

5.4.2 Feasibility

This project will be technically feasible with some level of support by outside consultants with extensive experience in R&D and laboratory operations in water utilities. The most critical part will be securing the necessary skills to carry out R&D projects and financing procurement of testing equipment in the implementation phase of the plan. Due to an MWSS budget constraint for R&D projects and procurement of additional laboratory testing equipment, it will require a thorough study on financial aspects including estimation of required costs and search for funding sources.

5.4.3 Expected Benefits

The following benefits are expected from this project:

- Effective use of limited R&D resources through clarification of R&D objectives and goals, and concentration on key activities to optimize the R&D effects
- Effective allocation of scarce management resources to the laboratories' operations through prioritizing the procurement of laboratory testing equipment and training personnel to use it
- Continuous research and application of advanced technologies in the water sector to make MWSS operations more efficient and effective.

5.4.4 Risks Involved

Potential risks are:

- Risk that MWSS get behind and not benefit from new technology and skills for efficient operations, if not implemented
- Difficulty in identifying financial source(s) to fund procurement of the laboratory equipment
- Failure to identify qualified personnel in and outside MWSS with proper skills and a strong commitment to R&D projects.

5.5 Human Resources

5.5.1 Consistency

The Human Resource Strengthening Project (HRSP) is designed to improve MWSS's overall human resource management and development capability and to motivate managers and employees. It will help MWSS to fulfill its mission of "Efficient and Effective Operations" and the corporate strategy of "Revitalizing the Organization" through formulation of human resource strategies, preparation of a comprehensive human resource development plan, and modification of appraisal and incentive systems.

5.5.2 Feasibility

It is technically feasible with adequate level of support by outside consultants possessing extensive experience in the human resource management and development area. One critical will be what degree of modifications of the existing HR management and development system can be made given the existing administration and labor laws as well as CSC, DBM and COA rules and regulations. Another critical part is securing support from the labor unions for the implementation of the new system.

5.5.3 Expected Benefits

The following benefits are expected:

- Improvement of overall corporate performance through higher productivity by motivating employees through the new system
- Recruiting and retaining the right personnel to maintain adequate skills and competency to support MWSS present and future operations
- Development of the right skill mix required by future operations and avoidance of creating redundant positions and excess staff due to poor manpower planning.

5.5.4 Risks Involved

Potential risks:

- Widening the skill mismatch and increasing overlapping positions and excess employees, if not implemented
- Limited improvement of the HR management and development system due to the existing administration and labor laws in addition to rules and regulations by CSC, DBM and COA preventing MWSS HR reform
- Difficulty in negotiating with CSC, DBM and COA on the change of the existing system
- Lack of communication and involvement of labor unions in the HR reformation process and strong opposition against the new system.

5.6 Management Information Systems

5.6.1 Consistency

The MIS Strengthening Project (MISSP) is designed to improve overall corporate management and operations through a full implementation of ISP and CMP. This project will help MWSS to fulfill its mission of "Efficient and Effective Operations" and the corporate strategy of "Enhancement of Operational Capability" through upgrading its information processing and management system based on an advanced technology.

5.6.2 Feasibility

In order to implement ISP and CMP successfully, it requires close coordination of various groups and operating units involved in the ISP and CMP projects. It will study and assist the ISP/CMP projects in implementing ISP systems and is technically feasible with high level support by outside consultants having extensive experience in planning, development and implementation of integrated MIS in a client server system environment. Costs for ISP and part of CMP have already been funded by ICG, but this project will still incur high costs for acquiring consulting services. Therefore, MWSS should aggressively seek financial aid to support it from international donor agencies, if it can not be funded by ICG.

5.6.3 Expected Benefits

Benefits expected from implementation:

- Avoidance of major delays or failure of implementation of ISP and CMP, incurring further cost to MWSS, through reinforcement of ISP/CMP implementation projects
- Improvement of overall corporate performance through successful implementation of ISP and CMP leading to increased office productivity and shortening data processing cycle time based on advanced information technology
- Faster decision making through more comprehensive and accurate data and information sharing for program implementation.

5.6.4 Risks Involved

Potential risks in this project:

- Long delays or high risk of failure in some application systems due to lack of implementation skills and resources, if not implemented
- Difficulty in seeking founding source(s) and necessary internal skills for the project
- Lack of communications between the project team and operating units and lack of user involvement
- Delay in design and development of new application systems.

Part V

Financial Study

Chapter 1.

Introduction

Part V Financial Study

Chapter 1. Introduction

1.1 Financial Concerns

This Part deals with the following financial aspects of MWSS activities:

1. Past financial performance
2. Tariff
3. Financing scheme for future capital projects
4. Future financial projections

1.2 Purpose of Financial Study

1.2.1 Financial Performance

The financial review is made mainly for the purpose of providing information that supports the arguments on specific matters discussed in other sections of this report. Accounting information per se is a reflection of what has happened, and therefore, is supposed to indicate various situations, issues and problems that might exist at MWSS. Nevertheless, it is more or less affected by accounting policies and principles that could change the way “the facts” are presented in the financial statements. It is for this reason that accounting information needs to be interpreted taking into account what was used as a basis when prepared and whether it is consistently applied from year to year. It is especially so when one attempts to compare one company to another or one fiscal year to another. As such, MWSS’s past financial performance is reviewed from the viewpoint of not only what has happened at MWSS, which is set out below, but what sorts of accounting policies are followed, which is detailed in the Supporting Report.

1.2.2 Tariff

The tariff is a vital component of the MWSS operation in terms of two concerns. First, together with the service volume it determines the revenue. In order for MWSS to fulfill its public duties, the tariff needs to be set high enough to achieve financial sustainability. The tariff level will be the most critical factor in the financial planning for MWSS’s future operations. However, at the same time, its services must be affordable for the customers since the MWSS deliverables are

basic necessities in human life. Therefore, the overall level needs to be carefully reviewed and examined.

Second, the tariff is an MWSS interface with the customers. The policies to provide services and to receive the return for them must be articulated in the design of the tariff. It needs to be reviewed from the viewpoint of whether it is delivering the message MWSS wants to deliver especially in terms of social equity and effective demand management.

1.2.3 Financing Scheme

The reason that financing scheme for capital projects needs to be considered is generally because current revenue is not sufficient to finance capital projects MWSS is going to undertake. If MWSS could do so, it should finance them with its internal cash generation because it is usually the lowest form of capital cost. Then, there will be no need to consider financing alternatives. However, a situation like this is highly unlikely to happen even in the distant future.

If capital projects can be fully supported by the future added revenue they will bring about, what MWSS will need to do is "buy time", and the price to do so is interest expense. This is to temporarily (maybe one year, maybe 20 years or longer) introduce money from outside (debt financing) until such time that future added revenue can pay off debts including interest.

The other possibility is that neither current revenue nor the future increased revenue can finance capital projects. If this is the case, there will be a need to introduce permanent money in the form of capital contribution, governmental subsidy or foreign grant.

In the past, the GOP's capital contribution has been rather significant to finance various capital projects, but there have been lots of indications that in the future such contribution will be limited, and therefore, financial alternatives should be carefully considered together with the magnitude of revenue from the operations.

1.2.4 Financial Projection

It will be important to financially assess the impacts of various projects proposed in the master plan together with a few alternatives for the financing plan. For this purpose, the future financial

statements should be projected based on a set of assumptions. It will be done separately for water and sewer/sanitation operations in order to pinpoint the issues more clearly.

Chapter 2.

Review of Operations

Chapter 2. Review of Operations

2.1 Financial Performance

2.1.1 Results of Operations

(1) Overview

MWSS's total revenue, total expenses and net income (in million pesos) for five years from 1990 to 1994 (the review period) are shown in the following graph:

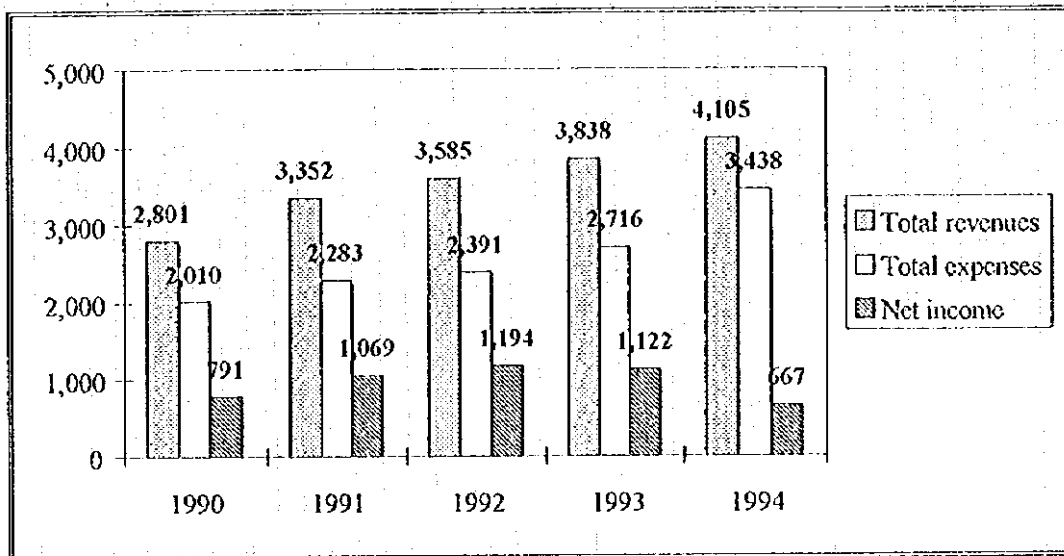


Figure 5.2.1 Total Revenues, Total Expenses and Net Income

The total revenues increased from P2,801 million (1990) to P4,105 million (1994), representing an average 10.0 percent annual growth. On the other hand, the total expenses went up from P2,010 million to P3,438 million for the same period, representing a 14.4 percent average annual growth, higher than that of the total revenues. Consequently, the net income declined from P791 million to P667 million. It should be noted, however, that net income was increasing steadily till 1992 and then it went down toward 1994.

(2) Revenues

Revenues for MWSS mainly consist of operating revenues (water service charges, sewerage /sanitation service charges, incidental revenues such as service connection charges, etc.) and

interest income. To provide a broad picture, MWSS earned 90 percent of gross revenues from water and sewerage/sanitation operations and 10 percent from utilizing available funds in the money market for the review period although the pesos amount of the latter has been decreasing due to the recent lowering of interest rate in the Philippines. In terms of the contribution share to net income, however, interest income accounted for 52 percent (1990), 36 percent (1991), 28 percent (1992), 24 percent (1993) and 50 percent (1994), meaning it played a significant role in MWSS's financial performance.

Operating revenues went up from P2,393 million (1990) to P3,774 million (1994) for an average 12.1 percent annual growth for the review period. On the other hand, the volume of water billed increased only from 384.7 million cubic meters (1990) to 413.5 million cubic meters (1994) for an average 1.8 percent annual growth; therefore, the increase in operating revenues was mainly achieved by upward revisions of the tariff. To further support this, a good portion of the growth in operating revenue was attained before mid-1992 when the last revision of the tariff was made, and then the growth rate declined to less than 10 percent per annum in recent years (only 5.8 percent for 1994).

The main components of operating revenues are water service, sewer service and environmental charges. Since environmental charges are levied as 10 percent of water service charges and sewer service charges happen to have been about the same as environmental charges in recent years, a bird's-eye view is that MWSS earns five-sixth of operating revenues from the water service.

(3) Expenses

These comprise operating expenses that require outlay of cash, non-cash expenses such as depreciation, and finance charges. The following graph shows the composition of expenses (in million pesos) for the review period:

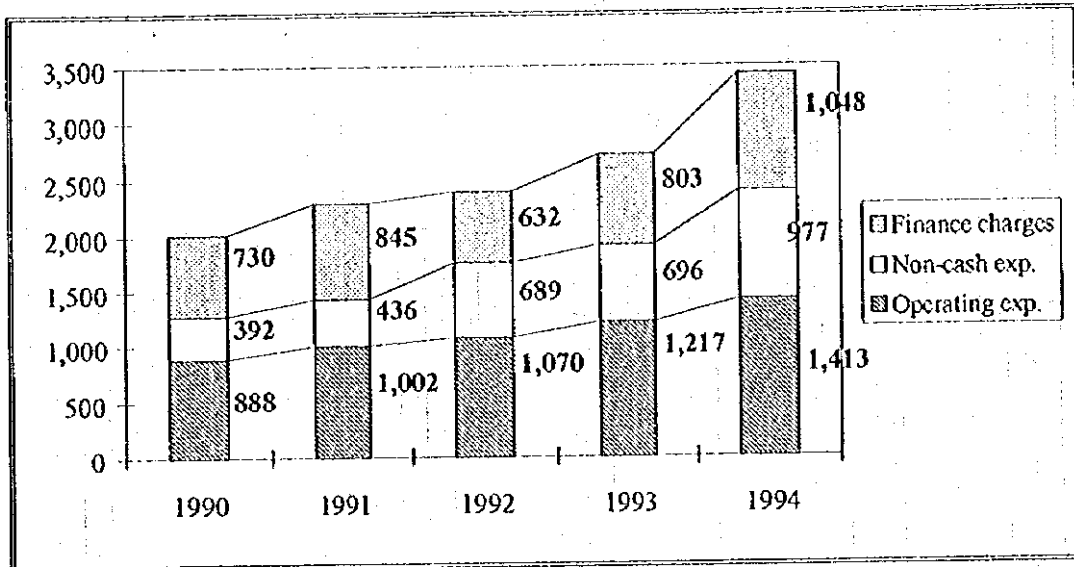


Figure 5.2.2 Break-down of Expenses

a) Operating Expenses

Operating expenses grew at the average rate of 13.4 percent per annum as compared to an average 1.8 percent annual growth in service quantity as measured by the volume of water billed. Operating expenses are further broken down into personnel, water treatment chemicals, illumination and power and sundry expenses. For the review period, their respective shares in the total operating expenses were 57 percent, 7 percent, 14 percent and 22 percent. The rather small ratio for chemical and power reflects the good operational environment MWSS is in such as good raw water quality and high location of water sources and treatment plants which generally reduces the requirement to transmit water by power.

The total headcount of MWSS decreased from 9,250 (1990) to 7,795 (1994), caused mainly by a reduction in project workers. The increase in personnel expenses (P507 million in 1990 to P824 million in 1994) was due to changes in salary structure and by the shifting of people from the construction operation (personnel costs capitalized) to the customer service operation (personnel costs expensed).

The headcount for the review period was as follows:

<u>Personnel category</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>
Regular	4,933	4,777	4,619	4,583	4,615
Casual:					
Main office	1,374	1,374	1,398	1,461	1,357
Project workers	2,943	2,680	2,308	1,991	1,823
Total casual	<u>4,317</u>	<u>4,054</u>	<u>3,706</u>	<u>3,452</u>	<u>3,180</u>
Total personnel	<u>9,250</u>	<u>8,831</u>	<u>8,325</u>	<u>8,035</u>	<u>7,795</u>
 Contract collectors	 248	 261	 272	 291	 374

Water treatment chemicals and illumination and power expenses are direct operating expenses. MWSS spent P0.07 to P0.12 for water treatment chemicals and P0.14 to P0.20 for illumination and power per cubic meter of water produced for the review period. For the same period, it earned P8.11 per cubic water of water billed, which translates to P3.46 per cubic meter of water produced. Therefore, MWSS spent around 7.5 percent of revenue in direct operating expenses, which is relatively low as compared to other water utilities.

Note: In this exercise, the revenue includes not only water service charges but sewerage and other service charges, and therefore, the average revenue per unit is different from what is shown in the analysis of water service revenues in the Supporting Report.

Sundry expenses include, among others, repair and maintenance expenses for facilities, car expenses (rental fees and gasoline) and contract collectors' commissions.

b) Non-cash Expenses

Non-cash expenses are composed of allowance for bad debts, depreciation and nominal amortization of Angat Water rights.

Allowance for bad debts was set up at the rate of 2 percent of the gross billings. There were no write-offs of delinquent accounts for the review period.

Depreciation accounted for 22 percent of the total expenses and showed an increase of an average 27 percent per annum for the review period. The increase, in spite of MWSS's use of the straight-line method, was caused by the completion of several capital projects (transfer from construction in progress to fixed assets), the annual revaluation of the assets based on CPI and a further write-up to the respective market value in 1992. Moreover, estimated useful lives of

fixed assets were generally revised downward in 1992.

c) Finance Charges

Finance charges consist of interest expenses on loans and foreign exchange differences.

Interest expenses, accounting for 22 percent of the total expenses for the review period, went down toward 1992 due to the full pay-off of certain loans but went up toward 1994 due to the completion of a few capital projects. Interest during construction is capitalized. Some loans are with a fixed interest rate while others carry a floating interest rate.

Foreign exchange differences arise at the time of repayment of loans because MWSS is required to repay in accordance with the original foreign currency mix of the loans rather than in US dollars which MWSS uses for financial reporting purposes. This accounted for 9 percent of the total expenses for the review period, but increased at the pace of 14 percent per annum, representing the decline of US dollar value against other foreign currencies.

In summary, MWSS's operating revenue in 1994 (excluding interest income) was spent and resulted in profit as follows:

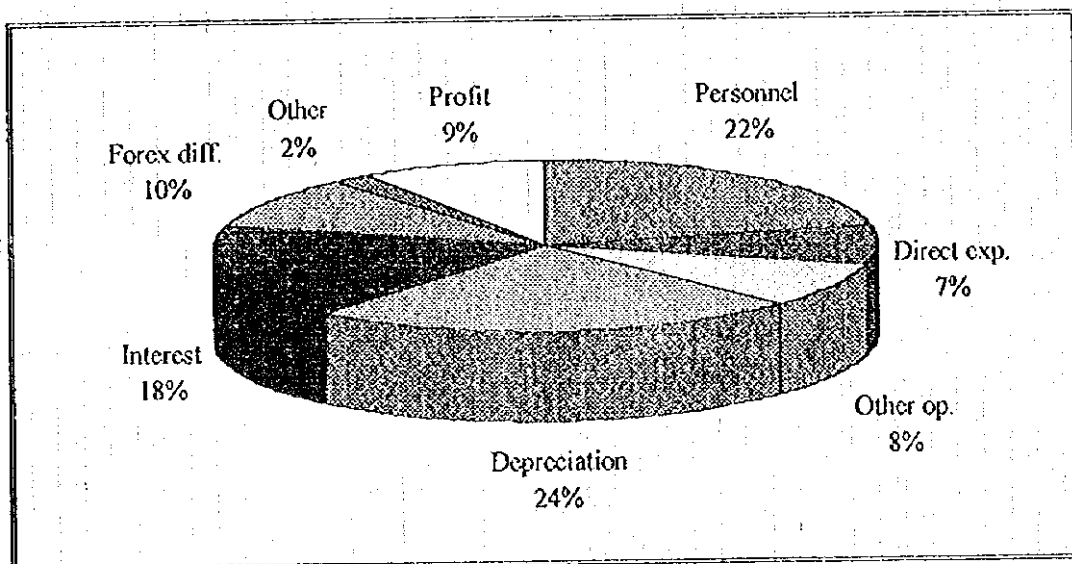


Figure 5.2.3 Components of Operating Revenues

(4) Sewerage/Sanitation Operation

Revenues for the sewerage/sanitation operation mainly consist of the sewerage service charge and the environmental charge. Expenses consist of direct expenses that are directly incurred by the Sewerage System Department and apportioned expenses that are allocated from the main accounts. Allocation used to be made based on the proportion of operating revenues for the sewerage/sanitation operation to total revenues until 1993, but was changed to that based on such factors as the number of service connections and the headcount. This change resulted in a lower burden for the sewerage/sanitation operation, now showing better profitability than the entire MWSS operations, contrary to the general notion that the sewerage/sanitation operation is not profitable. The main reason for the profitability, however, comes from the environmental charge which was introduced to cover the cost of regular desludging of septic tanks since MWSS does not charge anything for the scheduled service to the customers. MWSS is not desludging too many tanks now, resulting in a sort of "windfall" profit.

(5) Assessment on Profitability

Excluding interest income, the profit ratio peaked at 26 percent in 1992 but went all the way down to 9 percent in 1994, which might be still respectable for any profit-seeking enterprise.

The operating expense ratio was around 35 percent for the review period, possibly implying that not enough expenses were spent on routine operation and maintenance, rather than indicating MWSS's effectiveness in operations.

The return on total assets and the return on equity were acceptable at around 5 percent (see Data Report), partially made possible by large interest income. On the operations alone, however, because of the huge amount of investments needed in capital projects, the return on assets would be generally modest for any utility company, and MWSS is not an exception.

Both RORs (by the ADB covenant and by the MWSS Charter) were recently worsened mainly due to the increased depreciation burden. The ADB covenant for MWSS to maintain at least 8 percent of ROR was barely met in 1994.

In summary, the profitability of MWSS is characterized as follows:

- The operating revenue is helped by the relatively high tariff level, the benefit of which is offset by the ineffective operations as evidenced by the high NRW rate resulting in less volume of water billed.
- Good interest income is derived from the large cash balance partially made possible by the past equity contribution by the GOP.
- The 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 has been controlled to generate sufficient income to satisfy the ROR requirement, which may have been contributed to the high NRW rate.
- The salary level of the MWSS personnel has been determined centrally irrespective of its financial performance, due to the fact that MWSS is a GOCC and its personnel are civil servants.

2.1.2 Financial Positions

(1) Overview

MWSS's total assets grew from P23,060 million (1990) to P31,794 million (1994), representing an average 8.4 percent annual growth. It is typical of utility companies to have a huge asset base as compared to the level of revenues due to the large costs of infrastructure development. Fixed assets and construction in progress combined accounted for 81 percent of the total assets at FYE 1994. Other notable asset accounts are cash and accounts receivable.

These assets are funded primarily by long-term loans and equity. Long-term loans are subject to repayments, and therefore, the outstanding balance changed upward and downward during the review period. On the other hand, equity only accumulates year after year, and consequently, the debt-equity ratio improved from 58 percent (1990) to 42 percent (1994).

(2) Fixed Assets

The net fixed assets increased from P14,594 million (1990) to P18,969 million (1994). It went down slightly in 1994 due to the adjustments of a revaluation MWSS made in 1992. MWSS has been reevaluating its fixed assets every year in accordance with a recommendation made by

IBRD in 1977. The 1992 revaluation whereby an independent appraiser was commissioned to reevaluate most of the assets individually was an attempt to compensate for the deficiency of the simplified method of annually applying the CPI increments to assets. The result of this detailed special appraisal was fully reflected in the books of account in 1994.

On a cost basis, the balance of fixed assets was composed of the original cost (41%) and the appraisal increase (59%) at FYE 1994. 43 percent of fixed assets was already depreciated then.

(3) Accounts Receivable

MWSS collected about 95 percent of gross billings for the review period. It cannot write off delinquent accounts deemed uncollectible without the approval of higher authorities, and therefore, the balance kept rising. The gross balance of P1,569 million at FYE 1994 excluded the accounts MWSS considered uncollectible and reclassified to other assets in the amount of P289 million, of which P247 million was to be written off and P42 million was under court litigation. The accounts receivable balance (P1,569 million) was equivalent to 5.1 months billing, well above the three months billing called for by the covenants with IBRD and ADB.

Allowance for bad debts was provided at 2 percent of gross billings as already explained, amounting to P548 million at FYE 1994. Of this P289 million will probably have to be applied against the above-mentioned troubled accounts. According to the aging list (see Supporting Report), P587 million was two years old or older, and therefore, it is easily assumed that MWSS did not have sufficient allowance for doubtful accounts at FYE 1994, especially considering the fact that it itself designates accounts three months or older as arrears accounts and only about 10 percent of those accounts has been collected historically.

It should also be noted that the receivables from various government agencies decreased considerably in recent years but still stood at P88 million at FYE 1994.

(4) Long-term Loans

MWSS capital projects are mainly funded by debt financing of loans from international lending agencies such as IBRD and ADB, borrowing from domestic banks and the GOP, issuance of bonds and bilateral financing from foreign governments. Projects are also funded by the equity

financing from the GOP and MWSS's own internal cash generation.

The balance of long-term loans varies depending upon the stage of capital projects, repayment schedule and how the projects are originally financed. At FYE 1994, the balance consisted of ADB loans (48%), IBRD loans (29%), bonds (14%), domestic loans (3%), government loans (4%) and others (2%).

(5) Equity

At FYE 1994, equity principally consisted of capital stock (25%), appraisal surplus (40%) and retained earnings (32%). The authorized capital was P8,000 million, of which P5,723 million was subscribed and paid for. The Philippine Congress is now deliberating an increase to P16,000 million for possible future capital projects. Appraisal surplus is a result of write-up of fixed assets, net of depreciation thereof. MWSS for the first time paid a dividend of P50 million in 1993 for FY 1992. P224 million was paid in 1995 for FY 1993.

(6) Assessment on Liquidity

Generally speaking, MWSS had an excellent financial position for the review period. MWSS's short-term liabilities balance was nominal and on the other hand the short-term assets balance stayed at a high level due to a good cash balance and accumulating accounts receivable, which led to a high current ratio of more than 400 percent. Consequently, assets of a long-term nature, i.e., fixed assets and construction in progress were easily financed by funds of a long-term nature, i.e., long-term liabilities and equity. Excessive long-term funds were used to finance accounts receivable and to earn interest income.

Further analyzing the long-term funds, interest-free equity outweighed interest-bearing long-term liabilities by almost three to one, which contributed considerably to good financial results. It can not be overstated that the past equity contribution played very positively in both increasing profitability and improving liquidity.

On a final note, the impact of the annual revaluation of fixed assets should not be overlooked. It accounted for 40 percent of equity and 29 percent of the total assets at FYE 1994.

2.1.3 Cash Flows

(1) Overview

MWSS's cash disbursements consist of capital expenditures and debt service payments. On the other hand, its cash receipts comprise internal cash generation from operations and external financing (debt financing and equity financing). There is a direct relationship between capital expenditures and external financing because the latter is specifically assigned to the former.

During the review period, cash receipts exceeded cash disbursements every year resulting in an increase in cash balance from P2,321 million (1990) to P3,413 million (1994), an average annual increase of 8 percent.

(2) Cash Receipts

The total cash receipts steadily decreased from P4,157 million (1990) to P3,148 million (1994) for the review period caused by a drastic reduction in proceeds from external financing. On the five year total, the total internal cash generation accounted for 62 percent of all cash receipts while the total external financing represented 38 percent. The five year aggregate amount of P7,368 million for external financing was almost equal to that of P7,412 million for capital expenditures. Therefore, it may be summarized that internal cash generation was the major source for debt service payments for the review period.

Internal cash generation jumped from P1,800 million in 1990 to P2,500 million in 1991 and then stayed around that level through 1994. The diminishing income did not result in the reduction of internal cash generation because it was mainly caused by added depreciation expenses.

(3) Cash Disbursements

The total cash disbursements also steadily decreased from P4,114 million (1990) to P3,113 million (1994) for the review period. On the five year total, the capital expenditures accounted for 41 percent of the total cash disbursements while the debt service payments represented 59 percent. There was a nominal payment of dividends in 1993 of P50 million. The decrease was mainly due to the reduced capital expenditures caused by the completion of MWSRP II and the slow implementation of such projects as AWSOP and UATP.

The capital expenditures for the review period were funded as follows:

Financing Source	Amount	Composition
Foreign loans	3,681	49.7%
Foreign grant	25	0.3%
Domestic loans	1,584	21.4%
Equity contribution	2,025	27.3%
OECF-equity	53	0.7%
Internal cash generation	44	0.6%
Total	7,412	100.0%

On the other hand, debt service payments are affected by the past capital projects, the terms of loans and prevailing forex rates. The amount fluctuated between P1,900 million and P2,500 million for the review period.

(4) Assessment of Financial Capacity

The fact that capital expenditures were almost fully funded by external financing and that debt service payments were more than covered by internal cash generation resulting in an increase in cash balance indicates that MWSS maintained a good financial capacity for the review period. This situation was partially made possible by the past equity contribution by the GOP. It is predicted, however, that in the future the share of internal cash generation in capital projects will have to increase because of a diminishing role of the GOP in financing as indicated by the recent government economic plans, affecting MWSS's financial capacity in debt servicing.

The debt service ratio as defined by the covenant of the international lending agencies is the ratio of (i) net income exclusive of non-cash expenses and finance charges (not exactly internal cash generation from operations) to (ii) debt service payments. The required ratio is 120 percent and was met for the review period although the ratio of 123 percent in 1994 came very close to the floor.

2.1.4 Financial Implication of NRW

The NRW rate has been around 57 percent since 1990 and without doubt has pervasively

impacted MWSS's operations. There are several factors causing water to go unbilled. Among them, what directly affects operating revenues is illegal connection/illegal use. MWSS has never been able to accurately determine how much water loss is attributable to pilferage, but using the 1994 financial and operational results, on the assumption that 27 percent of produced water (or 45 percent of water lost) was illegally stolen, this translates to a loss of approximately P2,400 million in operating revenues for MWSS.

Like operating revenues, operating expenses are also affected by NRW. In this case, they are negatively affected by leaks since variable expenses to produce leaked water are a waste. Variable expenses, however, is very small for MWSS. The financial impacts should rather be measured by the need to develop new supply sources which is necessitated by the wasted water, and then it will become very significant.

Therefore, the reduction of NRW is relevant in order to increase the revenue and lessen the need to develop new water sources, both with enormous financial impacts.

2.2 Tariff

2.2.1 Authority

The MWSS Charter (RA 6234) entitles the Board of Trustees of MWSS to fix the water and sewer service tariff without any intervention of higher authorities, provided that it is such that the rate of return on net assets necessary for operations does not exceed 12 percent. Despite the authority and the MWSS policy to revise the tariff every year at least for inflation, it has not been revised since mid-1992 mainly due to political considerations.

2.2.2 Characteristics

(1) Basic Structure

The MWSS tariff is established separately for water service and sewer/sanitation service. Although there are several line items in the tariff, the water service charge, the sewer service charge and the environmental charge combined account for almost 100 percent of the total revenue. The water service charge is based on the metered usage volume of water and has the characteristics explained below. On the other hand, the sewer service charge is levied only on sewered customers at the rate of 50 percent of these customers' water service charge while the environmental charge is levied on all customers at the rate of 10 percent of the customers' water service charge. CERA (currency exchange rate adjustment), which addresses the fluctuation of forex rate between pesos and foreign currencies, is considered as part of the water service charge.

(2) Customer Classification and Grading

The MWSS water tariff is set for customers as classified based on the economic activities in their premises, i.e., residential and business which is further divided between commercial and industrial. This classification is typical of water utilities in developing countries while another classification based on the designed water demands as indicated by the diameter of service pipes reflects more diversified water use and is quite common in developed countries.

While the water tariff for business customers has only three grades, that for residential customers has as many as nine for no apparent justification. Because of the large number of grades, they

are divided by a rather narrow interval with small difference in service rates between them resulting in insufficient demand management.

(3) Basic Charge

The current tariff has a basic fixed charge built in for the first 10 cubic meters of consumption for residential customers. Theoretically speaking, basic charges are applied to all customers more or less uniformly in order to cover the fixed expenses in operations. However, the majority of expenses for MWSS are fixed rather than variable, and the fixed cost per customer may be as much as P300 a month, which is certainly not affordable. The present basic charge of P28 is, therefore, only a partial recovery of fixed expenses. There appears to be no justification for the amount of P28 or the water volume of 10 cubic meters a month. In a country where a big difference in household income exists, the basic charge feature may not serve the purpose.

(4) Cross Subsidy

Cross subsidy is provided within the tariff for residential customers between high and low volume users as well as between residential and business customers. The former does not differentiate too much probably due to too many grades. The latter is currently at the rate of 2.09 on the average basis, which probably could be widened a little more in consideration of the relatively high financial capacity of business customers in the Philippines.

2.2.3 Sewerage and Sanitation Charge

There are two types of customers: one with sewer connections to the MWSS system and the other with septic tanks installed on their own premise. Sewered customers pay both the sewer service and the environmental charge while unsewered ones pay only the environmental charge. Since the latter charge has been introduced to cover the expenses of the desludging service for septic tanks undertaken by MWSS free of charge, it is contradictory that even sewered customers have to pay it. If an individual's benefit provided by MWSS is at stake, there is a good reason that sewered customers should be charged more than unsewered ones. However, if it is agreed that environmental conservation is important as a national concern for the current and future generations and that sewerage and sanitation service is a vital component of the efforts to conserve the environment, unsewered customers negatively affecting the environment equally

with, if not more than, sewerage customers should pay the cost at least as much. This is the rationale for the argument that the current sewer service charge should be replaced with a uniform environmental charge to be levied on all. Last but not least, it should be remembered that MWSS is entitled to the environmental charge on the proviso that it is mandated with the sewerage and sanitation operations and that it is indeed fulfilling its mandate. The current performance of MWSS in the area of sewerage and sanitation does not really support this prerequisite.

2.2.4 Tariff Level

(1) Revenue Adequacy

In establishing a tariff, revenue adequacy sets the floor while affordability sets the ceiling. The fact that MWSS has been recently operating at profit indicates that the current tariff level is probably high enough to generate sufficient revenue warranting a full cost recovery. In terms of ROR (ADB covenant), MWSS is having difficulty satisfying the required 8 percent, but it is caused not by a low tariff level but by MWSS's ineffective operation as evidenced by the high NRW rate. Therefore, ROR may not be used as a leverage to raise the tariff. The Study Team is of the opinion that the current tariff is already on the high side, but in future there may be a need to raise it to the upper limit defined by affordability because of high-cost capital projects.

(2) Affordability

There is no doubt that there is certain reluctance on the part of the customers to pay the water bill. It can be interpreted in two ways. The customers cannot afford to pay for the service. Or, the customers are dissatisfied with it.

Currently the MWSS service coverage is around 60 percent. This rather low coverage is caused by MWSS's insufficient service delivery capacity, not by the high price of its services. Lots of people remain unserved simply because MWSS water is not available. To support this view, MWSS now sometimes declines to accept new customers. Current collection efficiency of 95 percent is not really great, but is not bad enough to question the affordability of water.

Chapter 3.

Recommendations and Proposals

Chapter 3. Recommendations and Proposals

3.1 Finance and Accounting

3.1.1 Accounting Process

Currently most daily work at the Accounting Department is processed by hand with occasional use of stand-alone PCs. Considering the large volume of financial information that needs to be processed this situation will not contribute to accurate and timely processing of accounting data that is vital to management decision-making. Supposedly a lot of staff employees are needed because of this manual accounting process.

It is recommended that ISP in relation to financial accounting be promptly implemented. If to be further delayed, there may be a need for an interim measure.

3.1.2 Accounts Receivable

(1) Customer Ledger

MWSS does not maintain a customer ledger with the running balance for every customer, and consequently can not readily know who owes MWSS how much. This makes it almost impossible to know the payment history of a specific customer right away for delinquent notice delivery or other purposes.

Customers' guarantee deposit information should be linked to accounts receivable using a customer ledger.

Readily available accounting information regarding accounts receivable is essentially on the billing year (not month), on the type of customer and on the branch. Therefore, the aging list can be prepared only on the billing year. And such data become available as much as six months after the transaction month. The current system does not provide vital information for management purposes.

MWSS is trying to automate the customer ledger with ISP. There is no need to stress that a further delay in its implementation must be avoided.

(2) Allowance for Bad Debts

MWSS is already aware that the current provision rate of 2 percent is not sufficient. The revision to an appropriate rate should be effected without a delay to make income statement more accurate.

3.1.3 Foreign Loans

The foreign loans from IBRD and ADB are presented in the financial statements as if they were denominated in US dollars. They are in fact expressed in US dollars only for the matter of convenience and in reality are multiple currency loans. Therefore, actual repayment amounts are different from the ones per the original amortization schedule shown in US dollars prepared on the assumption that it will hold its value against other foreign currencies.

There are two steps for foreign current translation MWSS takes here. One is to translate loans from US dollars to pesos at the year end with the resulting difference not charged to income but directly to retained earnings--contrary to the Statement of Financial Accounting Standards No. 52, which is widely accepted and followed. The other is to translate loans from various foreign currencies to US dollars, the result of which is only recognized and charged to income at the time of repayment--this is also contrary to the accounting standard.

Since it is probable that MWSS will have to pay considerably more than what is shown as liabilities on the balance sheet, its financial magnitude should be carefully monitored and addressed by management, if the accounting based on the SFAS 52 is not possible.

MWSS had outstanding SPIA (Special Project Implementation Assistance) loans in the amount of P275 million at FYE 1994. They were, however, actually denominated in US dollars at \$13.2 million. Therefore, they were understated by P67 million.

3.1.4 Allocation of Overhead Expenses to Sewerage/Sanitation Operations

The formulas used for allocating the administration function and the finance function expenses need to be revisited because they will lead to an unfair burden to the water operations. The

denominator in the formula should exclude the number of people in the overhead departments. Moreover, the allocation of the customer service function expenses had better be based on revenue rather than the number of connections. Finally the construction function expenses as related to locally funded projects probably should not be apportioned to the sewerage /sanitation operation at all since no locally funded projects now exist for sewerage/sanitation.

3.1.5 Dividends

Now that RA 7656 has been enacted, all GOCCs are required to pay dividends at a minimum 50 percent of their net income. Although this was overridden by EO 209 and the dividend rate for FY 1993 was adjusted to 20 percent for MWSS, the future dividend rate is still 50 percent. It may be the right concept that GOCCs should operate efficiently and effectively with resulting profit and a possible return on capital contribution to the shareholder, i.e., the GOP. However, if the GOP's equity contribution to MWSS diminishes in the future causing the latter to count more on its internal cash generation, this requirement of dividends may become very critical in MWSS's undertaking of capital projects. Another view is that dividends paid by MWSS will result in the redistribution of income from the MWSS customers to others. It is difficult to say that such an arrangement is appropriate. It is recommended, therefore, that the dividend rate be flexible in consideration of MWSS's cash requirements. One way to alleviate the financial impacts of dividend payments may be stock dividends that may be allowed on an exception basis.

3.2 Tariff

3.2.1 Issues and Discussions

(1) Revenue Implications

MWSS does not receive any subsidies from the government for its operations except for minor customs duties. Therefore, it needs to generate sufficient revenue to cover not only direct operating expenses but depreciation, finance charges and all or part of the cost of capital projects due to the mandate of "full cost recovery" as mentioned in the MTPDP. Moreover, there is a covenant with ADB that calls for it to earn at least 8 percent of net income (excluding finance charges) on average net fixed assets in service. In the early 1990s MWSS had very high profitability thus having no trouble meeting this covenant. Things have changed since then mainly due to added depreciation and personnel cost burdens, and now it barely manages to satisfy this requirement. Since MWSS has not raised its tariff for almost three years now and there has been no drastic increase in the number of service connections, the required ROR has had to be achieved mainly by cutting down on expenses. Unfortunately, most expenses, such as personnel and depreciation, are uncontrollable. Consequently, MWSS may not have spent adequately in operation and maintenance, especially in the preventive maintenance area. Needless to say, this is an extremely deteriorating situation for the future.

All in all, MWSS needs more revenue now for operation and maintenance and later to finance expected high cost future projects. This is to assure its financial and operational sustainability further on.

Because $\text{revenue} = \text{water supply} \times (1 - \text{NRW ratio}) \times \text{tariff}$, revenue can be increased in two ways. One is to increase the volume of water distribution by either supplying more water or by reducing NRW. The other is to raise tariffs. Supplying more water, of course, is a long-term agenda and will not be achieved in a few years. On reducing NRW, MWSS now may be lowering the water pressure, which has resulted in the better NRW ratio but not in more water distribution, i.e., more revenue, as evidenced by the operational and financial data for the first half of FY 1995. Reducing NRW must be achieved not by lowering water pressure but by preventing illegal use of water and repairing water leaks.

Supplying more water and repairing water leaks are both major capital projects, which need money themselves before they can generate money. Preventing illegal use of water is easier said than done. Therefore, it may be natural for MWSS to resort to raising the tariff for more revenue. Questions exist as to the correctness of such a maneuver. One is, is it appropriate to raise the tariff? Another is, is there any other way to raise financial receipts?

The first question needs to be answered mainly by the issue of affordability of the tariff and whether the cost, the basis of tariff, is reflecting efficient operations. The second question is to be considered in a broader arena.

(2) Principles in Tariff Setting

Water is a basic necessity in life. Therefore, a sufficient amount of potable water must be provided to customers without interruptions. To do so in a continuous manner, the water operations need to be financially self-sustainable, which leads to the first principle in tariff setting. That is:

Tariffs should be sufficient and appropriate vis-à-vis the fair cost per efficient operations.

Water is a basic necessity in life. Therefore, the price must be affordable for customers, which leads to the second principle. That is:

Tariffs should be within the customers' capacity to pay.

The first principle can be tested by whether MWSS's operations generate enough surplus to maintain assets that are necessary to undertake the operations, now and in the future. The review of its past financial performance implies that this principle has recently been satisfied. However, the high NRW rate may indicate that recent operations may not have been efficient or sufficient. Therefore, MWSS may have been collecting more from customers than necessary.

If the tariff level that satisfies the first principle exceeds the level set by the second principle, the difference must be subsidized by the government. Because the source of such a subsidy is usually taxes which the rich pay more than the poor, this subsidy would mean the rich will

subsidize the poor on water consumption. The second principle, affordability, is discussed next.

(3) Affordability

It is pointed out that MWSS customers are paying more out of their pockets than their counterparts in other major Asian cities (see Supporting Report), which by itself does not necessarily suggest MWSS water is not affordable. The results of the external survey the Study Team conducted show that more than half the surveyed customers rated the water charges reasonable. Their opinions might be influenced by the fact that the tariff has not been raised for three years. Lower income earners tended to say expensive. Considering that the use of water does not vary drastically depending upon the income level, the surveyed opinions were predicted. Therefore, the messages are mixed.

On the assumption that each member of a household consumes 130 liters of water a day (MWSS average for recent years) or 3.9 cubic meters a month, and accordingly, 19.7 cubic meters per household (average 5.06 people per household per NSO statistics) per month, the water service charge will be P90 (the average rate being P4.56 per cubic meter for domestic customers). On top of it will be CERA which has been around P1.00 per cubic meter plus the 10% environmental charge. The total will be P121. If this particular customer is connected with the sewerage system the total charge will then become P176. A question is, is it affordable?

This question needs to be answered taking household income into consideration. According to a statistical data by the NSO, the 1991 average household income for the NCR was P140,011 per year. Assuming that the average income increased in accordance with inflation (20.7%-1991, 12.2%-1992, 10.4%-1993 and 10.2%-1994 for the NCR), the 1995 income is estimated to be approximately P230,700 a year or P19,200 a month. Therefore, an average household with a sewer connection is spending about 0.92 percent of its income on water and sewerage. Considering that it is said to be 0.4 percent for Japanese households and that the rate should be higher for developing countries, it is probably fair to say that 1.0 percent is the threshold figure for MWSS customers. This means the rate for low income families may be close to 5 percent, the upper limit set by LWUA and suggested by IBRD.

There is an idea to completely abolish the sewer service charge and uniformly levy the

environmental charge. Using the same assumptions, an average customer will pay P110 for water service charge inclusive of CERA. He can pay up to 1 percent of his income, i.e., P192. Therefore, the combination of a water tariff increase this year and a uniform environmental charge rate may be 75 percent, meaning if the water tariff is increased by 50 percent, the environmental charge may be set at 16 percent, and if the environmental charge is set at 30 percent as has been suggested, the water tariff may be raised by only 34 percent in 1995.

(4) Simplicity

MWSS has four sets of water tariffs, two of them having 9 grades, the other two, 3. It may or may not be simple.

Having two sets of tariffs based on economic activities, one for residents and another for business, is quite common. One exception is Taipei, where the tariff is set based upon the size of service pipe diameter. Otherwise, most water utilities have separate tariff schedules based upon the customer's activities. In the case of MWSS, four sets can be regarded as two because of their proximity to each other.

There has been a proposal to change the classification of MWSS customers. Unless it is to combine groups into one, it will be difficult to divide one to a few or change the customer mix without an extensive survey of customers. Therefore, such a proposal is not recommended.

A problem exists with the number of grades for residential customers. Of course because of the use of computers in data processing, it does not affect the clerical work. But there are still questions on whether this minute grading means anything. Firstly, when an average consumption per service connection is said to be 33 cubic meters per month, grading over, say 60 cubic meters, does not mean much. Secondly, grading by 10 cubic meters is too fine resulting in a gradual rate increase from one grade to another, which does not serve the purpose of demand management.

The current structure is supported from two ends: LWUA established its structure that way; and customers may try to cut down the use of water if the target is within reach. The former should not theoretically affect the tariff structure for MWSS which is not under the jurisdiction of the

LWUA. The latter has a certain point to it, but customers may not be watching the use of water so precisely, especially when the reward of conservation is not that much. As such, a structure with a fewer and steeper grades seems more desirable.

(5) Grading

Grading is an effective way to promote water conservation consciousness among the customers, and the current tariff incorporates some, but it may not be sufficient as proved by the following example.

An average household consuming 19.7 cubic meters of water a month (each member consuming 130 liters a day) pays P60.98 a month or P3.10 per cubic meter. Another household consuming 29.6 cubic meters in the same period (each using 50 percent more) pays P101.84 a month or P 3.44 per cubic meter, merely 10 percent more than the first one on average. Now where is the penalty for excessive use?

Because grading is on the marginal rate, it needs to be fairly steep in order to have a clear impact on the overall average. From this viewpoint, the current system is not sufficiently steep, probably caused by too many grades.

(6) Lifeline Volume and Charge

Because water is a basic necessity in human life, the basic minimum of water needs to be offered at an affordable price. There appears to be no such consideration with the current tariff. One might argue that the first 10 cubic meters of water is offered at P28 regardless of the actual consumption. But that volume is way below the lifeline volume for an average household, and it is unfair to a customer who uses less than 10 cubic meters a month. If he consumes only 7.8 cubic meters of water (a family of two), he still has to pay P28 for an average of P3.59 per cubic meter.

The present tariff can be viewed as though the basic charge is P28 and the first 10 cubic meters of water is free of charge. The counterpoints are: the basic charge, covering the fixed cost in operations and very common in developed countries, may be too burdensome for low income earners; and no water should be provided free of charge.

Therefore, there should not be a minimum charge for a certain volume, and the first grade should be cut off at a higher level, say 20 cubic meters, rather than 10 cubic meters.

(7) Cross Subsidy

At a use of 30 cubic meters a month, the cross subsidy ratio between residential customers and business customers is 2.86 for MWSS according to the ADB Data book. On an average charge basis, the ratio is 2.09 according to the Corplan calculation. There is no rule of thumb ratio, but for a developing country like the Philippines, the ratio should be higher than for a developed country taking the respective financial capacity of customer groups into consideration. A hypothetical idea is somewhere around 2.5 on an average charge basis.

On the discrepancy of the ratio between the 30 cubic meter level and the average charge, it is noted that 6.4 percent of the total billed volume is accounted for by that in excess of 100 cubic meters of water consumed by the residential customers (See Data Report). This percentage is rather incomprehensible for domestic use and leads to a thought that some commercial or industrial customers are registered as residential.

(8) Equity

According to the tariff, families of different sizes will pay as follows assuming each family member consumes 130 liters of water a day:

Size of Family	Total Use (m ³)	Total Charge (pesos)	Ave. per m ³
1	3.9	28.00	7.18
2	7.8	28.00	3.59
3	11.7	33.78	2.89
5	19.5	60.30	3.09
7	27.3	92.30	3.38
9	35.1	130.02	3.70

It is noted that despite each person consuming the same amount of water, the larger family has to pay more. This tendency is almost inevitable to any water tariff tables unless a flat rate structure is adopted, but the deviation as shown above should be taken as acceptable. The issue here is

rather than small volume users are very negatively treated because of the fixed minimum charge.

(9) Willingness to Pay

Customers' willingness to pay is often discussed in association with the appropriateness of tariff. It is, however, not really that kind of issue as long as the charge is viewed affordable and equitable. It is rather a service issue in that customers will not be willing to pay for a poor service even if the charge itself may be affordable. MWSS has not lately been able to collect 100 percent of its billings, but this perhaps is not an indication of customers' dissatisfaction. The external survey shows that the MWSS customers are generally content with the water service they are getting.

Willingness to pay may be an issue for sewerage and sanitation, though. While water is a visible commodity sewerage and sanitation are invisible services. Customers often do not recognize the fact that they are getting benefits from those services. It is especially true with the environmental charge because MWSS is indeed not performing too well in scheduled desludging of septic tanks. There may be strong resistance against raising the environmental charge unless the public realize that MWSS is fulfilling its mandate effectively in the sanitation area.

(10) Sewerage/Sanitation Tariff

Sewerage/sanitation tariff consists basically of the sewerage service and the environmental charges. The former is for sewerage discharge lines and the latter is for scheduled desludging service for septic tanks.

It is fairly common to base sewerage service charge on water service charge. The current 50 percent may be on the lower side as compared to other countries. The primary reason that there are very few seweraged customers is not its high monthly cost but the unavailability of the service itself. Therefore, the sewer service charge could be reasonably increased.

The customers who already have a septic tank may not wish to be connected with the sewer line even if it is available mainly due to the high initial cost, but this situation (which will have to be corrected in the future once a sewerage network is installed) should probably be dealt with through a legislative measure, not through the structure of the tariff.

From the customer's point of view, if he is starting out, he would opt for a sewer connection over a septic tank because it is cheaper to start the service than to buy a septic tank, and therefore, there is a good reason why he should pay more than an unsewered customer using a septic tank. Another reason is because his premises will be more hygienic due to prompt disposition of human waste possibly resulting in a higher real estate value.

As mentioned on a few occasions in this report, MWSS has not been desludging septic tanks as expected. Therefore, there will be strong resistance from the general public against an increase of the environmental charge. Moreover, it is contradictory that even sewer customers have to pay it.

The discussion so far supports higher sewer charge and lower environmental charge.

There is a different view proposed by an IBRD consultant to raise the environmental charge from the current 10 percent to 30 percent in return for the abolishment of the sewer charge. This view was probably first expressed for the purpose of raising more money because it will lead to a roughly 50 percent increase in the sewer department revenue. The rationale is that it is not equitable to charge sewer customers at a combined rate of 60 percent of the water service charge while unsewered customers are charged at only 10 percent. It is convincing especially when it is considered that unsewered customers are deteriorating the environment equally with, if not more than, sewer customers, thus costing MWSS (or the nation) equally or more. However, it should never be forgotten that this argument is only valid when MWSS attempts to preserve the environment. In order for MWSS to restructure the sewer charges as suggested, it needs to effectively perform its mandate regarding sewerage and sanitation.

These two somewhat opposing views come from the difference in where the environment is considered from. If it is seen from an individual's perspective, sewer customers should pay more (they benefit more). If it is seen from the national perspective, sewer customers should pay less (they deteriorate less). The Study Team feels that the latter may have more ground in that sewerage/sanitation is not merchandise nor even public commodity. It is a must for the current generation to maintain the environment as it was before, and therefore, all the people should be charged equitably. If MWSS remains responsible for the protection of environment as

to human waste and sewage and if the cost to do so is such that customers cannot afford it, then it will have to be addressed by the GOP.

Regarding the basis for sewerage/sanitation charge, because there is a direct relationship between the water consumption and the volume of sewage, it should continue to be based upon the water service charge rather than as a fixed charge.

3.2.2 Recommendations

(1) Overall Level

The fee the customers pay for both water and sewer/sanitation services should be maximum 1 percent of their household income on an average basis provided that the ceiling set by RA 6234 is observed. This means that the 1995 tariff may be raised by a max. 35 percent.

(2) Revision

The revision of the tariff should be made regularly (once a year or once every two years) so that the average tariff will remain the same percentage of the average household income.

(3) Sewerage and Sanitation Tariff

The current sewer service and the environmental charges should be combined into a uniform environmental charge to be levied to all the customers at the rate of 30 percent of the water service charge.

(4) Water Tariff Structure

- There should be four grades for residential customers and one grade for commercial and industrial customers. For residential they shall be cut off at 20, 40 and 60 cubic meters. The incremental rate increase between grades should be 50 percent.
- The cross subsidy ratio between residential and business should be two and half on an average basis. The rate for commercial should be 90 percent of that for industrial.
- CERA should be redesigned so that not only forex fluctuation between pesos and US dollars but that between pesos and other foreign currencies will be taken care of.

(5) Current vs. Proposed Tariff

The Study Team has designed a water service tariff table which incorporates recommendations to remedy the deficiencies of the current water tariff. It compares with the present tariff as shown in the following table:

Table 5.3.1 Current vs. Proposed Tariff

Customer Class	Current	Proposed	Increase Rate
Residential:			
0-10 m ³	P28.00 per SC	P3.40 per m ³	
10-20 m ³	P 3.40 per m ³		
20-30 m ³	P4.15 per m ³	P5.10 per m ³	
30-40 m ³	P5.20 per m ³		
40-50 m ³	P6.00 per m ³	P7.65 per m ³	
50-60 m ³	P6.55 per m ³		
60-80 m ³	P7.25 per m ³	P11.47 per m ³	
80-100 m ³	P7.90 per m ³		
Over 100 m ³	P 8.45 per m ³		
Average	P4.56 per m ³	P5.55 per m ³	21.7 %
Commercial:			
0-25 m ³	P226.25 per SC	P13.60 per m ³	
25-1,000 m ³	P9.05 per m ³		
Over 1,000 m ³	P9.50 per m ³		
Average	P9.25 per m ³	P13.60 per m ³	47.0 %
Industrial:			
0-25 m ³	P 246.25 per SC	P15.11 per m ³	
25-1,000 m ³	P9.85 per m ³		
Over 1,000 m ³	P11.55 per m ³		
Average	P10.86 per m ³	P15.11 per m ³	39.1 %
Overall average	P6.43 per m ³	P8.69 per m ³	35.0 %

SC: service connection

Chapter 4.

Financing Scheme and Financial Projections

Chapter 4. Financing Scheme and Financial Projections

4.1 Financing Scheme

4.1.1 Full Cost Recovery

If full cost recovery means profitable operations, MWSS has shown that it has fully recovered its costs at least for the past several years although its profitability has deteriorated lately. However, the current expenses have been favorably affected by the past equity contribution made by the GOP, for which MWSS has started paying dividends only recently. Therefore, precisely speaking, MWSS may not have achieved a full cost recovery as called for by the MTPDP to the extent that it needed financial assistance from the GOP.

4.1.2 Review of Performance

For the years 1990 to 1994, the financing performance was as indicated in the following table:

Table 5.4.1 Financing Performance (1990 - 1994)

(in million pesos)

Expenditures		Financing	
Capital Projects			
Capital expenditure	7,412	Debt financing	4,115
		Bond issue	1,150
		Equity contribution	2,078
		Foreign grants	25
		ICG	44
Total	7,412	Total	7,412
Regular Operations			
Debt services	10,652	ICG	11,838
Dividends	50		
Capital expenditures	44		
Surplus	1,092		
Total	11,838	Total	11,838

The following points are noted from the above table:

- With the completion of MWSRP I and II and the delay in AWSOP/UATP, the amount of capital expenditures (P7,412 million) for the last five years was relatively small.

- Without the equity contribution of P2,078 million, MWSS would have been in a financially difficult position.
- Debt service payments reflect relatively small expenditures of the capital projects undertaken in the past, mainly before 1990.

4.1.3 Future Outlook

Although MWSS's cash balance is almost equal to a year's gross revenue and more than double the annual cash-out operating expenses, it is not going to be enough to entirely self-finance capital projects, so MWSS will continue to have to raise money from outside. It is typical for foreign loans to have a condition which requires a certain percentage of project costs to be locally financed (self-financing ratio). Such a percentage used to be 40 percent before, but it is likely to change to some 25 percent in the future because of the difficult financial position the country is in. 75 percent financing by international lending agencies is good news and bad news. It is good news in that money is there for MWSS's taking. It is bad news because the equity contribution will be replaced with loans, and consequently, foreign loans will cost MWSS interest expenses and cash disbursements, unlike the equity contribution which is free of both. The decrease in the equity contribution will have three financial impacts, namely:

- local debt financing needs to be sought, or cash in banks needs to be used.
- it will result in more interest expenses or less interest revenue.
- in case of local debt financing, it will have to be paid back.

It is foreseen that the equity contribution by the GOP will be around a maximum 5 percent of capital projects. The balance will have to be financed by a combination of local borrowings and internal cash generation. Both cash flow and income effects should be carefully evaluated. In assessing internal cash generation, the tariff level will be one of the key determinants, but it must be remembered that there will be an upper limit for the tariff. If the revenue level is not sufficient, a different source of funding will need to be pursued.

4.1.4 Existing Sources

Currently MWSS's operation and projects are financed from operating revenue, foreign loans, domestic loans, bond issues, foreign grants and equity contribution.

(1) Operating Revenue

It should be the main source of financing, but as mentioned already there is going to be an upper limit because of customers' capacity to pay. The future operating expenses will be higher due to the addition of more expensive infrastructure and required more intensified operations. The future profitability of MWSS may not be as good as in the past. As a supplementary revenue, interest income has been and will be playing a significant role due to the high interest rate of the country.

(2) Foreign Loans

Future capital projects will continue to be primarily financed through various ODA (official development assistance) extended bilaterally by foreign governments and multilaterally through international lending agencies such as IBRD and ADB. This type of loans is preferable because of eased financing terms such as lower interest rates and longer repayment periods. Drawbacks are lengthy negotiations involving governmental agencies leading to a possible delay in capital project implementations and a foreign currency risk.

(3) Domestic Loans

MWSS currently has outstanding notes payable to the DBP. Several banks are known to have expressed an interest in lending money to MWSS. Commercial loans are easy to introduce but tend to carry higher interest rates and shorter repayment periods.

(4) Bond Issues

MWSS has issued bonds in relation to AWSOP. It will be possible to utilize this type of financial instruments in the future although it will cost MWSS a little more than others.

(5) Foreign Grants

The Japanese Government has agreed to provide MWSS with a grant for the rehabilitation of the Balara Treatment Plant. This type of financing is, in effect, a gift from foreign countries, and therefore, very desirable. In the future, foreign grants may be available mainly in the area of TA

(technical assistance) and smaller projects. Since foreign governments have specific grant policies, MWSS needs to work closely with the NEDA to take advantage of the possibility.

(6) Equity Contribution

Since MWSS is a limited-liability company wholly owned by the GOP, the past equity contribution has been exclusively made by the GOP. Currently there is no way for others to make a capital investment in MWSS. The capital contribution has recently been made to cover part of the cost of capital projects, and therefore, the amount has had a direct relationship to capital projects MWSS undertook.

4.1.5 Future Possible Sources

If MWSS is going to generate enough profit and cash to fully cover daily operations, finance capital projects and service debt payments with the help of the existing financing means, there will be no need to search for other funding sources. Chances are this will not happen due to less equity contributions, so there will be a need for new financing instruments simply because future projects will be more expensive than before, especially those for sewerage/sanitation.

(1) BOT

This is a kind of private sector participation scheme mainly aimed to ease the financial burden in infrastructure developments rather than to seek operational efficiency. A BOT operator will finance a project and amortize its cost over the BOT period. MWSS will buy goods or services from the operator, and its price will cover operating expenses, amortization of capital costs and the operator's profit. The effect is for MWSS to get financing from the BOT operator with a higher financial charge and to amortize the cost of infrastructure over the BOT period, usually shorter than the estimated useful lives of subjected fixed assets. Due to the element of the BOT operator's profit, BOT is usually more costly than self-financing unless the operator is very efficient in operations.

(2) Financing from Customers

It is fairly common to finance capital projects with a bond issue to new customers in certain countries. This scheme may be applicable when a capital project leads to a drastic increase in

service coverage and in the number of customers. But the financial implication may not be that much in the case of MWSS because of the limited financial capacity of its customers.

(3) Subscription Charge

The future production cost of water will be higher than now, not because of inflation but because of the higher cost of additional infrastructure. New customers necessitate such new capital projects, and therefore, it will be unfair to existing customers to revise the tariff upward in reflection of higher expected average cost of production. This is the rationale for subscription charge being used in many countries. Theoretically speaking, all the added cost should be absorbed by the new customers. It would, however, be astronomically expensive, and therefore, the paying capacity must be considered. Yet, this scheme may be reasonably introduced in relation to projects such as MWSP III.

(4) Private Sector Participation

There are several types of private sector participation (PSP), some of which will have MWSS sell its assets, stock shares or the rights to operate to the private sector. The proceeds from such transactions will help MWSS finance capital projects, if adopted. An example may be for MWSS to sell a franchise of service sectors to the private sector.

(5) Subsidy

There appears to be no question as to the financial viability of the water operation. Subsidy needs to be discussed in relation to the sewer/sanitation operation.

If it is agreed that MWSS or another public corporation should assume the responsibility of the sewer/sanitation operation, there is much likelihood that the resulting financial deficiencies need to be paid by the government. If this view is further extended, it is possible to argue that the entire sewer/sanitation operation be undertaken by the national or local government.

4.2 Financial Projections

4.2.1 Assumptions

Certain assumptions are adopted to make the projection as realistic and informative as possible. These are set out in the Supporting Report in detail, but some important ones are summarized below:

- Macro-economic indicators of GDP growth, inflation and foreign currency exchange are all in accordance with the forecast the Study Team has conducted. While inflation is not considered in evaluating capital projects, it is included in financial projections.
- The MWSS service parameters such as the served population, NRW rate and the number of service connections are per the engineering study made by the Study Team.
- The number of the future MWSS personnel is based on the headcount projection made in the human resource study by the Study Team.
- No special financial arrangements such as BOT or sales of certain operations are considered. Accordingly, all proposed projects are to be undertaken by MWSS with the help of debt financing from international or domestic markets.

Financial projections are made separately for the water operation and the sewer/sanitation operation for the purpose of indicating the impacts of the proposed projects more clearly and due to the possibility that these operations may be unbundled some time in the future.

See Data Report for projected financial statements.

4.2.2 Water Operation

(1) Operating Results

The operating results for the master plan period are projected as follows:

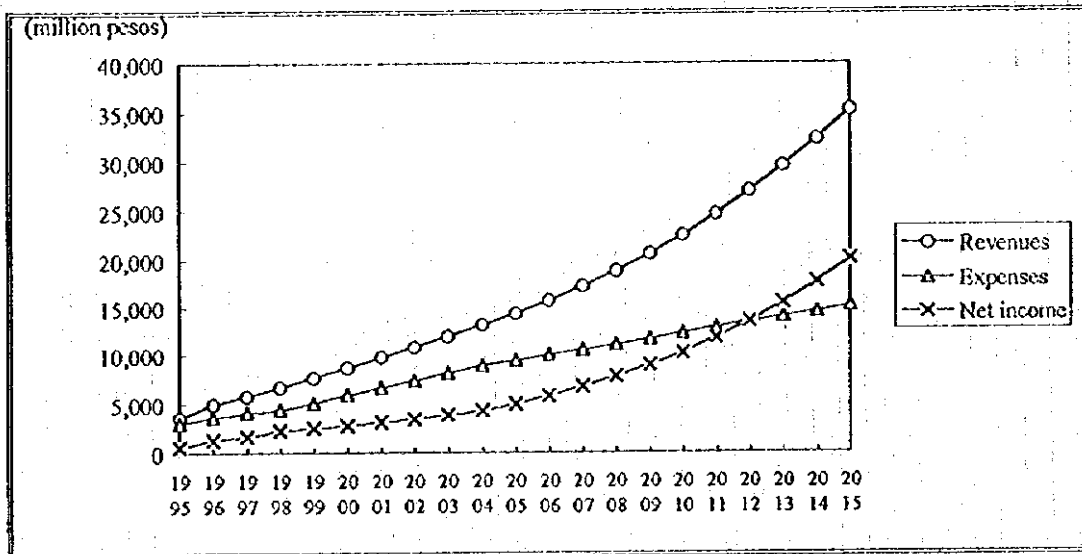


Figure 5.4.1 Projected Results of Operations (Water)

Total revenues are projected to go up from P 3,489 million (1994) to P35,232 million (2015), a 910 percent increase while total expenses will increase from P2,966 million (1994) to P15,140 million (2015), a 410 percent increase. Consequently, net income will grow from P523 million (1994) to P20,092 million (2015). Operating profit ratio will be 56.1 percent in 2015 as compared to 33.4 percent in 1994.

(2) Revenues

Revenues consist of operating revenue and interest income.

Operating revenue will go up from P3,158 million (1994) to P30,452 million(2015), representing a 11.4 percent average annual growth. The majority of operating revenue will continue to be the water service charge, accounting for 97.9 percent of operating revenue in 2015.

The growth in the water service charge is attributed to the following factors:

- Billed water will increase from 1,134 mld (1994) to 3,212 mld (2015) due to added supply and distribution capacity.
- The average tariff rate (including CERA) will increase from P7.45 per cubic meter (1994) to P18.96 per cubic meter (2015) due to inflation and growth in GRDP per capita for NCR.

- The change in customer mix will lower the average tariff rate slightly because the share of residential customers will outpace that of business customers in the future.

Interest income is expected to be P4,780 million in 2015 as compared to P331 million in 1994. This drastic increase will be caused by the inflated cash balance made possible by good operational results in future in spite of lower interest rates than now.

(3) Expenses

The following graph shows the projected composition of expenses for the master plan period:

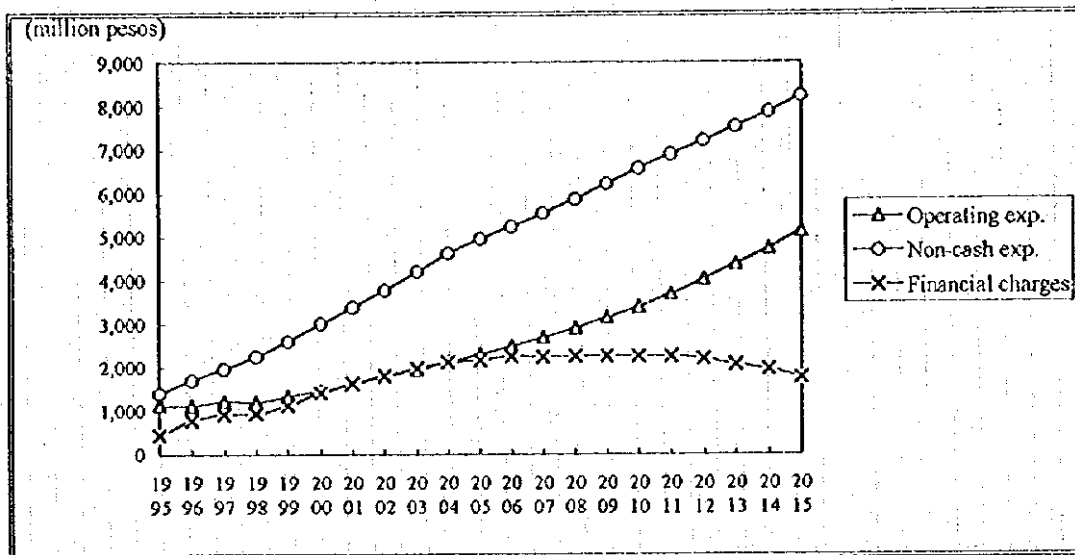


Figure 5.4.2 Projected Expenses (Water)

Cash expenses consist of personnel, power, chemicals and others. The increase in personnel expenses will be subdued by the decrease in the total headcount. Power and chemical expenses will increase in accordance with the increase in water production.

The majority of non-cash expenses will be depreciation, which will increase due to the proposed master plan projects and annual reevaluation. It is expected that in 2015 depreciation will account for 54.8 percent of the total operating expenses as compared to 36.9 percent in 1994.

Financial charges will go up toward the year 2010 and then go down slightly. This is because

the repayment of loans will outweigh their drawdowns after that year.

(4) Financial Ratios

ROR is expected to be below the required 8 percent until the year 2011, then it will be over that level the rest of the master plan period. This is because the increased revenue made possible by the added supply capacity will not generate enough profit until that year to satisfy the ROR requirement.

Debt service ratio will be over the required 120 percent most of the master plan period.

4.2.3 Sewer/Sanitation Operation

(1) Operating Results

The operating results for the master plan period are projected as follows:

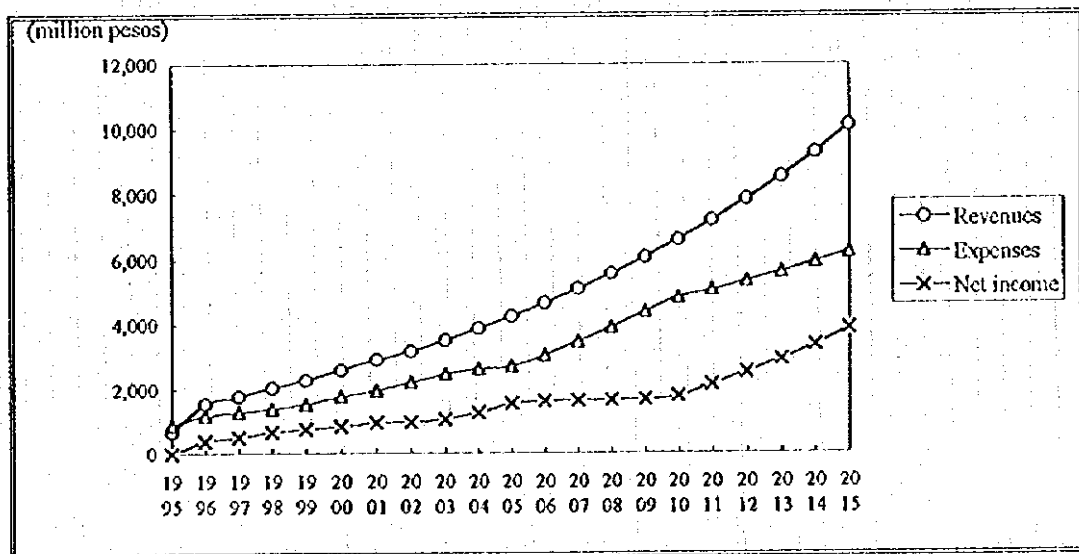


Figure 5.4.3 Projected Results of Operations (Sewer/Sanitation)

Total revenues are projected to go up from P 616 million (1994) to 10,114 million (2015), a 1,541 percent increase while total expenses will increase from P472 million (1994) to P6,232 million (2015), a 1,220 percent increase. Consequently, net income will grow from P144 million (1994) to P3,882 million (2015). Operating profit ratio will be 40.4 percent in 2015 as

compared to 53.4 percent in 1994.

(2) Revenues

Operating revenue is projected to increase from P 616 million (1994) to P 9,050 million (2015), representing a 13.7 percent average annual growth. Since the proposed uniform environmental charge will be fixed at 30 percent of the water service charge, the future operating revenue for the sewer/sanitation operation will show a similar trend to the water operation. The reason that it will grow faster than that for the water operation is because of the proposed reconfiguration of the tariff to be made at the start of 1996.

Until now, no interest income has been attributed to the sewer/sanitation operation, but it is projected that it will be as much as P1,000 in the year 2015 due to the accumulation of cash.

(3) Expenses

The following graph shows the projected composition of expenses for the master plan period:

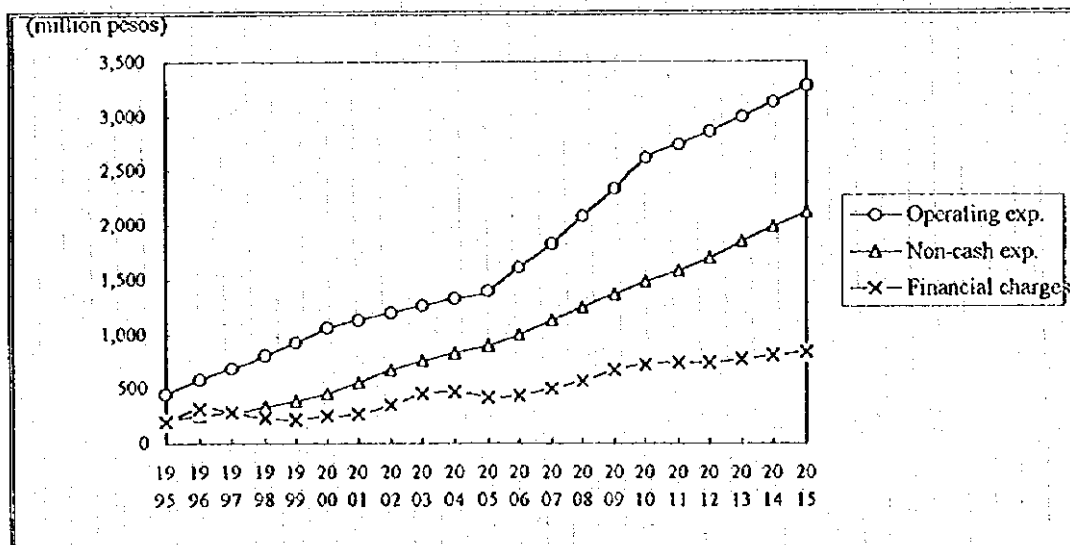


Figure 5.4.4 Projected Expenses (Sewer/Sanitation)

It is characteristic here that unlike the water operation operating expenses will increase faster than non-cash expenses mainly accounted for by depreciation. This is because it is expected that MWSS will desludge septic tanks so that they will be taken care of once every ten years. This

will mainly be done by outside contractors.

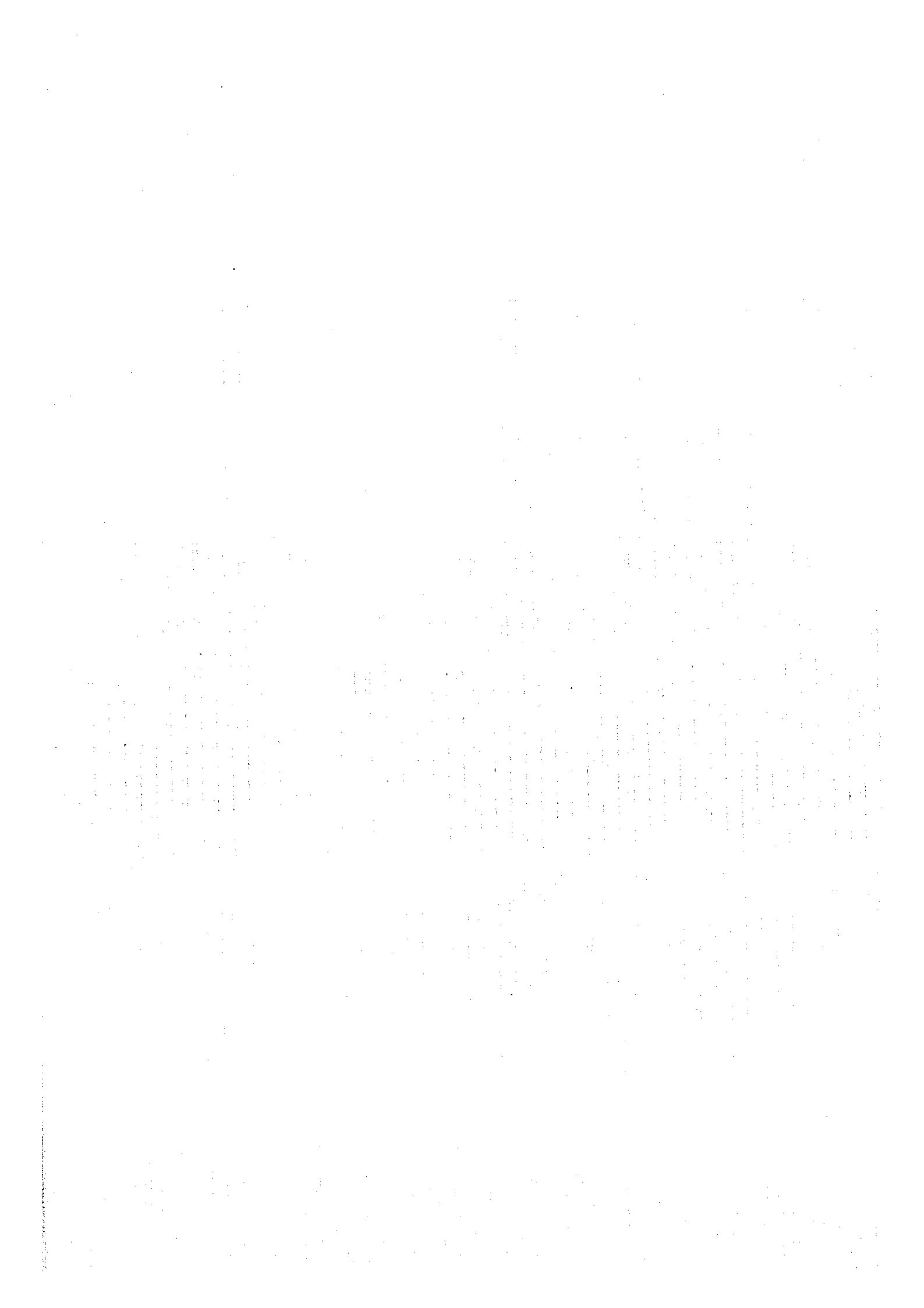
Depreciation will increase as investments are made. However, it should be noted that the increases in depreciation and financial charges will be less than that of operating expenses. This probably indicates (in contrast with the water operation) that what is proposed in the master plan for the sewer/sanitation operation will still need to be extended beyond the year 2015.

(4) Financial Ratios

ROR (ADB covenant) is expected to be over the required 8 percent throughout the master plan period except for a few years around the year 2010.

On the other hand, debt service ratio will be gradually improved and it will go over the required 120 percent after the year 2008.





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