILITIES (Cont'd.)

- Regularly review and act upon managerial reports.
- Contribute to the improvement of the Technical Sector through suggestions, cooperation with other managers and leadership example.

TECHNICAL RESPONSIBILITIES

The principal technical responsibilities of the Manager, Mechanical and Electrical Engineering are to:

- Review and recommend changes in building and utility codes.

  Evaluate long-range plans and cost estimates for expansion, renovation or major repairs to the mechanical and electrical equipment and systems of the Utility.

  Evaluate the condition of mechanical and electrical systems when requested by operations departments.

  Review and approve all aspects of design related to mechanical or electrical engineering before major plans are released for construction.

  Evaluate and recommend suppliers, consultants and contractors to be used by the Utility.

  Provide technical advice and assistance to Project Managers and to operating departments when requested.

  Submit status reports periodically.

RELATIONSHIPS

The Manager, Mechanical and Electrical Engineering must work cooperatively and closely with:

- The General Manager, Project Management.
- The Long-Range Planning Manager.
- Project Managers.
- Engineering consultants.

JOB DESCRIPTION - MANAGER, MECHANICAL AND ELECTRICAL ENGINEERING

RELATIONSHIPS (Cont'd.)

He should also maintain contact with the Manager, Mechanical and Electrical Engineering at the other water or wastewater utility in the city. He should participate in national technical associations concerned with water and wastewater engineering and construction.

QUALIFICATIONS

The qualifications of a potential Manager, Mechanical and Electrical Engineering should include:

- Successful water or wastewater engineering experience.
- Knowledge and sound understanding of the concepts, issues and practices concerning water or wastewater planning and engineering.
- The ability to evaluate mechanical or electrical equipment and recommend appropriate rennovation or repair.
- The ability to work effectively with engineering consultants.

MEASURES OF PERFORMANCE

Achievement of goals set for the following measures of performance will affect the Manager's annual evaluation:

- Number of mechanical or electrical engineering changes required during construction of projects
- Timeliness, cost and effectiveness (compared to plan) of minor projects designed for the operating departments