

## 2.4 Human Resources

1. It seems that jobs are divided into very small segments, each assigned to one employee. While this scheme gives them a clear objective, it may also give them wrong job achievement goals without considering efficiency improvements in performance. Furthermore, many small segments result in thinly spread management and supervision time over subordinates.
2. While there are obviously a lot of managers and employees who are highly motivated and devote themselves to accomplishing the objectives and goals of their units, there appears to be a morale issue in MWSS. Contributing factors may be as follows:
  - Low compensation and lack of incentive systems
  - Lack of recognition of subordinates by middle and upper managers
  - Slow promotion due to limited available positions
  - Bureaucratic red tape and slow decision making process
  - Few role models in middle and upper management
3. The existing Performance Appraisal Rating (PAR) system mainly focuses on individual performance and is not designed to encourage team or group efforts. It is not directly integrated with either cash/non-cash incentive systems or compensation; consequently it does not motivate employees as originally planned. In addition, it may not be appropriate to apply a unified evaluation system to all employees since they have jobs of different nature requiring different skills.
4. Many training programs (such as off the job training) are provided for officers/employees without any systematic scheme through which they can develop and improve their skills step by step throughout their career. These training programs should be systematized for efficient and effective skills development of officers/employees.

### **3. Strengthening Plans**

#### **3.1 Institution**

The fundamental cause of inefficient and ineffective operations at MWSS is directly related to its institutional setup and is mainly due to the lack of incentives for competition as well as of the application of commercial principles because of the natural government-owned integrated monopoly. In order to cope with these institutional issues, two key approaches, "unbundling" and "private sector participation (PSP)" were studied for possible restructuring of the MWSS organization and its operations. These two approaches will introduce competitive and commercial principles to the operations thus creating incentives for better performance and easing governmental controls.

Taking organizational, physical and geographical setup into consideration in assessing the unbundling process and options for the water supply function of MWSS, the Study Team identified five basic options for unbundling as follows:

- Option 1: Functional Unbundling
- Option 2: Segregation between Planning/Development and Routine Operations
- Option 3: Unbundling between Wholesale and Retail
- Option 4: Unbundling by Water Source
- Option 5: Unbundling Retail Operations by Region

MWSS operations should be also broken up between areas in which private sector participation (PSP) is suitable for efficient operations due to its commercial and economic nature on the one hand, and areas in which public authority must be imposed such as resource management, program development, regulatory and monitoring activities. Unbundling of operations needs to be considered with the possible introduction of PSP.

The Study Team performed an extensive study on the future organization of MWSS, including types of ownership and management coupled with unbundling and PSP. Numerous options for the future organization were considered and the following four options were identified for in-depth analysis:

- Option 1: Full Corporatization
- Option 2: Partial Privatization
- Option 3: Unbundling and Privatization
- Option 4: Full Privatization

As a result our study reached the following conclusions:

1. Core MWSS functions that include resource management, planning and programming, infrastructure development, and operations and maintenance of wholesale area shall remain as a GOCC. MWSS shall own the entire assets of infrastructure, from sourcing through treatment and transmission to distribution, in order to maintain the integrity of water supply system and to achieve economy of scale.
2. The Customer Service Area shall be divided into two or more units and privatized through a sale of franchises. One mode to accomplish this in customer service and distribution will be the establishment of a joint venture between MWSS and the private sector (Option 3: Unbundling and Privatization.)
3. As an initial step, one service sector or two in the Customer Service Area (CSA) could be privatized on a pilot basis. Thereafter, all or most sectors will follow according to the experience gained previously.
4. In the infrastructure development area, BOT or similar schemes shall be promoted for the development of water sources, treatment plants and major transmission facilities in order to expand capital assets without incurring any burden on the governmental budget (Option 2: Partial Privatization). However, those schemes must be carefully introduced since MWSS has no experience with this mode of PSP.
5. In the operations and maintenance function of the wholesale operations, MWSS will be able to enter into a management contract with the private sector to improve maintenance and logistics on a short term basis (Option 2: Partial Privatization). As a long term strategy, MWSS may be able to establish a joint venture with that sector to provide engineering and maintenance services to MWSS. In order to secure financing for the

major rehabilitation projects on the existing treatment plants or other facilities, MWSS may sell franchises to the private sector to operate those facilities based on a lease or a concession arrangement.

The fundamental issue in MWSS sewerage and sanitation operations is lack of public awareness on the importance of public health/safety and prevention of environmental degradation; hence, both of those operations have received less attention and lower priority from the GOP, MWSS and the international lending agencies to date.

There are two major issues in this regard: one is the low priority of program development and implementation, and the other is the difficulty in operating on a full cost recovery basis. The study was conducted on several options of the future sewerage and sanitation operations including independence from MWSS and operations transfer to other agencies.

As a result, our study concludes that MWSS should retain both the sewerage and sanitation operations and create an independent and separate operating unit apart from water supply operations within MWSS (Option 1 - Independent Operations from Waterworks). The new sewerage and sanitation unit would be headed by a Deputy Administrator who reports directly to the Administrator or any other senior executive with the stature to secure autonomy and independence on budget, personnel, and day-to-day decisions for the sewerage and sanitation operations. In the long run, an independent sewerage and sanitation system from MWSS (Option 2 - New Public Enterprise Independent from MWSS) may be sought as capital projects and operations expand.

### **3.2 Organization**

The objective and goal of organizational strengthening is to transform MWSS into a more efficient and effective organization. Key strategies to be formulated here are centered around decentralization, empowerment and rightsizing.

The Operations Area and CSA, which require daily routine operations and immediate attention to customers' requests, shall be segregated from the Administrator's direct responsibility and placed under a Chief Operating Officer (COO) at the SDA level. Another strategy is for sectoralization in the customer service function to be fully implemented and formalized. In the long run, the CSA

and/or a service sector may be able to gain greater autonomy and independence from headquarters, while they assume more financial responsibility and are held accountable for the results of their operations.

In order to avoid a lengthy and slow decision making process due to involvement of too many decision makers and organizational red tape, powers and duties for the Administrator, SDA, DAs, department and division managers and section chiefs shall be redefined after a thorough review of the MWSS bylaws and the corresponding assignment and delegation of authority. The objective of the review is to transfer areas that require day-to-day attention from upper management to a lower hierarchy in the organization. Upper management will thus be freed from daily routine work and problems so that they can devote time to more critical management issues.

MWSS has been reducing the number of regular and casual employees for the past several years. Adjustments in the size of organizations will be continuous due to rationalization by information technology, contracting out of non-mission activities, transfer of excess personnel to strategically important functions and employment policy. MWSS has to be prepared for massive reduction in casual employees especially in the Construction Management Area, if future water source development projects are implemented through PSP, such as BOT or similar schemes.

Based on the strategies for organizational strengthening discussed above, the following should be considered in the reorganization:

1. A centralized organization directly headed by the Administrator should concentrate on resource planning and management, engineering and construction, finance and administration.
2. A decentralized organization headed by COO or SDA should be directly involved in operations and customer service. The Operations area should be further divided between the waterworks and the sewerage and sanitation systems.
3. Corplan, MIS and PM&E should be combined to enhance planning and monitoring capacity and to maintain integrity in the planning and monitoring cycle.
4. The Engineering and Construction Management Areas should be combined after major capital expansion projects are completed.

5. A new department in the Construction Management Area should be created, with all excess casual employees to be pooled/assigned. This department will provide common work as a back office for FAP and LFPs.
6. Part of the material management functions (WSD and PMD) should be integrated with the facilities and equipment maintenance function (CMD).
7. The MWSS Action Center should be transferred to the Customer Service Area.

On December 6, 1995, just before finalizing this Final Report, Malacanang (The Office of the President) Issued Executive Order No. 286 (EO 286) reorganizing MWSS and LWUA pursuant to Republic Act No. 8401 otherwise known as the National Water Crisis Act of 1995. At the time of writing this Final Report, MWSS is being reorganized according to the EO 286 which contains key changes of the MWSS organizational structure recommended by the Study Team. The following lists the major points of the new MWSS organization:

- Appointment of two (2) Senior Deputy Administrators, one for Operations and Customer Service and the other for Resource Development and Management
- Appointment of four (4) Deputy Administrators, one (1) for Engineering and Construction, one (1) for Finance and Administration, and two (2) for Customer Service (District 1 and 2).

### 3.3 Operations

To effectively fulfill its corporate mission and to achieve long-term objectives and goals, MWSS needs to develop a corporate planning process for long-, medium- and short-term planning cycles and to monitor progress of such plans based upon pre-determined performance measurements at various levels and functional areas.

As a road map for MWSS's short-term business goal, the budget is supposed to be prepared based upon activities necessary to attain such a goal, set by MWSS management during the corporate planning process. There is also a need to introduce the concept of profit center whereby each operating function or unit will be financially evaluated.

In the Engineering and Construction Management Areas, MWSS should strive for development of management guidelines and dissemination of engineering data and information sharing in order to

improve communication among parties concerned with construction projects and to expedite the overall project process.

The Sectoralization Scheme should be formalized through persistent negotiation with DBM in due course, as ISP takes place and is included in the 1996 MWSS budget. In the long run, care should be taken that the service sector boundaries correspond to the municipal boundaries, through changes in hydraulic layout as pipelines are replaced and rehabilitated.

The implementation of ISP, which is one of the most critical operational strengthening projects of MWSS together with CMP, should be reprioritized, and required resources should be identified, reassigned and rescheduled to avoid further delay in implementation. MWSS should also formulate the second phase of ISP (ISP-II) to enhance and improve the systems to be put in place under ISP-I.

#### **3.4 Human Resources**

At present, MWSS employs approximately 7,800 regular and casual employees. The number of employees and their functional composition will gradually change over the next 20 years due to various factors such as fewer predicted major construction projects after the year 2005, a constant increase of work volume in customer service and contracting out some routine operations to the private sector.

The following table summarizes the results of the projection for the total number of regular and casual employees and the number of personnel for work to be contracted out:

**Table 4. 2 Projected Number of Employees**

| Description                      | Present | 2000  | 2005  | 2010  | 2015  |
|----------------------------------|---------|-------|-------|-------|-------|
| Service connections (in 000)     | 799     | 1,063 | 1,549 | 2,092 | 2,831 |
| Septage tanks desludged (in 000) | 50.0    | 103.4 | 103.4 | 188.6 | 188.6 |
| (1) Regular employees            | 4,616   | 4,570 | 4,805 | 4,980 | 5,195 |
| (2) Casual employees             | 3,180   | 2,181 | 1,827 | 1,055 | 941   |
| (3) MWSS employees (1)+(2)       | 7,796   | 6,751 | 6,632 | 6,035 | 6,136 |
| Staff/1,000 connections          | 9.3     | 6.0   | 4.0   | 2.7   | 2.0   |
| (4) Work to be contracted out    | 855     | 1,430 | 1,950 | 2,587 | 2,991 |
| (5) Total (3)+(4)                | 8,651   | 8,181 | 8,582 | 8,622 | 9,127 |

The projection shows that the total number of employees will decrease by 1,660 from 7,796 to 6,136. The number of regular employees will increase by 579 from 4,616 to 5,195 because of a rapid increase in service connections, while the number of casual employees will decline drastically from 3,180 to 941 mainly due to the completion of major expansion projects after the year 2005 except renovation projects.

MWSS needs restructuring to become more responsive, so the future organization and its operations should be characterized as follows:

- More mission, goal and customer orientation
- Decentralization through better corporate planning and empowerment
- Taking advantage of private sector participation (PSP)
- Extensive use of information technology
- Introduction of commercial and competitive principles

As the characteristics of the MWSS organization and operations change in the future, they will also require a change of skill-set from existing employees. Emphasis on required skills and capability in the future will shift from implementation to planning, from infrastructure development to O&M and R&D, from remedies to prevention, and from manual clerical work to computer-assisted work. Since HRD is a long-term issue, strategies for human resource development should be defined in terms of the future mix of core skills and competency required by MWSS.



HR management areas to be improved are enhancement of employee motivation, introduction of a job rotation system, review of position titles, job description and qualification standards, and establishing higher goals and targets.

### **3.5 Water Sector Activities**

The future R&D strategies to be implemented are: concentrating R&D activities in key areas, creating Special Interest Groups (SIGs), introducing team-oriented R&D project organization, and promoting joint projects in conjunction with other research institutions. In order to effectively carry out these strategies, a medium-term R&D plan supported by action plans for individual activities should be drawn out.

In the area of public relations, the fields of public awareness, health education and hearings should be further enhanced to maintain closer relationship with the general public and stakeholders. Especially, MWSS should formulate a strategy for a bottom-up approach through mobilizing a grass root movement by resident forces based on the barangay (smallest administrative unit) or other small community unions.

Inefficient operations and delay in infrastructure development are partly attributable to weak water-related domestic industries that are not sufficiently capable of meeting the requirements of MWSS. The necessary efforts to develop these industries will be required at three levels, i.e., national, water sector and MWSS. Strategies to be initiated by GOP include the preparation of industry development plans for targeted sub-sectors and governmental incentives and assistance to encourage local production. Water sector initiatives include the establishment of national waterworks standards through participation in PWWA activities. As for MWSS, transfers of some service delivery responsibilities to the private sector through mobilizing PSP in the form of delegated contracts will be required.

## **4. Proposed Projects**

### **4.1 Corporate Planning and Monitoring**

This project aims at strengthening organizational capabilities through the development and implementation of the corporate planning, budgeting and monitoring process, its purposes in MWSS being as follows:

- **Clarification of Directions** - To establish common goals and objectives, strategies and plans to clarify the corporate directions
- **Integration of Plans** - To integrate expansion project and functional plans into an overall corporate plan in order to maintain their integrity and consistency (including also the budget's) for better coordination of business activities
- **Resource Re-deployment** - To optimize allocation of management resources to various projects and operating units through well coordinated corporate planning, budgeting and monitoring processes.
- **Decentralization and Empowerment** - To facilitate decentralization and empowerment through the implementation of the processes in the previous paragraph.

The scope of the project will cover development of the corporate planning guidelines, formulation of the medium-term corporate plan, preparation of the two-year rolling business plan, and development and implementation of a monitoring and evaluation process in the following phases:

**Phase I - Development of Corporate Planning Guidelines:** These will clearly describe corporate planning process, roles and responsibilities of the parties concerned, related activities for formulating a medium-term (5 year) corporate plan, and a two-year rolling business plan and annual budget.

**Phase II - Formulation of the Medium-term Corporate Plan:** The medium-term corporate plan will consist of corporate policies, goals and objectives, strategies, expansion project and functional plans, and financial projections.

**Phase III - Preparation of the Two-year Rolling Plan and Annual Budget:** The two-year rolling business plan will cover short-term corporate goals and objectives, expansion project and functional plans, and financial projections. The annual budget, based on the above plan, will cover revenues, operating expenses by department/division, project expenditures, debt service, etc. The budgeting process will also cover preparation of projected financial statements and cash flow.

**Phase IV - Development and Implementation of the Monitoring and Evaluation Process:** This process will be developed and implemented for the execution of Phase III items.

#### **4.2 Maintenance and Logistics**

This project aims at strengthening the operations and maintenance area through the development of maintenance guidelines and programs and the streamlining of maintenance and logistics operations based on the business process re-engineering approach.

The scope of the proposed project will be divided into two components - the development of maintenance guidelines and programs and the re-engineering of maintenance and logistics operating processes.

The development of maintenance guidelines and programs will cover routine patrol and checks, periodical preventive maintenance and emergency repairs by location and type of facility and equipment, while the re-engineering work will cover both the maintenance and logistics operations. Re-engineering the maintenance operations will include maintenance planning, job order monitoring, resource allocation and scheduling, maintenance and repair work, job costing and performance measurement processes. As far as logistics, it will include procurement planning and management, receiving and issuing, inventory control and monitoring, and inventory valuation processes for materials, parts, tools and maintenance equipment.

The maintenance and logistics project will be performed in two phases as follows:

##### **Phase I - Development of Maintenance Guidelines and Programs**

- Identification of facilities and equipment to be covered by this project
- Clarification of deficiencies and issues on the existing maintenance policies, standards, systems and procedures
- Formulation of new maintenance strategies, policies and standards as guidelines
- Development of new maintenance programs for selected key facilities and equipment
- Development of action plans for implementing maintenance guidelines and programs.

#### **Phase II - Re-engineering of Maintenance and Logistics Operations**

- Study on the existing operating processes for maintenance and logistics
- Development of solutions to integrate and streamline these operations
- Development of an action plan for implementing changes.

### **4.3 R&D and Laboratory**

This project aims at strengthening MWSS R&D and laboratory testing capabilities through the development of an integrated medium-term R&D and laboratory strengthening plan. The purposes in developing this plan are as follows:

- Clarification of R&D directions and strategies
- Prioritizing R&D and laboratory investments
- Effective allocation of scarce R&D resources
- Strengthening laboratory testing capability

The scope of the proposed project will cover selecting R&D subjects, setting up R&D project teams and Special Interest Groups (SIGs), laboratory strengthening and development of R&D skills in the following phases:

**Phase I - Development of R&D and Laboratory Strengthening Plan:** This medium-term plan includes R&D goals and objectives, strategies, R&D areas for focusing, skills to be enhanced, equipment to be acquired, action plans and cost estimation for implementing the plan.

**Phase II - Implementation of R&D and Laboratory Strengthening Plan:** Based on the above medium-term plan, R&D project teams and SIGs will be formed, and required laboratory equipment will be procured.

### **4.4 Human Resources**

This project focuses on strengthening organizational capabilities through the planning, development and implementation of integrated human resource management and development plans. Its purposes are as follows:

- **Clarifying Human Resource Requirements** - Defining present and future human resource requirements in terms of skills, competency, and number of employees by function and hierarchy
- **Securing Required Skills and Competency** - Developing and implementing a comprehensive human resource development program based on the career path to secure future skills and competency required by MWSS
- **Motivating Employees** - Motivating managers and other employees by establishing an integrated human resource management program including appraisal system and incentive plan.

The scope of the proposed project will cover a study on present and future manpower and skill requirements, development of human resource (HR) strategies, design of a career development program (CDP), formulation of a comprehensive human resource development (HRD) program, and review of the present appraisal system and incentive plan for modification. The project will be executed in the following three phases:

**Phase I - Study on HR Requirements and CDP:** The present manpower and skill requirements will be studied based on a manpower audit, and so will future ones be also defined in this phase. Based on the latter requirements, several career path models will be designed and a career development program developed for each.

**Phase II - Study on Human Resource Development Program -** A five-year human resource development program will be formulated to support the career development program and to develop required skills in MWSS.

**Phase III - Study on Appraisal System and Incentive Plan:** The present appraisal system and the incentive plan will be evaluated to identify their weaknesses and deficiencies. In addition, the existing CSC rules, regulations and related administration/labor laws will be studied to identify areas where MWSS will be able to modify or change the existing appraisal system and incentive plan. Then a new appraisal system, incentive plan and reward system, which must be closely integrated to each other, will be designed and an action plan for implementation developed.

#### **4.5 Management Information System**

This project aims at strengthening MWSS operational capabilities through a full implementation of the present Information Systems Plan (ISP-I) coupled with that of the Change Management Program (CMP) and plans for an enhancement of ISP-I (ISP-II). It is critically important for MWSS to successfully carry out ISP-I and CMP to lay down the foundation for organizational and operational improvements. To achieve this objective, a project organization consisting of external and internal expertise should be formed. The outside consultants, working on a full time basis on this project, will provide technical assistance for reviewing the existing ISP-I project status, determining priorities of implementation, re-allocating resources, assisting implementation efforts and developing a plan for the second phase of ISP (ISP-II). The internal expertise will be selected from the existing ISP Project Team and user departments cross-functionally on a full time or part-time basis.

The scope of the proposed project will cover the following areas in three phases:

##### **Phase I - Project Review and Planning for ISP-I**

- Review on the present status of the ongoing ISP-I and CMP
- Development of the revised implementation plan for ISP-I/CMP.

##### **Phase II - System Planning for ISP-II**

- Assessment of the present ISP-I to identify key additional requirements
- Study on implementation scope of OA/DSS system and other new application systems
- Development of the system plan for ISP-II.

##### **Phase III -. Implementation Support for ISP-I/CMP**

- Overall Project Management for the implementation of ISP-I/CMP
- Assisting in user training and data conversion
- Assisting in defining new operating standards and procedures
- Development of Standard Operating Procedure (SOP) manuals.

## 5. Evaluation

### 5.1 Quantitative Analysis

The project duration, the required outside consultants and the cost of acquiring consulting services for the above five proposed projects are estimated as follows:

**Table 4.3 Estimated Project Duration and Cost**

| Proposed Project  | Duration (Months) | Consultants (M/M) |          | Consulting Cost (Million Pesos) |
|---|-------------------|-------------------|----------|---------------------------------|
|   |                   | Overseas          | Domestic |                                 |
| Corporate Planning and Monitoring Strengthening Project (CPMSP) | 15                | 19                | 17       | 16                              |
| Maintenance and Logistics Strengthening Project (MLSP)          | 6                 | 12                | 12       | 10                              |
| R&D and Laboratory Strengthening Project (RDLSP)                | 5                 | 7                 | 6        | 6                               |
| Human Resources Strengthening Project (HRSP)                    | 11                | 13                | 15       | 12                              |
| Management Information System Strengthening Project (MISSP)     | 20                | 32                | 96       | 40                              |

Note: Duration in months

Judging from the above table, MISSP requires the largest management resources in terms of cost and time followed by CPMSP, HRSP, MLSP and RDLSP.

The costs for these projects may be partially funded by internal cash generation (ICG). MWSS may also seek financial and technical assistance from international donors through NEDA, since its own internal resources are inadequate to execute the projects. Costs will be recovered through improved overall corporate performance, expected higher employee productivity, and more effective use of management resources to avoid waste on a medium-term basis.

### 5.2 Qualitative Analysis

The Study Team evaluated the five proposed projects from the viewpoints of consistency with the corporate mission, technical and financial feasibility, expected benefits, potential risks and urgency. The following table summarizes results of the qualitative analysis of the five projects:

**Table 4.4 Qualitative Analysis of Proposed Projects**

| Project | Consistency | Feasibility | Benefits | Risks  | Urgency | Overall |
|---------|-------------|-------------|----------|--------|---------|---------|
| CPMSP   | High        | High        | Medium   | Low    | Medium  | Medium  |
| MLSP    | High        | Medium      | High     | Medium | High    | High    |
| RDLSP   | Medium      | Low         | Medium   | Low    | Low     | Low     |
| HRSP    | Medium      | Medium      | Medium   | Medium | Medium  | Medium  |
| MISSP   | High        | Medium      | High     | Medium | High    | High    |

As a result of the overall evaluation, MISSP and MLSP are at the highest priority followed by CPMSP, HRSP and RDLSP.



# **Part V**

## **Financial Study**

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## Part V Financial Study

### 1. Review of Current Operation

#### 1.1 Financial Performance

##### 1.1.1 Profitability

MWSS's financial performance was reviewed for the past five years from 1990 to 1994. It recorded its highest profitability in 1992, when the profit ratio (operating profit to total operating revenue) was as high as 26.3 percent. 72 percent of net income was from operations and 28 percent from interest. For FY 1994, net income went down from a peak of P1,194 million to P667 million. During this two year period, the increase in operating revenue (from P3,245 million to P3,774 million) was more than offset by that in operating expenses (from P1,070 million to P1,413 million), depreciation (from P623 million to P900 million) and financial charges (from P632 million to P1,048 million). In 1994, almost half of the net income was earned from interest income (P331 million).

MWSS's profitability is still respectable as compared to profit-seeking companies but in 1994 barely managed to satisfy the rate of return (ROR) on net fixed assets of 8 percent called for by ADB. It is doubtful that this loan covenant will be met in 1995.

Although the significant increase in depreciation expense was primarily caused by the shortening of useful lives of fixed assets, and therefore it will not further inflate in the future (except for that caused by annual revaluation), operating expenses and financial charges are expected to grow continuously. Considering that MWSS currently may not be spending adequately in operation and maintenance mainly for the purpose of satisfying the ROR covenant, the future profitability needs to be closely watched.

The financial data for the first six months of the year 1995 shows that gross revenue decreased to P1,840 million from P1,889 million for the same period last year. Likewise net income went down from P348 million to P110 million. What is very alarming is that P108 million out of P110 million came from interest income meaning that MWSS earned almost nothing from its operations. This situation was mainly caused by increased personnel expense.

The sewerage/sanitation operation has shown better profitability than the water operation partly because of the change in the way overhead expenses are allocated. The current methodology is in accordance with the recommendation made by an IBRD consultant but may be resulting in an undue burden for the water operation now. Good profitability is also due to the fact that the Sewerage System Department is not doing what is expected, i.e., regular desludging of septic tanks.

MWSS's profitability may be summarized as follows:

- The operating revenue is helped by the relatively high tariff level, the benefit of which is more than offset by the ineffective operations as evidenced by the high NRW rate resulting in less volume of water billed.
- Good interest income is the result of the large cash balance partially made possible by the past equity contribution by the GOP.
- The favorable geographical setup and the good quality of raw water result in less burden for power and chemical spending.
- MWSS's operating expense spending especially in preventive maintenance may have been curtailed to generate sufficient income to satisfy the ROR requirement. The high NRW rate may be the result of this.
- The salary level of the MWSS personnel has been determined irrespective of its financial performance due to the fact that it is a GOCC and its personnel are civil servants.

### 1.1.2 Liquidity

MWSS's current financial position is very sound because of the past equity contribution by the GOP and long-term loans from IBRD and ADB. Almost 97 percent of assets were funded by funds of a long-term nature at FYE 1994.

MWSS has spent extensively in infrastructure investments since its inception, and the total assets of P31,794 million at FYE 1994 was more than eight times the operating revenue, negating the high profitability in terms of return on assets or equity.

Assets mainly consist of fixed assets in the amount of P25,750 million at FYE 1994 (including

construction in progress) subject to revaluation for inflation every year, further increasing the importance of fixed assets on the balance sheet. At FYE 1994, the fixed assets consisted of original investment of P20,342 million and accumulated revaluation of P19,497 million, net of accumulated depreciation of P14,089 million.

Other important assets are cash and accounts receivable. The cash balance of P3,413 million at FYE 1994 was almost 11 months worth of operating revenues. On the other hand, the accounts receivable balance of P1,569 million was more than 5 months sales, well above what IBRD and ADB call for.

Virtually all of MWSS's financing is of a long-term nature, which contributes to MWSS's healthy financial position.

### 1.1.3 Financial Capacity

For the five-year review period, the total cash receipts of P19,206 million consisted of internal cash generation from operations (61.6 %), debt financing (27.8%) and equity financing (10.6%). The share of external financing was relatively small mainly because not too many major capital projects were undertaken for the period. Also the self-financing ratio (local financing vs. foreign financing) was exceptionally high. It was supposed to be around 40 percent but will be as low as 25 percent in the future reflecting the GOP's insufficient financial capacity.

In comparison, the total cash disbursements of P18,114 million for the review period were split between capital expenditures (40.9%) and debt service payments (59.1%). The cash receipts exceeded the cash disbursements by 6 percent. This resulted in an increase in cash balance by P1,092 million or almost 50 percent over the year 1990.

Debt service capacity ratio as defined by the covenant of the foreign loans was 123 percent for the year 1994, barely exceeding the required 120 percent. As debt service requirements are expected to go up in the future, it goes without saying that more income from operation is needed while at the same time MWSS will have to spend more in operation and maintenance. Therefore, its future in terms of financial capacity may not be as favorable as before.

## 1.2 Tariff

### 1.2.1 Overview

MWSS is authorized by its charter RA 6234 to design and fix the level and structure of the tariff on its own as long as the defined rate of return on capital assets does not exceed 12 percent. In reality, however, as a GOCC and public corporation it cannot revise the tariff without consulting higher decision-makers. In fact, the current tariff was last revised in 1992, and the MWSS policy to change it annually at least for inflation has been disregarded for three years.

The present tariff is set separately but not independently for water and sewer/sanitation. The sewer/sanitation charges are based on the water service charge. Although there are other line items in the current tariff structure such as maintenance service charge and metering charge, those based on monthly service volume account for almost 100 percent of the total revenues. The ratio of water revenue to sewer/sanitation revenue is about 5 to 1.

The average water service charge per one cubic meter of water is said to be P4.56 for residential customers, P9.25 for commercial customers and P10.86 for industrial customers for the overall average of P6.43. These averages are calculated based on a consumption survey made by MWSS a few years ago and may now be outdated since the actual averages are below the theoretical figures.

CERA (currency exchange rate adjustment) forms a part of the water service charge in billing to customers. It is designed so that the additional foreign disbursement requirements due to the fluctuation between pesos and US dollar are taken care of. Therefore, it should not be considered a revenue item but rather a non-operating item corresponding to foreign exchange differentials which is classified as a finance charge in the income statement.

### 1.2.2 Revenue Adequacy

As the majority of MWSS's revenue is earned from its operations, it is critical for the tariff to be set sufficiently high so that MWSS can financially support its daily operation and maintenance activities and capital projects.

In contrast to ROR defined by RA 6234 which is for the purpose of preventing MWSS from setting the tariff level too high, the one specified by the covenants in the loans from ADB ensures that MWSS's profitability is sufficient so that the repayment of the loans is secured. This ROR has been regarded by MWSS as the key indicator of its profitability. The rate was well over the required 8 percent until 1993 but was barely achieved in 1994 and may be missed in 1995. However, this should not be taken as evidence that the existing tariff level is not generating adequate revenue. The Study Team concludes that the inadequate revenue was caused not by a low tariff level but by the high NRW rate due to ineffective operations.

The current tariff level should be sufficient to sustain present operations while future operations to include additional facilities and more concentrated maintenance activities may necessitate an higher one.

### 1.2.3 Affordability

On the average basis, the customers who are connected with MWSS's sewerage system pay monthly 0.92 percent of their household income for the service. Those who have their own septic tanks on their premises pay 0.63 percent. These are generally higher than those for other water utilities in the ASEAN countries.

Although they are paying more for water and sewer/sanitation than their counterparts in the region, the Study Team concludes that these services are affordable if the rate is less than one percent of their household income. If there is certain reluctance in paying the MWSS bill on the part of the customers, it is rather caused by the service quality than the billed amount itself.

### 1.2.4 Sewerage and Sanitation Charge

All the MWSS customers now pay an additional 10 percent of the water service charge as an environmental charge. In spite of its name, the environmental charge was introduced to cover the cost of regular desludging of septic tanks owned by MWSS customers which became the responsibility of MWSS in the 1980s and has been provided free of charge.

There are currently about 90,000 customers who are connected with the MWSS sewer system as compared to about 820,000 water customers. The former pay a further 50 percent on the water



service charge on top of the environmental charge.

## **2. Recommendations and Proposals**

### **2.1 Finance and Accounting**

Generally speaking, the financial statements prepared by MWSS fairly state its results of operation, financial position and cash flows except for the following two items:

- The allowance for doubtful accounts has been provided at two percent of gross billing although historically about five percent remains uncollected.
- Foreign currency denominated loans may be considerably understated due to the accounting principle MWSS uses to present the account which is different from the norm internationally followed.

In order to increase the accuracy of the data and the efficiency of the procedures, ISP in relation to financial accounting should be promptly implemented. If to be further delayed, there may be a need for an interim measure.

### **2.2 Tariff**

#### **2.2.1 Level**

The overall level of the tariff should be considered from the viewpoints of both revenue adequacy and affordability.

The revenue adequacy is defined by the required cost to enable sustainability of the operations. It will be determined by the future capital projects and operating and maintenance expenses based on necessary and sufficient activities performed effectively and efficiently. The revenue adequacy sets the floor for the tariff level.

On the other hand, despite the national policy of "full cost recovery" for the water sector, the affordability will set the ceiling for the tariff level since water is a basic necessity in human life and must be affordable for the customers.

It is possible that the tariff level that satisfies the revenue adequacy exceeds the affordability level. In such a case, the affordability criteria must prevail, and the shortage needs to be subsidized by the government possibly through a designated tax system. This effectively means that the rich will subsidize the poor in water consumption, which should not conflict with the national policy.

From the viewpoint of affordability, the tariff may be raised by 35 percent in consideration of 1995 average household income for the residents in NCR. This will result in the customers spending one percent of their household income on water and sewerage/sanitation.

The tariff should be regularly revised to maintain a constant rate between the average tariff and average household income.

#### **2.2.2 Reconfiguration of Sewer/Sanitation Charges**

The Study Team concludes that the current scheme for the sewer and sanitation charges results in inequity between sewered and unsewered customers and accordingly recommends that a uniform environmental charge be introduced at the rate of 30 percent of the water service charge in return for abolishing the present sewer service charge.

#### **2.2.3 Streamlining of Water Service Charge**

The existing water service charge should be streamlined as follows so that the basic MWSS policies in tariff setting will be observed more effectively:

1. There should be four grades for residential and one grade for business (commercial and industrial) customers (at present 9 and 3). The grades for residential shall be cut off at 20, 40 and 60 cubic meters (currently every 10 cubic meters until 60 and every 20 thereafter). The incremental rate increase between grades should be 50 percent (now 15 percent).
2. The cross subsidy ratio between residential and business customers should be two and half on the average basis (currently 2.09). The rate for commercial should be 90 percent of that for industrial (now 85 percent).

3. CERA should be redesigned so that not only the forex fluctuation between pesos and US dollars but that between pesos and other foreign currencies will be taken care of (at present US dollar only).

### **3. Financing Scheme and Financial Projections**

#### **3.1 Financing Scheme**

##### **3.1.1 Past Financing Performance**

As discussed previously, the financial state of MWSS has been fairly sound and stable for the past five years. The general features are as follows:

- There were few capital projects undertaken in the review period.
- These were all well taken care of by the debt financing from the international lending agencies and the equity financing by the GOP.
- MWSS's financial capacity was sufficient due to the few revisions of the tariff to satisfy the debt service payment requirements that directly relates to the capital projects undertaken mainly before the year 1990.

##### **3.1.2 Future Outlook**

Various factors as shown below will make MWSS's financial future somewhat pessimistic, which might necessitate it to explore other financial means than are available now:

- Much less capital infusion expected from the GOP
- Requirement to pay dividends and possibly income tax
- Huge fund requirements for future capital projects for waterworks and sewerage system including replacement of existing water pipe lines
- More operating costs for proper operation and maintenance

Among possible financial alternatives, the BOT scheme appears most promising although it will result in higher cost of water. The decrease in the GOP's financial role will have to be replaced with MWSS's own internal cash generation and possibly debt financing from domestic banks.

The application of the full cost recovery concept to the full scale sewerage and sanitation operation appears to be extremely difficult, and therefore the operation may need to be either heavily subsidized by the GOP or completely taken over by it or the LGUs from the viewpoint of national environmental protection.

## **3.2 Financial Projections**

### **3.2.1 Water**

Operating revenue is projected to increase from P 3,081 million (1994) to P 29,799 million (2015). During the master plan period, revenue water will increase 2.6 times while the average charge per cubic meter of water billed will go up 3.5 times. The average tariff is assumed to be revised every year for inflation and 50 percent of the increase in GRDP for NCR.

Operating expenses will increase from P2,103 million (1994) to P13,371 million (2015). Although personnel expenses will be effectively controlled by the improvement in productivity, it will be more than offset by the huge increase in depreciation due to newly constructed facilities.

Interest expenses will inflate as can be easily expected, but thanks to a good amount of cash balance, interest income will exceed interest expenses toward the end of the master plan period.

ROR (ADB covenant) will be less than the required 8 percent until the year 2011, and then it will exceed it the rest of the master plan period. On the other hand, the debt service ratio will be over the required 120 percent most of the period.

### **3.2.2 Sewer/Sanitation**

Operating revenue is projected to increase from P 615 million (1994) to P 8,940 million (2015). This increase is more than that of the water operation because of the proposed reconfiguration of the sewer/sanitation charge to be made at the start of 1996 which will result in 50 percent increase in revenue right away.

Operating expenses will increase from P287 million (1994) to 5,394 million (2015). This drastic

increase is because MWSS will desludge septic tanks primarily using outside contractors on a scheduled basis as is mandated. There will also be an increase in depreciation expenses.

Interest expenses will keep increasing throughout the master plan period, unlike the water operation that will subside after the year 2010 since the sewer/sanitation project disbursements will be fairly evenly spread. However, interest income is expected to surpass interest expenses around the year 2013.

ROR (ADB covenant) will be better than the required 8 percent except for a few years toward the end of the master plan period. On the other hand, the debt service ratio will significantly fluctuate around the 100 percent level but will exceed the required 120 percent after the year 2008.





1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in the context of public administration and financial management. The text highlights that records should be kept in a secure, accessible, and organized manner to facilitate audits and ensure compliance with relevant laws and regulations.

2. The second part of the document focuses on the role of technology in enhancing record-keeping and data management. It explores various digital solutions and tools that can streamline the process, reduce errors, and improve the efficiency of data storage and retrieval. The text notes that while technology offers significant benefits, it also requires careful implementation and ongoing maintenance to ensure data integrity and security.

3. The third part of the document addresses the challenges associated with record-keeping, such as data loss, corruption, and unauthorized access. It provides strategies and best practices to mitigate these risks, including the use of backup systems, access controls, and regular security audits. The text stresses that a proactive approach to risk management is crucial for protecting valuable information and ensuring the long-term sustainability of the record-keeping system.

4. The fourth part of the document discusses the importance of training and awareness for staff involved in record-keeping. It emphasizes that all personnel should be educated on the correct procedures and the significance of their role in maintaining accurate records. The text suggests that regular training sessions and awareness campaigns can help foster a culture of responsibility and ensure that everyone is up-to-date on the latest record-keeping practices.

5. The fifth part of the document concludes by summarizing the key points and reiterating the overall goal of achieving a robust and reliable record-keeping system. It encourages organizations to continuously evaluate and improve their record-keeping processes to adapt to changing requirements and technological advancements. The text ends with a call to action, urging all stakeholders to work together to ensure the highest standards of record-keeping are maintained at all times.



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