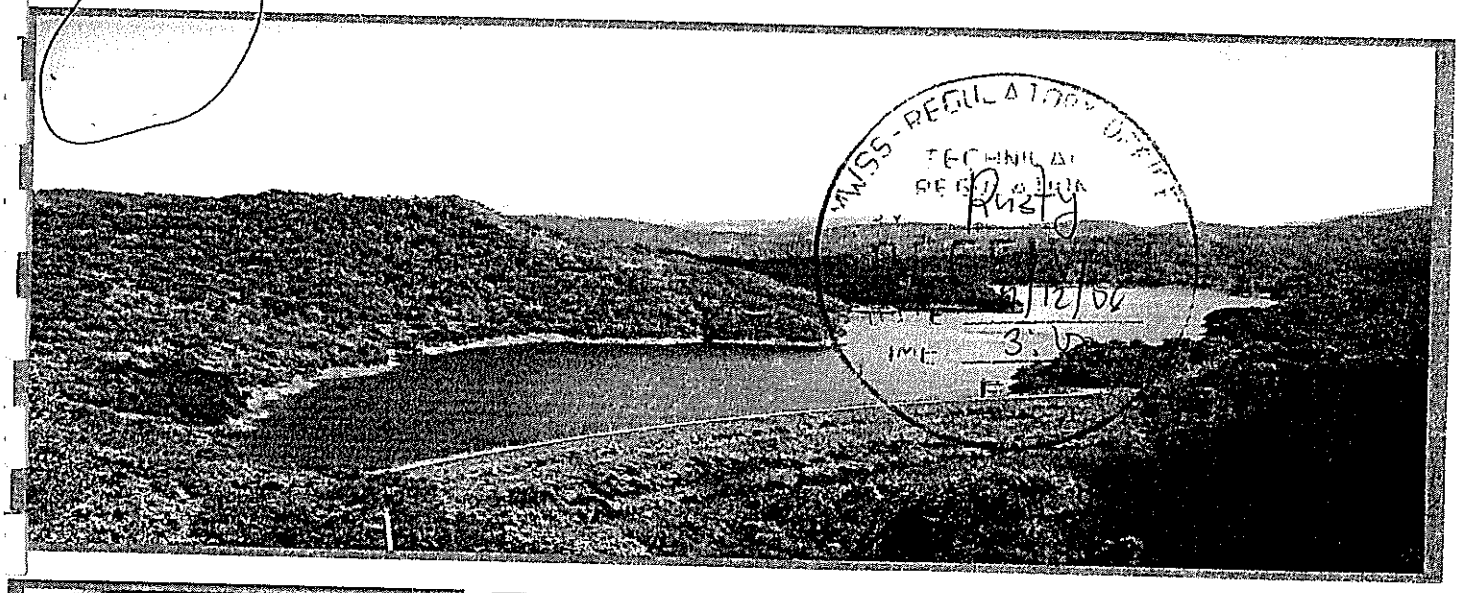
Maynilad Water Services, Inc.

Business Plan

Updated September 2008

Second Rate Rebasing



MAYNILAD WATER SERVICES, INC.

MWSS REGULATORY OFFICE
Office of the Chief Regulator
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September 10, 2008

HON. MANUEL P. QUIZON
Chief Regulator
MWSS - Regulatory Office
MWSS Compound, Katipunan Road
Balara, Quezon City

Subject : Maynilad's September 2008 Business Plan (Sept BP)

Dear Chief Regulator Quizon:

We are pleased to submit to the Regulatory Office the September 2008 Business Plan (***Sept BP***) of Maynilad Water Services, Inc. (***Maynilad***). The September 2008 Business Plan incorporates the required changes and updates after the series of discussions among Maynilad, the Regulatory Office and its consultants on the July 2008 Business Plan (***July BP***). Please find attached the covering letter of the July BP (Annex A) and the summary of the changes and updates incorporated in the Sept BP (Annex B) for your guidance and ready reference.

These changes and updates which Maynilad finds merits to consider for inclusion or exclusion in the Sept BP (and in the Financial Model), have been packaged in the OCP (historical) and/or the Future Cash Flows (assumptions and projections). This proposed package has resulted in a Rebasing Adjustment of 52.01% or PhP11.99 per cubic meter which is lower than the July BP Rebasing Adjustment of PhP12.49 per cubic meter.

During the September 4, 2008 meeting, the Regulatory Office requested us to consider their points on various regulatory issues. In response to such request, we have prepared an alternative financial model incorporating adjustments relative to certain regulatory issues that will result in a further reduction in the Rebasing Adjustment that will cushion the impact of the rate adjustment to West Zone customers. While we feel that we have strong bases to support our position on these issues, we are open to such adjustments set forth in the alternative financial model provided that the basic business case set forth in the Sept BP is acceptable to the Regulatory Office. We trust that this approach will serve to finally conclude and complete this Rate Rebasing exercise.

The details of the above adjustments are found in the Financial Model incorporated in the Sept BP (with enclosed soft copy). We are also respectfully submitting to your good office, together

with the Sept BP, a soft copy of the alternative financial model referred to above, for your review.

We trust that you will find the attached September 2008 Business Plan to be in order.

We look forward to the conclusion and completion of this Rate Rebasing exercise soonest.

Very truly yours,

RANDOLPH T. ESTRELLADO
Chief Finance Officer and Head, MWSI Rate Rebasing

COPY FURNISHED:

Justice Oscar I. Garcia
Chairman, MWSS Board of Trustees

Hon. Diosdado Allado
Administrator, MWSS

Mr. Randolph A. Sakai
Chairman, MWSI Rate Rebasing

Mr. Rogelio L. Singson
President, Maynilad

MWSS REGULATORY OFFICE
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MAYNILAD WATER SERVICES, INC.

Annex A

MWSS REGULATORY OFFICE
Office of the Chief Regulator
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July 18, 2008

HON. MANUEL P. QUIZON
Chief Regulator
MWSS - Regulatory Office
MWSS Compound, Katipunan Road
Balara, Quezon City

Subject : Maynilad's July 2008 Business Plan

Dear Chief Regulator Quizon:

We are pleased to submit to the Regulatory Office the July 2008 Business Plan (***July 2008 Business Plan***) of Maynilad Water Services, Inc. (***Maynilad***). The July 2008 Business Plan incorporates the required updates and points agreed between Maynilad and the Regulatory Office after the various discussions held on Maynilad's March 2008 Business Plan.

Hereunder are the highlights of the July 2008 Business Plan, for your guidance:

1. *Number of persons per connection*

The number of persons per connection for the purpose of computing service coverage is still assumed at 7.4 on the average. However, the enhanced service coverage targets consider the revised water and sewerage service connection schedules, the latest population projections based on the 2007 Census of Population and Housing recently released this year by the National Statistics Office and the complementary targets resulting from the rationalization of sewerage and sanitation programs.

2. *Appropriate Discount Rate*

For this submission, Maynilad has maintained the Appropriate Discount Rate for Future Cash Flows at 9.3% per annum, subject to discussions with the Regulatory Office on the appropriateness of this rate, pursuant to the requirements of the Concession Agreement.

3. ***Foreign Exchange Losses and Gains***

Maynilad submitted to the Regulatory Office on July 16, 2008 its revised computation on foreign exchange (***forex***) gains arising from the prepayment of its DCRA obligations in January of this year, to be compensated to the Customers for a period of four (4) years following the mandate of the Transitional and Clarificatory Agreement (***TCA***). With the exception of the issue on the Tranche B Concession Fees which needs to be further reviewed and internally discussed within the Regulatory Office, all forex issues had been resolved during the meeting held on July 2, 2008 between members of Maynilad's Rate Rebasing Team and the Regulatory Office, as discussed below in the section on the OCP.

As confirmed by Maynilad to the Regulatory Office during the said July 2, 2008 meeting, Maynilad has accepted the Regulatory Office's earlier ruling that forex losses/gains arising from payments made in relation to USD loans resulting from MWSS' drawing of Maynilad's US$120 million Performance Bond on January 20, 2005 are not subject to recovery or compensation.

4. ***Opening Cash Position (OCP)***

The important aspects of the OCP, following discussions with the Regulatory Office, are as follows:

a. As agreed with the Regulatory Office during the July 2, 2008 meeting, the OCP allows for reconciliation and the inherent correction via the Rate Rebasing of the inter-related issues on over-recovery of forex losses for the continued collection of the AEPA and the FCDA from 2003 to 2004, under-recovery of revenues during the same period (from 2003 to 2004) due to the delayed implementation of the 2003 rebased rate, and Maynilad's claim for recovery of forex losses incurred in 2002 to 2005 relating to payments made in connection with its USD bridge and other short-term loans prior to October 2005 (***Unrecovered Bridge Forex Losses***). Maynilad's Receipts arising from its AEPA and FCDA collections have also been presented under a separate line item in the adjusted OCP, as suggested by the Regulatory Office. The recovery of the Unrecovered Bridge Forex Losses is presented also under a separate line item in the Cash Flows, for proper reference.

b. The Expenditures incurred by Maynilad for the funding of the emergency repairs made to the Angat-Umiray Transbasin Tunnel and its facilities are continued to be reflected in the OCP and we trust that this is no longer an issue.

c. Maynilad's past years' Receipts for Raw Water, as reflected in the OCP, and the future revenue stream previously included in the 2002 Rate Rebasing financial model as well as in the March 2008 Business Plan have now been removed from the July 2008 Business Plan. As elucidated on in item no. 10 below, Maynilad has decided to turn over all Raw Water accounts to MWSS in order to finally settle this issue, subject to the principle of revenue neutrality.

d. The OCP reflects Maynilad's LPPC collections as part of its historical Receipts, thus resulting in a corresponding reduction to the Rebasing Adjustment. As presented to the Regulatory Office, while Maynilad maintains the validity and reasonableness of Maynilad's imposition and collection of the LPPC, Maynilad had already suspended this effective April 2008. Maynilad reiterates, however, its request for the Regulatory Office to resolve the LPPC issue in a manner that is most beneficial to Maynilad's Customers, so that the good-paying Customers will not end up subsidizing the delinquent ones. Further, Maynilad believes that it is high time that the Regulatory Office issue the corresponding guidelines for the imposition of the LPPC which is well-recognized in the Concession Agreement, to enable the Concessionaires to further step up their collection efforts in the years to come.

e. Maynilad will be submitting its position paper/further documentation, as necessary, on the remaining issues that impact the OCP; namely, Expenditures incurred for residual benefits paid made to Maynilad's employees who were formerly employed by MWSS equivalent to their 23 months COLA claim and those incurred for the implementation of the Temfacil Projects. With respect to the Expenditures incurred by Maynilad for payments made to its affiliated company, D.M. Consunji, Inc. under certain civil works contracts, Maynilad had submitted necessary documentary information, and will submit any further documents as may be reasonably required by the Regulatory Office, in order to show that such Expenditures have been efficiently and prudently incurred, as agreed during the July 2, 2008 meeting with the Regulatory Office.

f. Maynilad wishes to note that its claim for OCP correction relative to the PhP2.8 billion net revenue disallowance from the 2003 OCP on account of NRW-related revenues, which is sufficiently supported by the Major Appeals Panel decision and RO Resolution No. 04-014-CA, has not been incorporated in the July 2008 Business Plan, pending receipt of the Regulatory Office's position on this matter.

5. ***Customer Service – Related Matters***

The financial impact of the implementation of the following Customer service-related changes, as initiated by the Regulatory Office and approved by the MWSS Board of Trustees, is now incorporated in the July 2008 Business Plan:

a. the 20% discount for Residential Customers consuming 10 cubic meters and below;

b. the application of the Residential Rate for Semi-Business Customers for the first 10 cubic meters consumption;

c. the application of the Semi-Business Rate for some governmental accounts such as schools, hospitals and jails; and

d. the application of reduced connection charges for additional and clustering connections for low-income and depressed communities.

However, kindly note that the financial impact of the adoption of the new billing scheme for High-Rise Customers has not yet been included in the July 2008 Business Plan. The High-Rise Customers form part of the big consumers of Maynilad.

6. *Revised Capex Program*

The July 2008 Business Plan incorporates the revised capital expenditures (***Capex***) program, specifically relating to the water network and other related Capex (including incremental new water treatment plants) based on the results of the DCCD study as well as NRW-reduction programs based on Maynilad's discussions with the Regulatory Office and the latter's consultants and experts.

7. *KPIs and BEMs*

Further discussions on the adoption of Key Performance Indicators (***KPIs***) and Business Efficiency Measures (***BEMs***), including penalty and reward mechanisms and Capex monitoring will continue after finalization of the Business Plan and determination of Maynilad's indicative rebased tariff.

8. *Raw Water Supply*

The July 2008 Business Plan reflects the following major considerations:

a. As presented to the Regulatory Office and the High Level Steering Committee on Water Supply Projects of MWSS, Maynilad has proposed to implement the 300 Mld water treatment project as part of its Capex program. Maynilad will implement initially the first 100 Mld treatment plant and ramp up to 300 Mld as needed.

b. There will be additional Concession Fees for implementation of the Umiray rehabilitation, the BNAQ-6 Phase 2 Project and the 15 cms. Project.

c. Due to the huge cost of implementing the Laiban Raw Water supply project and given that the recovery period over the remaining term of the Concession would be too short, Maynilad has not considered this project in the July 2008 Business Plan as it would have a huge impact on the water tariffs. Maynilad proposes to increase water treatment capacity using Laguna Lake as water source or develop another new water source in the long-run.

9. *Sewerage and Sanitation Charges and Programs*

A realignment of Maynilad's sewerage and sanitation targets has been taken into account in the July 2008 Business Plan, in connection with the rationalization of sewerage and sanitation programs and charges.

As part of this rationalization, Maynilad wishes to propose to the Regulatory Office and MWSS that the nomenclature of "environmental charge" be appropriately changed to "sanitation charge"

beginning on January 1, 2009. This proposal is consistent with paragraph 2 of Exhibit E to the Concession Agreement.

Maynilad proposes an immediate reduction of the sewerage charges from the current 50% to 20% of the water tariff, starting in January 2009. On the other hand, the sanitation charge, currently at 10%, will gradually increase annually until it reaches 20% in 2012.The sewerage and sanitation charges are summarized below.

SEWERAGE AND SANITATION RATES (as % of Water Charges)					
	2008	2009	2010	2011	2012
I. UNSEWERED SERVICES					
Sanitation Charge					
Domestic	10%	12%	14%	17%	20%
Non-domestic	10%	12%	14%	17%	20%
II. SEWERED SERVICES	(includes connected to sewer line and combined sewerage and drainage system)				
Sewerage Charge *					
Domestic	50%	20%	20%	20%	20%
Non-domestic	50%	32%	34%	37%	40%

* inclusive of Sanitation Charge:

The sewerage charges covers those connected to sewer lines and those serviced by the combined sewerage and drainage system. The different charging for sewerage for Domestic and Non-domestic Customers is consistent with the principle of cross-subsidy in any tariff adjustment.

10. *Raw Water Accounts*

Following the directive of MWSS and without delving anymore into the intricacies of the matter, we wish to respectfully advise you that Maynilad will be turning over to MWSS the responsibility for the billing, collection and all other services (including customer service) relating to all twenty-one (21) Raw Water accounts which are enumerated below, for your ready reference:

#	CONTRACT ACCT NO.	CUSTOMER NAME
1	51341582	Policarpio, Benjamin
2	52027064	Dela Merced, Cenon
3	52027135	Samson, Wendeslao
4	52027233	Delos Santos, Enrique
5	52027260	Cruz, Rodolfo
6	52027368	Ramos, Pelagio
7	52027448	Dimaala, Leticia
8	52027527	Robes, Mario
9	52027581	Pete, Manuel
10	54430640	Central Luzon Sanitarium
11	55418796	Grogun Compound
12	55418858	Obhoaco Catalino Diaz
13	55418901	Rayo, Carlos
14	55418974	Flores, Leonardo
15	55419036	Lazaro, Ernesto
16	55419090	Tungkong Mangga Co L Dia
17	55419143	Guballa, Jose
18	55419205	Abela, Severino
19	55419269	Sitio Crusher Homeowners Association
20	55419321	LWUA San Jose Del Monte District
21	55419376	Victoria Wave Limited Inc.

We will be coordinating with MWSS for the proper turnover of the above Raw Water accounts, to ensure a smooth transition of the responsibility for all services relative to these accounts to MWSS.

We wish to advise you further that in a letter dated June 24, 2008, a copy of which was received by Maynilad last July 10, 2008, MWSS has reiterated its demand "*for the immediate remittance of the amount of P34,845,840.59 representing Raw Water Collection covering various periods in San Jose Del Monte Water District and Tungko Mangga Barangay Water Service System.*" Accordingly, in order to finally put this matter to rest, Maynilad will propose to settle and pay such amount to MWSS in four (4) equal quarterly installments beginning on the effectivity of the rebased tariff.

11. ***Recovery Mechanism for BNAQ-6 Phase 1 Expenditures***

Maynilad is still awaiting the final resolution as to the details on the recovery mechanism in relation to the funding of the BNAQ-6 Phase 1 Project in accordance with the provisions of paragraphs (i) and (ii) of Clause 18.8 (*Special Projects*) of the DCRA, in compliance with the provisions of the TCA. However, Maynilad is open to other equivalent means of recovery (e.g. treating such Expenditures as Concession Fees) in order to mitigate the impact of the corresponding tariff adjustment to the Customers, per initial discussions with the Regulatory Office.

12. ***Disputed Claims***

Maynilad is still currently under discussion with MWSS' designated committee on the resolution of MWSS' disputed claims in accordance with the TCA. Accordingly, the July 2008 Business

Plan has not taken into account any assumptions relating to this, pending final resolution between Maynilad and MWSS on the matter.

13. ***Intention to Apply for ITH Bonus Year***

We wish to respectfully advise the Regulatory Office that Maynilad intends to apply with the Board of Investments for a bonus year to extend its income tax holiday (***ITH***) incentive pursuant to the Omnibus Investments Code and existing regulations. We did not incorporate the financial impact of any bonus year in our projections in the July 2008 Business Plan, as there is still no certainty on this matter. Rest assured that Maynilad will update the Regulatory Office on any development regarding this.

14. ***Interim Standard Rates Adjustment Proposal***

On May 30, 2008, Maynilad submitted to the Regulatory Office its Interim Standard Rates Adjustment Proposal, proposing to implement, beginning on September 1 of this year, an Interim Standard Rates Adjustment pursuant to Section 9.2.5 of the Concession Agreement of an average of PhP2.33 per cu. m, to be applied through unequal rate adjustments per customer class. As an important component of such proposal, Maynilad also proposed the rationalization and reduction of the consumption bands per customer category. Pending receipt of the Regulatory Office's response in relation to such proposal, Maynilad has not yet incorporated the financial impact of the implementation of such proposal in the July 2008 Business Plan.

Maynilad reiterates, however, that its Interim Standard Rates Adjustment Proposal is not inconsistent with the on-going Rate Rebasing exercise and may be harmonized with such process, always with due regard to the fundamental principle of revenue-neutrality enshrined in the Concession Agreement. Should such proposal be approved and the Interim Standard Rates Adjustment be authorized for implementation by Maynilad effective September 1, 2008 or within the last quarter of this year, the business plan will be adjusted to include Maynilad's future incremental Receipts to reflect the resulting increase in base revenue stream commencing in 2008, thus resulting in a corresponding reduction to the rebased tariff that will become effective on January 1, 2009. Accordingly, Maynilad respectfully reiterates its request that the Regulatory Office give due course to its Interim Standard Rates Adjustment Proposal and recommend that the same be approved by the MWSS Board of Trustees, in time for implementation by Maynilad effective September 1, 2008 or within the last quarter of this year. As mentioned , we will be happy to provide any further information or documents, as may be reasonably required by the Regulatory Office in connection with such proposal.

It is also significant to note that the Expiration Date remains at May 6, 2022 in the July 2008 Business Plan, subject to MWSS' consideration of Maynilad's earlier request for extension. Finally, as confirmed by both Maynilad and MWSS during the July 2, 2008 meeting, the issue on excess materials relating to the non-revenue water (***NRW***) component of the UATP (UATP-Part B) which is a Concession Fee project, had already been resolved with MWSS, and as such, this is no longer an outstanding issue for the on-going Rate Rebasing exercise.

Any required changes to the July 2008 Business Plan to cover the final resolution/agreement on certain remaining unresolved matters as well as any other relevant information will be submitted to the Regulatory Office in due course. Further, a final reconciliation of all the items and/or concerns enumerated in this letter will be done and adjustments will be incorporated in the subsequent implementation of the rebased tariff, subject to the principle of revenue neutrality.

We trust that you will find the attached July 2008 Business Plan to be in order.

We are open to discussions with the Regulatory Office-TWG relative to our assumptions, projections and plans/programs in the July 2008 Business Plan.

Very truly yours,

ROGELIO L. SINGSON
President

COPY FURNISHED:

Justice Oscar I. Garcia
Chairman, MWSS Board of Trustees

Hon. Diosdado Allado
Administrator, MWSS

Mr. Randolph A.Sakai
Chairman, MWSI Rate Rebasing

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MAYNILAD WATER

SUMMARY OF CHANGES AND UPDATES IN THE SEPTEMBER 2008 BUSINESS PLAN

1. *Revised Demand-Supply*

In this updated September 2008 Business Plan, it was assumed that there will be a 5% reduction in the unit consumption until 2015 due to the combined effect of price elasticity and demand management compared to the July BP. The maximum level of 151 lpcd will now be attained in 2021. As in the case of the domestic per capita consumption, a 5% reduction in the non-domestic consumption estimates is assumed until 2021.

The reduction in the consumption per capita and the non-domestic demand resulted in the reduction in the billed volume by 2.3% for the period 2008-2012.

Maynilad will implement initially the first 100 Mld treatment plant and ramp up to 300 Mld as needed. The North Treatment Plant will be deferred consistent with the demand projection.

The revised billed volume resulted in an adjustment to the new water service connections which, in turn, resulted in new coverage targets.

2. *Foreign Exchange Losses and Gains*

Maynilad maintains its position in the July 2008 BP.

3. *Opening Cash Position (OCP)*

The important aspects of the OCP, following further discussions during the September 4, 2008 meeting with the Regulatory Office, are summarized as follows:

a. The Regulatory Office and Maynilad agreed that the interrelated issues as well as the recovery of Bridge Forex Losses will be handled in the OCP and we trust that this is no longer an issue.

b. Maynilad maintains its position in the July BP regarding expenditures on emergency repairs made to the Angat-Umiray Transbasin Tunnel and its facilities.

c. Maynilad affirms its position in the July BP relative to the raw water accounts. Maynilad had considered in its Sept BP the additional amount of P3.8M as requested by MWSS in its letter dated August 28, 2008 regarding this matter. Further, the Memorandum of Agreement for the turn over of raw water accounts are underway and being discussed among the concerned parties.

d. Maynilad continues to support its position regarding LPPC. However, please refer to the alternative financial model discussed in the covering letter regarding a proposed resolution of this matter, in the interest of concluding this Rate Rebasing exercise and to finally settle this issue.

e. Maynilad had submitted on August 1 (relative to item e.3) and on August 6, 2008 (relative to items e.1 and e.2) its position paper/further documents to support the same position outlined in the July BP, on the remaining issues that impact the OCP; namely,

e.1 Residual benefits paid to Maynilad's employees who were formerly employed by MWSS. Maynilad stresses the importance of granting these residual benefits to such employees, as set forth in its position paper dated August 6, 2008. However, please refer to the alternative financial model discussed in the covering letter regarding our proposed resolution of this matter, in the interest of concluding this Rate Rebasing exercise and to finally settle this issue.

e.2 Expenditures incurred for the implementation of the Temfacil Projects.

e.3 Expenditures incurred by Maynilad for payments made to its affiliated company, D.M. Consunji, Inc. under certain civil works contracts.

f. Maynilad maintains its position on its claim for OCP correction relative to the PhP2.8 billion net revenue disallowance from the 2003 OCP on account of NRW-related revenues.

4. *Customer Service – Related Matters*

Due to the requirement for a thorough evaluation of the financial and operational impact of the implementation of the Customer service-related changes, as initiated by the Regulatory Office and approved by the MWSS Board of Trustees, particularly on the adoption of new billing scheme for high-rise Customers, the same has not yet been incorporated in the Sept BP.

5. *Revised Capex Program*

The Sept BP incorporates the revised capital expenditures (*Capex*) program, specifically relating to sewerage and sanitation to comply with the directive of Congress to MWSS and its Concessionaires to accelerate the service coverages for sewerage and sanitation.

6. *KPIs and BEMs*

Maynilad has on-going discussions with the Regulatory Office for the establishment of enhanced KPIs and BEMs, including Capex monitoring and reward/penalty schemes.

7. *Raw Water Supply/Treatment Facilities*

The Sept BP reflects the following major considerations:

a. Consistent with the July BP, Maynilad will implement initially the first 100 Mld treatment plant and ramp up to 300 Mld as needed. However, the North Treatment Plant will be deferred.

b. In addition to the new Concession Fees as provided in the July BP related to the implementation of the Umiray rehabilitation, the BNAQ-6 Phase 2 Project and the 15 cms. Project, Maynilad has included the related expenses to the BNAQ-6 Phase 1 Project in the Sept BP.

c. Maynilad maintains its position in the July BP regarding the Laiban Raw Water supply project and its proposal to increase water treatment capacity using Laguna Lake as water source or to develop another new water source in the long-run.

8. *Sewerage and Sanitation Charges and Programs*

Further refinements to Maynilad's sewerage and sanitation targets have been taken into account in the Sept BP relative to the rationalization of sewerage and sanitation programs and charges and to comply with the directive of Congress to accelerate the service targets for sewerage and sanitation.

Maynilad affirms its proposal to the Regulatory Office and MWSS that the nomenclature of "environmental charge" be appropriately changed to "sanitation charge" beginning on January 1, 2009 consistent with paragraph 2 of Exhibit E to the Concession Agreement.

Shown below is the Sewerage and Sanitation Charge Schedule for the 3rd Rate Rebasing Period:

	2008	2009	2010	2011	2012
Not connected to Separate Sewerage System					
Sanitation Charge	10%	12%	14%	17%	20%
Separate Sewerage System (Sewerage Charge)					
Domestic Sewer Charge	50%	20%	20%	20%	20%
Non-domestic Sewer Charge *	50%	20%	20%	20%	20%
Combined Sewerage System					
Domestic Sewer Charge	**	**	**	**	**
Non-domestic Sewer Charge	**	**	**	**	**

* Non-domestic customer connected to separate sewerage system pays the Sewerage Charge plus the corresponding Sanitation Charge

** Rate equal to Sanitation Charge for the 3rd RR Period

The different charging for those connected to separate sewerage system for Domestic and Non-domestic Customers is consistent with the principles of cross-subsidy and affordability in any tariff adjustment.

9. *Recovery Mechanism for BNAQ-6 Phase 1 Expenditures*

Maynilad has considered the BNAQ-6 Phase 1 Project as Concession Fees in its Sept BP.

10. *Disputed Claims*

Maynilad has not considered the MWSS' disputed claims in accordance with the TCA pending final resolution between MWSS and Maynilad on the matter.

11. *Interim Standard Rates Adjustment Proposal*

Maynilad affirms its position for an Interim Standard Rates Adjustment pending receipt of the Regulatory Office's response in relation to such proposal. Maynilad has not yet incorporated the financial impact of the implementation of such proposal in the Sept BP for implementation effective October 1, 2008 or within the last quarter of this year.

Submitted by:

RANDOLPH T. ESTRELLADO
CFO and Head, Rate Rebasing Team

September 10, 2008

MAYNILAD WATER SERVICES, INC.

September 10, 2008

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HON. MANUEL P. QUIZON
Chief Regulator
MWSS - Regulatory Office
MWSS Compound, Katipunan Road
Balara, Quezon City

Subject : **Alternative Financial Model**
Maynilad's September 2008 Business Plan

Dear Chief Regulator Quizon:

As discussed in the covering letter of Maynilad's September 2008 Business Plan (***Sept BP***), we are respectfully submitting a soft copy of an alternative financial model, in response to the request from the Regulatory Office during the September 4, 2008 meeting that Maynilad consider their points on various regulatory issues. After careful consideration, we have identified certain issues, in respect of which, certain adjustments may be acceptable to Maynilad. These adjustments are summarized in Annex A1 hereto, for your guidance.

Maynilad's position on these issues, as set forth in the various position papers submitted to the Regulatory Office, remain. However, in the interest of finally concluding and completing this Rate Rebasing exercise and to put closure to these issues, we are amenable to these adjustments provided that the basic business case set forth in the Sept BP is acceptable to the Regulatory Office.

The attached alternative financial model will no doubt result in a further reduction in the Rebasing Adjustment that will cushion the impact of the rate adjustment to West Zone customers.

We look forward to the conclusion and completion of this Rate Rebasing exercise soonest.

Very truly yours,

RANDOLPH T. ESTRELLADO
Chief Finance Officer and Head, MWSI Rate Rebasing

MWSS Compound, Katipunan Road, Balara, Quezon City Telephone No. 920-5521

COPY FURNISHED:

Justice Oscar I. Garcia
Chairman, MWSS Board of Trustees

Hon. Diosdado Jose M. Allado
Administrator, MWSS

Mr. Randolph A. Sakai
Chairman, MWSI Rate Rebasing

Mr. Rogelio L. Singson
President, Maynilad

ANNEX A1

MAYNILAD WATER

SUMMARY OF ADJUSTMENTS
IN ALTERNATIVE FINANCIAL MODEL

1. ***Tranche B Concession Fees and Corresponding Forex Gain***

Maynilad affirms its position regarding Expenditures on account of Tranche B Concession Fees, as elucidated on in its July 10, 2008 position paper submitted to the Regulatory Office. However, in the interest of concluding this Rate Rebasing exercise and to finally settle this issue, Maynilad is amenable to non-recovery of payments made in January 2008 for the prepayment made by Maynilad to MWSS in respect of Tranche B Concession Fees in the total amount of approximately P1.3 billion. This effectively removes the Tranche B Concession Fees from the ambit of the FCDA or other foreign currency exchange rate adjustment mechanisms and thus, there will no longer be any recognition of the corresponding Forex Gain (approx. P480 million) resulting from the prepayment of the Tranche B Concession Fees. These adjustments are now reflected in the alternative financial model.

2. ***Residual Benefits***

Maynilad cannot over-emphasize the importance and necessity of granting these residual benefits to employees who were previous MWSS employees, as set forth in its position paper dated August 6, 2008. However, in the interest of concluding this Rate Rebasing exercise and to finally settle this issue, Maynilad is amenable to OCP adjustment for the Residual Benefits paid to employees in 2006 and 2007 who were previous MWSS employees, in the total amount of P102 million, as illustrated in the alternative financial model.

3. ***LPPC***

Maynilad continues to support its position regarding LPPC. However, in the interest of concluding this Rate Rebasing exercise and to finally settle this issue, Maynilad is amenable to OCP adjustment for collections from 2003 to 2007 in excess of 2% per month, in the total amount of P153.10 million.

4. ***PSA Forex Gain***

Following the adjustments made in the alternative financial model, the total PSA Forex Gain to be compensated to Customers now amounts to approximately P1.09 billion. This revised calculation likewise takes into account adjustment on the Forex Loss/Gain for payments made to MWSS of Tranche A2 Concession Fees pursuant to the discussions with the Regulatory Office held on September 4, 2008. Further, Maynilad is now amenable to implement the compensation

scheme for the PSA Forex Gain for a period two (2) years, instead of four (4) years, as illustrated in the alternative financial model.

Maynilad wishes to emphasize that Maynilad is open to the above adjustments set forth in the alternative financial model provided that the basic business case in the Sept BP is acceptable to the Regulatory Office.

Submitted by:

RANDOLPH T. ESTRELLADO
CFO and Head, Rate Rebasing Team

September 10, 2008

EXECUTIVE SUMMARY

This July 2008 Business Plan (Business Plan) is a revised version of the March 2008 Business Plan. The revisions were the result of several discussions with the Regulatory Office, recent developments in the economy and release of the results of the 2007 Census on Population and Housing by the National Statistics Ofice (NSO), among others. This Business Plan has been prepared in accordance with the Concession Agreement dated February 21, 1997 (as clarified and amended) (Concession Agreement or CA) between the Metropolitan Waterworks and Sewerage System (MWSS) and Maynilad Water Services, Inc. (Maynilad or the Company). Capitalized terms used and not otherwise defined herein or unless the context otherwise requires shall have the same meanings set forth in the Concession Agreement.

The Concession Agreement features a periodic performance review and general tariff adjustment mechanism referred to as "Rate Rebasing". Through this Rate Rebasing mechanism, rates are adjusted every five (5) years commencing on the second Rate Rebasing date of January 1, 2008, and set at a level that will permit the Concessionaire to recover, over the 25-year term of the Concession, its Expenditures that are efficiently and prudently incurred and to earn a rate of return on these Expenditures for the remaining term of the Concession, in line with the prevailing industry return for similar long-term infrastructure concession projects in other countries having a credit standing similar to that of the Philippines. The Company's first Rate Rebasing exercise, however, was undertaken in 2002 pursuant to the mandate of Amendment No. 1 to the Concession Agreement dated October 5, 2001 (Amendment No. 1), but its rebased rate was implemented only on January 1, 2005 pursuant to the resolutions of the Regulatory Office and the MWSS Board of Trustees, as an important component of the Company's court-approved 2005 Rehabilitation Plan. Then, on August 9, 2007, by virtue of the Transitional and Clarificatory Agreement (TCA), the Company's second Rate Rebasing exercise supposed to be undertaken in 2007 was deferred to 2008 after the Company shall have exited from its court-supervised corporate rehabilitation. Further, by virtue of the TCA, the actual implementation and charging to Customers of the new rebased tariff was also correspondingly deferred from January 1, 2008 to January 1, 2009, subject to revenue neutrality. However, notwithstanding the said deferment of the exercise and the implementation of the rebased rate, the TCA highlighted that there is no corresponding change to the second Rate Rebasing Date of January 1, 2008. This is to ensure that the Rate Rebasing Dates and the Rate Rebasing Periods prescribed by the Concession Agreement are preserved for the proper operation of the Rate Rebasing mechanism throughout the remaining term of the Concession.

The MWSS, the Regulatory Office and Maynilad are once again tasked to undertake a Rate Rebasing process pursuant to the Concession Agreement, a task

requiring careful review and analysis of all relevant facts and circumstances. In compliance with the requirements of the Concession Agreement, Maynilad is submitting this Business Plan for the consideration and review of the Regulatory Office, without prejudice to any agreement Maynilad, the Regulatory Office and MWSS may reach in relation thereto, particularly in connection with any remaining outstanding regulatory and financial issues.

Maynilad believes that the Rate Rebasing exercise must be conducted in careful consideration of the relevant facts and circumstances summarized in this Business Plan. The new rebased tariff must reflect the principles enshrined in Section 9.4 of the Concession Agreement, especially the fundamental principle of revenue neutrality, to enable Maynilad to faithfully carry out its responsibilities under the Concession Agreement.

Maynilad understands that upon the directive of the MWSS Board of Trustees, the Regulatory Office will undertake a review of the Concession Agreement to identify specific provisions that need to be revisited in order to, among others, further improve and strengthen customer service and reduce the impact of water tariff increase for the benefit of the consumers, the Government and the Concessionaires. We further understand that such review will include a careful evaluation of our proposed extension of the Concession term, balancing its direct impact on tariff reduction, possible elimination of Government exposure to Expiration Payment under Clause 9.4.4 of the Concession Agreement and greatly encouraging the Concessionaires to embark on more capital expenditure (Capex) and investment programs to further improve facilities and network for better service. This will also be aligned with the government programs to improve the basic services and propel the economy.

As part of the on-going Rate Rebasing exercise, due regard must be given to the relevant events that transpired in connection with the Concession, particularly those that affected the implementation of Maynilad's rates pursuant to the Concession Agreement. Accordingly, an overview of relevant events is presented to assist the parties in undertaking this Rate Rebasing process properly, efficiently and effectively.

On February 6, 2008, the Rehabilitation Court issued the Order confirming the termination of Maynilad's rehabilitation proceedings on account of Maynilad's successful implementation of the 2005 Rehabilitation Plan. (For a summary of the key events of the West Concession, please see Annex 4.)

With the entry of the new Sponsors in Maynilad, the Company's vision and mission statements and its core values were reviewed and revised to set the new direction on where the company would want it to be. After a series of consultations with its stakeholders, the company restated its vision-mission statements and its core values.

The Company's restated vision statement is; "We are a world-class water service company committed to excellence and improve quality of life"

In line with its restated vision and mission statements, Maynilad adopted the following strategies for the next five (5) years to achieve its objectives for a sustainable growth:

- Improve network and operational efficiency
- Improve organizational efficiency and right size
- Ensure financial viability and enhance shareholder value
- Upgrade customer services
- Improve corporate image

In compliance with the Concession Agreement and the Transitional and Clarificatory Agreement (TCA), Maynilad on March 28, 2008 had submitted to the Regulatory Office its Service Obligation Report for the period 2002-2006 and status as of year 2007 to serve as baseline information for the Business Plan. Likewise, Maynilad submitted the March 2008 Business Plan on March 31, 2008.and an updated version on July 18, 2008 taking into account the various suggestions

MAYNILAD'S ACCOMPLISHMENTS

Water Service

In spite of the many challenges that Maynilad went through, the Company was able to meet its Year 2006 service targets for several cities and municipalities. Based on existing assumptions, the 100% coverage targets for Manila, Quezon City, Pasay, Caloocan, Makati and Parañaque (where the large number of population is privately served) were essentially met, except for a few blighted areas. The service coverage assumptions will be subject to review and proposed revisions for more realistic service coverage targets moving forward.

The shortfall is mainly found in Malabon, Navotas and Valenzuela but it is expected that the service coverage targets will be met in 2008 as assumed in the 2005 Rehabilitation Plan. Likewise, in Las Piñas and Muntinlupa (included in the National Capital Region (NCR) but located in the southern portion of the service area), the delay in the 300 Mld BOT Project adversely affected Maynilad's ability to meet its coverage targets in the said areas.

Sewerage Service

The Debt and Capital Restructuring Agreement (DCRA) dated April 29, 2005 provided for the deferment of the sewerage targets until all pending issues on legislations are resolved.

Sanitation Service

The service coverage targets for Manila and Quezon City have already been met. Desludging activities have shifted to the other areas in the northern part of the NCR. However, there are difficulties encountered in Malabon and Navotas as these areas are often flooded, thus, septic tanks are inaccessible for desludging. Other than these problem areas, the service coverage targets for the cities/municipalities in the northern part of NCR are expected to be met.

On the other hand, desludging activities in the southern part of NCR and in Cavite are slow to progress because there is no septage treatment facility in the south. Septage collected from households is transported to the Dagat-dagatan Septage Treatment Plant in Caloocan, which is in the north.

PROPOSED SERVICE COVERAGE TARGETS

The service coverage assumption on the person per service connection and the estimation of privately served population will be the subject of review and proposed revisions for more realistic service coverage targets.

The revision will cover the revised assumption of an average of 7.4 persons per connection based on the Public Assessment of Water Services (PAWS) partial survey data, instead of the 9.2 persons per connection based on the IFC-Sogreah Report in the numerator, and the use of total population instead of total population net of the privately served in the denominator.

Likewise, Maynilad is now using the results of the NSO's 2007 Census of Population in the projections of future population, which is much higher than the previous projections and will entail higher number of new connections to attain coverage targets. These enhancements in the coverage framework will surely provide a more reasonable indicator compared to the agreed methodology of the service coverage.

Water Service

Based on the enhanced assumptions and framework, Maynilad will be able to improve its water service coverage targets in the entire service area by an average of 17 percentage points from 68% in EO2006 to 85% in EO2011. The growth in the NCR of about 15 percentage points for the same period is modest compared to the growth in the Cavite area where there will be a significant expansion of water service of about 40 percentage points. Maynilad will attain the 100% water service coverage in 2022 (including the privately served population). However, the realization of service expansion for water in the South, which includes the Cavite area, is heavily anchored on the availability of water supply. The revised service

coverage target in the South is contingent with the phased-in completion of the 300 Mld Muntinlupa Water Treatment Plant Project being proposed to be undertaken by Maynilad immediate upon approval of MWSS in the next five (5) years or the development of other projects utilizing Laguna Lake as water source or another new water source in the long-run.

A total of 254,486 new water service connections will be installed in a four (4) year period from 2008 to 2011 to attain the 85.2% water service coverage and bringing the total number of billed customers to about 958,000 by the end of 2011.

Sewer Service

Maynilad will work to comply with the provisions of Republic Act No. 9275, otherwise known as The Philippine Clean Water Act of 2004 (CWA). In the next five years, the five (5) communal/imhoff tanks under its jurisdiction will be rehabilitated and its treatment capability will be enhanced. In coordination with MWSS, there is an ongoing clearing of four (4) communal septic tanks occupied by informal settlers in preparation for its upgrading/rehabilitation.

For Maynilad to maintain its present service coverage of 9% up to end of concession, it needs to install more than 60,000 additional sewer service connections. With the present tariff structure, this would be an impossible task. To date, the high connection charges and the higher tariff for sewered accounts (which is expected to increase as a result of the 2nd rate rebasing exercise) remain a deterrent factor for customers to connect.

In this rate rebasing exercise Maynilad proposes the following rationalization schemes in order to translate the unused capacity of its existing sewerage facilities into additional connections. Maynilad is confident that the said scheme will encourage more customers to avail of the sewer services:

1. Maynilad's capitalization of the cost of connection which to date amounts to an average of PhP60,000 per connection.
2. Rationalization of existing sewerage and environmental charges. Maynilad will immediately reduce the 50% sewer charge to 20% starting 2009 and moving forward.

Sanitation Service

Maynilad will intensify its sanitation activities to compensate for the shortfall in the sewerage coverage. It will meet the 2008 target as stated in the 2005 Rehabilitation Plan of 36%, 43% in 2011, 50% in 2016, and 55% in 2021.

To ensure compliance with committed targets and maximize environmental benefits in the implementation of the sanitation program, Maynilad will continue with its

systematic approach in its execution of the Sanitation Program. Selection of program areas will be coordinated with the Business Centers (BCs) and concerned community/barangay leaders. Program briefing will be done to explain the importance of the program and to get cooperation/assistance of community leaders during the actual desludging operation.

WATER DEMAND AND SUPPLY

The future water demand in Maynilad's service area is estimated using the results of the revised-population-projection, proposed unit consumption, adjusted service coverage targets and projected commercial and industrial water consumptions.

The total water demand is the sum of domestic and non-domestic consumption, and physical Non-Revenue Water (NRW). Domestic consumption refers to water consumed in residences, including those classified as semi-business, which is served by a Maynilad water service connection, public faucet, deepwells, water peddlers, households operating small business, etc. Non-domestic consumption refers to water consumed in commercial and industrial establishments; and NRW refers to apparent losses, real losses (leakage) and unbilled authorized consumption as defined by the International Water Association (IWA).

Considering the current water supply facilities and projected water demand, Maynilad has envisioned the need for construction of new treatment plants to cater to the growing water demand due to the increase in population and business activities.

Maynilad proposes a phased-in implementation of the 300 Mld Muntinlupa Water Treatment Plant starting 2009 to nearly match the supply deficit and the proposed total plant capacities in the intended areas within the interim period.

TECHNICAL PLAN

Water Resources

The two (2) Concessionaires greatly rely on Angat and Umiray Rivers as the main sources of water for their customers. MWSS and National Irrigation Administration (NIA) share the water used by the hydroelectric power plant of National Power Corporation (NPC) in power generation, which has been drawn from the impounding reservoir at Angat Dam.

The 46 cms (4,000 Mld) raw water allocation of MWSS from Angat Reservoir is divided to Maynilad and Manila Water on a 60/40 basis, i.e. 2,400 Mld is allocated to the West Zone and the other 1,600 Ml/d goes to the East Zone. For the past six (6) years, an average of 41 cms (3,500 Mld) has been obtained from Angat Reservoir.

Water from Angat and Ipo represents 98% of Maynilad's supply to its Service Area and the remaining 2% come from groundwater sources, which currently supply the fringe areas, mainly in Cavite. Further development and rehabilitation of wells cannot be pursued because, aside from the difficulty in finding new good sites, there are problems associated with salt-water intrusion, lowering of the groundwater table, soil subsidence and water quality.

Water Production

La Mesa Treatment Plants 1 & 2 are responsible for the treatment of the allocated 60% raw water releases from Ipo/Angat Dam. The plants under the Water Production Department were ISO 9001:2000 (Quality Management Systems) certified by TUV: SUD, Philippines on October 18, 2006.

La Mesa Treatment Plant 1 (LMTP-1), commissioned in 1982, is a standard flocculation-settlement-rapid gravity filter plant with a design capacity of 1500 Mld while La Mesa Treatment Plant 2 (LMTP-2), completed in 1994, is a pulsator-clarifier filter plant with a design capacity of 900 Mld. With a combined capacity of 2,400 Mld, both treatment facilities have an overload capacity of at least 10% of the design capacity.

Water Network

The current water distribution network of Maynilad is a relatively old water system composed of 5,424 kms of pipelines ranging from 50 mm to 3200 mm and made up of various materials, such as reinforced concrete, steel, cast iron, asbestos cement (ACP), ductile iron, and PVC. The 350-km primary distribution network (main backbone) translates to about 8.5% of the total length.

Treated water that comes out of the treatment plants is distributed by gravity or by pumping. Seventy-one percent (71%) of the total surface water supply is fed by gravity while the remaining twenty-nine percent (29%) is distributed using five (5) major pumping stations, four (4) mini boosters, fifteen (15) in-line booster stations, and eleven (11) reservoirs

All other areas covered by the Concession not provided with surface water are served by eighty-three (83) deepwells which account for the remaining 2 percent of the total water supply.

Sewerage

Maynilad is operating four (4) sewerage systems serving around 9 % of the total population under the Service Area West. These are the following:

- Central Manila Sewerage System (CMSS)
- Dagat-dagatan System
- Quezon City Communal System
- Makati Isolated System

The CMSS serves 70% of the total area of the City of Manila. The system currently serves around 47,000 sewer service connections. The wastewater generated within the area is collected by the system through sewer service connections, conveyed to a terminal pumping at Tondo Station for screening and grit removal, and then pumped to about 3.9 km away from the shore of Manila Bay through a 1,800mm-diameter outfall. The system is newly rehabilitated under MSSP-4 project funded by the World Bank.

Sanitation

Maynilad is also operating sanitation facilities for the implementation of sanitation program of the Company. Regular desludging of Customers' septic tanks is being conducted once every 5-7 years to help in the reduction of pollution loading entering public drain and waterways.

A septage treatment plant with capacity of 450 cubic meters per day was constructed in 2003-2005 under the MSSP-2 project funded by the World Bank. It is located at the existing wastewater treatment plant site at Dagat-dagatan, Caloocan City. All septage collected using vacuum tankers is brought to this facility for dewatering and treatment of the wastewater.

CAPITAL INVESTMENT PROGRAM

The Capital Investment Program for the 5-year Business Plan from 2008 to 2012 focused on four (4) major programs, namely: NRW Management and 3R Program; Operations Support Program; Water Sources Program; and Sewerage and Sanitation Program. Each program is associated with one another and is planned to comply with the Company's service obligations to all customers in the West Concession. The programs also include the natural calamity mitigation within the five-year period.

NRW Management and 3R Program

The NRW Management and 3R Program is an integration of the concept of ***Recovery*** of lost water, ***Reallocation*** to potential market area and ***Resell*** to underserved and unserved customers in West Concession. It also incorporates the instrumentation and digitization to the Geographical Information System (GIS) of the established and future underground and exposed assets. The Program also takes

into account the requirement for technical assistance provided by various local and foreign experts in the water industry.

The main thrusts of the 3R Program, are:

- To recover lost water by rehabilitating and reconfiguring the pipe network.
- To improve service levels to existing underserved Customers and serve new ones.
- To improve operations efficiency with the provision of equipment, telemetry, GIS and appropriative training and development; and
- To maintain and sustain the low level of NRW

The Program plans for the reconfiguration of the network into 31 discrete hydraulic areas (HAs). It covers the current supply area (26 HAs) and expansion areas (5 HAs). Within each discrete HA, district meter areas (DMAs) or Sub-zones are likewise to be established, isolated and measured. Each DMA is single-fed and fully isolated. All DMAs will be equipped with district meters for supply flow measurement and pressure reducing valves (PRVs) for the pressure control and management. A total of 1,489 DMA's will be established within the Service Area West of which 1,338 DMAs are within the 3R Program while the rest will be supplied by the new water sources.

After establishing the DMAs, the NRW team will undertake diagnostics and analyze the NRW, cause of leaks and other information on the DMA. After the diagnostics, decision will be made if full or partial pipe replacements will be undertaken in the DMAs established. However, for HAs or DMAs with the highest NRW of above 60% or Infrastructure Leakage Index (ILI) of more than 500, the immediate solution would be a total pipe replacement.

Once the establishment of certain DMA is completed and its NRW data (supply flow, IWA water balance, infrastructure leakage index, night flows, diurnal pressures, etc.) becomes available, appropriate NRW diagnostic will be undertaken to verify whether full pipe replacement or partial rehabilitation will be implemented.

The infrastructural improvements will be supported by institutional strengthening to ensure sustainability of the gains in reducing NRW as well as continuing social intervention by the BC personnel to ensure that the NRW is kept at low levels.
The program components of the NRW Management and 3R Program are:

A. Recovery Program
   - DMA Establishment
   - NRW Diagnostic
   - DMA Full and Partial Pipe Rehabilitation

B. Reallocate Program
   - Hydraulic Area Establishment and Measurements
   - Hydraulic Area Pipelaying

C. Resell Program
   - Pipelaying in Expansion Areas

D. Instrumentation and GIS
E. Technical Assistance

Operational Support Program

The Operational Support Program aims to sustain and enhance service efficiency and to provide new primary pipelines to the expansion areas. The main components of this program are: La Mesa Treatment Plants or Water Production Rehabilitation, New Trunklines, New Pump Stations, New Reservoirs, Water Network & Pumping Station Rehabilitation, Construction and Optimization, Building, Offices and Warehouses, Water Meters Replacement, Information Technology Programs, ROW & Permits, Affected Utility Projects, Equipment, and Consultancy Services.

Water Source Development Program

The Water Sources Development Program is composed of three (3) components, namely:

- MWSS Water Source Projects
- MWSI Water Source Projects
- Common Purpose Facilities Projects

The MWSS Water Source Projects are basically projects initiated and funded by MWSS but to be paid by the two (2) Concessionaires as Concession Fees. There are four (4) projects under this category, to wit:

- Umiray Rehabilitation and Upgrading
- Angat Water Utilization and Aqueduct Improvement Project (AWUAIP)
- Laiban Dam Project
- 15 cms New Water Sources Projects

The first two (2) MWSS projects are meant for upgrading and rehabilitation of existing water source facilities. The 15 cms project is a new water source project. Maynilad has not considered the Laiban Dam Project in this Business Plan due to the huge cost of implementing the Laiban Dam Project and given that the recovery period over the remaining term of the Concession would be too short. Maynilad proposes to increase water treatment capacity utilizing Laguna Lake as water source or develop other new water source in the long-run.

The component of the MWSI Water Source Projects is intended for the construction of new water treatment plants in the South called the Muntinlupa Water Treatment Plant utilizing water from Laguna Lake.

The Common Purpose Facilities Projects are intended for the upgrading, renewal and maintenance projects of the Common Purpose Facilities as outlined in the Concession Agreement. Basically, these projects will be financed and managed by the two (2) concessionaires.

Sewerage and Sanitation Program

In the next five (5) years, beginning 2008, Maynilad will work for the compliance of its sewerage and sanitation facilities with environmental standards and improvements in the service level and coverage targets. Maynilad will also adopt new measures to maximize the utilization of its existing Central Manila Sewerage System and increase sewer connections. To attain these objectives, it will implement the following projects:

- Reduction of sewerage charge from 50% to 20%
- Enhancement of treatment capability of the Central Manila Sewerage System
- Provision of treatment facility for five (5) communal septic tanks in Quezon City
- Additional septage treatment plant in the South with capacity of 250 CMD
- Repair of defective sewer network
- Purchase of additional desludging equipment
- Implement an effective desludging re-fleeting program
- Implementation of combined system
- Installation of additional sewer connections

Total Capital Investment

The total capital investment for the five (5) year period starting 2008 to 2012 amounted to PhP41,300 million.

Procurement

Maynilad's procurement process is segregated into two (2) parts. The first involves civil works contracts and the other for goods and other services. These, however, follow practically similar processes as approved by the president of the Company.

To further improve the efficiency of procurement and the timely delivery of goods and other services, the Company intends to adopt the following:

1. Institutionalize the annual procurement planning to be able to enter into longer term supply agreements with vendors thereby ensuring better prices of goods and services as well as reliable deliveries.
2. Expansion of the Company's supplier base for a more competitive sourcing.
3. Implementation of the procurement sub-module of SAP's Enterprise Asset Management for better efficiency.
4. Electronic or E-Procurement

Asset Maintenance

Prudent utility practice in operation and maintenance means keeping the facilities of a utility system in sound and dependable condition that would ensure the production and delivery of the required quantity and quality of water at all times, in the case of water facilities, and the disposal of wastewater of acceptable quality, in the case of sewer facilities. Maynilad will apply prudent utility practice as its main approach to operation and maintenance. An IT-based GIS Asset Management program will be implemented to ensure proper monitoring and assessment of all assets of Maynilad.

CUSTOMER SERVICE, BILLING, COLLECTION, CUSTOMER CARE AND CSR

The new Customer Care Program covers the end-to-end handling of all customer wants and needs, easy access for service requests and account payments, service restoration, churn management and continuous quality improvement activities to keep up with industry standards. The robust IT-telephony infrastructure of PLDT Group: PLDT, Smart and ePLDT shall make a significant contribution on how Maynilad can improve customer services. A more efficient and upgraded Customer Relations Management software has been implemented to improve customer care.

The new Maynilad seeks to further strengthen and expand its CSR program not only as part of its strategic goals to enhance viability, attain growth and meet concession targets but also in recognition of the pivotal role it plays in ensuring a better quality of life for the people.

It aims to attain this through its CSR projects that promote poverty alleviation, sustainable water management, and community development and well-being, create better cooperation and partnership between government and people, and provide assistance to calamity victims and charitable organizations.

The new Maynilad acknowledges that more than just being a water and sanitation services provider for the West Zone, it is a catalyst for growth and progress of the communities it serves.

ORGANIZATION AND MANAGEMENT

Management Structure

In consonance with the new mission and vision of Maynilad, the Corporate Human Capital and Organization Development (CHCOD) has implemented the Right Sizing program and created two new groups: 1) Commercial and Marketing which entails departments such as key Accounts Management, Business Development and Marketing and 2) NRW Management to focus dedicated technically trained NRW specialists on reducing NRW and maintaining NRW at low levels. The new mission and vision also culls for a major culture change in the organization, from a public utility mindset to a consumer marketing organization. The rationale behind these changes is to promote a proactive culture in Maynilad that is customer-focused and performance-based. As a result of the change equating to improvement, Maynilad will be able to ride the different demands of the industry, thus achieving our goals and taking our office to greater heights.

The structure shall have two (2) major components: the Head Office and the Business Center Management. The Head Office organization shall provide the basic functional flatform to assist the various business centers to operate as profit centers.

An integral part of management's initiative to improve the network and operational efficiency of Maynilad is the shift to a HA configuration for the Business Centers (BCs). The adoption of this new setup is necessary for the better management of supply, pressure and losses in our distribution system. It will also give rise to other benefits, namely: enhancement of service levels and customer satisfaction, increase in water volume, minimization of dependencies and conflicts between areas, and an improved system to measure performance for the giving of incentives.

Human Resources

The major innovation shall be the transformation of the organization to be customer-oriented and performance driven. This means that HR shall take more strategic role in culture change and continuous personnel development and training. Likewise, fun and people programs will be implemented to facilitate open discussion between management and employees as well as initiate action planning for organizational development. Moreover, the Company will apply the highest standards of excellence in improving workplace to create a positive working environment. The remuneration will be performance-based with increases in rewards that are directly linked to the performance indicator of the function

Quality Management, Environmental Safety and Health

To fulfill its environmental policy, the Company will adopt strategic programs which will address the following goals within a certain prescribed period:

- Determine the current position of the organization with regards to the environment.
- Establish an environmental management system with structures, responsibility, practices, procedures, process and resources for implementing the policies, objectives and targets.
- Evaluate performance against internationally accepted standards, secure recognition and achieve third party certification/registration or declaration of the organization's performance. Maynilad will seek the relevant ISO 9000 and ISO 14000 certifications.
- A management process will be adopted and undertaken at a defined schedule based on the above international specifications. This process will audit and review the system as well as identify opportunities for improvement.

FINANCE

The calculated Opening Cash Position amounted to negative PhP35,440 million. For the period 2008 to 2022, the projections for various items are as follows:

Revenue	PhP332,416 million
Operating Expenses	PhP76,536 million
Concession Fees	PhP17,227 million
Capital Expenditures	PhP87,555 billion

These items including various assumptions are discussed in Chapter 7 of the Business Plan.

The financial projections resulted to the basic tariff increase of 52.01% of the 2008 approved basic tariff of PhP23.05 or about PhP11.99 per cubic meter.

RATE REBASING FRAMEWORK

After having just emerged from corporate rehabilitation upon the initiative of its new Sponsor, the new Maynilad is committed to working hand-in-hand with the Regulatory Office in ensuring the successful completion of the on-going Rate Rebasing exercise. For this purpose, Maynilad believes that the success of this exercise is hinged on ensuring that the key considerations and objectives set out below are achieved.

1. All pending issues and concerns that impact the tariff should be finally resolved and appropriately addressed, following the principle of revenue neutrality.
2. Pursuant to and in accordance with the TCA, the enhanced Service Obligations of Maynilad should be established vis-à-vis those set out in the 2005 Rehabilitation Plan, taking into account all relevant factors and unforeseen circumstances which have affected the ability of Maynilad to properly carry out its Service Obligations under the CA pursuant to Section 5.1 and other applicable provisions of the CA. As further required by the TCA, due notification must be made to the Republic of the Philippines, through the Secretary of Finance, of the approved and agreed enhanced Service Obligations of Maynilad established pursuant to the current Rate Rebasing exercise.
3. In relation to the approved and agreed enhance Service Obligations of Maynilad, Key Performance Indicators (KPIs) and Business Efficiency Measures (BEMs) as a regulatory tool to measure the performance of Maynilad (including provisions for rewards and penalties) for the remaining term of the Concession should be agreed and accordingly adopted.
4. A review of the Concession Agreement will be undertaken by the Regulatory Office to identify the specific provisions that need to be revisited in order to, among other things, further improve and strengthen customer service and the reduce impact of water tariff increase for the benefit of the consumers, the Government and Maynilad which will include a careful evaluation of Maynilad's proposed extension of the Concession term to primarily reduce tariffs, among other benefits.

1 BACKGROUND

1.1 INTRODUCTION

On February 21, 1997, the Company, under its former shareholders/owners (Benpres Holdings Corporation/Lyonnaise des Eaux) entered into a Concession Agreement with MWSS, a government-owned and controlled corporation organized and existing pursuant to Republic Act No. 6234 (the Charter), as amended, with respect to the Service Area West. The Concession Agreement sets forth the rights and obligations of the Company throughout the Concession period. The Regulatory Office acts as a regulatory body of the Concessionaires [the Company and the East Concessionaire – Manila Water Company, Inc. (Manila Water)] under the Concession Agreement.

The Concession Agreement features a periodic performance review and general tariff adjustment mechanism referred to as "Rate Rebasing". Through this Rate Rebasing mechanism, rates are adjusted every five (5) years commencing on the second rate rebasing date of January 1, 2008 and set at a level that will permit the Concessionaire to recover, over the 25-year term of the Concession, its Expenditures that are efficiently and prudently incurred and to earn a rate of return on these Expenditures for the remaining term of the Concession, in line with the prevailing industry return for similar long-term infrastructure concession projects in other countries having a credit standing similar to that of the Philippines.

The Regulatory Office, however, pursuant to Amendment No. 1, exercised its discretion to make a general rate adjustment on the first Rate Rebasing Date of January 1, 2003 through RO Resolution No. 02-006 dated October 30, 2002. The said resolution granted Maynilad a Rebasing Adjustment of 141.5% or 144.1%, including the "C" factor, or an average tariff increase of PhP10.34/cu.m. which would result in a basic tariff rate of PhP17.52/cu.m. or an all-in average tariff (one-time adjustment)-of-PhP26.75/cu.m effective January 1, 2003. RO Resolution No. 02-006 further established, as part of the recommended all-in average tariff, the Special Transitory Mechanism (STM) rates scheduled for implementation from 2003 to 2006. On the same day, RO Resolution No. 02-006 was approved and confirmed by MWSS through MWSS Board of Trustees Resolution No. 298-2002 dated October 30, 2002. After the conduct of public consultation, the said approved rebased tariff was reduced to an all-in average tariff of PhP24.28/cu.m., effective February 1, 2003, preserving the Net Present Value of the Cash Flows (2003 Rebased Tariff).

The 2003 Rebased Tariff was not accepted by Maynilad as it was deemed inadequate to support the viability of the Concession and would not allow Maynilad to obtain long-term financing. At that time, Maynilad's financial position was

already very precarious, and the viability of the business was challenged. Maynilad was constrained to suspend payment of Concession Fees beginning on March 8, 2001, in order to sustain its operations. Despite that, Maynilad's woes continued to exacerbate its already-precarious position, such that it was constrained to exercise its right to terminate the Concession by serving upon MWSS on November 5, 2002 a cure notice pursuant to Section 10.1(iii) of the Concession Agreement and, on December 9, 2002, a notice of early termination of the Concession pursuant to Section 10.3.1 of the Concession Agreement. MWSS disputed the early termination notice (Termination Dispute) and an interim order was issued by the Appeals Panel for Major Disputes on February 7, 2003 staying the termination of the Concession. In the meantime, in order to preserve its rights and remedies under the Concession Agreement, and to be able to sustain its operations, Maynilad continued to charge its Customers the pre-rebased tariff of PhP19.92/cu.m. in effect since January 2002. Such pre-rebased tariff included the Accelerated Extraordinary Price Adjustment (AEPA) of PhP4.21/cu.m. and the Foreign Currency Differential Adjustment (FCDA) of PhP4.07/cu.m.

On May 5, 2003, Maynilad received notice that the MWSS Board of Trustees had approved the resolutions of the Regulatory Office, which ordered Maynilad to cease and desist from continuing to collect the AEPA and the FCDA on the ground that the AEPA should have ended on December 31, 2002 and that Maynilad was not entitled to the FCDA since it suspended paying Concession Fees to MWSS. Prior to this, or on April 25, 2003, Maynilad had proposed to MWSS that the 2003 Rebased Tariff be implemented during the pendency of the arbitration "without prejudice to the arguments or claims of the parties" and that, in accordance with the terms of its proposed agreement, Maynilad be permitted to continue to recover the current rate of PhP19.92/cu.m, with MWSS being paid the incremental revenue resulting from the rate increase. Maynilad's proposal, however, was rejected by MWSS and, accordingly, on May 9, 2003, Maynilad filed a Dispute Notice with the Minor Appeals Panel questioning the cease and desist orders (CDO Dispute).

The Major Appeals Panel decided the Termination Dispute by issuing an award on November 7, 2003, declaring that there was neither a Concessionaire Event of Termination nor a MWSS Event of Termination and that consequently, the Concession Agreement shall continue in force.

On November 13, 2003, Maynilad filed a petition for its corporate rehabilitation before Branch 90 of the Regional Trial Court of Quezon City (Rehabilitation Court). A stay order was issued by the Rehabilitation Court on November 17, 2003, prohibiting the Company, among other things, from making any payment of its liabilities outstanding as at the date of the filing of the petition. On September 9, 2004, Maynilad, with the recommendation of the court-appointed rehabilitation receiver (Receiver), filed with the Rehabilitation Court a revised rehabilitation plan. The 2004 Revised Rehabilitation Plan assumed the implementation of the 2003 Rebased Tariff as a crucial component of Maynilad's corporate rehabilitation.

Accordingly, the Regulatory Office, pursuant to the directions of the MWSS Board of Trustees, issued on November 24, 2004 RO Resolution No. 04-014-CA recommending the implementation, beginning on January 1, 2005, of an all-in average tariff of PhP30.19/cu.m., which was based on the 2003 Rebased Tariff, adjusted by inflation rates to 2005 prices. The Regulatory Office further recommended that Maynilad and MWSS jointly submit to the Minor Appeals Panel a request for arbitral award based on agreed terms that conform to the proposals in RO Resolution No. 04-014-CA, and required the conduct of a "a post-implementation review and validation of the tariff rate in order to ensure that at the next Rate Rebasing Date any excess or deficiency in collections as a result of the above tariff rate will be appropriately addressed in the Opening Cash Position (OCP) and a proper adjustment to the tariff would be done under the principle of revenue neutrality". The MWSS Board of Trustees approved and confirmed RO Resolution No. 04-014-CA in its Resolution No. 2004-301 dated November 24, 2004.

On the basis of a "Joint Submission Relating to Claimant's Request for Termination of Arbitration Proceedings by Reason of the Withdrawal of the Notice of Dispute" filed by both Maynilad and MWSS, the Minor Appeals Panel terminated the arbitration proceedings on the CDO Dispute by issuing an Arbitral Award on Agreed Terms on March 4, 2005. The issuance of the said arbitral award was specifically made subject to the condition that (1) the alleged under-recovery of the revenues that Maynilad failed to collect between the period January 1, 2003 up to December 31, 2004; and (2) the over-recovery of foreign exchange (Forex) losses by Maynilad due to continued collection of AEPA and FCDA in 2003 and 2004, be resolved through mutual consultation and negotiation, as mandated by Clause 12.1 of the Concession Agreement, and through such other means available in the Concession Agreement and existing laws.

To address concerns raised by several creditors of Maynilad, the terms of the 2004 Revised Rehabilitation Plan had to be further modified. Thus, on April 29, 2005, Maynilad submitted its 2005 Revised Rehabilitation Plan (2005 Rehabilitation Plan), incorporating therein the terms of a Debt and Capital Restructuring Agreement (or the DCRA) executed among Maynilad, MWSS, Maynilad's shareholders and creditors. On June 1, 2005, the Rehabilitation Court approved, for immediate implementation and execution, the 2005 Rehabilitation Plan and the DCRA, stating that "[t]he increase in tariff rates from PhP19.92 (see Petition, p. 24) to PhP30.19/cu.m. that was implemented on January 1, 2005 certainly would generate the needed cash flows to enable Maynilad to pay all its debts and liabilities during the whole period of rehabilitation ending by year 2013".

The 2005 Rehabilitation Plan contains the terms by which Maynilad can achieve rehabilitation and restore its financial viability by undertaking a debt and capital restructuring pursuant to the terms and conditions set out in the DCRA. Under the 2005 Rehabilitation Plan, all liabilities are expected to be paid in full by year 2013.

Simultaneous with the debt restructuring, Maynilad is also required to undertake a capital restructuring for the purpose of reducing its capital deficit in order to facilitate and ensure the speedy restructuring of its financial obligations. It also paved the way for the subscription by MWSS, through the conversion of certain receivables of MWSS from Maynilad amounting to US$22,670,408.00 or approximately 83.97% of Maynilad's outstanding capital stock. The Rehabilitation Court imposed upon Maynilad a non-extendible deadline of January 31, 2007 to complete the capital restructuring.

Instead of directly subscribing to Maynilad's shares, MWSS exercised its option under Clause 24 of the DCRA to assign its subscription right to a private investor. Consequently, the Capital Restructuring could only be completed after MWSS had itself completed its own process of selecting its assignee. As a government-owned and controlled corporation, MWSS was required to select its assignee pursuant to a competitive public bidding process. MWSS commenced this selection process in June of 2006.

Pursuant to the competitive public bidding process conducted by the MWSS with the assistance of the Privatization Council, in furtherance of the privatization efforts of the Philippine Government, DMCI-MPIC Water Company, Inc. (Sponsor) was designated as the assignee of certain MWSS' receivables and MWSS' subscription right to 83.97% of Maynilad shares pursuant to Clause 24 of the DCRA.

The assignment by MWSS to the Sponsor of its receivables and subscription right under the DCRA became effective on January 10, 2007 upon the satisfaction of all closing conditions. One of the closing conditions was the execution and coming into effect of the agreement between MWSS and the Company that would effect the adjustments to the Company's obligation to post the Performance Bond under Section 6.9 of the Concession Agreement. On December 15, 2006, the Agreement on the Performance Bond was executed by MWSS and the Company, incorporating the terms and conditions of MWSS Board of Trustees Resolution No. 2006-249 dated November 17, 2006 (Agreement on the Performance Bond). Such agreement provided, among others, that the aggregate amount drawable in one or more installments under each Performance Bond during the Rate Rebasing Period to which it relates has been adjusted to US$30 million until the Expiration Date and that upon the completion of the Capital Restructuring, the Sponsor shall post the Performance Bond and shall maintain the same until the Company is already in a position to do so, subject to compliance with the DCRA and, as necessary, the recommendation of the Receiver and the approval of the Rehabilitation Court. Further, it provided that while the Company is under corporate rehabilitation, any Capex commitment of the Sponsor not exceeding US$18 million to be infused into the Company for a period of three (3) years shall be deemed in compliance with the obligation of the Sponsor or the Company to deliver the equivalent amount of the Performance Bond, subject to the agreement between MWSS and the Sponsor. The

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Republic of the Philippines issued its acknowledgment of the terms of the Agreement on the Performance Bond on January 4, 2007.

On January 24, 2007, the said competitive public bidding process was successfully completed and the Sponsor became the owner (in substitution of MWSS) of Maynilad shares representing 83.97% of the outstanding capital stock of Maynilad, including the 88,500,000 ESOP shares, in accordance with Clause 2.6 of the DCRA.

In accordance with the requirements of MWSS under the Assignment and Assumption Agreement between MWSS and the Sponsor dated December 27, 2006, the Sponsor made sponsor contributions to Maynilad for the purpose of prepaying Maynilad's indebtedness under the DCRA, which included the Tranche A2 Concession Fees and the court-approved/recognized Tranche B Concession Fees (Recognized Tranche B Concession Fees) due to MWSS and effect Maynilad 's early exit from its corporate rehabilitation proceedings subject to the terms and conditions set forth in the Prepayment and Settlement Agreement (PSA) executed on August 9, 2007 among Maynilad, the Sponsor and Maynilad's DCRA creditors (including MWSS).

Following the completion of Maynilad's capital restructuring with the entry of the Sponsor as new controlling owner of Maynilad and Maynilad's early exit from rehabilitation proceedings after the implementation of the PSA with Sponsor's assistance, MWSS recognized that there was a need to provide for transitional arrangements in connection with the timing for the second Rate Rebasing exercise, the review of the Service Obligations (SO) of Maynilad as well as the mechanism for the treatment of extraordinary Forex losses or gains relating to the full prepayment of the USD Tranche, SBLC Tranche, Suez Loan, Tranche A2 Concession Fees and Recognized Tranche B Concession Fees pursuant to the PSA with the view to mitigating and alleviating the impact to the end users of Maynilad, as the case may be.

In order to fully address the transitional arrangements and in compliance with the requirements for the early exit from rehabilitation proceedings, Maynilad signed the TCA with the MWSS on August 9, 2007. In addition to providing for the transitional arrangements, the TCA required Maynilad to update the Performance Bond to US$30 million upon the effectivity of the new rebased rate on January 1, 2009. The ROP issued its acknowledgment of the TCA terms on January 7, 2008.

On August 16, 2007, Maynilad, MWSS and other parties to the PSA filed the Joint Omnibus Motion with the Rehabilitation Court praying for the approval of the PSA and the termination of Maynilad's rehabilitation proceedings upon implementation of the PSA. The Receiver recommended the approval and termination of Maynilad's rehabilitation proceedings as prayed for in the Joint Omnibus Motion on

September 14, 2007. Thereafter, or on December 19, 2007, the Rehabilitation Court approved the PSA.

Maynilad received on January 11, 2008 the Bangko Sentral ng Pilipinas (BSP) implementing letter containing Monetary Board Resolution No. 23 approving full prepayment of Maynilad's DCRA loans and Concession Fees (per the PSA), to be funded from proceeds of the BSP-registered US$240M Capex/Prepayment standby letter of credit issued by the Singapore branch of JPMorgan Chase Bank, N.A. for the Sponsor's account, in compliance with MWSS' requirements.

Accordingly, Maynilad effected full prepayment of Maynilad's DCRA loans and Concession Fees on January 16, 2008. Subsequently, Maynilad submitted to the Rehabilitation Court its Manifestation with Motion for Issuance of Order Confirming Termination of Corporate Rehabilitation Proceedings certifying the implementation of the Prepayment and Settlement Agreement.

On February 6, 2008, the Rehabilitation Court issued the Order confirming the termination of Maynilad's rehabilitation proceedings on account of Maynilad's successful implementation of the 2005 Rehabilitation Plan. This serves as a jumpstart to Maynilad to synthesize minds, efforts and resources to achieve the Company's vision and key priority goals which are described in the succeeding section. (For a summary of the key events of the West Concession, please see Annex 4.)

1.2 THE NEW SPONSOR: THE DMCI - METRO PACIFIC CONSORTIUM

DMCI Holdings Inc.

DMCI Holdings, Inc (DMCI HI) was incorporated on March 8, 1995 and it consolidated all the construction businesses, construction component companies and subsidiaries and affiliates of the flagship construction-company, D.M. Consunji, Inc. (DMCI). DMCI was founded on December 24, 1954 and has the capability to construct a wide variety of projects ranging from multi-storey hotels and condominiums, irrigation dams and pipelines, treatment plants, kilometer-long concrete bridges, power plants and transmission lines to industrial plants, to large commercial complexes. DMCI is the pioneer in the application of advanced construction technologies in the Philippines.

Aside from its flagship company in construction, DMCI has 40 % share in equity in the Subic Water & Sewerage Co. Inc. (SWSCI) since November 1996. SWSCI received its ISO 9001:2000 certification in 2004, making it the first privatized water company in the Philippines and Southeast Asia to be ISO certified. It has reduced its NRW from 39.7% in 2002 to 30.8% in 2006.

Through its subsidiary company, Eco Process & Equipment Phils. Corp., which is a joint venture company with a Canadian Partner, DMCI has also acquired the experience in the process design and equipping, and subsequently, the operation and maintenance of Sewage and Wastewater Treatment Plants.

Metro Pacific Investments Corp (MPIC)

MPIC was incorporated on March 27, 2006 as an investment holding company. At present, MPIC is a majority-owned subsidiary of Metro Pacific Holdings, Inc. which is among the existing majority stockholders of Metro Pacific Corporation (MPC) and a Philippine affiliate of First Pacific Company Limited. MPIC acquired all of the equity interest of MPC in Landco, one of the Philippines' largest property developers in terms of revenues and size of projects.

PLDT & Smart are affiliates of MPIC and thus can readily share their extensive experience on customer care, services and innovative billing and collection approaches.

1.3 VISION, MISSION AND CORE VALUES

With the entry of the new Sponsors in Maynilad, the Company's vision and mission statements and its core values were reviewed and revised to set the new direction on where the company would want it to be. After a series of consultations with its stakeholders, the company restated its vision-mission statements and its core values as follows:

Our Vision
We are a world-class water service company committed to excellence and improve quality of life.

Our Mission	Our Core Values
We will delight our customers with reliable and high quality water and wastewater services at a fair price;	Maka-Diyos at Maka-Tao (Value relationship with God, Family and Community we Serve)
We will protect the environment to conserve our water resources for future generation;	Customer Focus (Marketing and Customer-orientated)
We will promote efficiency and productivity to enhance shareholder value;	Masipag at mapagkakatiwalan (Conscientious, Honest and Trustworthy)
We will attract and retain the most qualified individuals and enhance the personal and professional well-being of our human resources; and	Malasakit (Ownership) Teamwork and Respect (Cross-Functional Relationships)
We will conduct ourselves with integrity honesty and accountability in accordance with the highest ethical standards in serving our various stakeholders.	Performance-driven

1.4 STRATEGIC GOALS

In line with its restated vision and mission statements, Maynilad adopted the following strategies for the next five (5) years to achieve its objectives for a sustainable growth:

- **Improve network and operational efficiency** – involves the rehabilitation and improvement of the existing water network; improve project implementation and supervision policies and practices; metering program for the isolation and measurement of HAs, establishment of DMAs/zones; establishment of performance targets for key indicators (KPIs) to monitor each BCs performances; pro-active leak repair and control program in locating unreported leaks and speedy and quality repair of leaks; increase water supply and production, and secure full water supply per Concession Agreement; sewerage, sanitation and treatment plant projects for environment compliance; and expand service to achieve projected target coverage of Service Area West. A major NRW Management Program will be implemented to address NRW reduction and maintenance.

- **Improve organizational efficiency and right size** – involves organizational study to improve efficiency and right size the organization; culture change program to strengthen organization where people can relate with Company goals and objectives; creation of a continuous learning environment to develop learning programs at all levels, performance management and meritocracy program to introduce pay for performance incentive pay system; upgrade management, supervisory and professional competence of Logistics, Fleet and Facilities management team, upgrade policies and procedures on purchasing, warehousing, planning and control, fleet and facilities management for transparency, efficiency and control; strengthen marketing and business development capability of Regional Heads and Business Center Heads; and conduct process, value engineering and systems review with System Applications and Processes (SAP) and benchmark with other water service utility firms such as Manila Water.

- **Ensure financial viability and enhance shareholder value**- involves the early exit from rehabilitation program; ensure prudent use of Company funds; development of a more robust financial model to assist in rate rebasing exercise; negotiate financing options for Capex program with financing institutions (WB, ADB, JBIC, LB, DBP); financial projections to meet shareholders ROI expectations; adopt more aggressive collection policies and procedures; clean-up A/Rs, reduce minimum and average billings, upgrade guarantee deposits, create special teams to focus on

collection; reduction of illegals and delinquent accounts; and more aggressive 60-day disconnection.

- **Upgrade customer services** – develop a more customer-oriented service organization; establishment of baseline data of all customer service connections by DMA, sub-zone/Meter Reading Unit (MRU); conduct customer satisfaction survey; identify customer service gaps on the aspect of service levels, billing and collection system, service complaints, leaks, water quality, interruption notices, etc.

- **Improve corporate image** – conduct corporate image/perception rating; educate the public about Maynilad, water theft, service improvements, and related aspect that are of customers concerns, develop well planned corporate communication & PR programs, develop CSR programs such as "to provide access to potable water to everybody in the Service Area West" advocacy program, organize urban poor and people's organization to provide access to water and sanitation services of Maynilad; provide potable water to public schools; and strengthen good working relationship with regulators, heads of national and local government units, service providers and most especially to its customers.

2 SERVICE OBLIGATIONS

Maynilad's contractual obligations cover water supply, sewerage and sanitation services, in terms of coverage of population, and quality of service. Compliance with these obligations is assessed against targets defined over five-year scheduled milestones: Years 2001, 2006, 2011, 2016 and 2021.

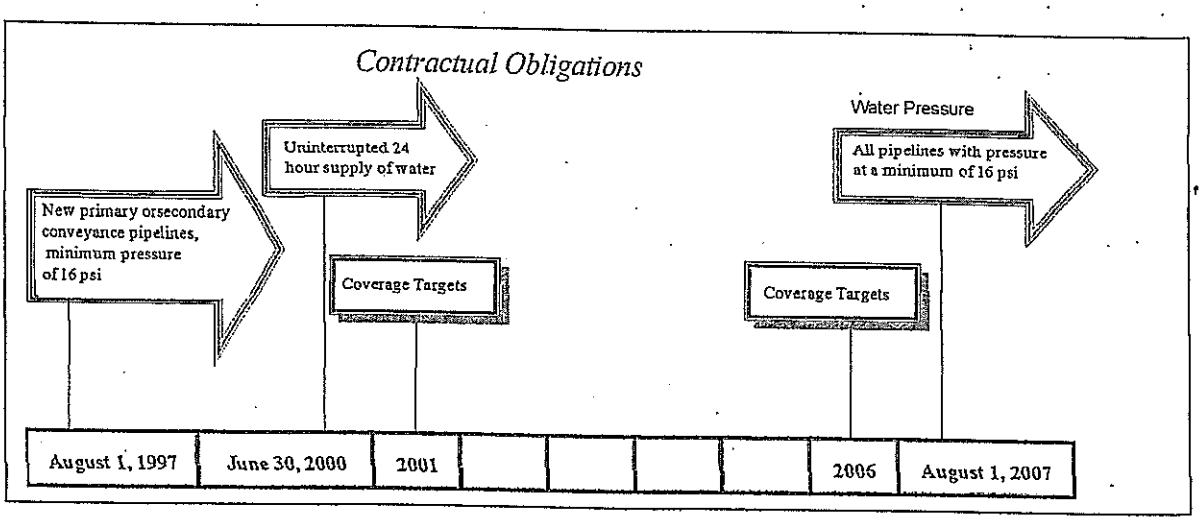
Water services cover compliance with continuity of supply, pressure and prescribed PNSDW. Sewerage services entail provisions for a separate collection system and pumping and required treatment facilities. Sanitation targets include "the emptying of domestic septic tanks and subsequent sludge disposal at regular intervals of five to seven years".

In order to offer improved water services to all existing customers in the West concession and to meet coverage targets new primary and secondary conveyance pipelines, as well as sufficient connections, have to be installed and energized in all designated cities and municipalities as scheduled.

Not later than June 30, 2000, Maynilad had to ensure availability of uninterrupted 24-hour water supply to all customers in the West Concession. Likewise, it has committed to increase water pressure in all pipelines to a minimum of 16 psi by July 31, 2007.

The contractual obligations under the CA are summarized in Figure 2-1 below:

Figure 2-1: Contractual Obligations as per CA



The CA requires Maynilad to adhere at all times to the Philippine National Standards for Drinking Water (PNSDW) as published by the Department of Health for water supplied to customers within the service area.

Maynilad is also committed to act on any application for water service connection in its service area immediately or as soon as reasonably practicable.

Sewerage services shall be made available to customers who have sewerage connections for domestic sewerage and compatible industrial effluent. Maynilad is also required to make sewer connections and to comply with wastewater standards.

Sanitation services: Maynilad shall offer cleaning services (desludging of domestic septic tanks) and meet coverage targets; the priority shall be given to customers who request such service.

Finally, Maynilad is obliged to meet all sewerage and sanitation coverage targets.

2.1 MAYNILAD'S PERFORMANCE

2.1.1 Water Service

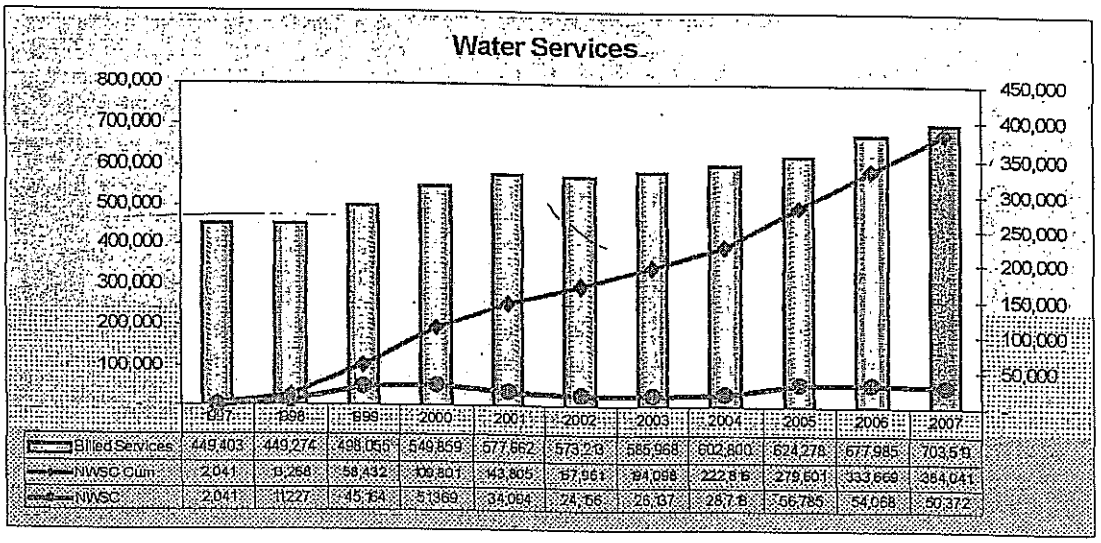
2.1.1.1 Water Service Coverage

The main driver in attaining the water service coverage target is the number of new connections installed and billed. For the period 2002-2006, a total of 189,864 connections were installed, despite the precarious condition in 2002-2004. After the approval of the 2005 Rehabilitation Plan in June 2005, Maynilad started to regain stability. Figure 2-2 shows a total of 333,669 new water connections installed since the start of the privatization up to the end of 2006 bringing the net WSC to 677,985 (exclusive of private meters) or an increase of 52% despite the disconnection of some services for various reasons.

Maynilad initiated the Bayan Tubig program in February 1999 aimed to provide urban poor with convenient access to good quality water through individual WSC. Since its inception, Maynilad installed more 170,000 water service connections for the Bayan Tubig program – along with its offshoot project Bayanihan Bayan Tubig (BBT). The BBT utilizes the "bayanihan" concept wherein Maynilad provides the pipes, equipment and expertise while the residents dig the trenches.

The BBT won an award for public responsibility from the Lopez Group's annual competition, the Lopez Achievement Award.

Figure 2-2: Water Services



With the additional new water service connections installed in 2007, the water service coverage further improved to 87.9% by the end of 2007. In terms of water service coverage as defined in the CA, actual achievement is presented in Table 2-1.

Table 2-1: Water Service Coverage

City/Municipality	Water Service Coverage					
	Actual			Rehab Target		
	EO 2001	EO 2006	EO 2007	2006	2008	2010
NCR (MWSI)	88%	91%	93%			
Manila	100%	100%	100%	100%	100%	100%
Quezon City	100%	100%	100%	100%	100%	100%
Caloocan	87%	100%	100%		100%	100%
Malabon	99%	98%	99%		100%	100%
Navotas	82%	71%	78%		100%	100%
Valenzuela	83%	88%	95%		100%	100%
Las Piñas	33%	40%	50%			91%
Makati	100%	100%	100%	100%	100%	100%
Muntinlupa	9%	21%	36%			86%
Parañaque	100%	100%	100%	100%	100%	100%
Pasay City	100%	100%	100%	100%	100%	100%
CAVITE (MWSI)	40%	46%	45%			
Bacoor	30%	44%	44%			90%
Cavite City	100%	100%	100%	100%	100%	100%
Imus	10%	14%	12%			61%
Kawit	82%	84%	87%			100%
Noveleta	38%	43%	37%			100%
Rosario	31%	30%	30%			90%
OVERALL - MWSI	83.1%	86.2%	87.9%			97.1%

In the 2005 Rehabilitation Plan, the original 2006 service coverage targets in the north and central areas will be met by end of 2008. Likewise, the coverage targets in the south area affected by the 300 Mld BOT Project will be achieved two (2) years after the delivery of the said project – which was assumed to be operational by early 2008.

The computation of the targets is based on the existing formula and principles agreed upon by the Concessionaires and the Regulatory Office in a workshop held on September 20-21, 2000.

$$\text{Water Coverage} = \frac{(BS + PM + US + BM) \times p/c + PF \times 475}{TP - PSP} \times 100\%$$

where:

a) BS = billed water services (R/SB/C/I)
b) PM = private meters
c) US = unbilled waters services (R/SB/C/I)
d) BM = bulk selling equivalent accounts (w/o PM)
e) p/c = persons per connection (per city/ municipality)
f) PF = number of public faucets
g) TP = total population (per National Statistics Office)
h) PSP = privately served population (National Water Resources Board data and certifications from water districts)

The abovementioned service coverage calculations use the existing assumptions of the IFC-Sogreah report of an average of 9.2 persons per connection but with different multiplier for each city/municipality and the 475 persons/connection for each public faucet as specified in the Concession Agreement.

- **NCR**

In spite of the many challenges that Maynilad went through, the Company was able to meet its Year 2006 service targets for several cities and municipalities. The 100% coverage targets for Manila, Quezon City, Pasay, Caloocan, Makati and Parañaque (where a large number of population are privately served) were essentially met, except for a few blighted areas.

The shortfall was mainly found in Malabon, Navotas and Valenzuela but it is expected that the service coverage targets in the said areas will be met by 2008 as assumed in the 2005 Rehabilitation Plan.

The 100% service coverage target in the Concession Agreement for Navotas is not realistic because the portion of the area is below sea level and always submerged in water. Such condition discourages, if not prevents, those living on flooded ground to avail of Maynilad's piped-water service. In areas near the seashore, houses are erected above the shore. Navotas has also a large number of informal settlers with no proof of land ownership and with likely possibility of being resettled.

Likewise, in Las Piñas and Muntinlupa located in the southern portion of the service area, the satisfactory achievement of service levels was anchored on the completion and operation of the 300 Mld BOT Project.

- Cavite

In Cavite, Maynilad was able to meet its service coverage targets of 100% in Cavite City.

The delay in the implementation of the 300 Mld BOT Project has virtually made it very difficult, if not impossible, for Maynilad to meet its coverage targets in Bacoor, Imus, Kawit, Noveleta, and Rosario due to insufficient water supply and pressure.

2.1.1.2 Water Supply Service Area Coverage

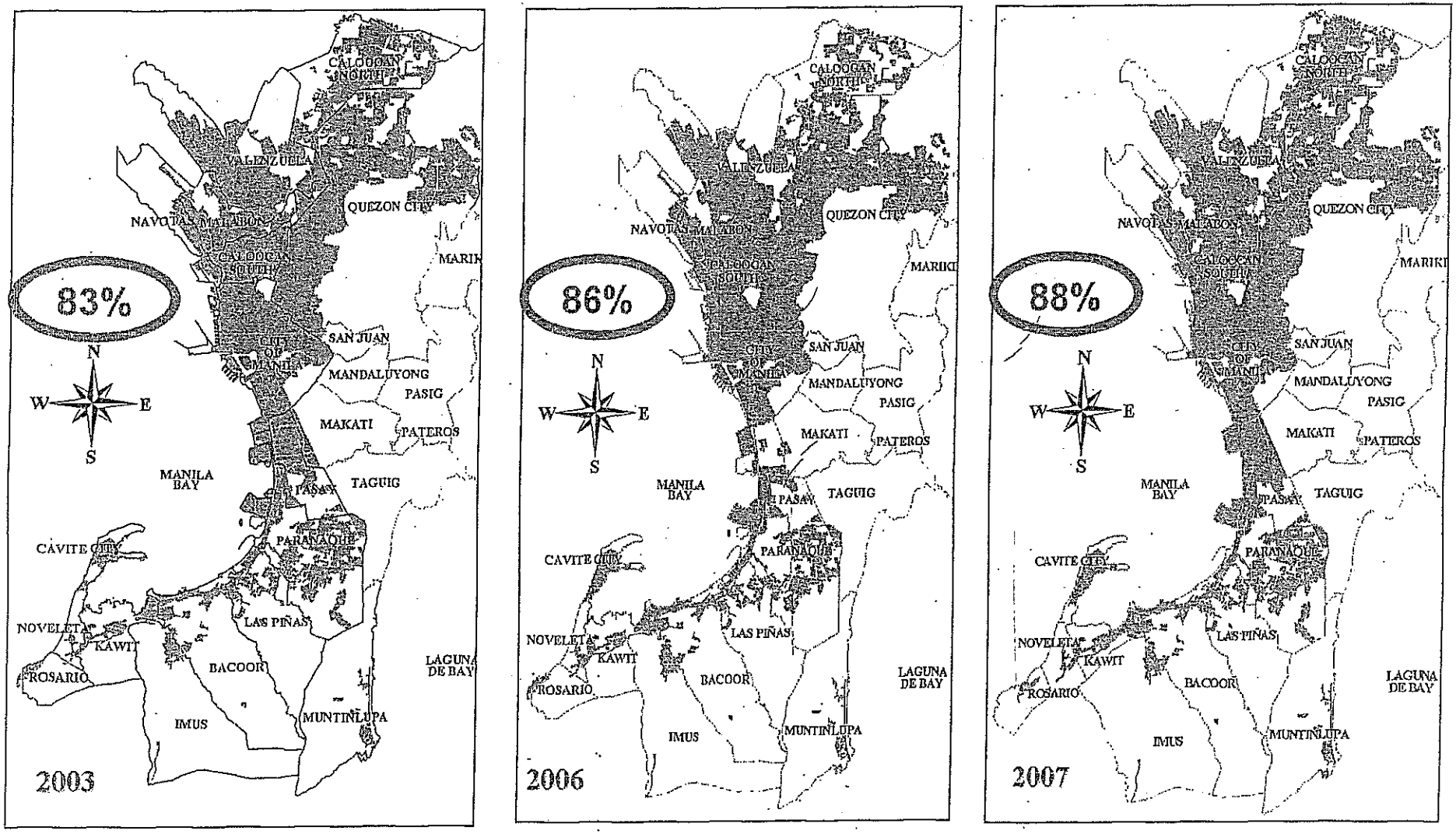
The water service coverage for the West Service Area as of December 2003, 2006 and 2007 is presented in Map 2-1.

2.1.1.3 Continuity of Water Supply

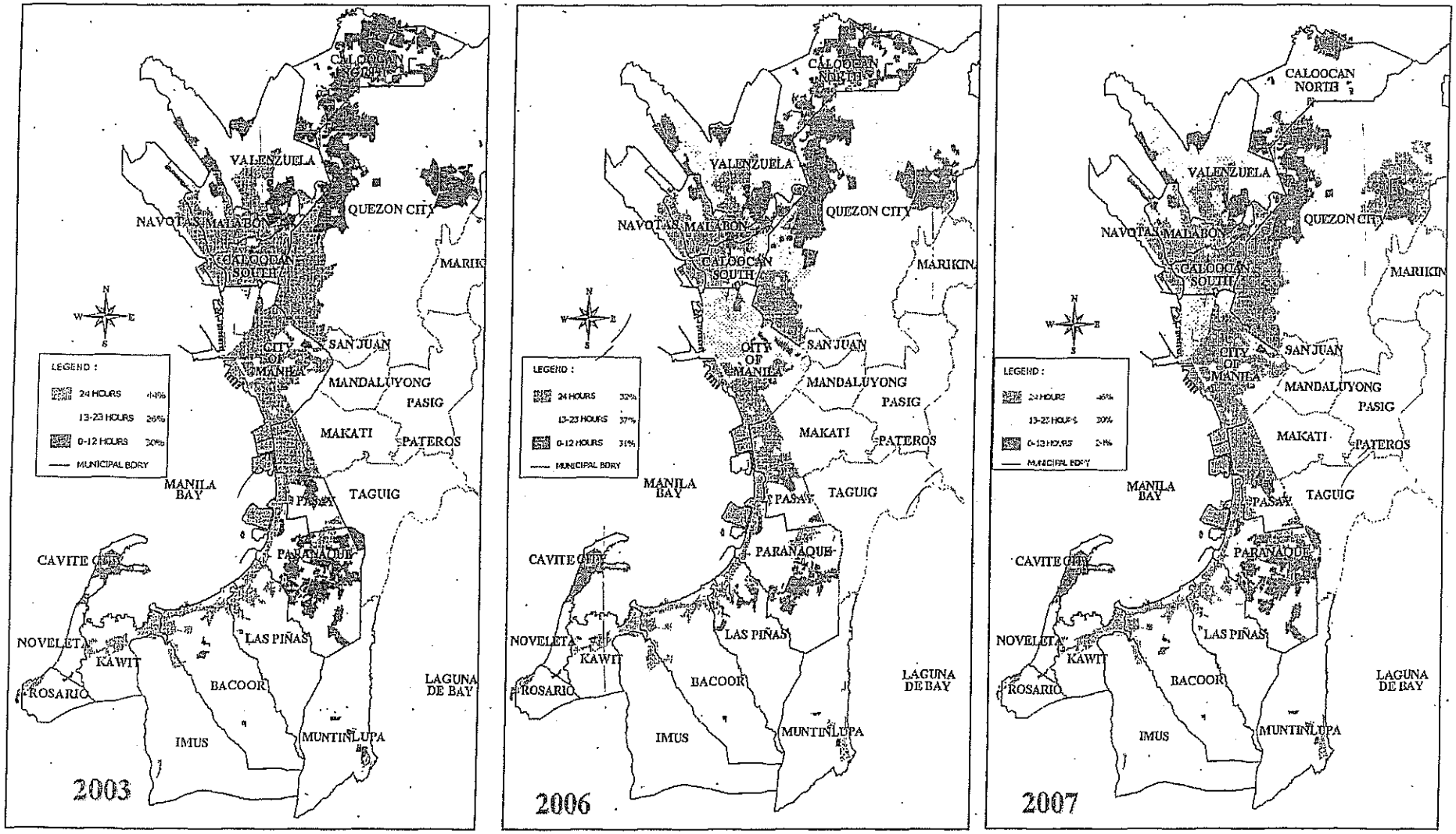
The water availability as of end December 2003, 2006 and 2007 is presented in Map 2-2 while the water pressure as of the same period in the West Service Area is presented in Map 2-3.

The drop in the water availability and pressure in December 2006 was largely due to the reduction in raw water releases from Angat which severely affected Maynilad's water production. The lowering of the Angat elevation was brought about by the over releases made by NPC sometime in November 2006.

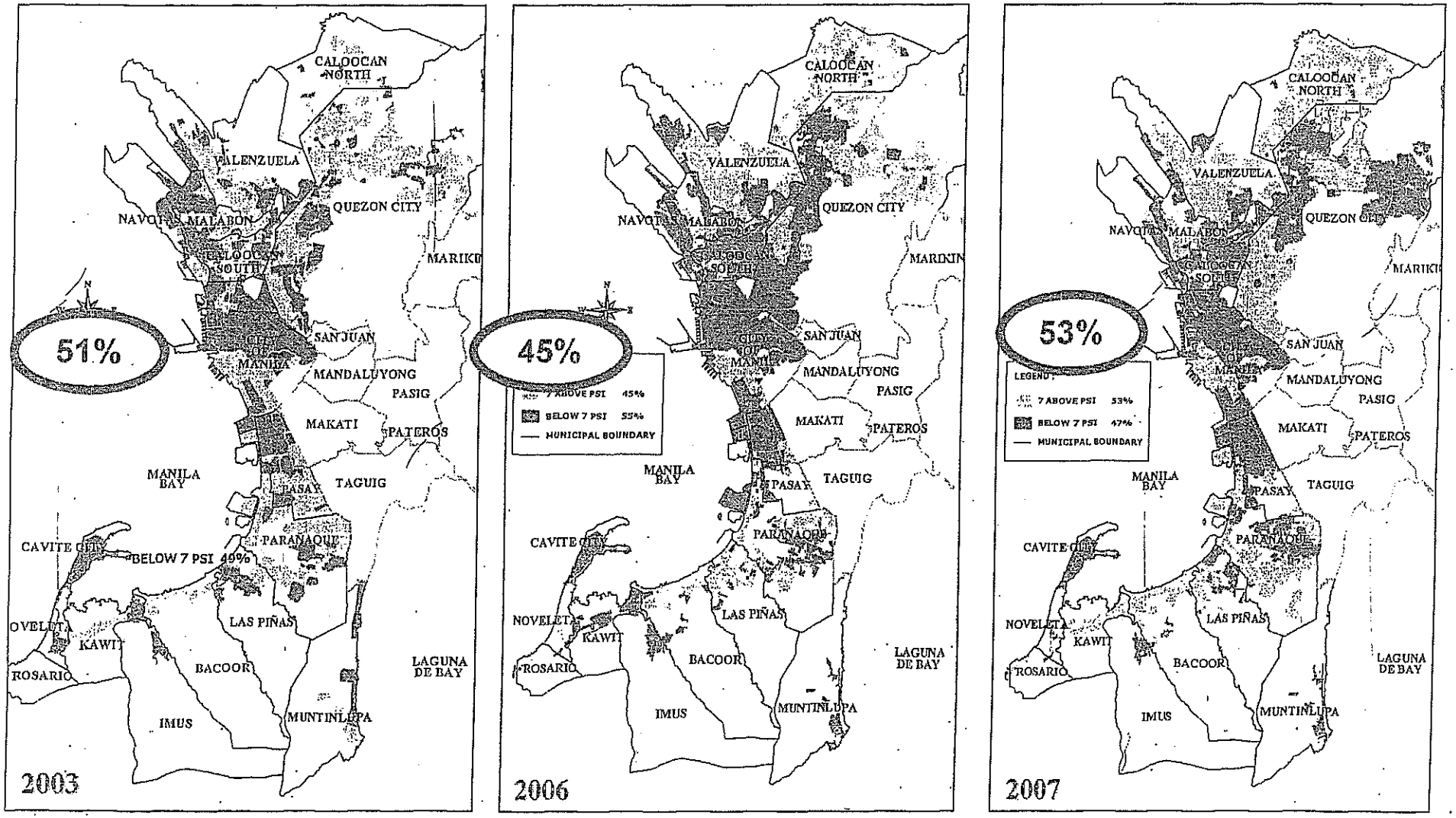
Map 2-1: Water Supply Service Area Coverage



Map 2-2: Water Availability Map



Map 2-3: Water Pressure Map



2.1.2 Sewerage Service

Pursuant to the provisions of the Concession Agreement, Maynilad is providing sewerage services to its Customers. It has installed a total of 541 new sewer service connections since 1997, including the 237 sewer connections installed under MSSP-4. As of the end of 2006, Maynilad has a total of 51,346 billed sewer connections. This number dropped compared to the number in 1997 brought about by the correction and cleaning of billing files when the SAP system was put in place.

By the end of 2007, the total number of billed sewer services was down to 50,184 resulting from the disconnection of some water services with sewer connection.

It must be noted that the existing sewerage facilities still have the capacity to absorb more than 38,000 new sewer connections.

The decline in the billed sewer services was due to database clean-up and temporarily disconnected water accounts. In addition, accounts classified as "sewered" but were found to have no physical connection after verification are automatically downgraded to "unsewered", even if the property is located within the sewered area. These accounts are referred to their respective City Health Department but even if notices of violation have been issued, these customers are still not compelled to reconnect to the system.

In the 2005 Rehabilitation Plan, Maynilad assumed that the Sewerage Program will not be implemented pending further legislation/ clarification of related issues and also to temper the tariff increase resulting from high investment related to sewerage program.

The sewerage service coverage as of December 2006 is presented in Table 2-2. The sharp drop in the sewer service coverage is the result the decline in the number of billed sewer services as stated earlier and the sharp increase in the number of water service connections. It must be noted that in the determination of the sewer coverage described in the previous chapter, the denominator is the water served population.

Table 2-2: Sewerage Service Coverage

City/Municipality	Sewerage Service Coverage		
	Actual		
	EO 2001	EO 2006	EO 2007
NCR (MWSI)	16%	11%	11%
Manila	55%	41%	41%
Quezon City	3%	3%	3%
Caloocan	1%	1%	1%
Malabon	2%	2%	1%
Navotas	15%	9%	10%
Valenzuela	0%	0%	0%
Las Piñas	0%	0%	0%
Makati	10%	9%	10%
Muntinlupa	0%	0%	0%
Parañaque	0%	0%	0%
Pasay City	0%	0%	0%
CAVITE (MWSI)	0%	0%	0%
Bacoor	0%	0%	0%
Cavite City	0%	0%	0%
Imus	0%	0%	0%
Kawit	0%	0%	0%
Noveleta	0%	0%	0%
Rosario	0%	0%	0%
OVERALL - MWSI	16%	10%	10%

The sewerage service coverage targets are expressed as a percentage of the population connected to Maynilad's water system at the schedule specified in the Concession Agreement.

$$\text{Sewerage Coverage} = \frac{(BSS + PMS + USS) \times p/c}{WCP - PFSP} \times 100\%$$

where:

a) BSS = billed water accounts with sewer
b) PMS = private meters with sewer
c) USS = unbilled water accounts with sewer
d) p/c = persons per connections
e) WCP = water covered population
f) PFSP = public faucet served population

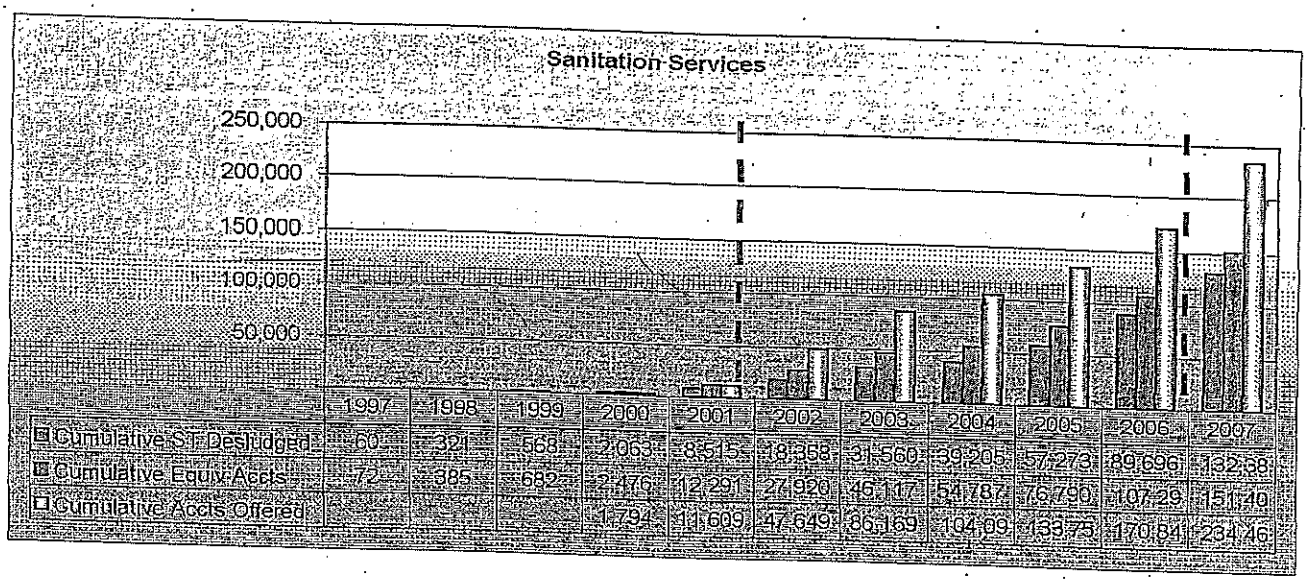
2.1.3 Sanitation Service

For the first five years (1997-2001), Maynilad was hounded by the delays in the delivery of the various components of the MSSP, mainly the delayed completion of barge loading facilities and the late delivery of vacuum trucks.

The delay in the implementation of most of the components of the MSSP project limited Maynilad's capacity to offer sanitation services to more customers. Mobile Dewatering Unit (MDU) was purchased during said period to start the sanitation program of the Company and provide the septic tank cleaning services to its customers. A total of 8,515 septic tanks were desludged during the period. With the delivery of the vacuum trucks, the number of septic tanks desludged increased significantly by 81,181 from 2002 to 2006, bringing the total number of septic tanks desludged to 89,696. This translates to a total of 114,991 equivalent number of accounts desludged since the start of the concession exclusive of those who were offered but declined the service for various reasons. The Concession Agreement allows Maynilad to offer the desludging services to customers based on certain schedule as part of its sanitation service accomplishment.

In 2007, Maynilad was able to desludge a total of 42,686 septic tanks equivalent to 44,085 accounts served improving the sanitation coverage to 36%.

Figure 2-3: Sanitation Services



In the later part of 2002, regulated disposal of collected septage into the sea was about to commence at the Estero de Vitas Barge Loading Facility; however, the Philippine Coast Guard refused to issue a dumping permit despite the issuance of an Environmental Clearance Certificate (ECC) by the DENR. In the absence of a

disposal facility, collected septage was temporarily disposed at the non-operational aerated pond at the Dagat-dagatan Sewage Treatment Plant in Caloocan. Desludging activities slowed down as the pond neared its maximum capacity, resulting in the decline in the number of septic tanks desludged in 2004.

The Dagat-dagatan Sewage Treatment Plant was rehabilitated in 2004 and a pilot Septage Treatment Plant was constructed in the same area. Desludging activities picked up in the later part of 2005 with the completion of the septage treatment plant.

The foregoing explains the reasons why the 2005 Rehabilitation Plan assumed that the 2006 sanitation targets in the Concession Agreement be deferred by two (2) years or in 2008.

The sanitation service coverage is presented in Table 2-3.

Table 2-3: Sanitation Service Coverage

City/Municipality	Sanitation Service Coverage			
	Actual			Rehab
	EO 2001	EO 2006	EO 2007	2008
NCR (MWSI)	4%	27%	37%	
Manila	2%	15%	15%	9%
Quezon City	7%	39%	40%	37%
Caloocan	10%	28%	51%	61%
Malabon	0%	33%	43%	42%
Navotas	0%	5%	18%	65%
Valenzuela	0%	33%	46%	90%
Las Piñas	0%	31%	48%	57%
Makati	0%	16%	16%	
Muntinlupa	0%	3%	11%	36%
Parañaque	0%	35%	61%	59%
Pasay City	0%	18%	36%	68%
CAVITE (MWSI)	0%	9%	23%	
Bacoor	0%	20%	41%	67%
Cavite City	0%	8%	16%	89%
Imus	0%	0%	24%	15%
Kawit	0%	0%	11%	68%
Noveleta	0%	0%	1%	41%
Rosario	0%	0%	1%	25%
OVERALL - MWSI	4%	26%	36%	46%

The sanitation service coverage targets are expressed as a percentage of the population connected to Maynilad's water system at the schedule specified in the Concession Agreement.

$$\text{Sanitation Coverage} = \frac{\text{OS x p/c x 100\%}}{\text{WCP} - \text{PFSP}}$$

where:

a) OS = no. of equivalent accounts (cumulative) offered sanitation service (inclusive of those who declined the services)
a) p/c = persons/connection
b) WCP = water covered population
c) PFSP = public faucet served population

The service coverage targets for Manila and Quezon City have already been met. Desludging activities shifted to other areas in the northern part of NCR. However, difficulties were encountered in Malabon and Navotas as these areas are often flooded, thus, septic tanks are inaccessible for desludging. Other than these problem areas, the service coverage targets for the cities/municipalities in the northern part of NCR are expected to be met. In Makati, where no service target was set, Maynilad was able to serve 16% of the total water served population. This is an apparent sign of Maynilad's commitment to continually provide sanitation services to its customers.

On the other hand, desludging activities in the southern part of NCR and in Cavite progressed slowly in the absence of a septage treatment facility in the south. Septage collected from households is transported to the Dagat-dagatan Sewerage Treatment Plant located in Caloocan. The long distance travel limits the number of customers served on a given day.

2.2 PROPOSED TARGETS

2.2.1 Water Service

Maynilad recalculated the population projection based on the results of recently released 2007 Census of Population and Housing as discussed in the next chapter. The NSO figures showed a significant increase over the population projection earlier calculated by Radian + Halcrow which resulted in lower percentage of service coverage in 2007. This has also significantly increases the number of new connections needed to attain service targets.

However, the realization of service expansion for water in the South, which includes the Cavite area, is heavily anchored on the availability of water supply. The revised service coverage target in the South is contingent with the phased-in completion of the 300 Mld Muntinlupa Water Treatment Plant Project being proposed to be undertaken directly by Maynilad immediately upon approval of MWSS.

2.2.1.1 Water Service Coverage

The service coverage assumption on the person per service connection and the estimation of privately served population will be the subject of review and proposed revisions for more realistic service coverage targets.

The revision will cover the revised assumption of an average of 7.4 persons per connections based on the PAWS, instead of the 9.2 person per connection based on the IFC-Sogreah Report in the numerator, and the use of total population instead of total population net of the privately served in the denominator.

Moreover, Maynilad used the population projection based on the recently released results of the 2007 Census of Population and Housing conducted by the NSO which is far higher than the population projection earlier calculated by Radian + Halcrow. These enhancements in the coverage framework will surely provide a more reasonable indicator compared to the agreed methodology of the service coverage but will result in a much lower percentage of population served. The sharp increase in the population within the service area will translate to a higher number of service connections to attain the desired service coverage targets.

Based on the enhanced assumptions and framework, Maynilad will improve its water service coverage target in the entire service area by an average of 1.7 percentage points from 68% in EO2006 to 85% in EO2011. The growth in the NCR of about 15 percentage points for the same period is modest compared to the growth in the Cavite area where there will be a significant expansion of water service of

about 40 percentage points. Maynilad will attain the 98.4% water service coverage in 2021 stated in the Concession Agreement and now includes the privately served population.

Table 2-4: Proposed Water Service Coverage

City/Municipality	WATER SERVICE COVERAGE				
	Actual		Projected		
	2006	2007	2011	2016	2021
NCR (MWSI)	73%	77%	88%	94%	100%
Manila	95%	99%	100%	100%	100%
Quezon City	96%	100%	100%	100%	100%
Caloocan	68%	74%	85%	94%	100%
Malabon	72%	73%	75%	85%	100%
Navotas	49%	54%	64%	81%	100%
Valenzuela	57%	62%	68%	83%	100%
Las Piñas	24%	30%	58%	81%	98%
Makati	100%	100%	100%	100%	100%
Muntinlupa	8%	13%	80%	88%	95%
Parañaque	69%	69%	99%	100%	100%
Pasay City	81%	82%	88%	98%	100%
CAVITE (MWSI)	25%	26%	65%	83%	91%
Bacoor	18%	17%	74%	89%	95%
Cavite City	87%	97%	100%	100%	100%
Imus	6%	5%	52%	69%	72%
Kawit	54%	56%	73%	100%	100%
Noveleta	26%	22%	35%	79%	100%
Rosario	16%	16%	24%	58%	90%
OVERALL - MWSI	67.6%	71.1%	85.2%	92.7%	98.4%

New Water Service Connections

To attain the water service coverage targets presented in Table 2-4, Maynilad will install a total of 254,468 new water service connections for a four (4) year period from 2008 to 2011 within its service area, bringing the total number of billed services to about 958,000 by the end of 2011. Table 2-5 shows the number of new water service connections needed to attain the desired service coverage.

Table 2-5: New Water Service Connections to Attain Targets

City/Municipality	NEW WATER SERVICE CONNECTIONS					
	2008	2009	2010	2011	2012-2016	2017-2021
NCR (MWSI)	42,768	47,431	47,842	44,803	121,365	130,194
Manila	4,433	1,523	995	920	149	-
Quezon City	10,953	4,999	2,264	2,063	10,411	17,228
Caloocan	-15,604	6,016	5,890	5,778	34,391	34,906
Malabon	1,897	430	278	254	7,580	10,977
Navotas	1,366	2,504	650	592	7,871	9,026
Valenzuela	3,196	3,851	551	502	17,486	20,069
Las Piñas	1,802	3,624	3,601	13,003	19,914	16,812
Makati	276	203	131	119	50	-
Muntinlupa	1,507	12,821	18,966	18,102	10,511	9,362
Parañaque	1,091	9,989	13,210	2,191	6,201	7,563
Pasay City	644	1,473	1,306	1,279	6,800	4,251
CAVITE (MWSI)	1,553	5,060	21,707	43,322	51,868	38,014
Bacoor	140	1,174	16,784	26,583	22,370	17,639
Cavite City	100	450	720	505	2,542	2,713
Imus	120	2,174	3,081	14,234	9,726	4,036
Kawit	473	487	441	1,510	6,907	2,551
Noveleta	248	287	241	245	3,631	3,252
Rosario	473	487	441	246	6,692	7,822
OVERALL - MWSI	44,321	52,491	69,549	88,125	173,233	168,208

2.2.1.2 Water Availability

The 24-hr water availability for the water-covered area will be achieved by the end of 2012. The water availability will be progressively adjusted in tune with the improvement in the hydraulic system of the network.

2.2.1.3 Water Pressure

Pressure targets are to be kept at a minimum of 7 psi per completed DMA by the end of 2012 to be taken from identified strategic points. The water pressure will be progressively adjusted consistent with the improvement in the hydraulic system of the network.

2.2.2 Sewerage Service

Maynilad will work on compliance with CWA. In the next five years, the five (5) communal/imhoff tanks under its jurisdiction will be rehabilitated and its treatment capability will be enhanced. To date, in coordination with MWSS, clearing of four communal septic tanks occupied by informal settlers is on going in preparation for its upgrading/rehabilitation.

For Maynilad to maintain its present service coverage of 9% up to end of concession, it needs to install more than 60,000 additional sewer service connections. With the present tariff structure, this would be an impossible task. To date, the high connection charges and the higher tariff for sewered accounts (which is expected to increase as a result of the 2nd rate rebasing exercise) remain a deterrent for customers to connect.

In this rate rebasing exercise Maynilad proposes the following rationalization schemes in order to translate the unused capacity of its existing sewerage facilities into additional connections, Maynilad is confident that the said scheme will encourage more customers to avail of the sewer services:

1. Maynilad's capitalization of the cost of connection which to date amounts to an average of PhP60,000 per connection.
2. Rationalization of existing sewerage and environmental charges. Maynilad will immediately reduce the 50% sewer charge to 20% starting 2009 and moving forward.

In the absence of the above schemes, Maynilad will still continue to effectively operate and maintain its existing sewerage facilities. To maximize its utilization, Maynilad will intensify its campaign to offer its services to customers within sewered areas and work on partnership with the concerned government agencies and LGUs to implement the compulsory connection as provided under the CWA. Without any significant increase in its sewer service connections, the total service coverage will gradually decrease from its existing 9% coverage to 6% at the end of the concession due to the continuously increasing water served population.

Maynilad will implement combined system in the West Zone. This project will be done in the vicinity of San Juan River catchment within Maynilad service area. The proposed San Juan River Wastewater Treatment Plant (TP) is a project recommended by the Chairman of MMDA aimed at reducing the pollution load in San Juan River. Drainage water in some parts of the vicinity of San Juan River will be intercepted and then treated within the standards before discharge. A full-blown study will be conducted on this proposed project. With this scheme, it is expected that the combined population coverage for customers connected in the existing separate system plus those that would be served by the combined system will be approximately 13.3.

Table 2-6: Proposed Sewerage Service Coverage

City/Municipality	SEWERAGE SERVICE COVERAGE				
	Actual		Projected		
	2006	2007	2011	2016	2021
NCR (MWSI)	10%	9%	9%		
Manila	35%	34%	34%	**43%**	**53%**
Quezon City	2%	2%	**14%**		
Caloocan	0%	0%	0%		
Malabon	2%	1%	1%		
Navotas	9%	10%	8%		
Valenzuela	0%	0%	0%		
Las Piñas	0%	0%	0%		
Makati	9%	8%	8%		
Muntinlupa	0%	0%	0%		
Parañaque	0%	0%	0%		
Pasay City	0%	0%	0%		
CAVITE (MWSI)	0%	0%	0%		
Bacoor	0%	0%	0%		
Cavite City	0%	0%	0%		
Imus	0%	0%	0%		
Kawit	0%	0%	0%		
Noveleta	0%	0%	0%		
Rosario	0%	0%	0%		
OVERALL - MWSI	9%	9%	13%	29%	39%

Notes:

1. From 2009 - 2012, additional 1000 sewer service connections per year will be installed.
2. Pilot Combined wastewater/drainage treatment plant will be implemeted in QC and expected to cover around 12% of the water served population of QC by 2011.
3. From 2013 - 2021, additional 4000 sewer service connections per year will be installed and expected to increase the coverage in Manila to 53% by 2021.
4. From 2013 - 2021, the combined wastewater/drainage system will be expanded and expected to increase the sewer covered population from 10% in 2011 to 39% in 202
5. Areas to be served by the proposed combined wastewater/drainage system from 2013 to 2021 could not be determined at this point pending result of the study to be conductec within 2008. To maximize benefits from said system, area prioritization shall be based on the following:
    a. Areas not yet covered by Sanitation Program
    b. Areas with operating drainage system
    c. Areas that would complement to the efforts being done by Manila Water relative sewerage.
    d. Results of coordinations with LGUs', MMDA, Community and LLDA
        i. Proposed areas
        ii. Arrangements on drainage maintenance & repair
        iii. Provision for WTP sites

2.2.3 Sanitation Service

Maynilad will intensify its sanitation activities to compensate for the shortfall in the sewerage coverage. It will meet the targets of 43% in 2011, 50% in 2016, and 55% in 2121. The new targets for 2016 and 2121 are much higher compared to what are outlined in the CA.

Maynilad will continue with its systematic approach in the implementation of the Sanitation Program to ensure compliance with committed targets and maximize environmental benefits. Selection of program areas will be coordinated with Business Centers and concerned community/barangay leaders. Program briefing will be done to explain the importance of the program and to get cooperation/assistance of community leaders during the actual desludging operation. In addition, the following will be implemented:

1. Continue with its effective operation and maintenance of its existing sanitation facilities.
2. Additional septage treatment capacity in the southern portion of the concession to facilitate services to customers in the south.
3. Increase its existing fleet of desludging trucks to handle additional load.
4. Improve capability to provide services to "hard to reach" or inaccessible areas.
5. Implement an effective "refleeting" program.
6. Research on other beneficial uses of biosolids. To date biosolids from its septage treatment facility is being used as soil conditioner in sugar cane plantations in Pampanga.

Customers who request for sanitation services will continue to be prioritized as provided in the Concession Agreement. Maynilad will continue to implement the Septic Desludging by Request (STDR) program to cater to those customers outside the programmed areas who have problems with their septic tanks. Dedicated teams will be made available to ensure quick reaction to septic tank related request/complaints. The sanitation coverage is exclusive of the accomplishments under the STDR Program.

Table 2-7: Proposed Sanitation Service Coverage

City/Municipality	SANITATION SERVICE COVERAGE				
	Actual		Projected		
	2006	2007	2011	2016	2021
NCR (MWSI)	22%	28%	43%	50%	55%
Manila	13%	13%	43%	50%	55%
Quezon City	28%	27%	43%	50%	55%
Caloocan	23%	38%	43%	50%	55%
Malabon	33%	43%	43%	50%	55%
Navotas	5%	18%	43%	50%	55%
Valenzuela	33%	46%	43%	50%	55%
Las Piñas	31%	48%	43%	50%	55%
Makati	14%	14%	43%	50%	55%
Muntinlupa	3%	11%	43%	50%	55%
Parañaque	26%	46%	43%	50%	55%
Pasay City	15%	29%	43%	50%	55%
CAVITE (MWSI)	8%	20%	43%	50%	55%
Bacoor	20%	41%	43%	50%	55%
Cavite City	7%	12%	43%	50%	55%
Imus	0%	24%	43%	50%	55%
Kawit	0%	11%	43%	50%	55%
Noveleta	0%	1%	43%	50%	55%
Rosario	0%	1%	43%	50%	55%
OVERALL - MWSI	22%	28%	43%	50%	55%

3 WATER DEMAND AND SUPPLY

3.1 WATER DEMAND

The future water demand in Maynilad's service area is estimated using the results of the population projection, proposed unit consumption, adjusted service coverage targets and projected commercial and industrial water consumptions.

The total water demand is the sum of domestic and non-domestic consumption, and NRW Physical. Domestic consumption refers to water consumed in residences, including those classified as semi-business, which is served by a Maynilad water service connection, public faucet, deepwells, water peddlers, etc.; Non-domestic consumption refers to water consumed in commercial and industrial establishments; and Non-Revenue Water refers to apparent losses, real losses (leakage) and unbilled authorized consumption as defined by the IWA.

3.1.1 Domestic Demand

Domestic water is defined as the water that is consumed by private households, i.e. either at home or outside but for private purposes. Domestic water demand is estimated using the results of population projection, proposed unit consumption and adjusted service coverage targets.

3.1.1.1 Population

The sources of population data are the various publications of the past censuses issued by the NSO. The NSO is the national agency mandated to collect information on population and its characteristics. The total population of the West Zone in 2007, according to the latest NSO census conducted in August 2007, was estimated to be at 8,893,835. About 53% of the total population reside in the three (3) biggest cities in the West Zone – the cities of Manila, Quezon and Caloocan while only 11% are residents of the city/municipalities of Cavite.

Past Population and Growth Rates

The population census in the country is generally conducted by NSO every ten (10) years until 1990, after which, the census was done in a five-year interval - in 1995 and 2000. However, the census for 2005 was delayed until 2007 due to budgetary constraint. A total of 12 population censuses had been completed since 1903.

The population figures of the 17 cities/municipalities within the Maynilad's service area in the past were taken from the NSO for the census years 1990, 1995, 2000 and 2007. In addition, official population projection of the NSO for the regional and

city/municipal levels were also collected and used as reference in the population projection. Table 3-1 presents the past population and annual growth rate of the cities/municipalities within Maynilad's service area.

Table 3-1: Past Population and Growth Rates

City/Municipality	NSO Census				Annual Growth Rates		
	1990 (May 1)	1995 (Sep 1)	2000 (May 1)	2007 (Aug 1)	1990-1995	1995-2000	2000-2007
NCR (MWSI)	5,353,891	6,429,537	6,784,704	7,884,972	3.5%	1.2%	2.1%
Manila (part)	1,439,584	1,487,707	1,416,331	1,493,819	0.6%	-1.0%	0.7%
Quezon City (part)	1,027,986	1,224,772	1,420,653	1,805,607	3.3%	3.2%	3.4%
Caloocan	763,415	1,023,159	1,177,604	1,378,856	5.6%	3.1%	2.2%
Malabon	280,027	347,484	338,855	363,681	4.1%	-0.5%	1.0%
Navotas	187,479	229,039	230,403	245,344	3.8%	0.1%	0.9%
Valenzuela	340,227	437,165	485,433	568,928	4.8%	2.3%	2.2%
Las Piñas	297,102	413,086	472,780	532,330	6.4%	2.9%	1.6%
Makati (part)	63,059	67,373	58,616	87,200	1.2%	-2.9%	5.6%
Muntinlupa	278,411	399,846	379,310	452,943	7.0%	-1.1%	2.5%
Parañaque	308,236	391,296	449,811	552,660	4.6%	3.0%	2.9%
Pasay City	368,366	408,610	354,908	403,604	2.0%	-3.0%	1.8%
CAVITE (MWSI)	457,021	659,255	768,923	1,008,863	7.1%	3.4%	3.8%
Bacoor	159,685	250,821	305,699	441,197	8.8%	4.3%	5.2%
Cavite City	91,641	92,641	99,367	104,581	0.2%	1.5%	0.7%
Imus	92,125	177,408	195,482	253,158	13.1%	2.1%	3.6%
Kawit	47,756	56,993	62,751	76,405	3.4%	2.1%	2.8%
Noveleta	20,409	27,306	31,959	39,294	5.6%	3.4%	2.9%
Rosario	45,405	54,086	73,665	94,228	3.3%	6.8%	3.5%
OVERALL - MWSI	5,810,912	7,088,792	7,553,627	8,893,835	3.8%	1.4%	2.3%

The final results of the latest Census of Population (POPCEN 2007) conducted by the NSO, which were made official with the signing by President Gloria Macapagal-Arroyo of Proclamation No. 1489 on April 16, 2008, showed that the annual population growth rate from 2000 to 2007 of both the NCR and the province of Cavite at 2.1 and 3.8% respectively are growing faster relative to the national average of 2.04%.

It is interesting to note that all the cities and municipalities in the West Zone showed a positive annual population growth rate with Makati, Bacoor, Imus, Rosario and Quezon City posting the highest rate at 5.6%, 5.2%, 3.6%, 3.5% and 3.4% respectively.

Population Projection

The population of the 17 cities/municipalities in the Maynilad service area was projected up to 2040 using the population census of 2007 as base year.

The population projection for the city/municipality utilized the ratio method, i.e., the levels and trends in the ratios of the population of the city/municipality to the population of their respective provinces as observed in the previous censuses. The derived ratios were then projected on the assumption that stability in the trends will be attained after some time. Moreover, 45,000 persons per square kilometer was used as a cap on the maximum population density of any city or municipality.

The cities and municipalities comprising the West zone were classified according to the trend of their ratios as observed in 1990, 1995, 2000 and 2007 and is presented in Table 3-2. The NSO classified the cities/municipalities into four (4) types, as follows:

Type I - cities/municipalities that showed unidirectional trend in their ratios (either increasing or decreasing) throughout the observation period

Type II - cities and municipalities that had unidirectional trends only during the last two intercensal periods

Type III - cities and municipalities that had unidirectional trend only during the first two intercensal periods.

Type IV - cities/municipalities with erratic trends

For each type of city/municipality, the initial rates (r) at which the ratios will change were computed in accordance with the formula suggested by the NSO.

Table 3-2: Historical Ratio of the Population of the City/Municipality to NCR/Cavite

City/Municipality	Ratio of City/Municipality to NCR/Province				Type
	1990 (May 1)	1995 (Sep 1)	2000 (May 1)	2007 (Aug 1)	
NCR (MWSI)	67.36%	68.01%	68.31%	68.25%	
Manila (part)	18.11%	15.74%	14.26%	12.93%	I
Quezon City (part)	12.93%	12.96%	14.30%	15.63%	I
Caloocan	9.60%	10.82%	11.86%	11.93%	I
Malabon	3.52%	3.68%	3.41%	3.15%	II
Navotas	2.36%	2.42%	2.32%	2.12%	II
Valenzuela	4.28%	4.62%	4.89%	4.92%	I
Las Piñas	3.74%	4.37%	4.76%	4.61%	IV
Makati (part)	0.79%	0.71%	0.59%	0.75%	III
Muntinlupa	3.50%	4.23%	3.82%	3.92%	IV
Parañaque	3.88%	4.14%	4.53%	4.78%	I
Pasay City	4.63%	4.32%	3.57%	3.49%	I
CAVITE (MWSI)	39.65%	41.12%	37.27%	35.31%	
Bacoor	13.86%	15.64%	14.82%	15.44%	IV
Cavite City	7.95%	5.78%	4.82%	3.66%	I
Imus	7.99%	11.07%	9.47%	8.86%	II
Kawit	4.14%	3.55%	3.04%	2.67%	I
Noveleta	1.77%	1.70%	1.55%	1.38%	I
Rosario	3.94%	3.37%	3.57%	3.30%	IV
OVERALL - MWSI	**63.9%**	**64.1%**	**63.0%**	**61.7%**	

The latest available official population projection at the national, regional and provincial levels covering the years 2000-2040 was prepared by the NSO utilizing the Cohort-component method. This methodology is based on the fact that population change is a factor of three demographic processes namely: fertility, mortality and migration. The base population used in this projection was the population enumerated during the 2000 Census of Population and Housing. There is no official government population projection yet based on the 2007 Census. These projected growth rates were used as guideline values in the population projections in this business plan to ensure that its results are consistent with official government projections. Table 3-3 presents the projected growth rates of the NCR and province of Cavite.

Table 3-3: Projected Annual Growth Rates

Region/Province	Projected Annual Growth Rates						
	2005-2010	2010-2015	2015-2020	2020-2025	2025-2030	2030-2035	2035-2040
NCR	1.38%	1.13%	0.89%	0.68%	0.49%	0.29%	0.07%
Cavite	3.11%	2.67%	2.43%	2.21%	1.95%	1.70%	1.45%

The table shows that the projected growth rate in both the NCR and the province of Cavite will decrease over time from 1.38% to .07% and 3.11% to 1.45% in the NCR and the province of Cavite respectively from 2005 to 2040.

Table 3-4 presents the population projection from 2007-to-2022. The table shows that the population in many of the cities/municipalities within Maynilad's service area will continue to increase over time.

Table 3-4: Population Projection (2001-2022)

City/Municipality	Population Projection																	
	2001	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
NCR (MWSI)	7,017,286	7,776,321	7,939,993	8,036,103	8,136,291	8,235,690	8,324,092	8,413,692	8,504,508	8,597,318	8,689,852	8,765,928	8,842,854	8,920,639	8,999,293	9,078,826	9,142,557	9,206,662
Manila	1,433,581	1,486,603	1,497,440	1,499,626	1,499,626	1,499,626	1,499,626	1,499,626	1,499,626	1,499,626	1,499,626	1,499,626	1,499,626	1,499,626	1,499,626	1,499,626	1,499,626	1,499,626
Quezon City	1,500,221	1,766,674	1,825,394	1,849,253	1,880,191	1,910,949	1,938,675	1,966,805	1,995,342	2,024,293	2,053,664	2,078,179	2,102,966	2,128,089	2,153,492	2,179,198	2,200,191	2,221,366
Caloocan	1,220,596	1,359,220	1,388,780	1,413,929	1,439,339	1,464,852	1,487,639	1,510,987	1,534,702	1,558,789	1,583,254	1,603,920	1,624,857	1,646,066	1,667,552	1,689,319	1,707,362	1,725,599
Malabon	344,344	361,351	364,852	370,264	374,250	378,165	381,497	384,880	388,252	391,673	395,125	397,723	400,337	402,969	405,617	408,284	410,162	412,048
Navotas	233,717	243,947	246,046	250,086	253,081	256,030	258,582	261,159	263,762	266,391	269,046	271,107	273,183	275,276	277,384	279,509	281,079	282,659
Valenzuela	503,263	560,778	573,047	581,801	590,248	598,817	606,440	614,160	621,979	629,897	637,916	644,462	651,075	657,757	664,506	671,325	676,737	682,193
Las Piñas	485,701	526,620	535,208	542,974	549,831	556,694	562,490	568,447	574,468	580,552	586,701	591,540	596,419	601,338	606,297	611,298	615,070	618,866
Makati	64,154	84,107	88,789	89,099	90,379	91,646	92,385	93,130	93,880	95,400	95,400	95,400	95,400	95,400	95,400	95,400	95,400	95,400
Muntinlupa	394,917	445,696	456,610	462,581	469,005	475,358	480,965	486,637	492,377	498,184	504,060	508,788	513,560	518,378	523,240	528,148	531,969	535,817
Parañaque	471,362	542,411	557,857	565,768	575,021	584,194	592,440	600,804	609,285	617,886	626,609	633,857	641,189	648,605	656,108	663,697	669,860	676,061
Pasay City	365,432	398,914	405,970	410,903	415,321	419,659	423,352	427,077	430,835	434,626	438,451	441,327	444,222	447,136	450,070	453,022	455,101	457,188
CAVITE (MWSI)	817,146	963,852	1,021,636	1,052,380	1,081,027	1,109,383	1,135,904	1,163,100	1,190,990	1,219,590	1,248,922	1,276,175	1,304,064	1,332,603	1,361,809	1,391,697	1,419,465	1,447,826
Bacoor	332,282	426,724	448,616	463,047	478,514	493,971	508,856	523,778	539,349	555,383	571,893	587,412	603,351	619,723	636,539	653,811	670,020	686,630
Cavite City	100,529	104,096	104,824	107,968	109,772	111,507	113,047	114,608	116,191	117,795	119,422	120,872	122,340	123,825	125,329	126,851	128,211	129,586
Imus	207,313	247,277	256,151	262,266	267,606	272,780	277,476	282,253	287,112	292,054	297,082	301,643	306,274	310,976	315,750	320,598	325,000	329,464
Kawit	65,622	75,050	77,092	79,561	81,581	83,571	85,417	87,305	89,233	91,205	93,219	95,079	96,975	98,909	100,882	102,894	104,750	106,640
Noveleta	33,496	38,563	39,665	41,063	42,254	43,436	44,545	45,683	46,850	48,046	49,274	50,416	51,586	52,782	54,006	55,259	56,424	57,614
Rosario	77,904	92,143	95,288	98,456	101,298	104,117	106,762	109,474	112,255	115,107	118,031	120,754	123,539	126,388	129,303	132,285	135,059	137,891
OVERALL - MWSI	7,834,432	8,760,173	8,961,630	9,088,483	9,217,318	9,345,073	9,459,996	9,576,793	9,695,498	9,816,909	9,938,773	10,042,103	10,146,918	10,253,242	10,361,102	10,470,524	10,562,022	10,654,688

3.1.1.2 Per Capita Consumption

Maynilad's water supply to its concession area is restricted through low pressures and less than 24-hr availability in some areas, which means that the current consumption is less than what it should have been in case water service is available for 24 hours at sufficient pressure.

Radian + Halcrow, in its feasibility study entitled "Water Supply Services Recovery Project" (May 2006), examined the per capita usage for domestic water service connections. The average consumption in 2005 for the West Zone was estimated to be 102 lpcd with adjustments in the detailed demand study for each city/municipality taking into account the level of service and income level.

The study projected the per capita consumption for unrestricted demand to be at the maximum level of 151 lpcd starting in 2015. However, for the purpose of this updated Business Plan, it was assumed that there will be a 5% reduction in the unit consumption until 2015 due to the combined effect of price elasticity and demand management. The maximum level of 151 lpcd will now be attained in 2021. The domestic unit consumption per city/municipality is presented in Table 3-5 below.

Table 3-5: Domestic Unit Consumption

City/Municipality	Projected Unit Consumption (lpcd)			
	2011	2016	2021	2026
NCR (MWSI)				
Manila (part)	125	145	151	151
Quezon City (part)	170	190	198	198
Caloocan	125	145	151	151
Malabon	125	145	151	151
Navotas	125	145	151	151
Valenzuela	125	145	151	151
Las Piñas	161	185	193	193
Makati (part)	223	258	269	269
Muntinlupa	125	145	151	151
Parañaque	148	171	178	178
Pasay City	125	145	151	151
CAVITE (MWSI)				
Bacoor	125	145	151	151
Cavite City	125	145	151	151
Imus	125	145	151	151
Kawit	125	145	151	151
Noveleta	125	145	151	151
Rosario	125	145	151	151
OVERALL - MWSI	140	160	166	166

3.1.1.3 *Water Service Coverage*

The adjusted water service coverage is discussed earlier. Table 2-4 shows the proposed service coverage per city/municipality.

3.1.1.4 *Domestic Demand Estimates*

The domestic demand estimates are presented in Table 3-6 below.

Table 3-6: Domestic Demand Estimates

City/Municipality	Projected Domestic Demand (Mld)			
	2011	2016	2021	2026
NCR (MWSI)	1,039	1,340	1,533	1,593
Manila (part)	188	217	226	226
Quezon City (part)	330	395	436	456
Caloocan	158	220	258	271
Malabon	36	49	62	63
Navotas	21	32	42	44
Valenzuela	51	77	102	106
Las Piñas	53	89	117	122
Makati (part)	21	25	26	26
Muntinlupa	48	65	77	83
Parañaque	87	108	119	125
Pasay City	47	63	69	70
CAVITE (MWSI)	92	153	194	236
Bacoor	47	76	97	114
Cavite City	14	18	19	20
Imus	18	30	36	52
Kawit	8	14	16	17
Noveleta	2	6	9	9
Rosario	3	10	18	23
OVERALL MWSI	1,131	1,493	1,727	1,829

3.1.2 Non-Domestic Demand

The non-domestic demand is difficult to estimate as many businesses have access to deep wells (both legal and illegal) and the level of commercial NRW is high. The approach adopted by the Radian + Halcrow study was similar to that in the MWSI Master Plan whereby large consumer consumption from billed volume is used as a starting value with growth at 5% initially up to 2015 and decreasing to 3% from 2016 to 2022. These growth rates include allowance for transfer of some deep well users to Maynilad's system as the service improves. Other smaller scale population dependent non-commercial use is estimated through a proximity percentage of the domestic consumption. This proximity percentage is assessed for each municipality

taking account of land use and billings. As in the case of the domestic per capita consumption, a 5% reduction in the non-domestic consumption estimates from the Radian + Halcrow Feasibility Study is assumed until 2021.

The non-domestic demand estimates are shown in Table 3-7 below:

Table 3-7: Non-Domestic Demand Estimates

City/Municipality	Projected Non-Domestic Demand (Mld)											
	Commercial Demand				Industrial Demand				Non-Domestic Demand			
	2011	2016	2021	2026	2011	2016	2021	2026	2011	2016	2021	2026
NCR (MWSI)	436	546	628	720	94	116	129	144	531	662	757	863
Manila (part)	243	303	350	403	26	32	38	44	269	335	388	447
Quezon City (part)	56	69	75	83	15	18	19	21	70	87	95	104
Caloocan	36	45	52	60	13	15	15	15	49	60	67	76
Malabon	8	10	10	11	12	15	17	19	20	25	27	30
Navotas	7	9	9	9	15	18	20	23	22	27	29	32
Valenzuela	9	12	13	15	5	6	7	7	14	18	20	22
Las Piñas	7	11	14	17	0	1	1	1	7	11	15	18
Makati (part)	7	9	9	10	1	1	1	1	8	10	10	11
Muntinlupa	4	8	11	15	1	1	2	3	5	9	13	17
Parañaque	21	25	30	34	4	5	6	6	25	31	35	40
Pasay City	38	47	54	62	2	3	3	3	40	50	57	65
CAVITE (MWSI)	6	10	12	14	2	4	7	9	8	15	19	23
Bacoor	3	4	5	6	1	2	4	5	4	7	9	11
Cavite City	1	2	2	2	0	0	1	1	2	2	3	3
Imus	1	1	2	2	0	1	1	1	1	2	3	4
Kawit	1	1	2	2	0	0	0	1	1	2	2	2
Noveleta	0	0	0	0	0	0	0	0	0	1	1	1
Rosario	1	1	1	1	0	0	1	1	1	2	2	2
OVERALL - MWSI	443	556	641	734	96	120	136	153	539	677	776	886

3.1.3 Total Demand Estimate

The total water demand is the sum of the estimated domestic and non-domestic demand and is presented in Table 3-8.

Table 3-8: Total Demand Estimates

City/Municipality	Projected Total Demand (Mld)			
	2011	2016	2021	2026
NCR (MWSI)	1,570	2,002	2,290	2,456
Manila (part)	457	553	614	674
Quezon City (part)	401	482	530	560
Caloocan	207	281	325	347
Malabon	56	74	89	93
Navotas	43	59	72	76
Valenzuela	65	95	121	128
Las Piñas	60	100	132	141
Makati (part)	29	34	36	37
Muntinlupa	53	74	90	100
Parañaque	112	139	154	165
Pasay City	87	112	126	135
CAVITE (MWSI)	100	168	213	259
Bacoor	51	82	106	125
Cavite City	16	20	22	23
Imus	19	32	38	56
Kawit	9	15	18	20
Noveleta	2	6	9	10
Rosario	4	12	21	25
OVERALL MWSI	1,670	2,169	2,504	2,715

3.1.4 NRW

The NRW is split into two (2) categories - the commercial NRW and physical NRW. The commercial NRW is already embedded in the demand estimates as the total demand is based on the population, service coverage and estimated per capita consumption as well as an estimated commercial and industrial demand.

The physical NRW, which are basically leakages, is not dependent on the consumption estimates but on water pressure and availability. The NRW targets are presented in Table 3-9 below.

Table 3-9: NRW Targets

Particulars	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Non-Revenue Water	66%	62%	57%	51%	46%	40%	38%	36%	34%	32%

3.1.5 Total Water Demand

The total water demand is the sum of the total consumption and the physical NRW. The estimated total water demand is shown in Table 3-10 below.

Table 3-10: Estimated Total Water Demand

Particulars	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Service Targets	71.1%	72.8%	75.6%	79.8%	85.2%	86.7%	87.8%	90.2%	91.6%	92.9%
Total Consumptio	1,219	1,302	1,405	1,528	1,670	1,770	1,868	1,989	2,101	2,169
Total NRW (%)	66%	62%	57%	51%	46%	40%	38%	36%	34%	32%
Total Water Dema	2,301	2,351	2,411	2,455	2,530	2,460	2,544	2,654	2,748	2,766

3.2 WATER SUPPLY

Water production capacities should at least be equal to total water demand. The total water demand and supply gap is presented in Table 3-11 below:

Table 3-11: Water Supply and Demand Gap

Particulars	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total Water Demand	2,301	2,351	2,411	2,455	2,530	2,460	2,544	2,654	2,748	2,766
Current Production	2,435	2,432	2,420	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Supply Demand Gap	134	81	9	(55)	(130)	(60)	(144)	(254)	(348)	(366)

Presented in Table 3-12 below are the supply surplus/deficits starting 2007. The La Mesa supply was assumed to be 2,400 Mld and the deepwell production will continue to deteriorate. With sufficient surface water by 2010, the deepwells are projected to be fully decommissioned due to certain environmental concerns.

The available water supply is calculated by adding the water production from La Mesa and the existing deepwells. The WTP production is computed using the projected billed volume and NRW targets.

Table 3-12 below likewise shows the available supply, WTP production, supply surplus/deficits, billed volume and NRW targets.

Table 3-12: Current Water Supply and Demand Situation

Years	La Mesa Supply	Supply from Wells	Available Supply	WTP Production	Surplus/ Deficit	Billed Volume Targets	NRW (%)	NRW (l/c/d)
2007	2,400	35	2,435	2,301	134	783	66%	2,198
2008	2,400	32	2,432	2,351	81	904	62%	1,993
2009	2,400	20	2,420	2,411	9	1,044	57%	1,765
2010	2,400		2,400	2,455	(55)	1,198	51%	1,505
2011	2,400		2,400	2,530	(130)	1,355	46%	1,285
2012	2,400		2,400	2,460	(60)	1,476	40%	1,011
2013	2,400		2,400	2,544	(144)	1,577	38%	964
2014	2,400		2,400	2,654	(254)	1,699	36%	917
2015	2,400		2,400	2,748	(348)	1,814	34%	862
2016	2,400		2,400	2,766	(366)	1,881	32%	792
2017	2,400		2,400	2,783	(383)	1,948	30%	726
2018	2,400		2,400	2,872	(472)	2,010	30%	728
2019	2,400		2,400	2,962	(562)	2,074	30%	730
2020	2,400		2,400	3,049	(649)	2,134	30%	730
2021	2,400		2,400	3,112	(712)	2,179	30%	725
2022	2,400		2,400	3,146	(746)	2,234	29%	689

Considering the current water supply facilities and projected water demand, Maynilad has envisioned the need for construction of new treatment plants to cater to the growing water demand due to the increase in population and business activities.

Table 3-12 above shows that despite the 15 percentage points drop in NRW from 2007 to 2010 brought about by the aggressive implementation of NRW management strategies, the supply deficit will still be incurred starting 2010 due to increase in water demand. This deficit will be addressed by the development of new water sources. Maynilad is implementing a medium-term water source project such as the Muntinlupa Water Treatment Plant utilizing water from the Laguna Lake.

Table 3-13 shows yearly supply and demand situation for the West Concession in the medium-term considering the additional 200 Mld water supply from the Muntinlupa Water Treatment Plant that will supply the water demand in the South.

Table 3-13: Projected Water Demand and Supply (2007-2013)

Years	La Mesa Supply	Supply From Wells	Medium Term Water Source	Available Supply	WTP Production	Surplus/ Deficit	Billed Volume Targets	Headroom / Buffer
			Muntinlupa					
2007	2,400	35		2,435	2,301	134	783	6%
2008	2,400	32		2,432	2,351	81	904	3%
2009	2,400	20		2,420	2,411	9	1,044	0%
2010	2,400		100	2,500	2,455	45	1,198	2%
2011	2,400		200	2,600	2,530	70	1,355	3%
2012	2,400		200	2,600	2,460	140	1,476	6%
2013	2,400		200	2,600	2,544	56	1,577	2%

The target headroom is defined as the minimum buffer or headroom that a prudent water company should allow between supply and demand to cater for specified uncertainties in the overall supply-demand balance.

If the available headroom is greater than or equal to target headroom, then the desired level of service should be achieved. Should the available headroom fall below the target headroom, Maynilad faces the risk of failing to meet its chosen headroom into the overall supply-demand balance.

The methodology for calculating target headroom is described in the document " A Practical Method for Converting Uncertainty in to Headroom by the UK Water Industry Research (UKWIR).

A certain portion of the available water supply, ideally, should serve as a buffer to provide operational flexibility in the event of an emergency. This is extremely important for Maynilad where reduction in supply is a recurring issue, especially in the events of El Nino and disastrous typhoons.

Uncertainties are inevitable in planning but it is important to reduce them as far as possible. The headroom assessment should identify the greatest sources of uncertainty and consider options for reducing this uncertainty.

Within the period of 2008 to 2013, the supply buffer or headroom falls to a low of 0% to 6%. Should there be a variation in water supply coming from Angat, the water supply services will be affected if the reduction is more than 6%.

The joint use of La Mesa Dam will serve as an extra headroom to Maynilad once approved by MWSS.

4 TECHNICAL PLAN

The technical plan discusses the background of existing water sources, potable water production, distribution, sewerage and sanitation in the West Concession. It highlights the capital investment program for the next five (5) years starting 2008 to 2012. Furthermore, it emphasizes the procurement of the capital expenditure projects and the asset management in general.

4.1 WATER RESOURCES, PRODUCTION AND DISTRIBUTION

4.1.1 Water Resources

The two (2) Concessionaires greatly rely on Angat and Umiray Rivers as the main sources of water for their customers. MWSS and NIA share the water used by the hydroelectric power plant of NPC in power generation, which has been drawn from the impounding reservoir at Angat Dam.

In 1962, the MWSS was granted water rights to abstract 22 cubic meters per second (cms) or 1,900 million liters per day (Mld) from Angat Reservoir by virtue of a Memorandum of Agreement by and between NPC and MWSS (formerly National Waterworks and Sewerage Authority, NWSA) and confirmed by the National Water Resources Board (NWRB). In 1968, MWSS was conditionally granted an additional 15 cms (1,300 Mld) maximum allocation out of the unutilized water rights of NIA.

In 1980, due to increasing population, NWRB granted MWSS water rights equivalent to 17.6 cms from Umiray River to further augment water supply through Angat Reservoir. However, only 15.7 cms was obtained from Angat Reservoir corresponding to the average amount of water produced by the Umiray-Angat Transbasin Project (UATP) representing inflows from the three (3) sites in Umiray. Eventually in 1994, only 9 cms additional inflow has been preset by MWSS to come up with the 46 cms allocation, which has been part of the supply equation since July 2000.

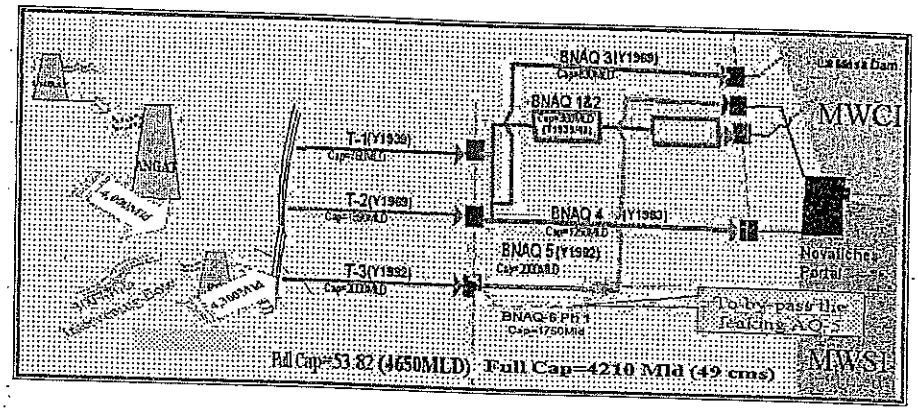
The breakdown of raw water allocation guaranteed in the Concession Agreement for both Concessionaires sourced from Angat Reservoir, i.e. 4,000 Mld, is summarized as follows:

Table 4-1: MWSS Water Rights at Angat

Year Granted	Amount Granted
1962	1,900 Mld (22 cms)
1988	1,300 Mld (15 cms)
1994	800 Mld (9 cms)
Total	4,000 Mld (46 cms)[1]

Figure 4-1 is a schematic diagram showing the Angat raw water conveyance system with its attributes.

Figure 4-1: Angat Raw Water Conveyance System



From Angat Reservoir, the raw water is conveyed through an auxiliary tunnel down to Ipo Dam where an estimated 300 Mld intervening flows within the watershed is added to the water supply.

Water flows through the Angat headworks, composed of a system of tunnels, aqueducts and open channels that allow water to flow by gravity into the water treatment facilities. Maynilad and Manila Water are jointly in charge of the operation and management of these facilities through the joint-venture group named Common Purpose Facilities (CPF).

The 46 cms (4,000 Mld) raw water allocation of MWSS from Angat Reservoir is further divided to Maynilad and Manila Water on a 60/40 basis, i.e. 2,400 Mld is allocated to the West Zone and the other 1,600 Ml/d goes to the East Zone. For the past six (6) years, an average of 41 cms (3,500 Mld) has been obtained from Angat Reservoir.

1 The allocations are expressed in m3/s. 46 m3/s = 3974.4 Mld

Water from Angat and Ipo represents 98% of Maynilad's supply to its service area and the remaining 2% come from groundwater sources, which currently supply the fringe areas, mainly in Cavite. Further development and rehabilitation of wells cannot be pursued because, aside from the difficulty in finding new good sites, there are problems associated with salt-water intrusion, lowering of the groundwater table, soil subsidence and water quality.

4.1.2 Water Production

La Mesa Treatment Plants 1 & 2 are responsible for the treatment of the allocated 60% raw water releases from Ipo/Angat Dam. The plants under the Water Production Department were ISO 9001:2000 (Quality Management Systems) certified by TUV: SUD, Philippines on October 18, 2006.

LMTP-1, commissioned in 1982, is a standard flocculation-settlement-rapid gravity filter plant with a design capacity of 1500 Mld while LMTP-2, completed in 1994, is a pulsator-clarifier filter plant with a design capacity of 900 Mld. With a combined capacity of 2,400 Mld, both treatment facilities have an overload capacity of at least 10% of the design capacity.

4.1.2.1 Water Treatment Processes

The water treatment plants basically apply the same principle but each has a distinct treatment process.

LMTP-1 Conventional System

- Screening – Raw water from the Angat-Ipo-Bicti source network travels over 30 kilometers before entering the La Mesa Water Treatment Plant. Raw water enters the plant through screens that prevent the entry of foreign objects, such as grass, leaves, tree limbs, and other large floating objects. These screens protect the rapid mixers, flocculators, and flowmeter sensors from damage.
- Coagulation – Coagulants added to the raw water reacts with the impurities to form precipitates called "flocs". Other undesirable suspended particles in raw water attached to these flocs forming clusters.
- Flocculation – Coagulated water mixed gently to enhance further agglomeration of the flocs into higher and heavier particles become too heavy to float and begin to sink (settle).
- Sedimentation – Flocculated water then enters the settling basins where heavy flocs settle at the bottom of the basin as sludge, which are periodically removed from the basin bottom. Clarified water enters the troughs called launders near the top of the basins.
- Filtration – Purification of water is done by gravity filtration through twenty-four dual-media filters, twelve in the northern half & twelve in the

southern half of the plant. Each dual-media filter consists of a layer of anthracite coal on top of a layer of sand.

- Disinfection – Chlorine is applied to the finished water and a residual ranging from 1.0 to 1.3 ppm is maintained before it leaves the plant.

LMTP-2 - Pulsator – Flocculator – Clarifier

- Screening – Raw water from the Angat-Ipo-Bicti source network travels over 30 kilometers before entering the La Mesa Water Treatment Plant. Raw water enters the plant through screens that prevent the entry of foreign objects, such as grass, leaves, tree limbs, and other large floating objects. These screens protect the rapid mixers, flocculators, and flowmeter sensors from damage.
- Coagulation – Coagulants added to the raw water reacts with the impurities to form precipitates called "flocs". Other undesirable suspended particles in raw water attached to these flocs forming clusters.
- Flocculation (Pulsator – Clarifier) - This is the unique feature of LMTP-2 for the removal of the "floc" and other impurities in the water. This is equivalent to the flocculation and sedimentation process of LMTP-1.
- Filtration – Purification of water is done by gravity filtration through twenty-four dual-media filters, twelve in the northern half & twelve in the southern half of the plant. Each dual-media filter consists of a layer of anthracite coal on top of a layer of sand.
- Disinfection – Chlorine is applied to the finished water and a residual of 1.1 ppm is maintained before it leaves the plant.

Figure 4-2: La Mesa Treatment Plant-1 Process Block Diagram

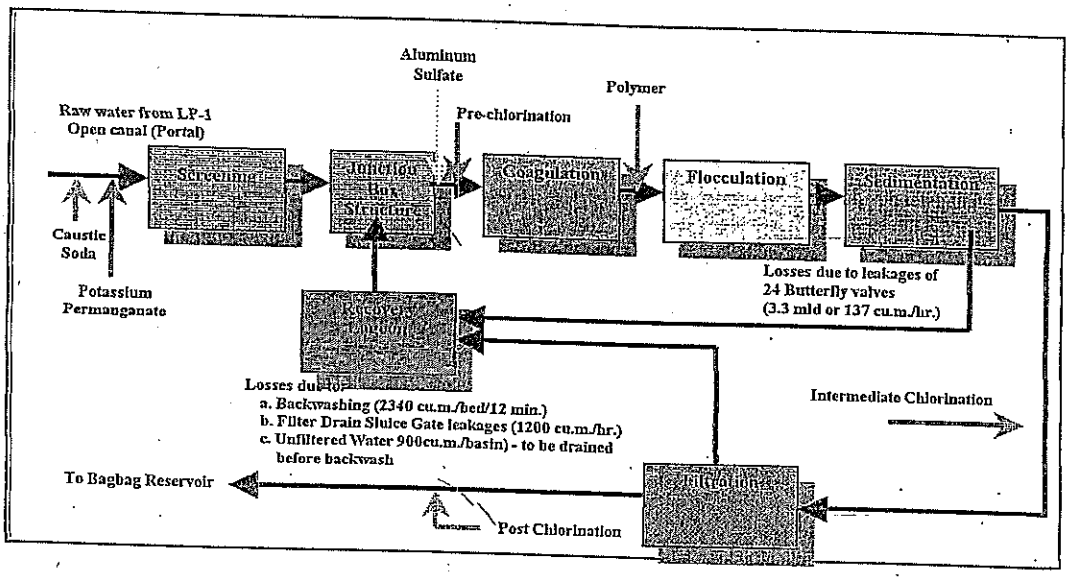
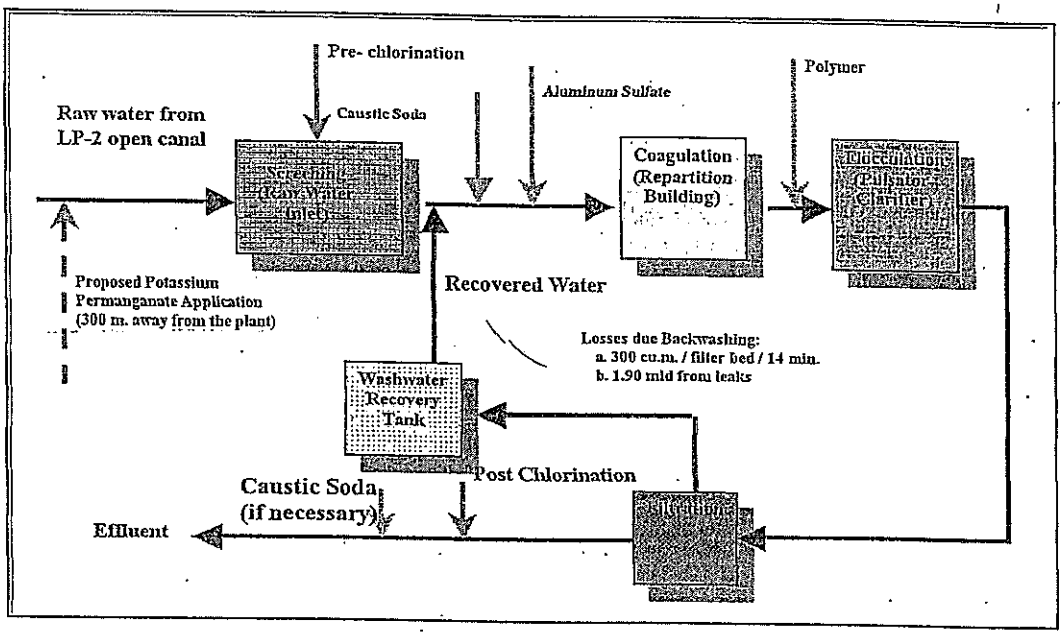


Figure 4-3: La Mesa Treatment Plant-2 Process Block Diagram



4.1.2.2 Key Features

The key features of the La Mesa Treatment Plants are presented in Table 4-2.

Table 4-2: La Mesa Treatment Plant Features

Treatment Stage	*Description*	*Unit*	*LMTP-1*	*LMTP -2*
Treatment Capacity	Design Capacity	Ml/d	1,500	900
	Overload flow	Ml/d	1,650	1,000
Flash Mixing	Mixers	Units	6 Flash Mixers	4 Flash Mixers
Flocculation	Basins	Units	72	
	Flocculators	Units	72	
	Detention Time	Min.	20	
Sedimentation	Basins	Units	12	
	Detention Time	Min.	80	
Pulsators ®	Tanks	Units	-	8
	Clarification Time	Min.	-	78
Filtration	Filters	Units	24 Dual media	20 Aquazur ®
	Filtration Area	m^2/unit	180	163

	Anthracite Depth	m	0.5	-
	Sand Depth	m	0.25	1.3
	Gravel Depth	m	0.45	-
	Filtration Rate	$m^3/m^2/h$	14.5	11.5
Chemical Dosing * (Ave. Design Dosing)	Disinfection			
	Hypochlorite	mg/l	-	1
	Pre-chlorine	mg/l	2	1
	Interim chlorine	mg/l	0.5	-
	Post-chlorine	mg/l	0.5	1
	pH Control			
	Hydrated Lime	mg/l	10	-
	Pre-Caustic Soda	mg/l	-	7.6
	Post Caustic Soda	mg/l	-	9.8
	Coagulants			
	Liquid Alum	mg/l	35	30
	Ferric Chloride	mg/l	25	30
	PAC		-	
	Coagulant Aid	mg/l	0.05	0.1
	Flocculent	mg/l		

* Chemical dosing depends on actual water quality

4.1.2.3 Deficiencies and Difficulty in the Treatment Plants

Consistency in Production Measurement

During construction in 1982, LMTP-1 was provided with a Dall Tube effluent flowmeter. Unfortunately, the original flowmeter did not work due to the partial flow condition at the main effluent pipe. Without an effluent flowmeter, the daily finished water will be based on computation and variance set by the Telemetry. A special effluent flowmeter is urgently needed to directly measure the actual production with an acceptable accuracy even in partial and full flow conditions.

LMTP-1 Measurement Status

The failure to measure accurately the amount of losses in the treatment plant and identifying the possible sources of it is one source of difficulty in LMTP-1.

Treatment Plants Instrumentation and Equipment Status

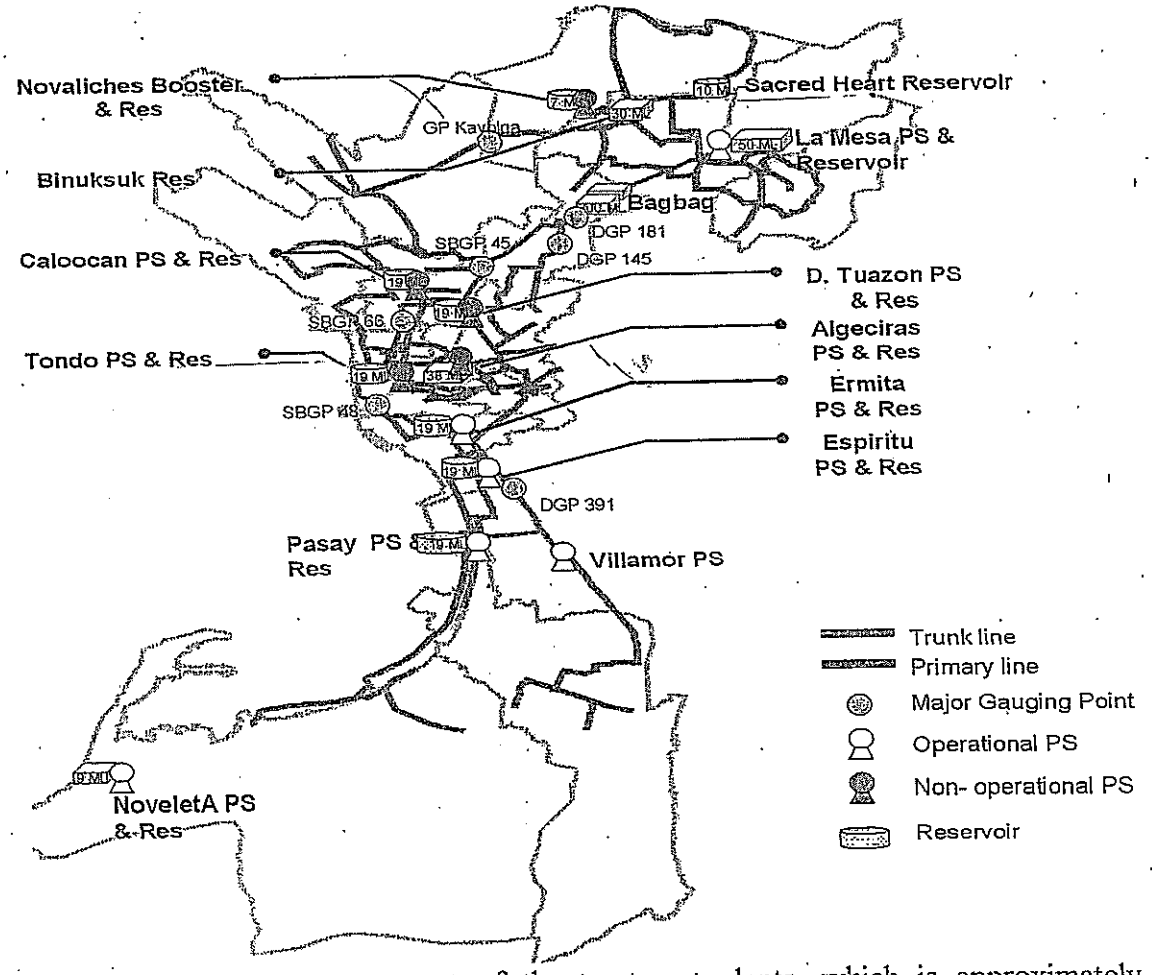
LMTP-1 and LMTP-2 had been operating continuously for the last 26 years and 14 years respectively, without any major rehabilitation. Most equipment had deteriorated due to natural wear and tear and with lesser operational efficiency.

4.1.3 Water Distribution Network

4.1.3.1 Water Transmission and Distribution Network

The current water distribution network of Maynilad is a relatively old water system composed of 5,424 kms of pipelines ranging from 50 mm to 3200 mm and made up of various materials, such as reinforced concrete, steel, cast iron, asbestos cement (ACP), ductile iron, and PVC. The 350-km primary distribution network (main backbone) translates to about 8.5% of the total length. Figure 4-4 shows the schematic diagram of the primary distribution network while Annex 1 gives a tabulation of installed pipelines according to materials and sizes.

Figure 4-4: Schematic Diagram of Primary Distribution Network



Treated water that comes out of the treatment plants, which is approximately ninety-eight percent (98%) of the total supply, is distributed by gravity or by pumping. Seventy-one percent (71%) of the total surface water supply is fed by gravity while the remaining twenty-nine percent (29%) is distributed using five (5) major pumping stations, four (4) mini boosters, fifteen (15) in-line booster stations,

and eleven (11) reservoirs. Annex 2 shows the list of existing pumping stations and reservoirs.

All other areas covered by the Concession not provided with surface water are served by eighty-three (83) deepwells which account for the remaining two percent (2%) of the total water supply. The list of all deepwell stations is shown in Annex 3.

Having inherited a very old and complicated network, a number of issues and deficiencies need to be addressed in order to deliver Maynilad's commitment. Among these vital issues are the following:

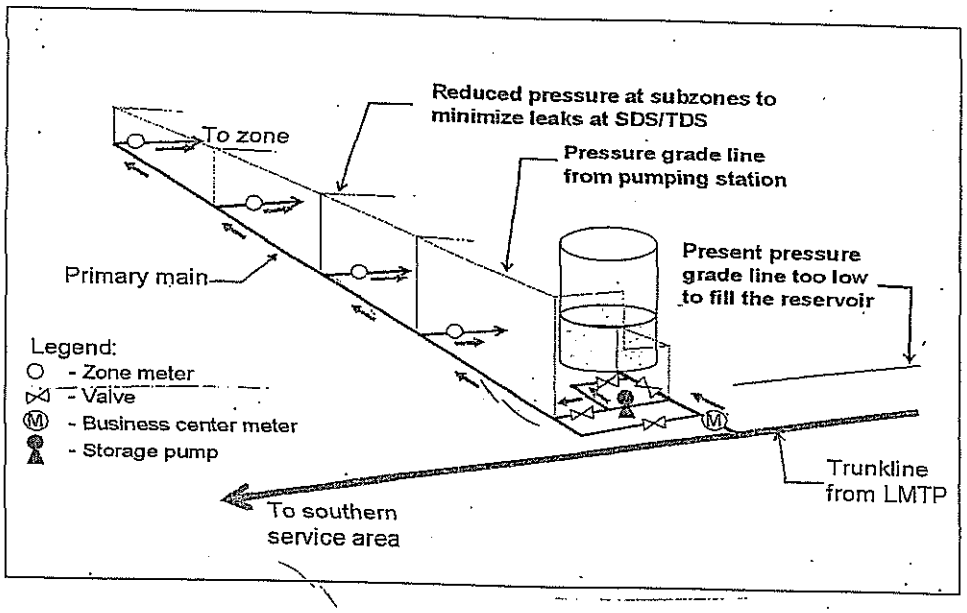
- **Some segments have high velocities causing low pressures and need reinforcement.**
  When the old MWSS distribution network was partitioned into West and East to correspond to the concession boundaries, the carrying capacity of the trunk and primary lines coming from La Mesa became insufficient to meet peak hour flow and demand due to expansion.
- **Open system (multi source) needs reconfiguration.**
  The old MWSS distribution network is an open system wherein there are a number of inflow and outflow pipes crisscrossing in an area. In such set up, management of supply and pressure is difficult.
- **A significant length of pipelines needs replacement.**
  The network inherited from MWSS is old and leaking, thus, causing very huge losses.
- **About 30-40% of the valves are either buried, hard to operate or defective.**
  The unavailability of good working valves makes it difficult to calibrate, direct supply and pressure to target areas.
- **Measuring instruments have to be upgraded and installed.**
  Telemetry instruments like flowmeters, pressure transducers and loggers are basic instruments in any water system. They serve as eyes and ears or listening posts needed in conducting diagnostic investigations as well as operational adjustments in the distribution network. The instrumentation from MWSS system is old, insufficient and not suitably located as a result of the partitioning of the system.
- **Insufficient storage and pumping capacity.**
  Existing pumping stations and reservoirs were built mostly in the late 60's and since then only a few had undergone major upgrading. Reorientation and upgrading of the rest were deferred while construction of new ones has not been done to date.

4.1.3.2 Strategies, Plans and Programs

To attain the commitment targets in the 2008-2012 Business Plan, the following strategies, plans and programs addressing the issues and deficiencies will be implemented.

- **Reconfiguration and Strengthening of the Primary Network**
  This program aims to construct supply highways to improve Maynilad's capacity to convey water to expansion areas, especially to the south, and reallocate water from recovery to resell areas as well as in handling peak hour flow. The reinforcement will improve carrying capacities; reduce the high velocities and head losses which in turn will improve supply, pressure and availability.
- **Provision of ample storage and pumping capacity**
  The reservoirs will be utilized in storing water during off peak hours when pressure is high which usually occur late at night up to just before daybreak. Stored water will then be released to accommodate additional demand and sustain pressure during peak hours. In this set up, excessive velocities and, therefore, pressure loss on the primary lines can be avoided. The program will require total rehabilitation, optimization and upgrading of the eleven (11) existing pumping stations and twelve (12) reservoirs, as well as construction of 10-14 new ones. This program will also involve the installation of in-line boosters to supply "soft spots" located at high portions of the Concession Area.

Figure 4-5: Leakage Control by Pumping to Storage



- **Formation/Shift to HAs, Hydraulic Zones and Subzones**
  To address the problem of complicated network that is very hard to manage and requires a lot of instrumentations, the existing network will be subdivided into HAs, then to hydraulic zones and sub-zones. The existing distribution network will be reconfigured from the present seven (7) hydraulic systems to 36 HAs, 158 Hydraulic Zones and 1,489 Sub-zones, which are isolated using isolation valves or by cut and plug method and supplied by 1-2 inflow lines provided with district meters or flowmeters for supply measurement. The program will involve installation of valves, pipelines, district meters, flowmeters and PRVs as well as decommissioning of old pipes.
- **Enhancement of the Telemetry System**
  The existing number of instruments will be increased to cover all requirements to measure the Business Centers' supply as well as their other operational requirements and the instrumentation needed to progressively shift to Hydraulic Areas, Zones and Sub-zones. New facilities will also have to be provided. This enhanced instrumentation will greatly improve the collection of real time data needed to effectively distribute and manage the current water supply.

4.1.3.3 Pressure and Supply Management

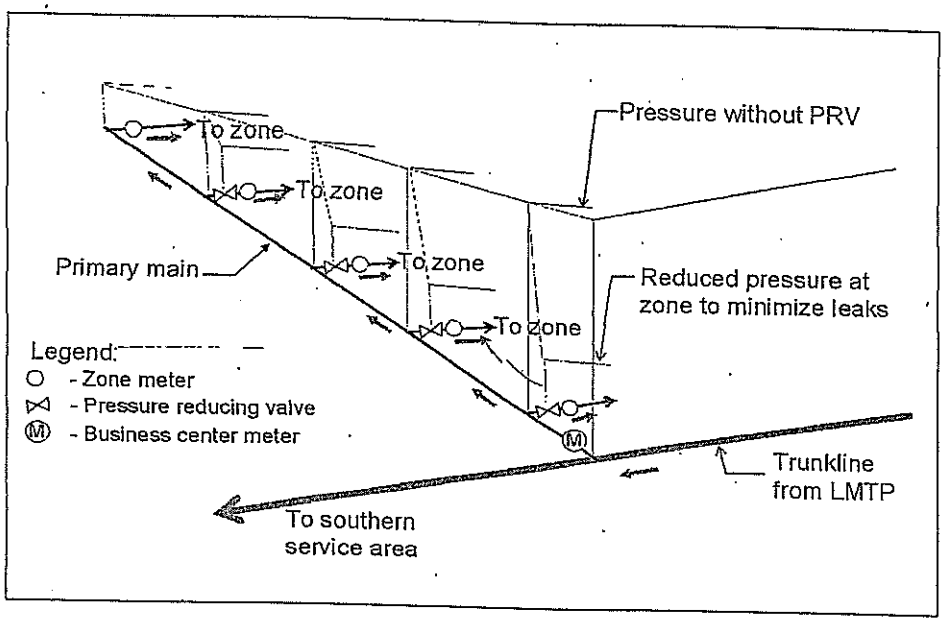
The basic strategy is to distribute the right quantity of water at the right time, place and pressure. The main goal is to optimize the conversion of available water supply to billed volume while minimizing losses in the form of leaks which is proportional to the pressure, i.e. high leakage rate with high pressure.

Supply management and measurement is currently set-up through the 15 BCs. As mentioned above, there is an upcoming shift to the HA concept in which inflow per HA is limited to 1-2, as much as possible, which will also be adapted to the Zones and Sub-zones.

Additional programs to efficiently manage the supply and pressure are:

- **Installation of PRVs**
  The use of PRVs is one of the primary means to control the pressure and, subsequently, the supply in the BCs (eventually HAs). Instead of conducting regular valving on trunk and primary mains to reduce NRW and divert water to where it is most needed, PRVs are strategically installed on secondary lines so that the BCs can bring water anywhere in their respective areas at their discretion to maximize the opportunity of selling water. Also, the use of PRVs is programmed corollary to the planned reactivation of reservoirs and pumping stations which will eventually eliminate the need for mini-boosters in low-lying areas.

Figure 4-6: Leakage Control by PRV During Minimum Demand Hours



The schematic diagram above shows the potential reduction in leakage as a result of reducing pressures during off-peak hours, typically late in the evening up to about 4:30 in the morning.

- **Valve Management Program**

  Despite the use of PRVs to manage the pressure in the system, occasional valve operation and throttling, both for operational and maintenance purposes, cannot be done away with. Valve management program, which includes activities like valve refurbishment, exposure and relocation, replacement, insertion and air valve rehabilitation (investigation/relocation/replacement), will greatly improve control and distribution of water.

- **Intensified Leak Detection and Repair Program**

  In order to alleviate the pressure level in the system, intensive leak detection and repair are conducted. In addition, investigation of network anomalies, head loss and abnormalities in the system are also being implemented through cross-under pipes investigation.

4.2 SEWERAGE AND SANITATION

4.2.1 The Sewerage System

Maynilad is operating four (4) sewerage systems serving around 10 % of the total population under the West Concession Area. These are the following:

- Central Manila Sewerage System (CMSS)
- Dagat-dagatan System
- Quezon City Communal System
- Makati Isolated System

The CMSS serves 70% of the total area of the City of Manila. The system currently serves around 47,000 sewer service connections. The wastewater generated within the area is collected by the system through sewer service connections, conveyed to a terminal pumping at Tondo Station for screening and grit removal, and then pumped to about 3.9 km away from the shore of Manila Bay through a 1,800mm-diameter outfall. The system is newly rehabilitated under MSSP-4 project funded by World Bank.

The rehabilitation of Tondo Sewage Pumping and seven (7) Lift Stations in 2003 - 2005 improved the overall performance of sewage collection in the Central Manila Sewerage System. The installation of new pumps, mechanized bar screens, aerated grid removal plant and instrumentation equipment enhanced its treatment capability and ensured uninterrupted sewage collection. The efficient and synchronized operation of CMSS enables the wastewater quality to pass the effluent quality standards through the avoidance of septic conditions and notwithstanding the fact that system only provides for the preliminary treatment of sewage.

There is also a significant reduction of pollution discharged in inland creeks via the closure of bypasses, repair of damaged sewer lines and installation of flap gates. Moreover, the bay outfall system was inspected and repaired which enhanced the sewage dispersion capability of the outfall.

Furthermore, the installation of odor control systems improved the air quality within the vicinity of the pumping stations. Gas detection, fire alarm and CCTV systems were also put in place at Tondo Pumping Station for the security of the facility and to ensure personnel safety.

To date, Tondo Pumping Plant is operating with discharge permit from LLDA.

The following are the technical information about the system:

- System – Central Manila Collection System
- Capacity – 432,000 CMD

- Average Loading – 130,000 CMD
- Components:
  - 1800 mm diameter Diffuser Outfall w/c extends ~ 3.5 km offshore.
  - 300 km of sewer network
  - Terminal Pumping Plant (Tondo Sewage Pumping Plant)
    - 2 Variable Speed, 750Kw Pumping Units
    - 2 Fixed Speed, 480Kw Pumping Units
    - 1 Mechanized Bar Screen Cleaning Assymbly
    - 1 Mechanized/Aerated Grit Removal Plant (Newly constructed under MSSP-4)
  - 7 Lift Stations (All pumps newly installed under MSSP-4)
    - Sta. Cruz L.S. – with 5 units 63Kw submersible pumps
    - Legarda L.S. – with 3 units 25Kw submersible pumps
    - Port Area L.S. – with 3 units 4.6Kw submersible pumps
    - Luneta L.S. – with 4 Units 43Kw submersible pumps
    - Malate L.S. – with 4 Units 43Kw submersible pumps
    - Paco L.S. – with 3 units 25Kw submersible pumps
    - Sta. Ana L.S. – with 3 units 25Kw submersible pumps

The **Dagat-dagatan System** covers an area of 332 hectares serving some parts of Malabon, Navotas, and Caloocan. It has more than 2,800-sewer service connections. Wastewater generated at the area is collected by the system through sewer service connections, conveyed and pumped to a lagoon system where it will stay for more than ten days to undergo biological treatment. The effluent is eventually discharged to the Maypajo Creek. The system is newly rehabilitated under the MSSP-2 project funded by World Bank.

The rehabilitation of the Dagat-dagatan Sewage Treatment Plant in 2004-2005 addressed its problems in the past on non-compliance with effluent standards in terms of total coliform and oil and grease, and on its inability to treat all of the sewage collected by the existing sewerage network (i.e., only 1 pump was functioning prior to the rehabilitation).

The rehabilitation of the sewage pumping station, installation of new surface aerators, construction of baffle walls and desludging of the lagoons led to the reduction of pollution being discharged to Maypajo Creek.

The following are the technical information about the system:

- System – Dagat-dagatan Sewage Treatment Plant
- Capacity – 13,000 CMD
- Average Loading – 4,000 CMD
- Components:
  - 67km sewer network
  - Sewage Pumping Plant

- 1.5km forced main
- Oxidation Ponds – 2 modules, each with 1 aerated pond, 1 facultative pond and 1 polishing pond
- Detention time ~ 8 days

- Additional Facts About the Facility:
  - ISO 9001:2000 (Quality Management System) & ISO 14001:2004 (Environmental Management Systems) Certified
  - Recipient of LLDA "Blue Award" for consistently meeting the effluent standards

To date, Dagat-dagatan Sewage Treatment Plant is operating with discharge permit from LLDA.

The **Quezon City Communal System** serves Project 7 and Project 8 in Quezon City. There are about 3,999 sewer service connections in this area. Wastewater generated in the area is collected by the system through sewer service connections and conveyed to a communal septic tank. The effluent is discharged to Culiat/Duria Creek.

The main components of the system include:

- 4 Communal Septic Tanks
- 1 Imhoff Tank
- ~ 18 km-long Sewer Line

These communal systems are not designed to meet the effluent standards set by the government. Part of the maintenance requirement is the regular desludging of these communal septic tanks (twice a year). However, due to accessibility problem, i.e., squatters living within the area, Maynilad was unable to desludge them. Currently, Maynilad, in coordination with MWSS and other government agencies, is in the process of clearing the said facilities in preparation for its planned upgrading. On the other hand, the Project 7 Imhoff tank was rehabilitated in April 2003 and regular desludging is being done thereafter.

For the **Makati Isolated System**, wastewater generated by the residents of the Magallanes Village is being conveyed to the Ayala Sewage Treatment Plant, which serves other parts of Makati City and is operated by Manila Water.

4.2.2 Sanitation Facilities

Maynilad is also operating sanitation facilities for the implementation of sanitation program of the company. Regular desludging of customers' septic tanks is being conducted once every 5-7 years to help in the reduction of pollution loading entering public drain and waterways.

A septage treatment plant with capacity of 450 cubic meters per day was constructed in 2003-2005 under the MSSP-2 project funded by the World Bank. It

is located at the existing wastewater treatment plant site at Dagat-dagatan, Caloocan City. All septage collected using vacuum tankers is brought to this facility for dewatering and treatment of the wastewater.

The following are the technical information about the system:

- Main Equipment
  - 2 Acceptance Units with screening and grit removal capabilities
  - 400 CM Equalization Tank
  - Polymer Dosing Unit
  - 3 Dewatering Units
- Type of Treatment – Flocculation/Coagulation, Dewatering
- Capacity – 450CM (16-hr operation)
- Sludge Quality – Dewatered Sludge @ 20-25% dry solids
- Sludge/Biosolid Management
  - The septage sludge or biosolids produced by the plant is being used as soil conditioner in sugar cane plantations in Pampanga. Through a research project that started in 2004 in cooperation with the Sugar Regulatory Administration, the biosolids is now recognized and certified by the Fertilizers and Pesticides Authority as a soil conditioner.
  - Provided 10,000 cubic meters of biosolids to sugar cane farmers in Floridablanca and Bacolor Pampanga last in 2006 and another 6,000 cubic meters in 2007. To date Maynilad is working on other beneficial uses of biosolids.
- Additional Facts About the Facility:
  - ISO 9001:2000 (Quality Management System) & ISO 14001:2004 (Environmental Management Systems) Certified
  - Recipient of Lopez Achievement Awards in 2006 for "Asset form Waste" Project
  - Recipient of LLDA "Blue Award" for consistently meeting the effluent standards

Maynilad is currently using two (2) types of equipment in collecting septage from septic tanks - the Mobile Dewatering Unit (MDU) and the Vacuum Truck.

- MDU Operation

There are currently seven (7) Mobile Dewatering Units (MDU). These trucks can desludge and dewater the septage on-site. The dry septage or biosolids are temporarily stored at the Dagat-dagatan Sewage Treatment Plant (DDSTP) and later hauled and disposed to farmlands in Pampanga.

- Vacuum Truck Operation

  There are six (6) units of 4-cu.m. and 19 units of 10-cu.m.capacity Vacuum Trucks Units (VTU). Each 4 cu.m. VTU can desludge an average of 2 septic tanks per trip while each 10 cu.m. VTU can desludge an average of 4 septic tanks per trip. Once the tank gets filled, the collected septage is discharged and processed at the Dagat-dagatan Septage Treatment Plant (DDSPTP).

Implementation of Desludging Program

In accordance with the CA, Maynilad provides regular desludging services to residential and semi-business customers in its service area.

Coordination with different subdivisions and barangays is done to select prospective program areas for massive desludging. A community briefing is undertaken to provide information on the services that Maynilad intends to provide to the customers. A survey is then conducted in the prospective areas to determine the number of interested customers. Those who are not interested are asked to sign a waiver indicating why they do not want to avail of the services. Customers who signed a waiver can no longer avail of the free services until after 5 to 7 years, which is the prescribed period for repetition of the services, based on the Concession Agreement. After the survey, the desludging schedule is set.

Customers can also request for desludging services through the Septic Tank Desludging Request (STDR) provided that their areas have not been served as program areas for the past 5 to 7 years. Such service is given free, however, once their areas have been scheduled and the desludging program has been completed, such requests are charged with scheduled fee.

At present, Maynilad is behind the sanitation target set in the CA. The reasons for this are the late delivery of septage collection trucks in the early years of the concession, delayed construction of the barge loading facility and the delayed construction of septage treatment facility. Nevertheless, a catch-up program has been established to meet the 2006 sanitation target in 2008 as contained in the Rehabilitation Plan

Maynilad intends to ensure that customers avail of desludging services to take full advantage of the facilities being operated and maximize environmental benefits. In fact, Maynilad plans to acquire smaller desludging tankers to serve the areas currently inaccessible due to narrow roads/streets. This will enable Maynilad to reach and serve a greater customer base. Moreover, information campaigns are regularly conducted in order to explain the advantages of the services being offered to the customers. This practice shall be continued because not only will this allow Maynilad to meet its targets for sanitation but will also contribute to a cleaner environment.

Under the CA, Maynilad is mandated to desludge septic tanks of domestic customers. Thus, the focus of the company is to meet targets for residential and semi-business customers. However, many commercial customers have been requesting for desludging services. To address this situation, Maynilad began imposing charges on desludging services for commercial customers, provided that their septic tanks contain only domestic waste, as the company's treatment facility cannot handle non-domestic wastes.

In addition, charges are also imposed on residential customers who initially refused service during a desludging program in their areas. It is hoped that this policy will force more customers to immediately avail of the service during scheduled desludging programs. In the past, it has been observed that many customers defer availment of service knowing that they could still request for free desludging even after the program. With this scheme, more customers are expected to be served in a given area in less time thus accelerating the attainment of targets for the different cities and municipalities set forth in the CA and maximizing the environmental benefits from the program.

4.3 CAPITAL INVESTMENT PROGRAM

The Capital Investment Program for the 5-year Business Plan from 2008 to 2012 focused on four (4) major programs, namely: 3R Program; Operations Support Program; Water Sources Program; and Sewerage and Sanitation Program. Each program is associated to one another and is planned to comply with the Company's service obligations to all customers in the West Concession. The programs also include the natural calamity mitigation within the five-year period.

4.3.1 NRW Management and 3R Program

The NRW Management and 3R Program is an integration of the concept of ***Recovery*** of lost water, ***Reallocation*** to potential market area and ***Resell*** to underserved and unserved customers in West Concession. It also incorporates the instrumentation and digitization to the Geographical Information System (GIS) of the established and future underground and exposed assets. The Program also takes into account the requirement for technical assistance provided by various local and foreign experts in the water industry.

4.3.1.1 Background

In 2005, Maynilad commissioned the firms Radian Consulting, Inc. (Radian) of the Philippines and Halcrow Water Services Limited (Halcrow) of United Kingdom to do a study for its Revenue Enhancement Project. Certain recommendations of the feasibility study submitted by Radian and Halcrow, such as the establishment of HAs and hydraulic zones or sub-zones and the rehabilitation of hydraulic zones/sub-zones with high losses, were adopted in the NRW Management and 3R Program.

In December 2006, the new owners of Maynilad submitted a technical proposal as part of their bid for the Company. Certain considerations were likewise adopted from that technical bid proposal in this Program. These include: (a) utilization of the existing pump stations and reservoirs, (b) installation of PRV for each DMA, and (c) adoption of the DMA concept in NRW reduction.

To further enhance and update the work of Radian and Halcrow, as well as the technical proposal of the new owners, Maynilad internally prepared hydraulic models. Calibrations for this model had been undertaken to suit actual field conditions based on flows and pressures.

There were also models prepared by Maynilad for each HA and its sub-zones. All of these models were prepared, calibrated and simulated based on today's scenario and future scenarios.

In this Program, the primary system hydraulic model, hydraulic area models and the sub-zones models were used in determining the activities for the establishment of the hydraulic areas and their sub-zones.

4.3.1.2 NRW Management Strategy

The goal of the strategy is to achieve the service level target of uninterrupted 24-hour supply that meets the PNSDW requirements and provide 5 meters/7 psi minimum pressure at customer meter by (a) increasing the production capacity; (b) reducing the NRW to a level that meets customer demands; and (c) a combination of the NRW reduction and of additional production capacity or new water treatment plants.

There are five (5) major components of the strategy, to wit:

- Creation of NRW Teams
- Establishment of HAs and DMAs
- Data Management/ GIS
- Meter Maintenance
- Training and Benchmarking

About 1500 Mld or 66% (2007 data) of the system input is lost in the distribution as NRW. Record shows that the most viable source of water and the fastest way of improving water supply services will come from NRW recovery. The greater part of lost water can be recovered, reallocated and resold to the underserved and unserved customers.

The current primary, secondary and tertiary pipes network is a huge interconnected maze, mainly because of the inadequate records and the vague underground assets during privatization. Available information about the current network is still a limitation.

It is necessary to restructure the overall distribution system into a number of smaller networks, each have a controlled pressure and monitored flow in order to obtain accurate and reliable information on flow and pressure in the water distribution system and to efficiently address NRW. These networks will reflect the hydraulic boundaries and will be fed by restructured primary mains forming the backbone of the system, with only single monitored connection to each HA.

The technical restructuring process is planned to be carried out in the following stages: (a) identification of the current status of the distribution system, installation of pressure and flow controlling instruments, collecting available data on flow and sales, setting up and verification of the hydraulic model; (b) identification of HAs and of DMAs within the HAs; (c) identification of primary distribution mains; (d) isolation of primary distribution mains and of HAs and DMAs; (e) monitoring and evaluation of pressure, flow and water sales in combination with night-flow

investigations within the HAs and DMAs; (f) assessment of intervention alternatives and selection of least-cost solution; (g) contracting construction and respective supervision of proposed option; and (h) handing over of restructured HAs and DMAs to a respective unit for operation and maintenance.

While the size of the hydraulic areas is determined by the hydraulics of the system, each HA will not supply more than 50,000 customers, while the DMAs will cover only about 500-1,000 customers.

The intervention assessment will compare technical options with its costs; impact on reduction of NRW and potential increase on water sale; impact on environment during construction or rehabilitation, such as on traffic and coordination with other public utilities networks; impact on reduction of pipe bursts and other accidents; impact on reduction of maintenance costs, age and materials of the rehabilitated pipeline, and others.

Within each discrete HA, DMAs or sub-zones will be established to provide information on supply flow, pressure, NRW, etc. in each DMA. In establishing DMAs, cross connections with adjacent zones will be closed and single feeds established. This will require improvements to primary mains supplying HAs and modifications to some existing DMAs with multiple cross border flows. Some DMAs will be fitted with PRVs for pressure control, while all DMAs will have district meters for monitoring of flow.

Information from night flow measurement will enable NRW in a DMA to be established and broken into its physical and commercial components. Generally, in a DMA with recorded high NRW, the high night flow relates to high physical NRW while the low night flow indicates high commercial NRW.

Each DMA, after establishment and isolation will have a pre-determined trigger flow level, above which leak detection and repair will be carried out until the inflow has been reduced to an acceptable level.

4.3.1.3 Objectives of the Program

The main thrust of the NRW Management and 3R Program is:

- To recover lost water by rehabilitating and reconfiguring the pipe network.
- To improve service levels to existing underserved customers and serve new ones
- To improve operations efficiency with the provision of equipment, telemetry, GIS and appropriative training and development; and
- To maintain and sustain the low level of NRW

The target reduction of NRW, increased sales, and improved services are shown in Table 4-3 below.

Table 4-3: NRW Reduction and Sales Target

Year	NRW (%)	Sales (MCM)
2007	66	286
2008	62	330
2009	57	381
2010	51	437
2011	46	495
2012	40	539

4.3.1.4 Description of the Program

The Program plans for the reconfiguration of the network into 31 discrete hydraulic areas (HAs). It covers the current supply area (26 HAs) and expansion areas (5 HAs). Within each discrete HA, district meter areas (DMAs) or Sub-zones are likewise to be established, isolated and measured. Each DMA is single-fed and fully isolated. All DMAs will be equipped with district meters for supply flow measurement and PRVs for the pressure control and management. A total of 1,489 DMA's will be established within the Service Area West of which 1,338 DMAs are within the 3R Program while the rest will be supplied by the new water sources.

After establishing the DMAs, the NRW team will undertake diagnostics and analyze the NRW, cause of leaks and other information on the DMA. After the diagnostics, decision will be made if full or partial pipe replacements will be undertaken in the DMAs established. However, for HAs or DMAs with the highest NRW of above 60% or Infrastructure Leakage Index (ILI) of more than 500, the immediate solution would be a total pipe replacement.

Once the establishment of each DMA is completed and its NRW data (i.e. supply flow, IWA water balance, infrastructure leakage index, night flows, diurnal pressures, etc.) becomes available, appropriate NRW diagnostic will be undertaken to verify whether full pipe replacement or partial rehabilitation will be implemented.

The infrastructural improvements will be supported by institutional strengthening to ensure sustainability of the gains in reducing NRW as well as continuing social intervention by the BC personnel to ensure that the NRW is kept at low levels.

In summary, the program components of the NRW Management and 3R Program are:

A. Recovery Program
   - DMA Establishment
   - NRW Diagnostic
   - DMA Full and Partial Pipe Rehabilitation

B. Reallocate Program
   - Hydraulic Area Establishment and Measurements
   - Hydraulic Area Pipelaying

C. Resell Program
   - Pipelaying in Expansion Areas

D. Instrumentation and GIS
E. Technical Assistance

4.3.1.5 Program Components

Recovery Program

The **Recovery Program** is part of the NRW Management Program of Maynilad. The implementation of recovering lost water through the use of NRW Management strategies will ensure the company's viability.

The Recovery Program consists of three (3) activities broken down as follows:

A1. DMA Establishment, Isolation and Measurement;
A2. NRW Diagnostic; and
A3. DMA Full and Partial Pipe Rehabilitation

Since NRW Management is an integral component of the Capital Investment Program, a comprehensive report for Maynilad's NRW Management Program has been prepared as a reference for the activities that will be undertaken.

DMA Establishment, Isolation and Measurements

With the establishment of the 31 discrete HAs for the distribution system of Maynilad, almost 1,338 DMA will likewise need to be established. There will be 118 km feeder pipelines, 1,296 district meters, 1,270 PRVs and 1,853 isolation valves required for installation. The district meters will be used for the flow measurements and the PRV for the control of the water pressure particularly during the night or low demand hours.

The works under this component are establishment, isolation and measurement of DMAs or sub-zones. Works would be the: (a) laying of feeder pipelines for the DMAs, (b) installation of gauging points (GPs) equipped or fitted with a district meter, pressure measuring device and PRVs, (c) leak repair works, and (d) minor rehabilitation. Table 4-4 shows the detailed requirements of 1,160 DMA for establishment, isolation and measurement.

Table 4-4: DMA Establishment, Isolation and Measurement

HA	Total No. of DMAs	Feeder Pipelines	District Meter	PRVs	Isolation Valves
		Km	Qty	Qty	Qty
2	81	8	74	63	91
3	44	14	43	44	5
4	43	7	41	37	18
5	50	7	50	50	26
6	63	6	63	63	68
7	8	0	8	8	0
8	25	0	25	24	0
9	21	0	21	21	0
10	26	0	26	20	0
11	76	14	76	76	0
12	90	5	87	87	554
13	56	2	55	35	0
14	22	9	22	22	0
15	0	0	0	0	0
16	98	0	72	98	188
17	53	2	54	58	4
18	39	3	39	39	134
19	18	0	18	9	0
20	67	1	62	64	91
21	46	0	46	46	17
22	48	1	48	48	39
23	62	7	62	62	203
24	28	0	28	28	93
25	63	1	63	63	220
27	37	0	14	14	78
28	26	17	37	37	0
29	48	1	26	26	21
32	45	3	48	48	0
33	20	5	45	45	0
34	21	4	22	20	0
36	14	1	21	15	3
Total	**1,338**	**118**	**1,296**	**1,270**	**1,853**

The detailed yearly program and Capex requirement for DMA establishment, isolation and measurement is shown in Annex 1A1.

NRW Diagnostic Program

The program applies to all DMAs that have already been established and measured. The works under this program are composed of leak repair, small and large meter auditing and replacement, closing of illegals, termination of spaghetti pipelines, valve installation and replacement, district meter replacement and other activities necessary to reduce high NRW level and sustain within the tolerance level.

DMA Full and Partial Pipe Rehabilitation

The works for full or partial rehabilitation of DMA varies with the NRW level or the ILI of a DMA. The rehabilitation works consider the bundle of DMA with high NRW in each discrete HA. This is to increase the success rate in reallocating the recovered lost water to the potential market areas. The concentration of NRW efforts will be on a per HA basis.

Rehabilitation involves full or partial replacement of distribution network and installation of service connections and other appurtenant works in priority DMA. The full replacement of pipes are applied for DMA with high NRW (higher than 60%) or ILI of more than 500, and with proven-unsatisfactory conditions, namely AC pipes, pipes deeper than two (2) m that are difficult to locate, and pipes with burst rates that exceed four (4) bursts per km per year.

In this program, the 490 DMAs for full rehabilitation and 677 DMAs for partial rehabilitation will replace 925 km and 414 km pipelines, respectively. Table 4-5 presents the breakdown of DMA full and partial rehabilitation per HA.

Table 4-5.: DMA Full and Partial Pipe Rehabilitation

HA	Full Rehabilitation Length (km)	Partial Rehabilitation Length (km)
2	7	46
3	36	12
4	0	39
5	26	28
6	0	31
7	0	22
8	15	0
9	16	0
10	42	0
11	91	26
12	36	30
13	84	20
14	17	32
15	0	5
16	16	13
17	31	34
18	0	12
19	85	0
20	135	6
21	61	4
22	128	0
23	88	8
24	0	10
25	11	30
27	0	4
28	0	0
29	0	0
32	0	0
33	0	0
34	0	0
36	0	0
Total	925	414

The detailed yearly program and Capex requirement for DMA Full and Partial Rehabilitation is shown in Annex 1A2.

NRW Reduction Programs on Primary Lines and other Network Facilities

Aside from the programs to improve operations and control of the primary distribution/transmission facilities, other NRW reduction activities will have to be implemented to ensure that the water recovered from the rehabilitation activities will not get lost/wasted and will reach its target areas where it will be sold. To achieve this objective, the **Primary Line Program** and **Reservoir Leak Test Program** will be continued.

The objective of the **Primary Line Program** is to systematically and comprehensively detect, eliminate, and repair significant losses that are occurring in the primary network in the form of leaks, illegal connections, flow obstructions, over & under loaded pipelines, and other abnormalities. The possible sources of significant losses or leaks may come from the following:

- Old Cast Iron pipes (lead caulked)
- Asbestos Cement pipes (comet joints)
- River and Creek Crossing Sections Pipelines
- Steel Pipes
- Reinforced Concrete Pipes

The Primary line program includes:

- Accelerated leak repair program
- Leak detection program
- Walk the line program
- Water audit by segment
- River and creek crossing investigation and analysis
- Inspection through CCTV camera

Leak Repair Program

The program is designed to address the immediate repair of breakages in order to arrest losses (potential revenue). Leakages/breakages are repaired within 48 hours upon detection/receipt.

Walk the Line Program

The objective of this program is to locate/detect leakages and illegal withdrawal of water on the 395 kms of primary mainlines through *ocular inspection*. For 2008, this program is targeting 326 kms of primary lines to undergo walk the line program. The procedures of this program includes inpections and investigation of manholes, drainage or open canals to search for possible leak and leak sounding for every 2 meters intervals is performed using a leak noise correlation equipment.

Comprehensive Leak Detection Program

This program is an in-depth study of leaks after the result of the walk the line program - this program is telemetry guided. Existing telemetry points will be analyzed in selecting primary mainline to be investigated. Flows in segment/span of pipe will be measured, or simply water audit is made, if flow difference is noted, mainline is considered to have losses (underground leaks or illegal withdrawal). Progressively, the span of pipe is reduced through the construction of GP until the segment is manageable for leak correlation.

Water Audit by Segment

The program aims to detect losses and abnormalities of the system through hydraulic analysis involving flow and pressure measurement and subsequently enforce and/or recommend ways in order to rectify or correct the situation either through leak repair, cutting and plugging of illegal withdrawal or endorsement to concerned authorities for regularization of illegal customers, if any. The results of the investigations can also be used as a guide in making decisions as to which parts of the distribution really need immediate rehabilitation. Likewise, the data that will be obtained will be used in calibrating and enhancing the Primary Network Model.

River and Creek Crossing Investigation and Analysis

The program aims to investigate and detect any abnormalities that are occurring in river and creek crossing sections of pipelines. Cross-over and cross-under pipes are identified and scheduled for measurement of flow and pressure. When data is gathered, hydraulic grade lines are made and compared to theoretical. If there are irregularities, section is tested again. The results of this investigation will be used as basis for decommissioning. For this year, about 22 river and creek crossing will be investigated.

Reservoir Leak Test

The reservoir leak test program was developed to be able to evaluate existing physical condition of the reservoirs and test them for losses / leaks especially on the flooring and appurtenances such as drain valves and etc. This program aims to conduct the test in all active and soon to be utilized reservoirs on a yearly basis. Testing for leaks will be done to ensure that water is not lost during impounding in these reservoirs. Prior to the actual test procedure, physical inspection of the reservoir structure such as the outside walls, drain outlets will be done to look for signs of leaks/losses. During the actual leak test, reservoir is refill and then, inlet and outlet valves are closed. Reservoir water level is observed for changes for three hours.

Recovery Program Cost Estimate

The five (5) year Recovery Program or the NRW Management Program will amount to PhP11.761 billion, of which 18% will be used for DMA establishment, isolation and measurement, 75% for DMA full and partial rehabilitation and 7% for NRW Diagnostic. Table 4-6 shows the yearly Capex (2008 to 2012) of the Recovery Program.

Table 4-6 : Five (5) Year Capex for Recovery Program

Project Description	PCE, MPhP 2008-2012	Project Cost Estimate (PCE), MPhP				
		2008	2009	2010	2011	2012
1A1. DMA Establishment, Isolation & Measurements	2,677	287	910	1,020	440	20
1A2. NRW Diagnostic	770	98	175	197	165	135
1A3. DMA Full and Partial Rehabilitation	8,314	1,984	2,567	2,266	1,053	444
TOTAL	11,761	2,369	3,652	3,483	1,659	599

Reallocate Program

Reallocate Program is a support for both the recovery and resell program. The main objective of this program is to reconfigure the existing network into discrete HA wherein the recovered lost water may be reallocated to the potential market areas.

Hydraulic Areas Establishment, Measurements and Pipelaying

The reconfiguration of the distribution network into 36 HAs is geared towards improved operations, monitoring and control of the system. Each HA will be fed by, as much-as-possible, single-supply source and will be provided with flow and pressure monitoring devices. In the 3R Program, 31 HAs are planned to be established and measured. Only 23 HAs requires capital investment since eight (8) of the 31 HAs were already established. The activities in this program entail the laying of 120 km of primary and secondary pipelines, installation of 31 gauging points and 31 isolation valves.

With the HAs in place, Maynilad can direct the water more easily where it is needed, manage and calibrate the pressures and measure the amount of water with better accuracy. Table 4-7 presented the total requirements of 23 HAs for establishment, measurement and pipelaying.

Table 4-7 : HAs for Establishment, Measurement and Pipelaying

Hydraulic Area	No. of HAs	Pipelines	Gauging Points	Isolation Valve
		Km	Qty	Qty
2	1	10	0	2
7	1	-	1	-
8	1	6	1	1
9	1	3	2	1
12	1	1	1	2
13	1	1	-	-
14	1	2	2	-
16	1	-	4	2
17	1	1	2	5
18	1	-	-	3
19	1	-	1	-
20	1	-	1	2
21	1	2	3	2
22	1	2	4	6
23	1	7	3	-
25	1	3	-	4
27	1	3	-	1
28	1	2	1	-
29	1	7	1	-
32	1	15	1	-
33	1	23	1	-
34	1	29	1	-
36	1	3	1	-
TOTAL	23	120	31	31

The detailed yearly program and Capex requirement for HA Establishment and Measurement, and HA Pipelaying are shown in Annex 1B1 and Annex 1B2, respectively.

Reallocate Program Cost Estimate

The five (5) year Reallocate Program will amount to approximately PhP2.64 billion, on which 2% will be used for HA establishment and measurement and 98% for HA pipelaying. Table 4-8 shows the yearly Capex (2008 to 2012) for the Reallocate Program.

Table 4-8 : Five (5) Year Capex for the Reallocate Program

Project Description	PCE, MPhP 2008-2012	Project Cost Estimate (PCE), MPhP				
		2008	2009	2010	2011	2012
1B1 HA Establishment & Measurements	54	9	9	18	18	0
1B2 HA Pipelaying	2,589	948	707	353	371	210
TOTAL	2,643	957	716	371	390	210

Resell Program

Resell Program is designed to provide water for underserved and unserved areas in the West Concession. The program is composed of pipelaying and network improvement that will directly benefit the customers.

Pipelaying in Expansion Areas Program

The program is applicable to different parts of the distribution system. Pipelaying may be conducted in the established DMA within the expansion areas. There will be around 151 DMAs with an approximately 600 km pipelines to be developed in the expansion areas. Table 4-9 shows the required pipelaying per HA expansion.

Table 4-9 : Pipelength per HA Expansion

HA	Expansion Length (km)
2	23
3	0
4	1
5	0
6	0
7	0
8	14
9	0
10	0
11	4
12	0
13	0
14	0
15	0
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
27	0
28	110
29	80
32	160
33	62
34	131
36	16
Total	600

Resell Program Cost Estimate

The five (5) year Resell Program is approximately PhP5.26 billion. Table 4-10 shows the yearly Capex (2008 to 2012) of the Resell Program.

Table 4-10 : Five (5) Year Capex for Resell Program

Project Description	PCE, MPhP 2008-2012	Project Cost Estimate (PCE), MPhP				
		2008	2009	2010	2011	2012
1C1. Pipelaying at Expansion Arees	5,262	1,509	1,131	866	893	862
TOTAL	6,262	1,509	1,131	866	893	862

The detailed yearly program and Capex requirement for pipelaying and network improvement is shown in Annex 1C1.

4.3.1.6 Instrumentation and GIS

The instrumentation and GIS consist of: (a) Geographic Information, (b) Telemetry, (c) Leak detection equipment, and (d) Water Meter.

Geographic Information System (GIS)

Maynilad has acquired the GIS Manifold Software in 2004 for the development of its GIS. Manifold is a GIS software package developed in UK.

To date, all pipeline network, sewer lines, district meters, flow meters, valves, PRV, etc., completed in 2007 have already been inputed in this GIS and continuous updating and validation have been undertaken with the help of Operations. Many operational data such as the flow and pressure readings in the gauging points are currently being developed. The current base maps such as the road polygons, and building footprints, are based on 1:5000 scale maps with accuracy of plus or minus 20 meters. These base maps were acquired in 1999. Considering its accuracy level and age of the base maps, an update is required.

Also, the GIS layers and its database are planned to be published in the web for viewing of the GIS clients in various locations early next year. The GIS software may require upgrading. The plan is to shift to ESRI GIS product or any equivalent because of its advanced functionalities and applications for utility companies.

Works included in this GIS are:

- Acquisition of base maps with sub-foot accuracy covering 70,000 hectares for the West Concession,
- Acquisition of ESRI GIS software and hardware, and
- Development of customized and advanced applications.

The detailed yearly program and Capex requirement for GIS is shown in Annex 1D1.

Telemetry

The telemetry component would include the supply and installation of data logger for all HAs, DMAs, Pump Stations, and top 500 commercial customers. The data loggers will be equipped with GSM/SMS technology, and will be capable of storing flow and pressure data from the flow meter or district meter and pressure transducer. The data logger will be capable of sending the daily flow and pressure data to the central computer in the Head Office at given periods (daily or every four hours). The central computer in the Head Office shall be designed to receive the flow and pressure data sent by the data loggers and to publish the flow and pressure readings in the web thru internet or intranet. Establishment of the flow and pressure profile of each HA, DMA and for the top 500 customers to be tracked periodically will be established. Any significant deviation in the established flow and pressure profiles will trigger appropriate actions to address the problem or irregularity. Such deviations would mean the presence of pipe breakage or occurrence of leaks inside the DMA, unauthorized connections, meter inaccuracies, etc. that would require immediate attention. Such deviations will be tracked by the data logger and alarms will be sent to the central computer and to the personnel concerned. The time duration in addressing the problem will also be tracked in the central computer. By undertaking and using this technology and supported institutionally, the sustenance of low NRW and better water supply service can be undertaken and ensured at all times.

The works in this component involve:

- Supply and installation of 2,000 data loggers which are equipped with GSM/SMS technology. These data loggers must have internal pressure transducers.
- Supply and installation of one (1) central computer system
- Supply of 150 personal computers for the zone personnel and all other technical support staff in Operations.
- Outsourcing the maintenance services of the data logger for the first 5 years.

The detailed yearly program and Capex requirement for Telemetry is shown in Annex 1D2.

Leak Detection Equipment

The advent on development in terms of leak detection technology has resulted to an improved accuracy in terms of determining locations of leak. Maynilad is looking towards purchasing such equipments as Leak Noise Correlators, Acoustic Leak Noise detectors, Valves and Pipe locators, Flow and Pressure loggers, etc. to identify locations of non-visible leaks which are major contributors to NRW. This will potentially decrease the need to implement total pipe replacement on DMAs where the only cause of high NRW is from specific numbers of non-visible (non-surfacing leaks).

The detailed yearly program and Capex requirement for Leak Detection Equipment is shown in Annex 1D3.

Water Meters

As part of the NRW Management Strategy, identification of commercial causes of NRW will be actively undertaken. As such, investigation of defective or under registering water meters and identification and regularization of illegal users, coupled with customer consumption analysis will be intensified.

The detailed yearly program and Capex requirement for Water Meter is shown in Annex 1D4.

Instrumentation and GIS Program Cost Estimate

The five (5) year Instrumentation and GIS Program amounted to PhP761 million, of which 10% will be used for GIS, 21% for telemetery and data loggers, 9% for leak detection equipment, and 60% for water meters. Table 4-11 shows the yearly Capex, (2008 to 2012) for Instrumentation and GIS Program.

Table 4-11 : Five (5) Year Capex for Instrumentation and GIS Program

Project Description	PCE, MPhP 2008-2012	Project Cost Estimate (PCE), MPhP				
		2008	2009	2010	2011	2012
1D1. *Geographic Information System*	76	14	25	10	15	12
1D2 *Telemetry & Dataloggers*	160	0	46	34	32	48
1D3. *Leak Detection Equipments*	74	0	24	17	17	16
1D4. *Water Meter*	452	220	53	55	64	59
TOTAL	761	234	148	116	128	135

4.3.1.7 Technical Assistance

The items under the Technical Assistance are: (a) engineering design services, (b) construction management and supervision (c) various advisory services and studies, and (d) trainings.

Engineering Design Services

Works included are engineering detailed design services of: (a) HA backbone, (b) DMA feeder mainlines, (c) Pipe replacement, and (d) DMAs establishment and measurement.

Construction Supervision Services

Works included are construction supervision in implementing the HA establishment and DMA establishment.

NRW Studies and Various Advisory Services

Works included are: (a) Quantity Surveyor services, (b) Institutional and strengthening studies, (c) Environmental monitoring studies, and (d) Engagement of the services of NRW expert, and (e) Feasibility Studies.

Personnel Training & Development

Various training and development programs concerning NRW reduction, such as the use of IWA water balance and other performance indicators, operations and maintenance of pressure regulating valves, best practices in NRW reduction and sustainability, and visits to other water utilities worldwide that have successfully implemented NRW reduction project, will be established. All 130 zone heads or managers and all NRW managers and staff will be required to participate in the training and development program to ensure the success of the NRW reduction program. Table 4-12 shows the yearly Capex (2008 to 2012) for Technical Assistance.

Table 4-12 : Five (5) Year Capex for Technical Assistance

Project Description	PCE, MPhP	Project Cost Estimate (PCE), MPhP				
	2008-2012	2008	2009	2010	2011	2012
1 Engineering & Construction Services	211	42	45	45	42	37
2 NRW Studies & Advisory Services	49	41	3	3	1	1
3 Training & Development	30	0	10	10	5	5
TOTAL	290	83	58	58	48	43

4.3.1.8 3R Program Cost Estimates

The five (5) year 3R Program is approximately PhP20.72 billion, of which, 57% will be used for recovery program, 13% for reallocate program, 25% for resell program, 4% for Instrumentation and GIS and 1% for Technical Assistance. Table 4-13 shows the yearly Capex (2008 to 2012) for 3R Program.

Table 4-13 : Five (5) Year Capex for 3R Program

Project Description	PCE, MPhP 2008-2012	Project Cost Estimate (PCE), MPhP				
		2008	2009	2010	2011	2012
A. Recovery Program	11,761	2,369	3,652	3,483	1,659	599
B. Reallocate Programs	2,643	957	716	371	390	210
C. Resell Program	5,262	1,509	1,131	866	893	862
D. Instrumentation and GIS	761	234	148	116	128	135
E. Technical Assistance	290	83	58	58	48	43
TOTAL	20,717	5,152	5,705	4,893	3,118	1,849

4.3.2 Operational Support Programs

The Operational Support Programs aim to sustain and enhance service efficiency and to provide new primary pipelines to the expansion areas. The main components of this program are: La Mesa Treatment Plants or Water Production Rehabilitation, New Trunklines, New Pump Stations, New Reservoirs, Water Network & Pumping Station Rehabilitation, Construction and Optimization, Building, Offices and Warehouses, Water Meters Replacement, Information Technology Programs, ROW & Permits, Affected Utility Projects, Equipment, and Consultancy Services.

4.3.2.1 Maintenance of Water Production Facilities

There are two existing water treatment plants in Maynilad, the La Mesa Treatment Plants 1 and 2. The WTPs are ISO 9001:2000, certified by TUV: SUD, Philippines on October 08, 2006.

The LMTP 1 was put in operation in 1982. It is a standard flocculation-settlement-rapid gravity filter plant with a design capacity of 1500 Mld.

The LMTP 2 was completed in 1994. It is a pulsator-clarifier filter plant with a design capacity of 900 Mld.

Plans and Programs

For the period 2008-2012, Maynilad will invest in the improvement of the water treatment facilities to ensure plant efficiency and reliability, environmental compliance and plant safety and stability.

Plant Efficiency/Reliability

- **Installation of Programmable Logic Controller (Skid Tank) - 1A**
  The Programmable Logic Controller will ensure continuous operation of the LMTP-2 skid tank where mixing of water and polymer is done to attain the right concentration.
- **Installation of Level Monitoring Device at Alum Tanks**
  The project aims to provide an accurate monitoring facility for alum stock for verification of volume delivery and actual consumption.
- **Relocation of North & South Ultrasonic Flowmeter Sensor at LMTP-2**
  The north & south influent flowmeter sensors need to be relocated from vertical to horizontal position to avert erroneous reading during low inflow elevation at LMTP-2.
- **Installation of Electric Actuators at LMTP-2**
  The project intends to install electric valve actuators to all manually operated valves at the repartition chamber, which will eventually be automated.
- **Rehabilitation of Sedimentation Basin Drain Gates**
  Rehabilitation of filter beds and sedimentation basin drain gates is necessary to be able to save on power costs in recovering water losses due to excessive leaks in 24 units of filter beds and sedimentation basin drain gates at LMTP-1.
- **Installation of Water Level Monitor for Filters (24 units)**
  The project aims to be able to obtain accurate real time data from each of the 24 filter beds, save on time and personnel costs and prepare the plant for eventual automation.
- **Installation of Centralized Monitoring System**
  The project intends to systematize the monitoring of all facilities by providing a centralized monitoring system that would give accurate data relevant to plant operation and level of water treatment and quality.
- **Hydraulic Improvement of Raw Water Channel (chipping)**
  Chipping of the raw water channel after the portal would result to maximization of raw water extraction going to LMTP-1.
- **Installation of Screens at LMTP-1**
  The existing screens, which prevent large, floating debris, such as tree limbs, branches, grass, etc., present in raw water from entering the plants, show signs of deterioration and are not automated to respond to emergency lifting. The proposed screens are automated to ensure easy maintenance (cleaning and repair).
- **Lowering of Chlorine Battery A**
  The existing chlorine cylinder weighing scale on the cement floor needs to be lowered further to prevent accidents that may occur during hauling of chlorine cylinder tanks using overhead crane and for symmetry and uniformity with Battery B and base of evaporation.

- **Rehabilitation of Operating Desk**
  Upgrade of the operating desk components aims to prevent further deterioration of the existing desks.
- **Supply of Various Laboratory Equipment**
  The Process Control Laboratory needs new equipment to operate at optimum level and provide quick services.

Water Quality Enhancement

- **Supply/ Installation of On-line Analyzers**
  On-line analyzers will give real time data as to the quality of raw, settled and finished water so proper adjustments could immediately be made as needed.
- **Upgrading of Existing On-line Analyzers**
  The existing analyzers need to be upgraded to become more responsive to laboratory requirements by giving more accurate real time data. Additional instruments are needed to be able to analyze other elements which cannot be detected using the available units.
- **Replenishment of Filter Media (Silica Sand)**
  Replacement/ replenishment of the filter media is urgently needed to restore filter beds efficiency which has greatly diminished as a result of continuous plant operation.
- **Upgrading of Chemical Dosing System at LMTP-1 & LMTP-2**
  Due to frequent breakdown of dosing pumps, upgrading of dosing systems is imperative, to ensure accurate dosing for higher range of inflows.

Environmental Compliance

- **Installation of Chlorine Scrubber**
  Chlorine scrubber is used to immediately neutralize chlorine during possible chlorine leak, thus, preventing escalation of the problem.

Plant Safety/Stability

- **Rehabilitation/ Replacement of Diesel tank**
  The project intends to maintain safe buffer of diesel for generator set and prevent further deterioration of underground tank from corrosion, etc.
- **Replacement / Repair of Electrical Cabinets**
  Electrical panels must always be secured and defective electrical cabinets should be repaired / replace to eliminate safety hazards in the workplace.
- **Insulation of Plant Offices**
  Plant offices should be insulated from chlorine odor or fumes, which is prevalent as chlorination is being done 24 hours a day.

- **Landscaping, Construction of Drainage & Fence at Weir Structure**
  Landscaping, construction of drainage and fence at weir structure aims to secure the area from unauthorized intrusion, prevent floodwaters from entering the weir structure, eliminate contamination of finished water and beautify the area.
- **Repainting of the Surface Wash Piping System**
  Due to long exposure to chlorine fumes, the piping of the surface wash system is heavily corroded, thus, repainting is necessary.
- **Installation of Fire Control and Miscellaneous Alarm Systems**
  A more reliable and detailed alarm system will have to be provided to ensure a more efficient operation and accurate monitoring system, especially during operational emergencies. Visual indication on the status of critical conditions of several plant equipment will likewise be provided that would give plant personnel enough reaction time to correct the situation.
- **Supply/ Installation of CCTV System at Strategic Sites**
  A security contractor should install the CCTV system to ensure tight security in the plants.
- **Investigation/ Rehabilitation of LMTP-1 & LMTP-2 Sewer Lines**
  The existing sewer lines at the plants need to be investigated and rehabilitated, as needed, due to long years of use without maintenance.
- **Repair/ Rehabilitation of the Buildings**
  The building structures have to be rehabilitated to provide a safe and comfortable environment for employees and guests. Remedy has to be provided for constant clogging of the drainage system and tiles have to be installed to replace the deteriorated linoleum.
- **Retrofitting of Super Structure LMTP-2**
  There was uneven settlement of the foundation of LMTP-2 structure which manifested in several structural cracks in filter, pulsator and other structural components. To implement a settlement monitoring and retrofitting of the various structural cracks are recommended.

Project Cost Estimate Summary

The Project Cost Estimate for the Maintenance of Water Production Facilities is summarized in Table 4-14

Table 4-14 : Five (5) Year Capex for Water Production Facilities

Project Description	PCE, MPhP 2008-2012	Project Cost Estimate, MPhP				
		2008	2009	2010	2011	2012
2.1 Water Production - Maintenance	*285*	*45*	*80*	*50*	*60*	*50*

Detailed project descriptions and yearly budget are shown in Annex 2.1.

4.3.2.2 *Upgrading and New Pump Station and Reservoirs*

New pumping stations will be constructed while existing ones will be upgraded to cater the expansion areas as well as improvement of service level to existing service customers for both the North and South areas. Maynilad engaged DCCD Engineering Corporation (DCCD) to undertake studies on the works needed to improve its services in the South.

Villamor Pump Station Upgrading

DCCD recommended the upgrading of the Villamor Pump Station based on various schemes. The proposed upgrading works for Villamor Pump Station includes the following:

- Construction of an underground 10 ML Reservoir in SLEX Service Road
- Construction of New Pump Station beside the 10 ML Reservoir
- Installation of 2-20 Mld x 60 meters x 300 HP storage Pumps at the new pump station for discharging water from the new reservoir
- Installation of 6-58 Mld x 50 meters x 650 HP booster pumps at the new pump stations
- Installation of substation and generator set to meet the main and standby power requirements of the new pump station

Pasay Pump Station Upgrading

The proposed upgrading works for the Pasay Pump Station includes the following:

- Construction of a new 23 ML reservoir on piles along the Macapagal Ave., at the reclaimed area near the SM Mall of Asia area. This new reservoir together with the existing 19 ML reservoir at the existing Pasay Pump Stations will provide the storage requirements of HA 25 until the design year of 2025.
- Construction of new pump station beside the 23 Ml reservoir to accommodate new horizontal type storage and booster pumps.
- Installation of 2 – 46 Mld x 50 meters x 500 HP storage pumps at the new pump station for discharging water from the new reservoir to Hydraulic Area 25
- Installation of 6 – 55 Mld x 40 meters x 500 HP booster Pumps at the new pump station to serve the Pasay PS HAs other than HA 25.
- Installation of substation and generator set to meet the main and stand-by power requirements of the new pump station.

Other Reservoirs and Pump station proposed to be put in place are:

- HA 27, 34 ML Reservoir and 8 Units – 12 Mld x 30 meters Head x 75 HP
- HA 28, 10 ML Reservoir and 4 Units – 10 Mld x 30 meters Head x 60 HP

- HA 29, 18 ML Reservoir and 8 Units – 7 Mld x 30 meters Head x 40 HP
- HA33, 11 ML Reservoir and 4 Units – 8 Mld x 30 meters Head x 50 HP
- HA 26, 17 ML Reservoir and 4 Units – 11 Mld x 30 meters Head x 75 HP
- HA 31, 13 ML Reservoir and 4 Units – 8 Mld x 30 meters Head x 60 HP
- HA 32, 46 ML Reservoir and 8 Units – 32 Mld x 30 meters Head x 100 HP
- HA 30, 24 ML Reservoir and 4 Units – 15 Mld x 30 meters Head x 100 HP
- HA 34, 11 ML Reservoir and 4 Units – 7 Mld x 30 meters Head x 50 HP
- HA 35, 5 ML Reservoir and 4 Units – 3 Mld x 30 meters Head x 25 HP
- Upgrading of Pump Station in HA 14
- 8-10 ML Reservoir for Commonwealth Pump Station

The Project Cost Estimate is summarized in Table 4-15

Table 4-15 : Five (5) Year Capex for Pump Station and Reservoir

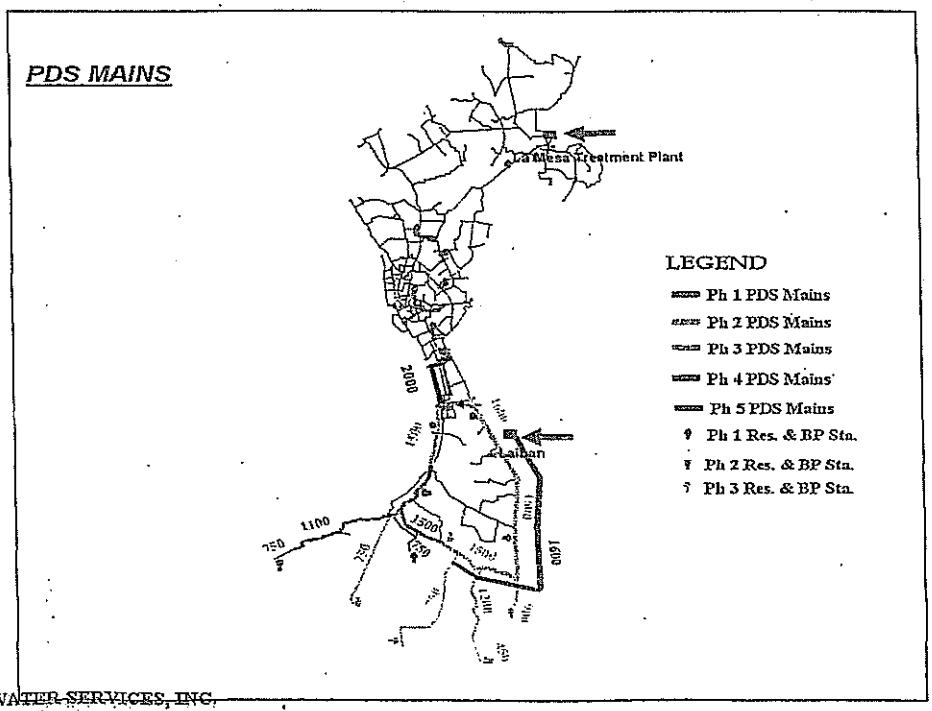
	Project Description	PCE, MPhP	Project Cost Estimate, MPhP				
		2008-2012	2008	2009	2010	2011	2012
2.2	*Upgrading and New Pump Stations and Reservoirs*	*2,268*	*235*	*560*	*655*	*424*	*394*

Detailed project descriptions and yearly budget are shown in Annex 2.2.

4.3.2.3 New Trunklines and Primary Lines

The upgrading of Villamor and Pasay Pump Stations is proposed to be implemented with various PDS mains reinforcement. Shown in figure below are the PDS mains.

Figure 4-7: PDS Mains for South Expansion Areas



The Project Cost Estimate is shown in Table 4-16:

Table 4-16 : Five (5) Year Capex for PDS Mains

	Project Description	PCE, MPhP 2008-2012	Project Cost Estimate, MPhP				
			2008	2009	2010	2011	2012
2.3	*New, Reinforcement and Replacement of Primary Pipelines*	4,771	1,223	658	573	716	1,600

The detailed project descriptions and yearly budget are shown in Annex 2.3.

4.3.2.4 Rehabilitation/Refurbishment of Water Network Facilities

The rehabilitation/refurbishment of water network facilities includes mainly valve & actuator replacements, valve exposure and refurbishment, replacements of old, deeply buried pipes, replacement of ACP pipe, water audit program, primary pipeline maintenance materials, repair works for the pump, reservoirs, spare parts, etc. The Project Cost Estimate is presented in Table 4-17

Table 4-17 : Five (5) Year Capex for Water Network Facilities

	Project Description	PCE, MPhP 2008-2012	Project Cost Estimate, MPhP				
			2008	2009	2010	2011	2012
2.4	*Rehabilitation/Refurbsihment of Water Network Facilities*	519	51	107	104	133	124

The detailed project descriptions and yearly budget are shown in Annex 2.4.

4.3.2.5 Building, Office, and Warehouse

Aligned in its new thrust to improve corporate image, Maynilad plans to construct new business center offices, enhance the main office and the business centers, construct new meter test facility, repair of La Mesa Quarters, renovate the Socea Bonna Warehouse, Re-fleeting Program, construct a new office for the Water Network, and various improvement works including maintenance. The Project Cost Estimate is shown in Table 4-18.

Table 4-18 : Five (5) Year Capex for Building, Office and Warehouse

	Project Description	PCE, MPhP 2008-2012	Project Cost Estimate, MPhP				
			2008	2009	2010	2011	2012
2.5	*Building, Offices & Warehouses*	348	28	75	52	98	95

The detailed project descriptions and yearly budget are shown in Annex 2.5.

4.3.2.6 *Information Technology Program*

As discussed in previous sections, capital expenditures for the IT are summarized in Table 4-19.

Table 4-19 : Five (5) Year Capex for Information Technology

Project Description	PCE, MPhP 2008-2012	Project Cost Estimate, MPhP				
		2008	2009	2010	2011	2012
2.6 *Information Technology*	*248*	*103*	*56*	*26*	*28*	*35*

Th detailed project descriptions and yearly budget are shown in Annex 2.6.

4.3.2.7 *Equipment and Vehicles*

The Project Cost Estimate for the equipment and vehicles is presented in Table 4-20:

Table 4-20 : Five (5) Year Capex for Equipment and Vehicles

Project Description	PCE, MPhP 2008-2012	Project Cost Estimate, MPhP				
		2008	2009	2010	2011	2012
2.7 *Equipment & Vehicles (General Administrative and Property Equipment)*	*370*	*114*	*85*	*85*	*40*	*45*

The detailed project descriptions and yearly budget are shown in Annex 2.7.

4.3.2.8 *Affected Utilities, ROW and Permits*

Right of way and permit to access were allocated in the plan. It will cater to the sudden increase in cost due to uncertain field conditions and from the activities of other agencies. Projects that involves land acquisition of proposed reservoir, pumping stations and laying of primary line in major highways and bridges are in cluded. Even encroachments to existing structure or affected utilities were also anticipated. The Project Cost Estimate for the Affected Utilities, ROW and Permits is shown in Table 4-21.

Table 4-21 : Five (5) Year Capex for Affected Utilities, ROW and Permits

Project Description	PCE, MPhP 2008-2012	Project Cost Estimate, MPhP				
		2008	2009	2010	2011	2012
2.8 *Affected Utility Projects, ROW & Permits*	*540*	*20*	*115*	*110*	*135*	*160*

The detailed project descriptions and yearly budget are shown in Annex 2.8.

4.3.2.9 *Ground Water Development and Studies*

Production and maintenance of existing groundwater was also planned. It is assumed that in expanding service coverage, most of the subdivisions will turnover their water supply system to Maynilad. With this, a groundwater development and studies will be necessary analyze the usability of turned over deep well. The Project Cost Estimate for this Ground Water Development and Studies is summarized in Table 4-22.

Table 4-22 : Five (5) Year Capex for Ground Water Development

	Project Description	PCE, MPhP 2008-2012	Project Cost Estimate, MPhP				
			2008	2009	2010	2011	2012
2.9	Groundwater Development & Water Source Studies (Production & Maintenance)	25	5	10	5	5	0

The detailed project descriptions and yearly budget are shown in Annex 2.9

4.3.2.10 *Corporate Social ResponsibilityPrograms*

The new Maynilad seeks to strengthen and expand its CSR program in recognition of the pivotal role it plays in ensuring a better quality of life for the people. It aims to attain this through its CSR projects that promote sustainable water and sanitation management, community development and well-being, better cooperation and partnership among government and people, among others.

- Lingkod Eskwela
- Lingkod Ospital and Health Center
- Lingkod Palengke
- Lingkod Social Welfare Centers
- Lingkod Presinto Tubig NGO
- PGMA Caravan

All of these projects will be implemented in cooperation with relevant government offices, such as DepEd, DOH, DSWD, Pagcor, TESDA, LGUs/NGOs.

The Project Cost Estimate for this program is shown in Table 4-23.

Table 4-23 : Five (5) Year Capex for Corporate Social Responsibilities

	Project Description	PCE, MPhP 2008-2012	Project Cost Estimate, MPhP				
			2008	2009	2010	2011	2012
2.1	Corporate Social Responsibility Program	173	10	49	39	40	35

The detailed project descriptions and yearly budget are shown in Annex 2.10.

4.3.2.11 Consultancy Services

Various consultancy services such as commissioning of experts in the field of water distribution, Capex optimization, master planning, design works, preparation of tender documents, etc., are expected in attaining the goals of Maynilad. The Project Cost Estimate for the consultancy services is hown in Table 4-24.

Table 4-24 : Five (5) Year Capex for Consultancy Services

Project Description	PCE, MPhP 2008-2012	Project Cost Estimate, MPhP				
		2008	2009	2010	2011	2012
2.11 *Consultant's Services*	*173*	*16*	*56*	*38*	*46*	*16*

The detailed project descriptions and yearly budget are shown in Annex 2.11.

4.3.2.12 *Operations Support Program Cost Estimate*

The summary of the total cost and disbursement of the Operations Support Program is presented in Table 4-25

Table 4-25 : Five (5) Year Capex for Operation Support Program

	Project Description	PCE, MPhP 2008-2012	Project Cost Estimate (PCE), MPhP				
			2008	2009	2010	2011	2012
2.1	Water Production-Maintenance	285	45	80	50	60	50
2.2	Upgrading and New Pump Station and Reservoirs	2,268	235	560	655	424	394
2.3	Reinforcement and Replacement of Primary Pipelines	4,771	1,223	658	573	716	1,600
2.4	Rehabilitation / Refurbishment of Water Network Facilities	519	51	107	104	133	124
2.5	Building, Offices & Warehouse	348	28	75	52	98	95
2.6	Information Technology	248	103	56	26	28	35
2.7	Equipment & Vehicles (GAPE)	370	114	85	85	40	45
2.8	Affected Utility Projects, ROW & Permits	540	20	115	110	135	160
2.9	Groundwater Development & Studies (Production & Maintenance)	25	5	10	5	5	0
2.10.	Corporate Social Responsibility Programs	173	10	49	39	40	35
2.11.	Consultant's Services	173	16	56	38	46	16
	TOTAL	9,719	1,851	1,852	1,737	1,725	2,554

4.3.3 Water Source Development Program

The Water Sources Development Program is composed of three (3) components, namely:

- MWSS Water Source Projects
- MWSI Water Source Projects
- Common Purpose Facilities Projects

The MWSS Water Source Projects are basically projects initiated and funded by MWSS but to be paid by the two (2) Concessionaires as Concession Fees. There are four (4) projects under this category, to wit:

- Umiray Rehabilitation and Upgrading
- Angat Water Utilization and Aqueduct Improvement Project (AWUAIP)
- Laiban Dam Project
- 15 cms New Water Sources Projects

The first two (2) MWSS projects are meant for upgrading and rehabilitation of existing water source facilities. The Laiban Dam and 15 cms projects are new water source projects.

The components of the MWSI Water Sources Projects are intended for the construction of new water treatment plants, which is the Muntinlupa Water Treatment Plant.

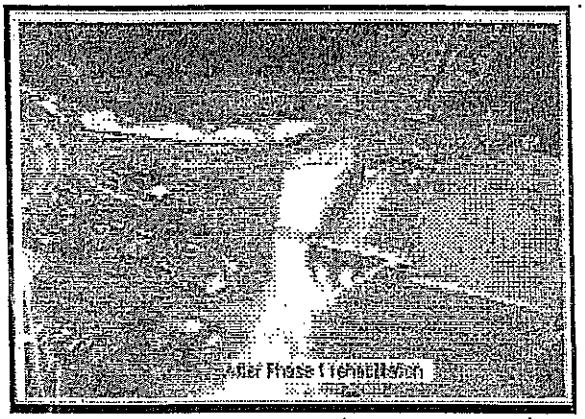
The Common Purpose Facilities Projects are intended for the upgrading, renewal and maintenance projects for the Common Purpose Facilities as outlined in the Concession Agreement. Basically, these projects will be financed and managed by the two (2) concessionaires.

4.3.3.1 MWSS Water Source Projects

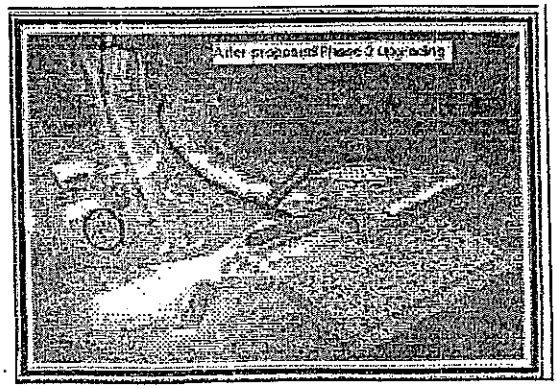
Umiray Rehabilitation and Upgrading

This project aims to repair the damage facilities in Umiray and to upgrade the said facilities to ensure the raw water supply availability.

When the country was hit by typhoon Winnie in November 2004, the facilities at Umiray and Macua have been severely damaged which resulted to clogging of the tunnel. It became imperative that MWSS and the Concessionaires expedite the declogging operation to ensure availability of water from Umiray. Maynilad and Manila Water have advanced about PhP400M for this undertaking, expecting that this amount would be retrofinanced thru MWSS.



The upgrading works at Umiray aims to strengthen the existing facilities by providing more permanent structures that could withstand strong typhoons.



Detailed design has been completed by EDCOP. NEDA-ICC has approved financing under the proposed ADB Multi-Tranche Loan Facility, however, ADB has cancelled this facility after financing for the AWUAIP has been transferred to the Chinese Bilateral Loan Package. The project is one of the Special Projects defined in the DCRA in which 50% of the project cost will be

funded by MWSS and recovery is through a Special Tariff. The other 50% is to be funded by Manila Water.

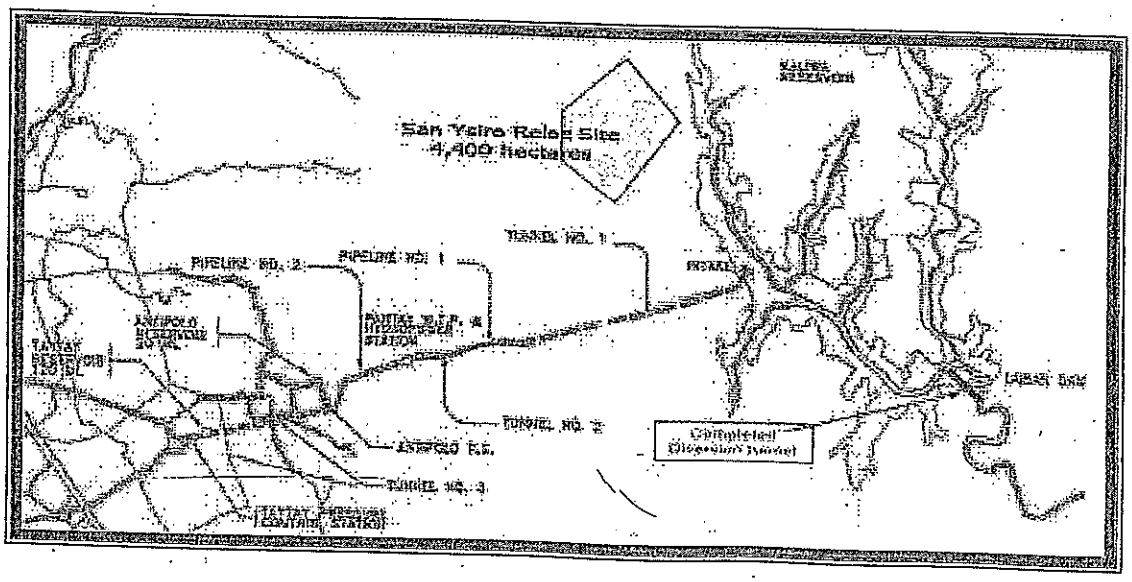
Angat Water Utilization and Aqueduct Improvement Project (AWUAIP)

The existing headworks are in relatively good condition, however, it has been noted that certain aqueducts show signs of degradation and in the medium-term, require renewal works. Studies indicate that about 585 Mld is lost in the aqueducts, mostly in the first 5.5 km of AQ-5 with 351 Mld losses and in AQ-1/2 and AQ-4 where about 177 Mld is lost. These deficiencies necessitate the construction of AQ-6 Phase 1 to bypass the leaking AQ-5, which has been completed in 2006.

Construction of AQ-6 Phase 2, repair of the leaking AQ-5 and interconnection of the aqueducts have likewise been programmed for implementation primarily to recover water losses, provide security in water supply while the other aqueducts are being investigated and repaired, and provide conveyance for additional water supply in the future. The detailed feasibility study has been completed and currently a consultant, Schema Konsult/SMEC, has been engaged by MWSS to prepare the detailed engineering design.

Laiban Dam Project (For Reference Purposes)

The project aims to supplement the long-term water supply requirements of Metro Manila and the Provinces of Cavite and Rizal by utilizing the Kaliwa River Basin in Tanay, Rizal, covering a watershed area of about 28,000 hectares located on the slope of the Sierra Madre Mountains. It is expected to provide an average yield of 22 cms or 1900 Mld of water, to be shared equally by the two (2) Concessionaires. It is also projected to have an output of approximately 25 megawatts (MW) of electricity from hydroelectric power generation.



The components of the project are:

- 113-meter high rock fill dam
- 23 km – 3.60 m. diameter tunnel and pipeline
- 25-megawatts hydroelectric power plant
- 1900 Mld water treatment plant
- 120 Ml reservoir & pressure control station at Taytay
- 100 Mld pumping station & 20 Ml reservoir at Antipolo
- 120 Mld reservoir at Muntinlupa
- Trunk and Primary Distribution Mains
- Land acquisition and relocation of affected families

The feasibility study and detailed engineering for the Project were completed in 1980's including the construction of the diversion tunnels. Some affected families have also been compensated for their aboveground improvements, aside from several titled properties that have been acquired.

MWSS has requested NEDA and DOF for inclusion of this project in the RP-China Bilateral Loan Package following the declaration of the President that this is a priority project of the Government. Negotiations between the Philippine Government and the Chinese Government on project financing has started, however, the Government has not confirmed the loan agreement to date. Debt servicing for the loan and the corresponding local equity will eventually be shared 50-50 by the Concessionaires.

MWSS completed several studies/reviews and updates since 1984. The contract repackaging, as well as the preparation of bid/tender documents, is likewise completed.

With MWSS target completion of the first phase by 2017; preparation for the distribution system covering the areas of Bacoor, Imus, Rosario, Kawit, Cavite City, Noveleta and portions of Parañaque, Muntinlupa and Las Piñas is likewise on the drawing board.

15 CMS New Water Sources Project

Other water sources are being considered as replacement to the 15 cms conditional allocation from Angat derived from the unutilized water rights of NIA. One of these sources is the Sumacbao River in Nueva Ecija, considered as the Balintingon Multi-Purpose Project, which is potentially capable of producing 15-17 cms of raw water. A pre-feasibility study on the project has been conducted under an MOU forged among MWSS, NIA and Cal Energy. NIA, MWSS and Cal Energy in consultation with NEDA and the BOT Center agreed to further study the most appropriate procurement and implementation scheme, i.e. BOT, solicited or unsolicited proposal, for the project. MWSS has yet to negotiate with NIA on the cost sharing issue which in turn is expected to be passed on to the Concessionaires.

Another alternative source of domestic and irrigation water being considered is the Candaba River due to the available volume of fresh water originating from the Pampanga River and its proximity to the NCR. A Memorandum of Understanding (MOU) has, likewise, been executed between MWSS and China CAMC Engineering relative to the latter's proposal to undertake feasibility study on the project at no cost to the Government, to arrange the Engineering, Procurement and Commissioning (EPC) Contractor and to provide a government-to-government financing under the terms and conditions acceptable to the Philippine Government.

A feasibility study is also in progress for the Pampanga River (Calumpit Area) as another source of water supply. This has been initiated by the Province of Bulacan and is being undertaken by Advanced Technology Resources Construction Corporation.

Research and Development (MOA'S)

For the protection as well as for the improvement of the MWSS Water Sources facilities, the projects identified under this category are the Climate-Based Information System intended to improve the management of Angat-Umiray reservoir, the Angat Dam/Dyke Safety Assessment which is a joint undertaking of the MWSS-NPC, the Integrated Warning System intended as warning system during the spilling of Angat and Ipo Dam, the Ipo Watershed Management and the creation of Special CAFGU Active Auxilliary Unit for the protection of Ipo Dam. Table 4-26 shows the budget requirement and disbursement for MWSS Project.

Table 4-26 : Five (5) Year Capex for MWSS Water Source Projects

Project Description	Total PCE MPhP *	Project Cost Estimate					
		2008	2009	2010	2011	2012	PCE, MPhP (2008-2012)
1.0 Rehabilitation & Upgrading of Umiray Facilities	529	13	30	24	0	0	67
2.0 AWUAIP Phase 2	5,700	97	86	128	117	0	428
4.0 Laiban Dam Project	59,868	4	15	0	90	90	199
5.0 15 cms New Water Source Project	6,060	0	14	206	226	240	686
6.0 Research & Development (MOA's)	674	15	17	31	101	201	365
TOTAL	72,831	129	162	389	536	531	1,745

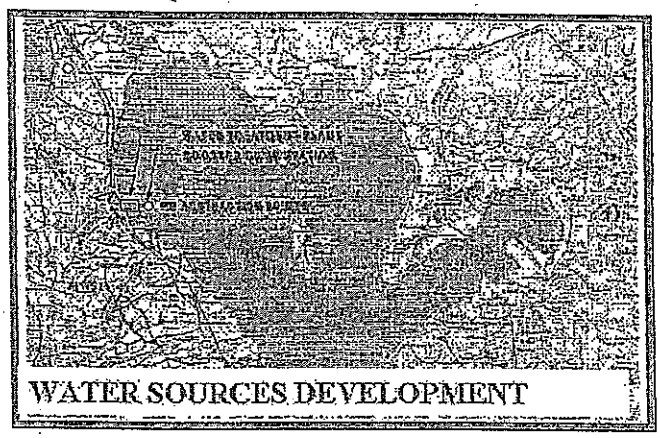
The detailed yearly program and Capex requirement for MWSS Water Source Projects is shown in Annex 3.1.

4.3.3.2 MWSI Water Sources Projects

The new water treatment plant capacities were determined based on the projected domestic and non-domestic demand and the target physical NRW as discussed earlier.

300-Mld Muntinlupa Water Treatment Plant

Maynilad considered the development of a 300 Mld water treatment plant as an interim project. Water to be sourced from Laguna Lake will be distributed to expansion and under-served areas in Muntinlupa and Parañaque.



Maynilad has engaged DCCD to conduct a feasibility study on the project, including the determination of the best location and method of abstraction, as well as the most suitable treatment process

The water permit application for the abstraction of 300 Mld from Laguna Lake has been filed with NWRB and is currently being processed for approval.

The first 100 Mld would be made available by 2010, the second 100 Mld by 2011 and the remaining 100 Mld is beyond 2014.

Table 4-27 : Five (5) Year Capex for MWSI Water Source Projects

Project Description	Total PCE MPhP*	Project Cost Estimate					
		2008	2009	2010	2011	2012	PCE, MPhP (2008-2012)
1.0 Muntinlupa Water Treatment Plant - 200 Mld	3,350	250	341	1,000	477	1,282	3,350
TOTAL	3,350	250	341	1,000	477	1,282	3,350

The detailed yearly program and Capex requirement for MWSI Water Source Projects is shown in Annex 3.2

4.3.3.3 Common Purpose Facilities Projects

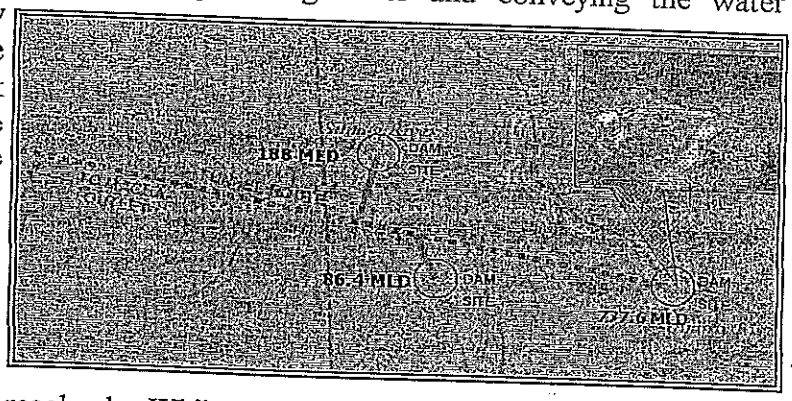
CPF Projects are projects financed and managed by the two (2) Concessionaires of MWSS. Maynilad and Manila Water share the same common interest in these projects.

Sumag River Development Project

Downstream of Umiray River are the Sumag and Alia Rivers. Their development as additional water sources was originally considered components of the UATP but has been deleted due to unresolved social issues. In 2005, the Steering Committee for New Water Sources agreed to engage a consultant to look into the viability of these sources, after which detailed engineering design would follow. However, the

Consultant's (EDCOP) hydrology study shows that only Sumag River is viable with a projected average inflow of about 2.2 cms or 188 Mld.

The Consultant is likewise working on the environmental permits, including the socio-economic aspects of developing Sumag River and conveying the water through the Umiray transbasin tunnel. One major setback encountered is the refusal of the Municipality of Gen. Nakar (MGN) and the affected Indigenous People Group (IPs) to negotiate unless the issues previously raised UATP issues have been resolved. While MWSS and the Concessionaires offered sustainable development assistance for their water supply, sewerage and sanitation programs, MGN insists that they be paid with the National Wealth Tax equivalent to 1% of the gross receipts derived from the use of water coming from Umiray, or any commensurate amount, pursuant to RA 7160 or the Local Government Code (1991). Likewise, the IPs demanded for 16 long and short-term provisions which MWSS and the Concessionaires have yet to decide.

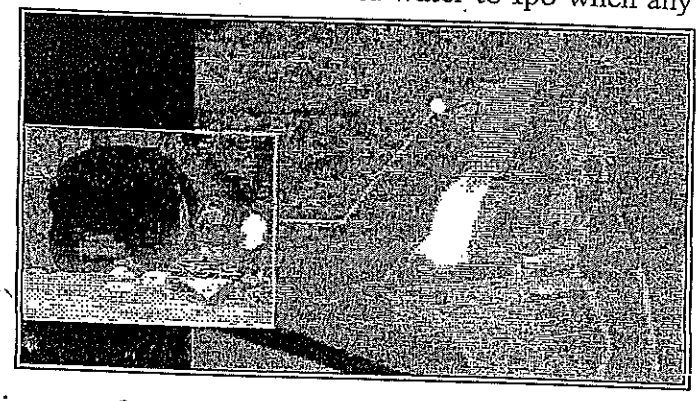


Target start of the project is by 2008 taking advantage of the high water elevation at Angat during mobilization. The Concessionaires will fund the project.

Rehabilitation and Upgrading Works at Angat

Angat Low-Level Outlet

The Low-Level Outlet in Angat is used to deliver 52 cms of water to Ipo when any of the auxiliary turbines or bypass lines break down, when the power plant needs to be shut down and when Angat water elevation reaches 151 m. It was clogged due to typhoon Winnie in 2004, thus, emergency repairs, had to be fast tracked. However, more permanent works have to be implemented to ensure continuous flow of water to Ipo in case of emergency.



NPC Auxiliary Turbine #5 and Bypass #5

Auxiliary Turbine #5 at Angat Hydroelectric Power Plant has been constructed to provide Ipo with 22 cms of water initially used for power generation. MWSS funded the construction of the said facility under AWSOP but it has not been operational since the Concessionaires took over the operation and maintenance of the System, thus, repair is imperative.

Likewise, permanent repair of Bypass #5, used when Auxiliary Turbine #5 is not in operation, is necessary to be able to provide about 28 cms of water to Ipo. This project primarily involves replacement of the fixed-cone valve (Howell-Bunger valve), which was repaired in 2005, and the conversion of the control system from manual to motorized operation.

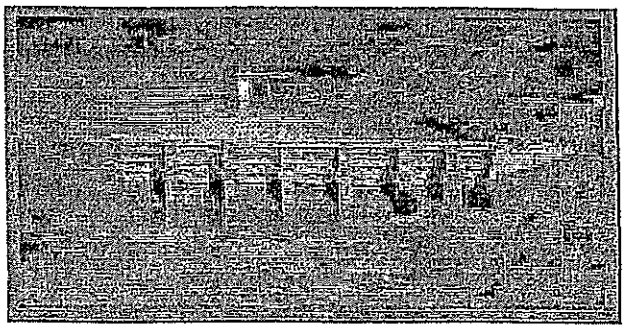
Metering of Angat Flow to Ipo

In the Concession–Agreement, the Concessionaires are guaranteed with 46 cms water allocation from Angat, although records show that-an-average of about 41 cms only was obtained from 2000 – 2006, based on the computed rating curve of the turbines. In 2006 NPC installed new ultrasonic flowmeters at the turbines to measure the releases to Ipo through these outlets. These flowmeters recorded an average reading of 48 cms which MWSS and the Concessionaires contest with NWRB. To resolve the issue and at the same ensure that the Concessionaires get the guaranteed allocation, CPF proposed the installation of a measuring device at the tailrace to Ipo to get the cumulative flow of water released by NPC from Angat through the turbines and bypasses.

Joint Use of La Mesa Dam

As proposed by the Regulatory Office, a joint operation of La Mesa Dam by the two (2) Concessionaires during emergency situations will provide raw water supply reliability to Maynilad. As a result thereof, Customers of Maynilad will be assured of continuous water supply during such incidents. Historically, the La Mesa Dam contributed raw water to the La Mesa Treatment Plants when the water level at La Mesa Dam is at high elevation while the water coming from Angat is minimal.

Rehabilitation and Upgrading Works at Ipo, Bicti, the Aqueducts and the Portal



Dredging of Ipo River Bed

Ipo Dam, which serves as an intermediate impoundment for water prior to release to the tunnels, is observed to be heavily silted. Estimated depth of silt

upstream of the old dam is more or less 3 m covering an area of 1 sq km. Dredging is required to improve the storage capacity and to accommodate the additional water supply from Sumag River.

Investigation and Rehabilitation of AQ-1 and AQ-2

Recent study shows that AQ-1 and AQ-2 poses a big risk as far as supply reliability is concerned considering that these aqueducts, built in 1939 and 1948, respectively, are in operation for 68 and 59 years. The consultants engaged by MWSS to conduct the study recommended the immediate investigation of these aqueducts and repair, as needed, to ensure the transmission of about 380 Mld of water to the portal.

Portal Interconnecting and Flow-Splitting Structures

The Concession Agreement specified the allocation of water coming from Angat at 60-40 between the West and East Concessionaires, respectively. To be able to accurately measure the prescribed sharing of water at the portal, CPF has proposed to install interconnecting and flow-splitting structures. Table 4-28 presents the project cost estimate for CPF Project

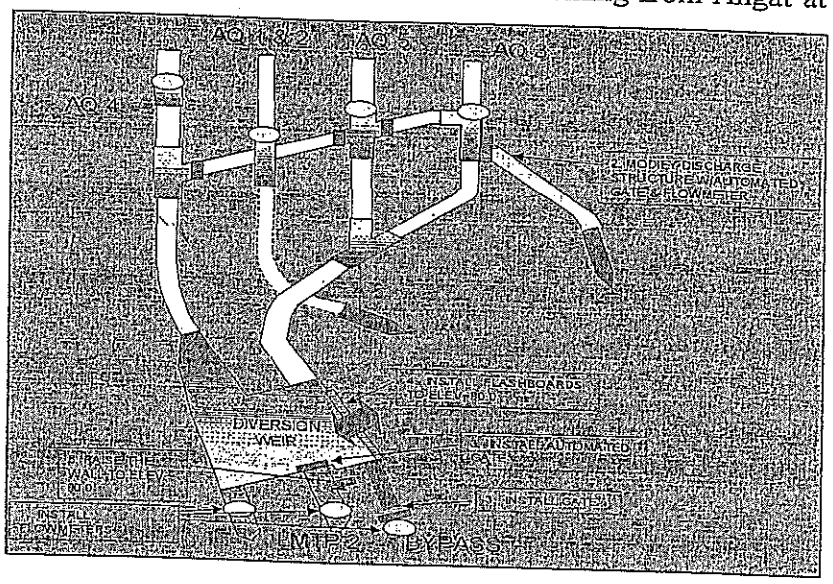


Table 4-28 : Five (5) Year Capex for CPF Projects

Project Description	Total PCE MPhP *	Project Cost Estimate					
		2008	2009	2010	2011	2012	PCE, MPhP (2008-2012)
2.1 Sumag River Project	560	112	140	28	0	0	280
2.2 Repair/ Rehabilitation of Various Facilities	585	96	46	56	44	47	289
2.3 La Mesa Dam	250	0	0	10	40	40	90
TOTAL	1,395	207	186	94	84	87	658

4.3.3.4 *Project Cost Estimate of Water Sources Development Projects*

The total Project Cost Estimate for the Water Sources Development Projects is presented in Table 4-29.

Table 4-29 : Five (5) Year Capex for Water Sources Development Projects

Project Description		PCE, MPhP 2008-2012	Project Cost Estimate (PCE), MPhP				
			2008	2009	2010	2011	2012
3.1	MWSS Projects	1,745	129	162	389	535	531
3.2	MWSI Projects	3,350	250	341	1,000	477	1,282
3.3	CPF Projects	658	207	186	94	84	87
TOTAL		5,754	586	689	1,483	1,096	1,901

4.3.4 Sewerage and Sanitation Program

4.3.4.1 *Sewerage and Sanitation Investment*

In the next five (5) years, beginning 2008, Maynilad will work for the compliance of its sewerage and sanitation facilities with environmental standards and improvements in the service level and coverage targets. To attain these objectives, it will implement the following projects:

1. ***Enhancement of treatment capability of Central Manila Sewerage System*** – This project will ensure continuous compliance of Tondo Pumping Plant to the set effluent standards for discharge to Class SC water. Two (2) lift stations (Sta. Cruz & Luneta LS) feeding to Tondo Pumping Plant (TPP) will be provided with secondary treatment capability so that at the inlet of the TPP the wastewater quality is already within the set standards. Due to limited available space in the lift stations, fiber media rapid filtration method (FMRF) will be utilized to improve the effluent level to below 100 mg/liter. In addition, for Luneta LS, 100 CMD of effluent will be reclaimed & disinfected. The reclaimed water will be used for plant watering purposes of parks within the vicinity of the lift station.

   To date, effluent of Tondo Pumping Plant complies with the government standards and is operating with LLDA Permit No. DP-25a-007-01068.

2. ***Provision for treatment facility for five (5) communal septic tanks in Quezon City*** – Maynilad is operating five (5) communal septic tanks serving Project 7 and Project 8 in Quezon City. These communal systems are not designed to meet the effluent standards set by the government.

The system in Project 7 will be converted into a combined sewage and septage treatment plant. This will be implemented within 2008 under the GEF – Manila Third Sewerage Project funded by the World Bank.

Upgrading of the remaining four (4) systems will be implemented as soon as the clearing of informal settlers occupying said facilities is completed. The clearing operation is being done in coordination with MWSS and the Quezon City government.

Because of constraint in space both for construction and operation/maintenance of facilities, the advanced septic tank (Jokaso) prefabricated shall be installed to replace the existing communal septic tanks. This system is capable of treating the wastewater to below 50 mg/liter of BOD.

3. ***Additional septage treatment plant in the South with capacity of 250 CMD*** – This project will ensure compliance of Maynilad to its committed target on sanitation. A 250 CMD plant will be constructed in the Paranaque area to cater to customers at the southern portion of the concession. This will significantly improve the level of sanitation services provided by Maynilad to its customers in said area.

   The proposed septage treatment plant shall be made of acceptance tank with grit collector & trash removal, acceptance storage tank, sludge pump, drum screen and dewatering equipment. It shall also be provided with facility for chemical dosing, biosolids transport, odor control, filtrate treatment, flow measurements, storage, laboratory and office of personnel.

4. ***Repair of defective sewer network*** – This project includes the repair of defective sewer lines identified in seven (7) different locations during the implementation of MSSP-4 projects. These are:

   - Repair of 200 mm diameter line along Margarita St. in Magallanes.
   - Repair of 450 mm diameter forced main crossing Intramuros Golf Course, Port Area.
   - Repair of 450 mm diameter forced main along Onyx Sta. Ana, Manila.
   - Interconnection of 250 mm diameter line along Taft Ave. crossing Pres. Quirino Ave., Manila
   - Repair of 650 mm diameter line along Antipolo, crossing PNR railroad.
   - Relocation of damaged line along Nagtahan.

- Inspection/repair of 1,200 mm diameter trunkline crossing Estero de Vitas along Juan Luna St., Tondo, Manila.

In addition to the above sites, which shall be implemented in 2008, annual repair of 800 linear meters of defective sewer lines shall form part of the project.

4. ***Purchase of additional desludging equipment*** – Additional desludging trucks will be purchased (4CM & 2CM) to augment the existing fleet of vacuum tankers to handle additional collection requirements and to be able to reach areas which could not be accessed by the existing 10CM VTUs.

5. ***Upgrading of sewer maintenance capability*** – Additional sewer cleaning equipment will be purchased to augment existing units of sewer jets and combination system to be able to perform regular maintenance on sewer lines located in narrow streets and alley. Existing CCTV capability will be upgraded through the acquisition of crowler system and provision of DVD recordable system to the existing CCTV van. Budget for the construction of new field office for sewer maintenance team is also provided.

6. ***Implement an effective desludging re-fleeting program*** – Desludging trucks that reached its economic life (10 years) will be replaced to ensure reliability of performance and uninterrupted provision of sanitation services for Maynilad customers.

7. ***Implementation of combined system*** – This project will be implemented around the area of San Juan River catchment within Maynilad service area. The proposed San Juan River Wastewater TP is a project recommended by the Chairman of MMDA aimed at reducing the pollution load in San Juan River. Drainage water in the vicinity of San Juan River will be intercepted and then treated to within the standards before discharge. Component of this project is a full-blown study to be conducted prior to its implementation to determine the priority area/s. By the end of 2012, the expected installed capacity of the combined treatment system in said area will be around 73,000 CMD.

8. ***Installation of additional sewer service connections*** – Maynilad will push for the rationalization of sewerage & environmental tariff and capitalization of the cost of connection for customers within the sewered area which are not yet connected to our sewer system. The plan is for *immediate reduction of sewer tariff from the existing 50% to 20% and gradual increase of sanitation charge (currently termed as environmental fee) from 10% to 20% within four (4) years. Sewerage and Sanitation Charges schedule is as presented in Chapter 7 Financial Projection.* With this strategy, it is hoped that Maynilad could maximize

the utilization of its existing network and optimized the benefits of the systems in terms of reduction of pollution loads to existing creeks/rivers.

Based on Maynilad's experience, even if the connection charge is free, as long as there is a significant gap in the tariff between those connected to sewer system and those using the septic tanks but are not linked to our sewer system, its almost impossible to convince the customers to connect to the system. It is in this premise that Maynilad only committed connection for 4,000 additional sewer connections in the next five (5) years.

Presently, the existing sewerage system could still accommodate 38,000, most of which are located in the Central Manila Sewerage System.

4.3.4.2 Project Cost Estimate

The five (5) year Sewerage and Sanitation Program is approximately PhP2.76 B. Table 4-30 shows the yearly Capex (2008 to 2012) of the Sewerage and Sanitation Program.

Table 4-30 : Five (5) Year Capex for Sewerage and Sanitation Program

Project Description	PCE, MPhP 2008-2012	Project Cost Estimate				
		2008	2009	2010	2011	2012
4.1 Sewerage Program	4,542	42	342	647	1,932	1,579
4.2 Sanitation Program	468	25	59	221	118	46
TOTAL	5,010	67	401	868	2,050	1,625

The detailed yearly program and Capex requirement for sewerage and sanitation are shown in Annex 4.1 and 4.2, respectively.

4.3.5 Natural Calamity Impact Mitigation

The water and wastewater facilities such as the headwork, treatment plants, distribution lines, pump stations, reservoirs, sewerage and sanitation that provides water supply services to Metro Manila needs to be protected from major catastrophes for the reliability of water supply. While a mechanism for the recovery of losses from force majeure events is available in the Concession Agreement, Maynilad aims to minimize the impact and effects of the damages and to provide minimum disruption of water supply to its customers despite of a natural calamity such as earthquakes, tsunamis, floods etc. may happen.

One of the most frightening and destructive phenomena is a severe earthquake and it's terrible after effects. Earthquakes strike suddenly, violently, and without warning at any time of the day or night. If an earthquake occurs in a populated area like Metro Manila, it may cause many deaths and injuries and extensive damages to property and infrastructures.

For water utilities like Maynilad, it may affect the Water Networks Distribution Systems, Reservoirs, Treatment Plants, Buildings and offices etc.

Although there are no guarantees of safety during an earthquake, identifying potential hazards ahead of time and advance planning can save lives and significantly reduce injuries and property damage. Repairing of visible or deep plaster cracks in the foundations, columns, beams and slabs, anchoring overhead lighting fixtures and following local seismic building standards, will help reduce the impact of earthquakes. Retrofitting of existing buildings, pipelines and other old structures may also help in minimizing damages.

Maynilad, as an MWSS water concessionaire serving millions of people in the West Zone, should device an earthquake contingency plan to mitigate the risk in the event that such a disaster happens.

To achieve this, Maynilad will implement the following programs:

The management and its employees should increase their level of awareness

All employees will be properly equipped with basic knowledge on standard operating procedures (SOP) on all safety equipment related to disaster and natural calamity. This will be done through appropriate training and education. The Safety Department in coordination with CHCOD should develop a program in enhancing awareness. The entire organization will be actively involved to ensure that the objectives are met.

Retrofitting of all existing facilities and improving the design of the new and future structures

Maynilad will conduct retrofitting of all existing water distribution network using earthquake resilient fitting with capability of tolerating lateral and vertical ground movement. Examples of these are the polyethylene and ductile pipes which possess excellent resiliency to earthquakes.

The retrofitting program to the existing network should be done and spread out through the remaining concession period.

Likewise, for ongoing and future projects, Maynilad will impose the use of earthquake resilient fitting with capability of tolerating lateral and vertical ground movement such as polyethylene and ductile pipes.

Buildings, treatment plants, pumping stations should be retrofitted by the application of steel jacket or concrete jacket on all columns, beams and slabs. Wrapping up the concrete columns by steel plates may also increase ductility.

Stock Level of Critical Pipes, Fittings, Equipment

The Company should maintain a certain stock level of critical pipes and fittings for repairs. Additional contingency repair equipment and materials will be deployed and stationed to the different locations within the BCs.

Portable Treatment Plant

Maynilad should purchase a portable treatment plant to enable it to respond quickly to localize dirty water incidents. The company should procure several Portable Treatments Plants, not only for major disaster preparedness, but to be used also during localized dirty water incidents.

4.3.6 Summary of the Capital Investment Plan

The summary of the Capital Investment Plan for 2008 to 2012 is presented in Table 4-31.

Table 4-31 : Capital Investment Plan

Description	PCE, MPhP 2008-2012	Schedule				
		2008	2009	2010	2011	2012
1. NRW Management and 3R Program	20,717	5,152	5,705	4,893	3,118	1,849
A. Recovery Program	11,761	2,369	3,652	3,483	1,659	599
1A1 DMA Establishment, Isolation & Measurements	2,677	287	910	1,020	440	20
1A2 NRW Diagnostic	770	98	175	197	165	135
1A3 DMA Full and Partial Rehabilitation	8,314	1,984	2,567	2,266	1,053	444
B. Reallocate Program	2,643	957	716	371	390	210
1B1 HA Establishment & Measurements	54	9	9	18	18	0
1B2 HA Pipelaying	2,589	948	707	353	371	210
C. Resell Program	5,262	1,509	1,131	866	893	862
1C1 Pipelaying in Expansion Areas	5,262	1,509	1,131	866	893	862
D. Instrumentation and GIS	761	234	148	116	128	135
1D1 Geographic Information System	76	14	25	10	15	12
1D2 Telemetry & Dataloggers	160	0	46	34	32	48
1D3 Leak Detection Equipments	74	0	24	17	17	16
1D4 Water Meter	452	220	53	55	64	59
E. Technical Assistance	290	83	58	58	48	43
1E1 Engineering & Construction Services	211	42	45	45	42	37
1E2 NRW Studies & Advisory Services	49	41	3	3	1	1
1E3 Training & Development	30	0	10	10	5	5
2. Operations Support Programs	9,719	1,851	1,852	1,737	1,725	2,554
2.1 Water Production	285	45	80	50	60	50
2.2 Upgrading and New Pump Station and Reservoirs	2,268	235	560	655	424	394
2.3 Reinforcement and Replacement of Primary Pipelines	4,771	1,223	658	573	716	1,600
2.4 Rehabilitation / Refurbishment of Water Network Facilities	519	51	107	104	133	124
2.5 Buildings/Offices/Warehouses	348	28	75	52	98	95
2.6 Information Technology	248	103	56	26	28	35
2.7 Equipment & Vehicles (GAPE)	370	114	85	85	40	45
2.8 Affected Utility Projects, ROW and Permits	540	20	115	110	135	160
2.9 Groundwater Development & Studies (Production & Maintenance)	25	5	10	5	5	0
2.10 Corporate Social Responsibility (CSR)	173	10	49	39	40	35
2.11 Consultant's Services	173	16	56	38	46	16
3. Water Sources Program	5,754	586	689	1,483	1,096	1,901
3.1 MWSS Projects	1,745	129	162	389	535	531
3.2 MWSI Projects	3,350	250	341	1,000	477	1,282
3.3 CPF Projects	658	207	186	94	84	87
4. Wastewater Program	5,010	67	401	868	2,050	1,625
4.1 Sewerage						
4.1.1 Treatment Plants and Facilities	1,485	0	84	387	679	335
4.1.2 Sewer Lines	3,057	42	258	260	1,254	1,244
4.2 Sanitation						
4.2.1 Treatment Plants and Facilities	321	0	0	221	101	0
4.2.2 Trucks	147	25	59	0	17	46
5. Natural Calamity Mitigation	100	0	15	20	46	19
5.1 Employees Level of Awareness	0	0	0	0	0	0
5.2 Investigation/Retrofitting of Existing Facilities	46	0	8	11	27	0
5.3 Portable Treatment Plant	20	0	0	0	10	10
5.4 Stock Level of Critical Pipes, Fittings and Equipment	20	0	5	5	5	5
5.5 Earthquake Studies and Facilities Investigation	14	0	2	4	4	4
Total Capex	41,300	7,655	8,662	9,000	8,035	7,948

4.4 PROCUREMENT

Maynilad's procurement process is segregated into two (2) parts. The first one involves civil works contracts and the other for goods and other services. These however follow practically similar processes as approved by the President of the Company.

4.4.1 Civil Works

This covers the procurement of services for civil works either thru contractors supplied materials and labor or purely provision of labor contracts. For the first type, the contract packages cover both labor and materials while the second one covers only the labor component. Majority of the 2008 construction projects were undertaken or are to be undertaken under the second type of contracts. As this entails construction jobs as pipelaying, interconnection, etc., the process, from accreditation, bidding, evaluation, and award, is handled by the Program Management Group (PMG).

The Contracts Management and Technical Services of PMG is responsible for the procurement of civil works.

4.4.1.1 Contractors Accreditation

Application for accreditation is open to all contractors. Interested applicants shall submit the required documents such as the Letter of Intent, PCAB License, SEC Registration, DTI Registration of Business Name, Organizational Chart, Articles of Incorporation, VAT Registration, Financial Statement for the last three (3) years and Financial Resources/Backing.

Applicant must have sufficient contracting capacity. Key personnel must have similar experience to what they are applying for accreditation and the equipment must be sufficient and in good running condition. The Company must also have experience in similar works.

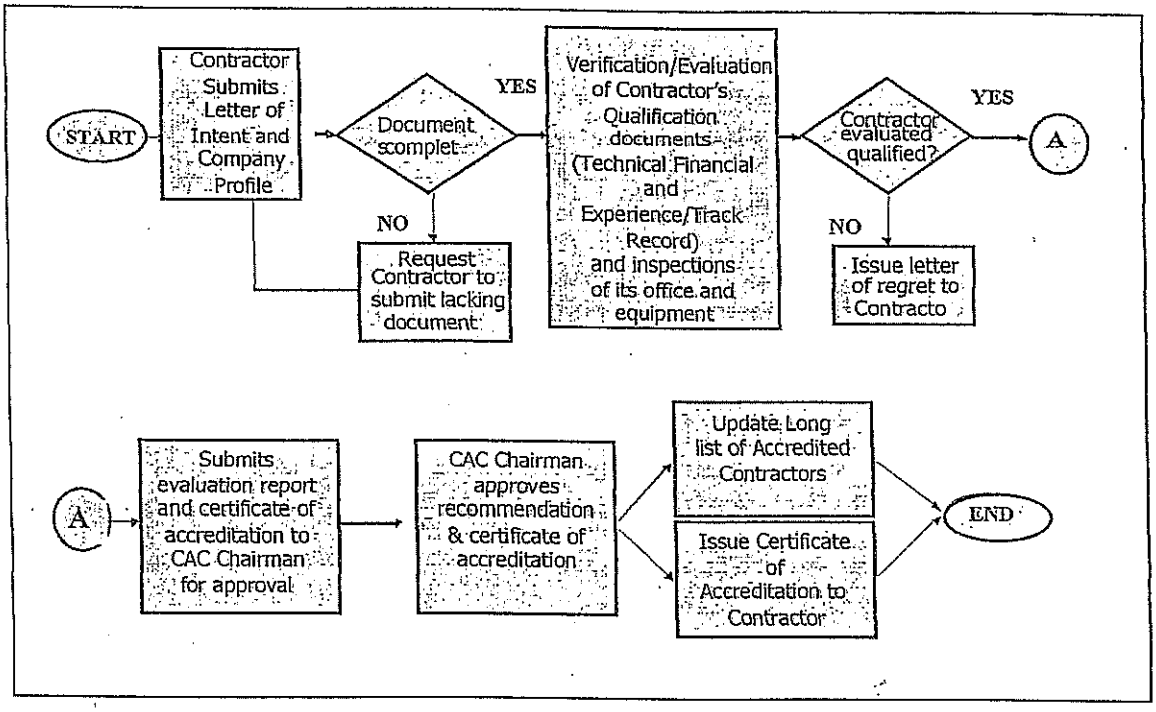
Only accredited/qualified contractors are invited to participate in the bidding. Contractors are categorized according to their project classification expertise and capacity to undertake a project.

Contractors with on-going/completed Maynilad projects are evaluated based on timeliness, safety, and quality of their performance. Those with poor performance rating are temporarily dropped from the long list of Maynilad Accredited Contractors for a minimum period of one (1) year.

Result of evaluation is subject to the approval of Contracts Awards Committee (CAC) Chairman. Accredited Contractors are required to submit updated documents yearly or as needed.

4.4.1.2 Flow Chart for Accreditation

The procedure for the accreditation is as follows:



4.4.1.3 CAC

The CAC was created by the President of Maynilad in an Inter-Office Memo dated March 13, 2006 to review and recommend for approval contracts above PhP1 million generally funded out of capital expenditures. Please refer to Section 4.4.1.6 below for the newly approved authorized signatories of awards and contracts, which took effect on May 15, 2008.

It is headed by a Chairman, who is the Chief Operating Officer, normally a second ranking official of Maynilad, a Vice Chairman, who is another second ranking official and five members including the Heads of Technical Operations & Program Management Group, Logistics, and CHCOD.

The Contract Services Unit serves as its Secretariat for civil works projects.

4.4.1.4 Bidding Procedures

Invitation to Bid

The list of projects scheduled for bidding is advertised in the bulletin board outside the office of PMG. Interested contractors may join the bidding provided they are qualified / accredited contractors of Maynilad.

Invitation to Bid is issued to all invited bidders approved by the CAC

Issuance of Bid Documents

Bid documents include among others, the Contract General Conditions and MWSI Standard Technical Specifications which are conforming to MWSS Standards. The complete sets of bid documents are ready for distribution on the first day of issuance of direct invitation. Each prospective bidder gets identical documents. Records are kept of all tender documents distributed.

Changes made up to the bid opening date are covered by addenda. Requests for clarification are allowed prior the bidding.

Pre-bid Conference

A pre-bid conference / site inspection is conducted for projects with complex scope of works or with areas that may pose construction difficulties.

Submission and Opening of Bids

Bids are dropped inside the bid boxes with two separate padlocks, one key is under the custody of Internal Audit and the other key is with PMG. Late bids are not accepted. Opening of bids is on the same day of submission of bids and witnessed by representatives from Internal Audit and Finance. Bidders are allowed to witness the bid opening.

Evaluation of Bids

A Cost Comparison of Bids is prepared to evaluate the unit bid prices of all the bidders. In-depth cost analysis of the detailed estimates is conducted, if necessary. The bandwidth for award is +/- 20% of the MWSI Reference Estimate.

Recommendation of Award

PMG recommends award in favor of the lowest bidder who is technically complying and with sufficient contracting capacity. Recommendation of Award for project worth Php1 Million and above is subject to approval of CAC.

Notice of Award

Notice of Award is issued to the winning bidder who complies with all the requirements e.g. Performance Bond, Insurances, S-Curve, PERT/ CPM, Cash Flow, Manpower and Equipment utilization, Construction Method, Traffic Management Plan and Safety Procedures.

The Performance Bond/Security is required to guarantee compliance with the terms and conditions of the bid and award. It can be in the form of cash, manager's check, bank guarantee, stand-by letter of credit or surety bond.

After the winning bidder has furnished the required performance bond/security and insurances, Maynilad promptly notifies the non-winning bidders.

Contract Agreement & Notice to Proceed

Maynilad simultaneously issues to the winning bidder the Notice of Award and Contract Agreement incorporating all agreements between the parties.

Within seven (7) calendar days from receipt of the Contract Agreement, the winning Bidder should sign the Contract Agreement and return the same to Maynilad.

A Notice to Proceed is issued after the contract agreement has been perfected.

4.4.1.5 Types of Bidding

Sealed Envelope Bidding

Shortlist of Contractors to be invited in the bidding shall be approved by CAC.
Sealed Bids are dropped inside the bid box.

Bid opening is on the day of bid submission and witnessed by Internal Audit and Finance. Bidders are also allowed to witness the bid opening.

The duration from the issuance of bid documents to issuance of Notice to Proceed is 45 calendar days for Supply and Install Contract and 30 calendar days for Labor Contract only.

Request for Price Quotation (For urgent projects)

Good performing contractors are requested to submit price quotations. Sealed Price Quotations are likewise dropped inside the bid boxes.
The duration from the issuance of bid documents to issuance of Notice to Proceed is 15 calendar days.

Unit Price Contracts (All-Works Job Order Type)

The bidding procedure is similar with the regular bidding of Capex projects. Maynilad accredited pipelaying contractors are requested to submit unit price quotations. Unit prices are established based on the comparison of bids received and are compared to Maynilad's unit prices. Established unit prices are offered to Maynilad good performing contractors and to other interested newly accredited bidders approved by CAC.

The duration from the acceptance of the established unit prices by the contractors up to issuance of Notice to Proceed is 15 calendar days.

Negotiated Contracts (Emergency Projects)

PMG enters into a negotiated contract when there is water quality issue, breakage of water mains, urgent repair, or where there is danger to lives and properties. Also, when there is failure of bidding.

Good performing contractors are considered for award for contracts in lieu of an incentive bonus for early project completion.

Negotiated contracts are subject to CAC's approval and the Contract Agreement is perfected within seven (7) calendar days.

4.4.1.6 Authorized Signatories

For Construction Contracts

Amount	Approval of Award	Signing of Contract
Up to 500T	Dept. Head	Division Head
Above P500T – P5M	Division Head	COO
Above P5M – P25M	CAC	
Above P25M – P50M	President	President
Above P50M	Board Execom	

4.4.2 Goods and Other Services

The Procurement Department under the Logistics Division is tasked with the acquisition of the goods, such as construction materials (in conformity with set standards), office and other supplies. Acquisition of services other than those for civil works, such as Janitorial, Fleet Management, Facilities Maintenance, Call Center, Meter Reading, Courier Services, IT Consultancy, are also handled by the Procurement Department.

The Logistics Division of Maynilad has two (2) departments: Procurement and Warehousing.

The Procurement Department is mandated to source from reliable suppliers and service providers the needed supplies, materials and services other than for civil works, of acceptable quality at the best possible price. Starting 2008, the mode of contracting of Capex projects shifted from contractor-supplied to owner-supplied material engagements, thereby significantly increasing the procurement activities.

In general, the Warehousing Department's role is to accept deliveries of procured materials and their release to the end-users. More importantly, it is expected to maintain a minimum inventory level of materials to ensure their availability when the need arises at the lowest possible cost. The main warehouse and stockyard are situated in Socea Bonna. A warehouse is operated to serve the needs of the Head Office in Balara and another one in La Mesa for the requirements of the Treatment Plants. In addition, seven (7) satellite warehouses situated in strategic locations across the concession area are also operated to service the different Business Centers.

4.4.2.1 Procurement Policies

The procurement of goods and services other than for civil works follow certain policies formulated and approved by the President of the Company.

Supplier Accreditation

As an assurance that the Company procures its supplies/requirements only from reliable suppliers and service providers, they have to undergo a two-stage accreditation process, namely, Financial and Technical. The following are the requirements to be submitted:

1. Application for vendor accreditation
2. Certificate of Registration with the Securities and Exchange Commission/Department of Trade and Industry
3. Incorporation Papers to include their Articles of Partnership/Incorporation and By-Laws
4. VAT Registration Certificate
5. Other relevant government permits and licenses (DENR/LLDA, etc.)
6. Latest Audited Financial Statements duly certified by an external auditor
7. References as Banks and other clients
8. List of tools, equipment and machineries
9. Technical Brochures and/or shop drawings
10. Product Samples

The financial statements of prospective vendors are scrutinized as to its financial capacity and viability using accepted financial ratios.

The last three (3) items listed are forwarded to the Technical Evaluation Department of the Engineering Division for evaluation. After passing the technical evaluation, the factories are inspected to ensure that the tools and equipment submitted are operational and capable of producing the required materials.

Modes of Procurement

To ensure efficient and timely acquisition of materials and other services, the Company adopts several modes:

1. Open Canvass for procurement valued at P50,000.00 and below
2. Sealed Bids for those above P50,000.00 but less than P500,000.00
3. E-Bidding for those valued at P500,000.00 and above
4. Repeat Orders are undertaken under the following circumstances:
   - Contract price must be the same as or lower than those in previous order
   - Must be done within six (6) months from date of original order
   - The quantity shall not exceed that in the original contract
5. Direct or Negotiated Purchases
   - For items exclusively distributed
   - They are urgently needed to avoid danger to life or property
   - After two (2) bidding failures

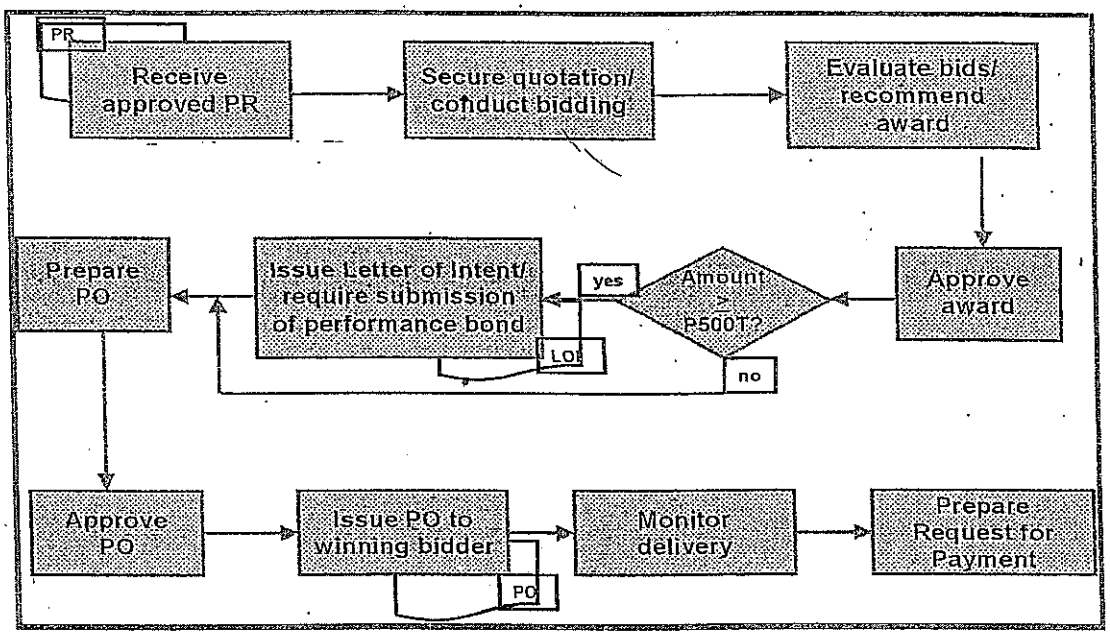
Electronic or E-Bidding

This mode is adopted to ensure a more dynamic and transparent process of procurement of goods and other services and has resulted in acquisition costs. Implemented using the facilities of Bayantrade, all purchases of materials, supplies and other services valued at P500,000.00 or more go through this process. The accredited bidders tender their offers on-line, either at Bayantrade or using the Internet. They may offer as many bids as they can within a certain time. As preferred by the Company, the bidders could only view the rank of their bids every time they post them but not the value. Immediately after the close of the bidding, the results are known to the bidders.

4.4.2.2 Procurement Process

Attached is the illustration of the process that the procurement of goods and other services go through.

Procurement Process



The Company shall require from the winning bidder a performance bond/security to guarantee compliance with the terms and conditions of the bid and the award. The performance bond/security can be in the form of cash, manager's check, bank guarantee, standby letter of credit or surety bond.

4.4.2.3 Dealings with Affiliated Companies

Companies affiliated with Maynilad or any of its shareholders may participate in any bidding for the procurement of goods and services by the Company provided that they are qualified and accredited by Maynilad. The affiliated companies shall be subject to the same procedures, requirements and rules as the other bidders. All dealings with affiliated companies shall be done on a commercial arms length basis at all times.

4.4.2.4 Approving Authorities

Approval of procurement documents pass through certain levels of authority depending on the value of goods and services to be procured. Exhibit 3 shows these levels.

APPROVING AUTHORITIES

	Value (P)	Recommending Approval	Approving Authority
Purchase Requisition	Less than P2M	End-user Head	CFO
	P2M and above	CFO	President
Award	Less than P50,000	Manager, Bids & Contract Admin	Procurement Manager
	P50,000 and above	Procurement Manager	V.P., Logistics
	>= P100,000 award to non-lowest complying bidder	Procurement Manager	CAC
Purchase Order.	Less than P2M	Procurement Manager	V.P., Logistics
	P2M and above	CFO	President

4.4.2.5 Plans

To further improve the efficiency of procurement and the timely delivery of goods and other services, the Company intends to adopt the following:

1. Institutionalize the annual procurement planning to be able to enter into longer term supply agreements with vendors thereby ensuring better prices of goods and services as well as reliable deliveries.
2. Expansion of the Company's supplier base for a more competitive sourcing.
3. Implementation of the procurement sub-module of SAP's Enterprise Asset Management for better efficiency.
4. Adoption of Electronic or E-Procurement

E-Procurement

Currently, all procurement of goods and other services are centralized at the Company's Head Office. The long and tedious process of frequently ordering small quantities of supplies oftentimes result in delays in acquisition of fast moving items needed by the Business Centers, such as office supplies, safety gears, tires, batteries, etc. By adopting the E-Procurement process, such delays will be minimized, if not totally eliminated.

The process involves the bidding of these items electronically and posting them and their respective prices as well as the contracted vendors, on the facilities of Bayantrade. These can be viewed by the end-users who can order their needs on-line with the items delivered directly to them.

4.5 ASSET MANAGEMENT IN GENERAL

4.5.1 Maintenance of Water and Sewer Facilities

The existing above ground and under-ground assets represent a significant level of capital investment and there are costs associated with their maintenance and rehabilitation and/or replacement when they reach the end of their useful life. The maintenance of existing assets, the systematic rehabilitation/replacement of aging assets and the development of new assets to meet growing demand all have important implications for the levels of service provided to customers and the associated tariff levels.

4.5.1.1 Application of Prudent Utility Practice (PUP)

Prudent utility practice in operation and maintenance means keeping the facilities of a utility system in sound and dependable condition that would ensure the production and delivery of the required quantity and quality of water at all times, in the case of water facilities, and the disposal of wastewater of acceptable quality, in the case of sewer facilities. Maynilad will apply prudent utility practice as its main approach to operation and maintenance. In applying PUP as the approach, Maynilad will:

1) Adopt a GIS-based asset management system which will include an asset register map containing spatial data on the water and sewer facilities.
2) Adhere to international standards and practices in designing, constructing, and testing of the new assets to replace the old ones.
3) Religiously carry out routine and preventive calibration, testing, monitoring, and maintenance programs per manufacturers' recommendations employing trained and experienced personnel who are duly licensed and are using proper equipment, tools, and procedures. This is to ensure that the equipment will function properly under all operating conditions.
4) Maintain at all times sufficient buffer stock of materials, spare parts, resources, and supplies to meet the preventive maintenance program.
5) Provide adequate manpower complement at all times in terms of: (a) duly licensed professional operating personnel, and (b) adequately experienced and trained personnel to operate the plants' equipment properly and efficiently taking into consideration manufacturers' guidelines and specifications.
6) Carry out periodic audit on the observance of the standard operating procedures to be incorporated into the existing operation and maintenance manual as part of the Quality Assurance System (QAS). The QAS shall comply with ISO 9001/9002:2000.

4.5.1.2 Adoption of a GIS-based Asset Management System

The need to maintain the assets during the concession period and to hand them back with residual life after the concession period will require a sound platform of asset

condition recording and verification. There must be an asset management system that will be responsive to the requirement of Article 6.5.2 (Asset Condition Disclosure) of the Concession Agreement, particularly its use in the determination of the book value of the assets which shall be the basis for the limit on return on rate base as well as its residual value which shall be used in the determination of the expiration payment pursuant to Articles 9.4.3 and 9.4.4 of the Concession Agreement. To this end, Maynilad will maintain an asset register map and database which will be derived from the normal day to day operation of the system. The system will be maintained in a GIS platform (Arc View Mapping Package or equivalent) which can contain spatial data on both the water and sewerage systems.

The data collection or asset registry to be maintained in the GIS maps shall include:

a. Installation date
b. Description of size, capacity, material used, etc.
c. Historical cost (actual or estimate)
d. Asset condition
e. Remaining life
f. Residual value

The GIS maps shall incorporate the operation and maintenance or repair data which could be used as basis for decision making in asset renewal or replacement. It shall have special feature of identifying valves which must be closed in case of pipe breakage. It shall also include existing and prospective customer data base which can be used for determining customer water demand for purposes of expansion planning as well as serve as a tool for locating possible illegal connections and meter tampering.

4.5.1.3 Adherence to Operation and Maintenance Manual

Maynilad will conduct a performance audit on all operating treatment plants and pumping/lift stations to determine if the procedures in the existing operation and maintenance manuals are being adhered to. Improvements shall be made if necessary to make sure that the PUP is being applied. Maynilad shall make sure that the manuals cover the following:

1) Normal Operation
2) Emergency Operation
3) Periodic Calibration and Preventive Maintenance

The Normal Operation Manual shall include, where applicable the following:

1) Process Flow Diagram indicating the range of operating pressures and water levels at strategic locations of the system
2) The Instrumentation Diagram
3) Standard Operating Procedures
4) Chemical Dosage Schedule

5) Backwashing Schedule
6) Valve Operation or Exercise Schedule
7) Manpower Schedule
8) Buffer Stock Levels of Consumables
9) Personnel Duties and Responsibilities

The Emergency Operation Manual shall include but is not limited to the following:

1) Standard Operating Procedures (SOP) applicable for every emergency situation that may occur on any part of the facilities.
2) List of vehicles, equipment, and tools needed for every situation.

The Periodic Calibration and Preventive Maintenance Manual shall consist of the following:

1) Schedule of periodic calibration and preventive maintenance of all equipment, incorporating the manufacturers' recommendations.
2) Standard Operating Procedures of all equipment if not covered by the Technical Manual supplied by the manufacturers.
3) List and location of spare parts.
4) Manpower Schedule.
5) List of maintenance tools and spare parts of all equipment.

4.5.1.4 Enhancing the Capability to Quickly React to Emergency Situation

Maynilad is planning to modernize the existing telemetry system to make it more responsive to emergency situations. The occurrence of pipe breakage which may cause the collapse of structures and/or damage to property must be detected immediately upon its occurrence. An emergency crew shall be dispatched quickly in order to close off the control valves which will cut the water supply to the busted pipe. This quick-reaction system will also require the regular exercise of control valves to ensure they are operable at all times.

It should be pointed out that breakage on trunklines results in substantial losses if left unattended even for just a few hours. Shortening the response time for major pipe breakages will thus significantly prevent the rise of NRW.

4.5.2 Water Distribution Incidence Management

Maynilad will minimize the incidence of pipe leaks, busted pipes, contamination, and outbreak of water-borne diseases due to ingress of contaminated water into the water distribution system. This goal is expected to be realized after the rehabilitation period (massive pipe replacement) and the eventual installation of a pro-active pipe replacement program once the GIS-based asset management system is made fully operational. The pro-active pipe replacement program will be drawn

up based on statistical data to be gathered during the rehabilitation period regarding the economic life of every pipe material. Pipes which are approaching their economic life will be programmed for replacement.

In the interim period, reactive standard operating procedures shall be drawn up for each type of incident. For emergency or crisis situation, a quick reaction action plan shall be put in place. In addition to making valves operable at all times by regular exercise, this quick reaction action plan shall also need an accurate asset register in GIS platform. The accurate asset register shall enable the quick dispatch of repair crew with the right materials, tools and equipment.

In cases of outbreak of water-borne diseases, close coordination with the Department of Health and other agencies shall be given top priority. Standard operating procedures shall be formulated and applied on remedial measures such as quick determination of dosage for on-line chlorination, distribution of drinking water by water tankers, immediate isolation of the influence area to prevent further dispersal of contamination, and immediate repair of breakages to prevent infiltration of contaminated water.

A thorough flushing and disinfection of affected pipelines is mandatory before they are put back in operation.

5 MARKET, CUSTOMER SERVICE, BILLING COLLECTION, CUSTOMER CARE AND CSR

5.1 MARKET PROFILE

5.1.1 The West Zone Service Area

As of December 2007, Maynilad's Customer base totals a little over 700,000 water service connections. Depending on economic activity, these customers are classified into the following categories: *Residential, Semi-Business, Business Group I (Commercial), Business Group II (Industrial)* and *Sea Transport*. About 20% or 150,000 of these customers are found in depressed communities. The customer mix summarizing Maynilad's Customers mix with respect to number of accounts and volume consumed is as follows:

		Accounts		Volume	
Customer Type	Classification	No.	% of total	MCM	% of total
Domestic	Residential	608,133	86.4%	15.9	67.2%
	Semi- Business	41,105	5.8%	1.6	6.9%
Non-Domestic	Commercial	44,597	6.3%	4.8	20.4%
	Industrial	9,672	1.4%	1.3	5.5%
	Sea Transport	12	0.0%	0.1	0.4%
	TOTAL	703,519	100.0%	23.8	100.0%

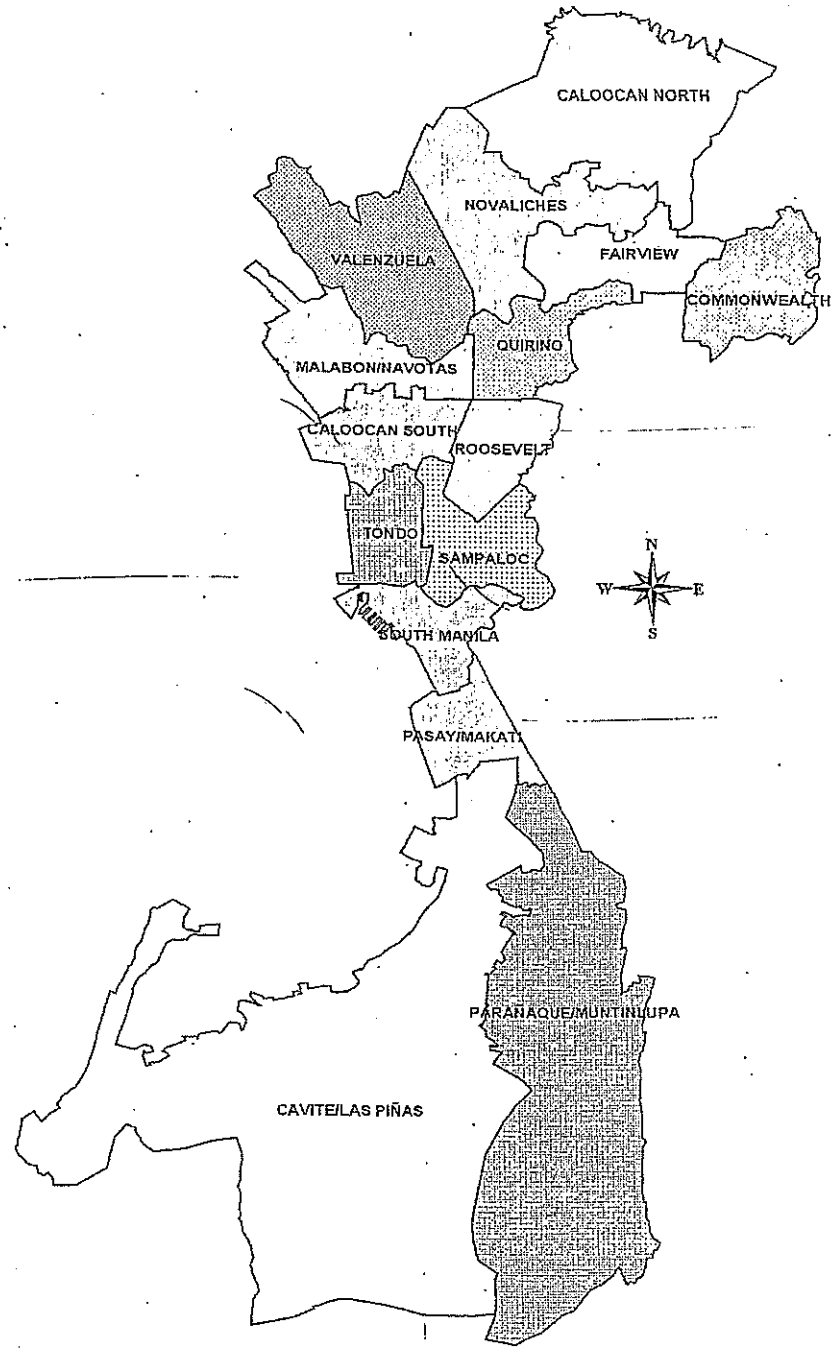
To better serve its Customers, Maynilad's concession area is geographically divided into 15 Business Centers (BCs) covering the following cities/municipalities:

Business Center	Municipality Served
Tondo	Manila
Sampaloc	
South Manila	
Sta. Cruz	
Quirino	Quezon City
Commonwealth	
Novaliches	
Roosevelt	
Malabon-Navotas	Malabon and Navotas
Pasay-Makati	Pasay and Makati
Parañaque	Parañaque and Muntinlupa
Cavite-Las Piñas	Cavite and Las Piñas
South Caloocan	Caloocan
North Caloocan	
Valenzuela	Valenzuela

In anticipation of its expansion and service level improvements, the Business Center Management will establish three (3) more BCs in the following general areas: Alabang, Las Piñas and Sta. Mesa. The Alabang and Las Piñas BC will be established in the 3rd quarter of 2008 while the Sta. Mesa BC is targeted to be set up by 1st quarter of 2009.

These additional BCs are expected to address the rapidly expanding area of the South where service level and coverage improvements through Capex projects are currently taking place. It is also aimed at bringing more focus to its highly commercialized area currently covered by the Sampaloc BC.

Map 5-1: The Maynilad Concession Area with Corresponding BC



Each BC has a customer base range of around 30,000 to 50,000 accounts depending on land area. The BCs are further broken down into zones with about 5,000 accounts per zone.

At present, the average consumption, service levels and NRW of these BCs are:

Business Center	Average CMD	Water Availability (ave. # of hrs)	Water Pressure (ave. psi)	NRW %
South Manila	2.63	23.0	above 7 psi	70%
Sta. Cruz	1.72	23.7	below 7 psi	72%
Sampaloc	1.13	20.4	below 7 psi	75%
Tondo	0.95	18.3	below 7 psi	73%
Roosevelt	1.27	23.4	above 7 psi	71%
Novaliches	0.92	15.0	7 psi	60%
Quirino	0.91	12.6	below 7 psi	68%
Commonwealth	0.76	15.0	below 7 psi	44%
Malabon-Navotas	0.93	21.6	7 psi	75%
Pasay-Makati	1.53	21.3	below 7 psi	68%
Parañaque	1.28	14.4	7 psi	59%
Cavite Las Piñas	0.79	19.5	7 psi	56%
North Caloocan	0.76	14.2	above 7 psi	41%
South Caloocan	0.91	22.5	below 7 psi	68%
Valenzuela	1.25	16.5	above 7 psi	53%

A discussion of each BCs profile and projects within the next five (5) years is presented below.

QUEZON CITY
Roosevelt Business Center

The Roosevelt BC currently serves 50,614 customers in its service area. Its supply source is mainly gravity-fed, with about 227 Mld of water flowing from Bagbag at 10 psi.

As of December 2007, the BC has laid 14.07 kms of pipelines in various locations and installed a total of 1,081 new water service connections. Since Roosevelt BC is highly commercialized, it is one of the highest revenue generating BCs. It accounts for 7% of the Company's total revenues. Despite this strong point, the area is

sensitive to deflections in water supply and its current NRW of 71% needs to be reduced significantly.

To address this issue, the BC is intensifying its campaign against illegal connections in the area. It is likewise providing NWSCs in blighted areas, with the intercession of local government officials, through meter clustering projects that offer easy payment schemes.

The BC implemented a series of pipe replacement projects in 2007 to boost supply to its customers. These include the 1.4 km-pipeline along Sto. Cristo St., 11.35 km-line at Brgy. Veterans, 0.36 km-line along Pitimini and Osmeña Streets, 0.53 km-line along P. Florentino St., and 0.43 km-line along Mauban St. The Baler Booster Station has been upgraded to complement these initiatives.

For 2008, pipe replacement projects are lined up for this BC in Zones 3 and 4, which will benefit Brgys N.S. Amoranto, Maharlika, St. Peter, Lourdes, Paang Bundok, Salvacion, San Isidro Labrador and Sta. Teresita covering more than 12,000 service connections. The 2008 Capex Program entails an investment of PhP236.06 million for 40 kms of pipes in Zone 3 and PhP216.08 million for 35 kms of pipes in Zone 4. In the next four (4) years, from 2009 to 2012, a total of 157 kms of mains will be replaced.

Commonwealth Business Center

Another BC serving the customers of Quezon City is the Commonwealth BC. While the Roosevelt BC is highly commercialized, this BC is predominantly residential in customer mix, most of whom come from the blighted areas.

The Commonwealth BC serves five (5) barangays namely Commonwealth, Batasan, Payatas, Holy Spirit and Bagong Silangan. As of December 2007, this BC has 58,409 active water service connections. It is served mainly by the North-C pump at La Mesa Dam.

In 2006, the BC laid 10.65 kms of mainline and installed 8,585 NWSCs. The following year, another 21.5 kms of mainline and additional 8,550 NWSCs were put in place.

To better serve the elevated portions (COA/Batasan), the BC commissioned the Commonwealth Booster last October 2007. Residents living in "extreme areas" such as those near the Montalban boundary also benefited from the Litex booster commissioned last December 2007.

For the next five (5) years, the BC's Capex projects will mainly cover total pipe replacement for Filinvest Subdivisions, namely Filinvest-1, Filinvest-2, Mountain View, Filheights, Northview-1, Northview-2 and Sierra Monte, and two (2) subdivisions at Brgy Commonwealth - Don Jose and Ideal.

The main concern of the BC is supply availability in its service area. It is fully dependent on the operation of North C pump, which has limited capacity. It expects to get an additional supply source from the volume that will be recovered from rehabilitation areas, particularly Novaliches and Quirino. A total of 31 kms of mainlines will be replaced to reduce the NRW level.

Novaliches Business Center

The Novaliches BC covers 14 barangays of Quezon City spread over approximately 4,030 hectares of land area. By the end of 2007, the BC has 51,688 active WSCs. Customer classification consists of 91% residential, 4% semi-residential, 4% commercial and 1% industrial. The present NRW is at 62%.

Novaliches BC is a pump-fed area, with supply coming from the La Mesa Booster Station.

In 2007, Novaliches BC completed the pipe replacement projects at Brgys Gulod, Sta Lucia and North Fairview to improve water supply, minimize leakages and address rampant illegal connections. Maynilad has also completed mainline extension projects for the underserved areas of Tawid Sapa II in Brgy Kaligayahan and Phase 8 Subdivision in Brgy North Fairview. The BC likewise reactivated the Novaliches Booster to further improve pressure in the area, particularly at the upper portion of Brgys Nagkaisang Nayon and San Agustin.

For the year 2008, the BC has lined up the total rehabilitation of Novaliches Zone 3 covering Brgys San Agustin, Sta. Monica and Novaliches Proper. Along with this is the pipe replacement along Quirino Highway covering Brgys Gulod, Novaliches Proper, Sta. Monica and Kaligayahan.

The years 2009 to 2011 will see the implementation of more pipe rehabilitation as well as extension projects in Novaliches, reduce NRW level to 30% and increase water availability to 24 hours at an average pressure of 16 psi. A total of 38 kms of mainline will be replaced and another 15 kms of mainline extension will be laid to attain the target coverage and NRW level.

Quirino Business Center

Quirino BC comes next to Novaliches BC as recipient of water from the La Mesa Treatment Plant and is the gateway of Roosevelt BC water supply. The main challenge in the area is to provide 24-hour water availability from a present of average 13 hours and improve water pressure from a low average of 7 psi without affecting the other BCs down the line.

The BC gets its water supply by gravity from Bagbag Reservoir and by pump through the North-C Pump at La Mesa Dam. It serves 256,704 people in 11

barangays covering an area of about 1,666 hectares. Currently, it has 43,067 active water connections. Domestic customers account for 97% of the total active services.

To improve its service levels, the BC implemented various pipe-laying activities in several areas in 2005, including the one in Project 8 benefiting 2,879 customers and the mainline extension along Congressional and Mindanao Avenues providing 869 WSCs. In 2006, the BC invested PhP18 million to install two booster pumps and laid new pipes in various locations to connect an additional 2,482 beneficiaries.

Meanwhile, PhP135 million was spent in 2007 for the total pipe replacement of Quirino Zone 4 in Brgy Bahay Toro benefiting around 4,000 customers. A "Customer Delight Program" was also implemented to improve service in other areas of Brgys Bahay Toro, Baesa, Talipapa, Sauyo, Bagbag, Sangandaan, Tandang Sora and San Bartolome through the installation of boosters at low-pressure points. This program costing PhP68 million benefited 6,500 customers in the area.

For 2008, Quirino BC has lined up Capex projects amounting to PhP201 million for the rehabilitation and total pipe replacement of Quirino Zone 5, which covers Brgys Sangandaan, Baesa and Bahay Toro. This is expected to benefit 6,900 customers. In addition, the BC will be implementing pipe reinforcement projects along King Alexander, Old Sauyo Road and St. Dominic Subdivision. In the next four (4) years, from 2009 to 2012, a total of 137.5 kms of watermains will be replaced to attain the target NRW level.

MANILA
South Manila Business Center

Due to the predominantly large accounts constituting its customer base, South Manila BC is the largest revenue-generating BC of Maynilad making up about 15% of the Company's total revenues from water and sewerage.

The BC's high revenue potential and recoverable volume made it the perfect candidate for total pipe replacement for the 2008 Capex Program. This is expected to address the area's NRW level of 70%, which translates to about 150 Mld that can be recovered and reallocated to other customers. This Capex project, costing around PhP1.2 billion, will involve the laying of 162 kms of pipelines in South Manila.

Under the new HA configuration, the South Manila BC will be getting its supply from two major take-off points: one in the 2,200 mm trunk line, another in the newly energized LMAQ line. In the next two (2) years, with the proposed upgrading of the Ermita Pumping Station and Reservoir, the whole HA will be supplied solely by the said pumping station, with the supply source coming from LMAQ line.

The new distribution system is designed to cater to possible expansion, especially in the commercial areas of Ermita, Malate and Port Area where it is expected that new high-rise buildings will be built in the next five (5) years.

Sampaloc Business Center

One of the most densely populated areas of the West Concession with its 373,238 inhabitants, the Sampaloc BC has a customer profile composed of 83% residential and 9% commercial mostly in the University Belt.

Its water supply is sourced from Bagbag through gravity-fed pipes. However, only 52% of the customers have 24-hour water availability while the NRW level in the area is at 75%. Sampaloc likewise has problems with low water pressure, which has resulted in the occurrence of dirty water in some areas.

To address this problem, the BC implemented a rehabilitation project for Zone 8 (University Belt area) last 2007. After its completion, NRW in the zone went down from 69% to 23% and average consumption levels increased from 1.55 cu.m. per day (CMD) to 1.80 CMD.

Future projects in Sampaloc include more rehabilitation works in Zones 5 and 9 to eliminate any water quality problems and improve water availability. This involves the laying of 34.403 kms of new pipes in year 2008. Zones 6 and 7 are set to be rehabilitated in 2009, Zones 3 and 4 in 2010, and Zones 1 and 2 in 2011. A total of 218 kms of main will be replaced in the next four (4) years to attain the target NRW level for the area. Some of the recovered water will be retained within the BC to cater the growing number of medium-rise buildings that are currently being built such as the Ayala properties at the former San Lazaro Race tracks and other high-rise buildings expected to be built in the next five (5) years.

Tondo Business Center

Covering Tondo Foreshore area and Gagalangin, the Tondo BC's customer profile is 85% residential, most of which belong to the socio-economic classes C, D and E. The biggest challenge for the BC is the area's social problem, as the prevailing culture of the community makes the use of illegal connections an accepted practice.

Due to water quality problems, the BC has replaced about 107 km of the 212 km pipeline from year 2003 to 2006 in the Tondo Foreshore area. NRW level has gone down after implementation of these projects, and the BC has since reduced water supply to the area from 260 Mld to 160 Mld. The water supply is gravity-fed, coming from Bagbag Reservoir through the 2,200-mm trunk line.

Year 2007 saw the laying of 34 kms of new pipes in Gagalangin, which is about 16% of the area's existing network. Improvements will continue from year 2008 to

2012, as the remaining 71 kms of pipelines, including the GI pipes laid in Tondo Foreshore, are scheduled for rehabilitation.

Sta. Cruz Business Center

The Sta. Cruz BC, which covers parts of Sampaloc, Binondo and Sta. Cruz in Manila, serves a total of 34,699 active connections as of December 2007. However, since the oldest network of MWSS is located here, Maynilad has implemented the replacement and relining of existing pipelines to ensure the system's reliability.

Among the projects in 2007 are the total pipe replacement projects at Sta. Cruz Zones 1, 4 and 7 costing Maynilad over PhP450 million.

For year 2008, the BC lined up a PhP31.21 million total pipe replacement project at Sta. Cruz Zone 6, particularly the area bounded by Bambang, Estero de San Lazaro, C.M. Recto and Estero de Magdalena.

Similar projects will also be implemented from 2009 to 2012 to replace the remaining pipelines in Sta. Cruz.

CALOOCAN

South Caloocan Business Center

South Caloocan BC is an urban community situated in the northwestern portion of Metro Manila. The 1,373-hectare area has a population of around 650,000.

In order to improve service levels and coverage, the BC lined up eight (8) Capex projects last year, which includes the total pipe replacement at South Caloocan-9, installation of the Baesa in-line booster and the Kalaanan mainline extension.

For year 2008, the total pipe replacement of CaS-2 has been programmed in the Capex. This includes the laying of roughly 27.5 kms of pipes and the installation of 20 district meters to measure water consumption in each sub-zone. In addition, 16 PRVs are to be installed in the individual supply sources of each sub-zone, making the distribution of water supply more manageable.

Included in the BC's five-year plan are total pipe replacement project in the remaining eight (8) unrehabilitated zones. A total of 208 kms of mainline will be replaced for the eight (8) zones for rehabilitation.

North Caloocan Business Center

Though its current customer base is predominantly residential, steady and rapid population growth is apparent in the service area of North Caloocan BC. Expected to follow suit is an increase in commercial and industrial establishments owing to the availability of real estate in its vast 4,123-hectare land area.

The challenge for North Caloocan BC, therefore, is to fully cover the area at a sustained water pressure of 7 psi and above with 24 hours availability. The water going to the area is pump-fed so the supply can reach customers despite the land's average elevation of 95 meters above sea level. The housing and commercial development in this side of Caloocan, which used to be called the "Bukid Area", has been going on at a frenetic pace for the last 10 years.

North Caloocan is the fastest growing BC in terms of number of connections. To support this improvement in service coverage, the BC has laid 13.01 kms of pipelines from 2006 to 2007. Capex for 2008 is focused on pipe replacement of approximately 14 kms in sub-zones with NRW of 65% and above, as well as mainline extension of roughly 11.04 kms.

On the other hand, its medium-term project for the next four (4) years aims to lay primary and secondary zone supply lines of around 11.78 kms to reinforce/conform to the new hydraulic boundary.

PASAY CITY and MAKATI CITY
Pasay-Makati Business Center

Owing to its predominantly commercial customer mix which counts among its customers Mall of Asia and other large establishments, it is one of the top BCs in terms of billed volume and revenue. The number of active connections in this Business Center stands at 42,795.

So far, the BC has laid a total of 62 kms of pipes in various locations from 2005 to 2007, which cost PhP582 million in Capex projects and benefited 11,060 households. These include the total pipe replacement project in San Rafael and San Roque.

More recently, there has been the pipelaying project along Roxas Blvd. Service Road, total pipe rehabilitation at Maricaban, mainline extension along MIA Road, and completion of gaps along the APM6 line along Dominga-Zamora that cost PhP262 million. These projects resulted in the increased pressure in the area from 3 psi to 4-5 psi and improved water quality.

In the coming years, from 2009 to 2010, the BC intends to spend a total of PhP1.36 billion to replace some 178.17 kms of pipes, which is expected to benefit 29,561 households. The goal is to decrease current NRW of 67%, improve the water pressure and attain water availability of 24 hours a day.

VALENZUELA
Valenzuela Business Center

A Maynilad expansion area, the Valenzuela BC currently provides water to 45,754 active connections, including two (2) towns of Bulacan (Obando and Meycauyan)

through water districts operated by LWUA. Twenty-eight out of the 32 barangays in Valenzuela are connected to Maynilad while the remaining barangays are targeted to become its next customers by the end of 2008.

The BC's main supply source is the North-B Booster, which provides a daily supply of 122 Mld. The NRW level is currently at 53%. Total pipe length in the area is 214 kms.

From year 2005 to 2007, Maynilad invested in major improvement projects to increase water pressure and improve the service coverage of Valenzuela. This came in the form of pipe extensions into unserved areas and installation of in-line boosters for elevated areas.

The challenge for the BC is to attain the 100% service coverage. With this in mind, it is intensifying expansion efforts through the laying a 24-km pipeline in the four (4) underserved barangays of Valenzuela. In the next five (5) years, replacements of 51 kms deteriorated pipelines are programmed to increase water pressure and reduce NRW

MALABON and NAVOTAS
Malabon-Navotas Business Center

For the period 2003 to 2006, the BC has completed numerous projects that involved billed volume growth, including temfacil projects in Brgys Muzon and Navotas, which benefited 805 customers; rehabilitation projects in Brgys Catmon, Tonsuya and Niugan in Malabon for 5,378 WSCs; temfacil projects in Brgy. Longos, Malabon, that improved water supply for 4,582 WSCs; and total replacement of a 400-mm diameter mainline along McArthur Highway.

In year 2007, several 3-R projects were included in the Capex Program for the BC. These included the mainline replacement at Guava Road, installation of booster pump at Reparo area, total rehabilitation of Zone M-7 that recovered at least 18 Mld of water and mainline replacement at Dampalit under Zone M-6.

The continued increase in its number of commercial customers - as well as the expansion at Tanza and Tangos in Navotas, including the three-hectare relocation site at Karisma in Malabon - need to be supported by appropriate water infrastructure. As of year-end 2007, the BC replaced 32 kms of old pipes, mostly from the total rehabilitation projects for Zone M-7.

To address the high NRW level in those areas, two (2) other zones will be rehabilitated, i.e., Zones M-2 and part of M-1, starting first quarter of 2008, Also, some 25 kms of pipes will be replaced at Zone M-7 (Brgys Concepcion, Ibaba, Agustin and Tañong) and Dampalit area.

The BC's master plan for reliability considers the replacement of all deteriorated lines such as ACPs and CIPs, which are now more than 25 years old and buried deep underneath several road-upgrading projects. A total of 255 kms will be replaced in the next five (5) years.

PARAÑAQUE and MUNTINLUPA
Parañaque- Muntinlupa Business Center

Owing to its distance from the main supply source, Parañaque/Muntinlupa BC utilizes surface water pumped through the Pasay and Villamor Pumping Stations for its Parañaque customers, and groundwater from 10 deepwells for its Muntinlupa customers.

The total number of WSCs is 40,334, registering an increase of 18% from last year. Billed volume has likewise improved from 44.72 Mld in 2006 to 51.69 Mld in 2007.

This was largely due to the BC's supply improvement projects in 2007, which include the filling of gaps on the 1,050-mm line along the Coastal Road, the laying of the 800-mm service pipe along Dr. A. Santos Avenue and the additional booster operation at Villamor, which improved the influence areas of along President's Avenue, Tahanan Village, Mon-El, Better Living Subdivision. MGV, Sunvalley and SAV.

More developments can be expected with the BCs expansion projects for 2008, such as the laying of new pipes at the HA 26, and along President's Avenue, Aguirre, J. Elizalde and El Grande Avenues to serve BF Homes and the new water sources to serve the various Parañaque and Muntinlupa subdivisions, most notably, BF Homes and Ayala Alabang. Maynilad will also upgrade the existing Villamor Pumping Station and build two (2) new reservoirs to increase the capacity particularly during peak demand hours.

To expand further to Muntinlupa City and the underserved areas of Parañaque, Maynilad considered the development of a 300 Mld water supply system with source coming from Laguna Lake.

CAVITE and LAS PIÑAS
Cavite-Las Piñas Business Center

Located at the farthest point of the Concession, the Cavite/Las Piñas BC gets is supply by groundwater and by pump through the Pasay Pumping Station. Its current number of accounts totalling 46,622 generates annual revenue of about PhP264 million.

The supply of surface water to Kawit, Cavite improved last year after the 600-mm pipe along Binakayan Bridge was completed. This replaced the deep well supply

that used to be the major supply source of the town. The "Bring More Water to the South Program" also allowed for the supply of surface water to high portions of Las Piñas at CAA and other areas.

To date, 600-mm. pipelines are being laid right up to the Noveleta Reservoir with the intention of bringing surface water to Cavite City and Noveleta, as well as shift the groundwater surplus to Rosario.

Gearing up for expansion in the next five (5) years and with the recovered water coming from the North BCs, Maynilad is laying a 2,000-mm. pipe dedicated for the soon-to-be-upgraded Pasay Pumping Station, thereby increasing the BC's capability to push more water to the south. Expansion efforts will concentrate at Las Piñas, Bacoor, Imus, Cavite City and Rosario.

5.1.2 Customer Profile

The tariff schedule identifies four (4) types of customers with related water/sewer service use:

Residential (Code R)

The water/sewer service is for domestic sanitary use of person, family or a group of families living in one structure, compound, apartment, multi-storey building or subdivision which are clearly designed, built and used only as domicile, as well as charitable institutions which use water for domestic purposes only. Domestic/sanitary use includes cooking, washing, bathing, flushing, laundry, maintaining the swimming pool, lawn, and garden, all of which are for the use of the permanent residents, their guests, and domestic helps only (workers are excluded).

Semi-Business (Code SB)

The water/sewer service is for the use of any person, establishment, and institution engaged in non-domestic/economic activity. Semi-Business includes small/marginal non-domestic/ economic activities. For a uniform and consistent way of classification, marginal activities are those activities which make use of not more than two (2) primary business units. These primary business units can take the form of any labor, material, equipment, apparatus or machines used in the conduct of the business. Moreover, the business owner or any of his/her household members, whether paid or unpaid, including his belongings/possessions/appurtenance that are used in the business are all considered business units.

Business Group I (Code BG I)

For the use of any person, establishment or institution, whether private or public, engaged in non-domestic/economic activities like banks, shopping malls, hospitals, schools, restaurant, hotels and others. Establishments classified in the Philippine

Standard Industrial Classification (PSIC*) under Agriculture, Fishery and Forestry; Wholesale and Retail Trade, Transportation, Storage and Communication, Financing, Insurance, Real Estate and Business Services, Community, Social and related services are included under this group.

Business Group II (Code BG II)

The water/sewer service is for the use of any person, establishment and institution, both private and government, engaged in the conversion/ transformation/processing of goods from one form to another form of higher economic value. Establishments classified in the PSIC under Mining and Quarrying, Manufacturing, Electricity, Gas and Water, and Construction are included under this group.

Raw Water and Sea Transport

In addition to the four (4) types of customers mentioned above, the Company also provides water service to 12 sea transport customers and raw water (water which did not undergo any purification or treatment) to around 20 customers.

Table 5-1: Customer Profile – Residential and Non-Residential

Customer Group *	Billed Services (Dec. 2007)	Average Tariff/m3 (as of Dec. 2007)**	Billed Services (Dec. 2007)	Average Tariff/m3 (as of Dec. 2007)**
	UNSEWERED		SEWERED	
Residential	573,055	17.50	35,078	28.85
Semi-Business	37,796	22.22	3,309	34.20
Business Group I	33,930	45.84	10,667	67.10
Business Group II	8,542	44.86	1,130	108.83
Sea Transport	12	19.86		
All-in P/cu.m.	**653,335**	**23.54**	**50,184**	**53.95**

*Excluding Raw Water

**Net of Value Added Tax & MSC

Breakdown of Billing per Customer Class

From the existing billing system, billing statistics can be generated for each of the four (4) customer classes: Residential, Semi-Business, Commercial and Industrial including Government Accounts. The contribution of each class in 2007 is as follows:

Table 5-2: Customer Profile – Residential and Non-Residential

Customer Type*	Billed Services	Billed Volume	Billed Amount
Residential	86.4%	67.2%	44.2%
Semi-business	5.8%	6.9%	5.6%
Commercial	6.3%	20.4%	39.3%
Industrial	1.4%	5.5%	10.5%
Sea Transport	0.0%	0.4%	0.3%

* Excluding Raw Water

Customer with Water & Sewer Services

Of the 703,519 total billed customers, 50,184 accounts were with water and sewer services as of December 2007. The billing statistics show that on the average, customers with water and sewer services are billed a higher volume than those with water service only. This is attributed to the high concentration of non-domestic customers in the sewered area.

Table 5-3 : Profile of Service Connections with Water and Sewer Services

Customer Group	Total Water Connections	Water Connections w/ sewer
Number of Services	603,519	50,184
Billed Volume per Connection (m^3/mo)	33.5	67.9

The sewered area is almost exclusively composed of the Central Manila Sewerage System. This sewerage collection system is located in the City of Manila, North and South of the Pasig River.

Profile of Residence Type

The Residential type is either "individual dwelling units" or "multiple dwelling units" which in turn are either:

- Vertical
  - High-rise buildings (condominiums)
  - Low income housing projects (Bliss Housing)
- Horizontal
  - Subdivisions
  - Villages
  - Townhouses

- Low-income housing projects (National Housing Authority projects)
- Blighted/low income communities

Key Customers

A total of 3,000 customers accounted for 24% of the total billed volume and 39% of the total revenues. The following are the major customers:

- San Miguel Corp. (breweries)
- Softdrinks factories; ice plants, etc.
- Obando & Meycauayan Water Districts
- Shopping malls / commercial centers
- Hotels and Condominiums
- Philippine Ports Authority
- Water sold to Ships (sea transport)
- Hospitals, universities, schools, etc.

5.2 OVERVIEW OF THE GENERAL APPROACH ON CUSTOMER SERVICES

In the drive to make Maynilad viable, achieve growth and meet concession targets, the Company has put in place a Customer Care program. The program involves meeting, satisfying customer wants and needs, ensuring easy access for service requests and account payments, service restoration, churn management and undertaking continuous quality improvement activities to keep up with industry standards.

Under its new owners, Maynilad has begun a major company-wide initiative to re-orient its employees to a new culture, that of a "customer-oriented marketing organization".

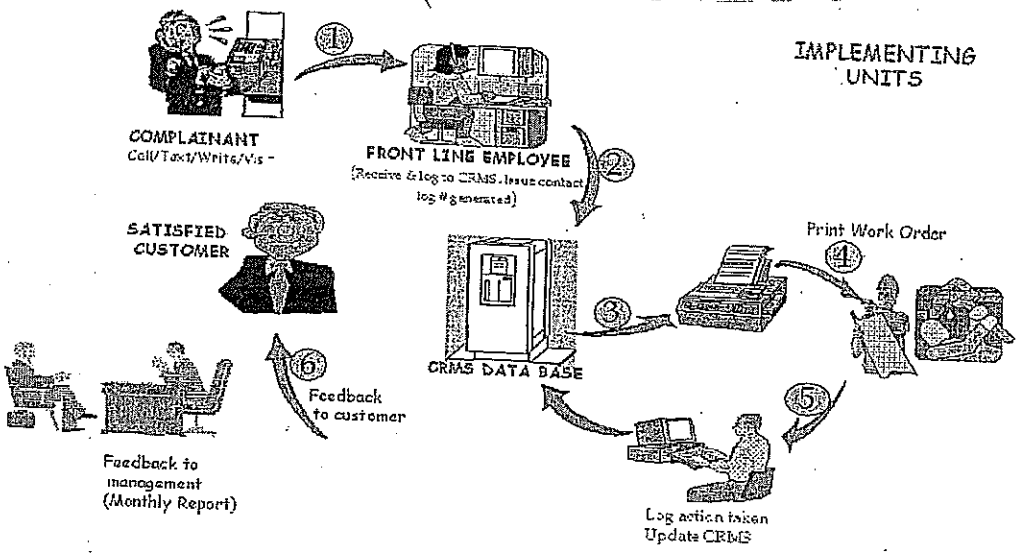
Aside from being customer-oriented, the Company is likewise adapting new technologies to make its operations more efficient and its employees more responsive to the needs of the customers.

5.2.1 Accessibility for Service Requests

With the Customer Care program, Maynilad has taken various ways to make it more accessible and convenient to its customers.

The BCs are being located strategically to make them within easier reach, and technically equipped to answer inquiries, process requests and resolve complaints. Contacting Maynilad has also been made more convenient through the 1626 Hotline, which is on service 24 hours a day, seven days a week. Customers may also make use of the SMS medium, or text messaging to make inquiries or send their complaints. Other means available are fax, e-mail, and internet. Innovative means shall be explored for alternate customer contact channels to further expand Maynilad's customer reach.

Access to customer database by the Call Center (through hotline 1626) and the implementing offices (Business Centers, Sewerage and Sanitation and Anti-Illegal Task Force) is made easy by the Complaints Routing & Monitoring System (CRMS). This system is capable of logging and routing to implementing offices (at real time) the complaints received from customers and providing instant feedback thereby closing the communication loop thus increasing level of service. There is still, however, a need to improve infrastructure technology for operational efficiency to address the number of complaints brought about by the increasing number of customers. Below is the current Complaints Handling Process of Maynilad.



Given the ever increasing number of customers needing to get in touch with Maynilad regarding a variety of concerns, such as billings, connections, and the like, and the current limited capacity of its Call Center, Maynilad has opted to make use of the country's largest, most experienced, and prominent telecommunications company, PLDT, to provide customers with a new contact center.

Since January 14, 2008, ePLDT Ventus has taken over the Maynilad Call Center operations. ePLDT Ventus is a provider of offshore, cost-effective outsourcing solutions specializing in inbound customer care. A subsidiary of PLDT, ePLDT Ventus is a cost-effective option for outsourcing customer service solutions in the Philippines.

5.2.2 Accessibility for Account Payment

The Company has taken measures to provide customers with a variety of options with which to pay their bills considering that bill payment has been identified as one of the most frequent transactions that customers make with Maynilad.

Aside from payments received at its BCs, customers can currently pay through the following:

- Express Payment Machines (ATM- Bancnet)
- Banks (East-West, RCBC Savings, BDO & PNB)
- Phone Banking (BPI)
- Internet Banking (BPI & PNB)
- Credit Cards (BDO & Metrocard)
- SM Payment Centers
- LBC
- Bayad Centers

- Convenience Stores (7-11)
- MV Lhuillier outlets
- EC Pay
- Smart Money

Credit cards, offer a monthly auto-debit arrangement (ADA) removing the worries from both the customer and the Company on how to pay bills and receive payments. This arrangement further encourages subscription because it is usually bundled with a freebie (ex. free phone) upon ADA subscription. Another option to consider would be a fixed monthly billing scheme reconciled every semester or every quarter.

The most recently introduced payment option considered to be the most convenient and hassle-free way of paying the bills is the Debit card (Smart Money) payment made by linking cellular phones and paying through its menu-driven options.

5.2.3 Continuous Quality Improvement

The Customer Care program involves maintaining and continuously raising the bar of quality in servicing customers including transforming the frontline offices more customer-friendly. Along this end, multi-skilled Customer Care officers empowered to answer and respond to customer requests through any medium will be assigned to field offices.

To further ensure that the Company's Customer Care standards are met, Customer Care officers shall be backed up by the Shared Services group, composed of employees whose functions include monitoring transactions to ensure compliance with service and industry standards, maintaining the technological infrastructure, searching for new, innovative ways to improve operations, and other support functions.

5.2.4 Service Restoration

As a service-oriented Company, Maynilad adheres to global service restoration standards and business continuity models. Adherence to these standards ensures that any disruption to a customer's service is restored immediately, especially when these disruptions are occasioned by emergencies or disasters.

With the entry of the new owners, Maynilad has adopted the advanced Microsoft CRM Software Implementation technology which allows a swifter and shorter reaction time for customer service concerns and service restoration. This technology is called the Maynilad's "Customer Service Information System (CSIS)" and will replace the existing Complaints Routing and Monitoring System (CRMS).

To cope with unscheduled service interruptions, operations and maintenance engineers and teams in the respective BCs are always available for immediate dispatch.

Also in place is a disaster recovery plan, designed to protect the integrity of the Company's database and the quality of the service.

5.2.5 Customer Service Policies and Procedures

To improve the level of customer satisfaction while protecting the interest of the two (2) Concessionaires, the Regulatory Office, recommended in various RO Resolutions the approval of some Implementing Rules and Regulations (IRR) which, the MWSS Board of Trustees (BOT) approved. The Resolutions are aimed at setting uniform standards and procedures on issues common to both Concessionaires.

The following are the IRRs passed for implementation, 15 days after publication:

1. IRR No.2008-01 - Temporary Disconnection/Reconnection of Water Service Connections
2. IRR No. 2008-02 - Billing Scheme and Rate Classification for High-Rise and Other Multiple Dwellings
3. IRR No. 2008-03 - Billing of Semi-Business (Residential B) Customers
4. IRR No. 2008-05 - Rate Reclassification of some Government Institutions
5. IRR No. 2008-06 - Additional Meter and Clustered Connection Charges for Open/Depressed Communities

Policies and procedures, which will also be common to both Concessionaires shall guide the personnel involved in the implementation of the above IRRs.

5.3 DETERMINING CUSTOMER SATISFACTION

Knowing what the customer wants and needs is one of the basic concerns which must be resolved if Maynilad is to be able to provide excellent customer service. With this in mind, the Customer Care program includes getting the latest input and feedback from Maynilad customers through a dedicated team whose sole function is to conduct customer research, to include, aside from the quality of service, the level of customer satisfaction.

5.3.1 In-house Research

A comprehensive customer satisfaction research shall be undertaken all-year round involving daily gathering of feedback, monthly consolidation of findings, and quarterly analysis in order to get information to help provide immediate and long-term solutions for any problems or deficiencies.

Apart from conducting researches, another way to gauge customer satisfaction is to get feedback from those who contacted Maynilad's 1626 hotline. These call-outs shall be made after the standard time to complete an activity has lapsed to determine if action had been undertaken within standard time set. Other call-outs will be made for issues and complaints recorded in the system as completed to gauge the customer's satisfaction level. For business offices, a self-administered survey form will be available for easy access of customers who wants to express their comments.

5.3.2 Out-sourced Research

A complementary customer satisfaction study shall be outsourced to a third party to further gauge the level of customer satisfaction and correlate internal findings. This study shall be composed of two (2) phases; a qualitative phase and a quantitative phase. Phase I is a qualitative study to set service element parameters and identify main issues in current customer service engagements, with brief reference to service experience with other institutions such as utilities (water, electricity, internet), banks, airlines, restaurants/fastfood, hotels, etc. Phase II is a quantitative customer satisfaction survey to gauge customers level of satisfaction in the given service parameters via face-to-face interviews.

5.3.3 Global Standards

To cope with the fast-paced customer service industry, Customer Care shall capitalize on applying the performance management system prescribed by Customer Operations Performance Center, Inc. (COPC), a global authority on contact center consulting and certification. Customer Care shall also be a member of the Contact Center Association of the Philippines (CCAP) and its key people

(managers and supervisors) shall undertake certification on Call Center Industry Advisory Council (CIAC). The membership allows access to comprehensive studies on the latest benchmarks and accepted standard for the customer service industry. These serve as integral inputs for establishing the level of quality that can be offered with the abundant resource of Customer Care - manpower and machine. These global standards are complemented by a leadership and people development program to ensure that both the standards and the people are world-class caliber.

5.4 APPROACH TO SUCCESFUL IMPLEMENTATION OF BILLING AND COLLECTION

The billing and collection practices have evolved to answer the increasing needs of meeting customer requirements and maintaining the bottom line for the shareholders. Profiling and forecasting possible billing requirements helped developers create a system and business processes suitable for the versatile customer service officers.

A more complex billing system is also needed to go along with the advanced services available. A new convergent billing system shall also be evaluated to serve the needs of Maynilad, which can serve both residential and corporate accounts.

5.4.1 Customer Focus

The existing billing practices do not stop at creating an encompassing rate across all customer types. It takes note of the market response and shall be acted upon accordingly. This may further evolve into offering discounts for those paying earlier or for those paying in advance. Likewise, the feasibility of applying a prepaid billing system will be evaluated together with tying it up with Smart's over-the-air e-load platform. Adapting to the changing needs of customers spawn the creation of new, innovative postpaid and prepaid programs which are further categorized based on target market.

5.4.2 Front-end Tool Upgrade

The separate applications used in answering calls, creating an account, reconnecting an account, resolving a complaint and the likes, may be maintained in one integrated system. More customer management information is now available using the advanced Customer Service Information System (CSIS) with the following objectives:

- To establish a service level metrics that will improve complaints resolution rate.
- To implement an escalation process based on customer classification, nature of complaint, and geographical coverage.
- To provide a tool for their outsourced contact center agents.
- To implement a customer relations management sytem that is flexible in handling changes in business processes.
- To improve on the first call resolution and proactive water service disruption notifications.
- To improve routing of complaint to appropriate implementation team via short messaging system (SMS).

5.4.3 Beyond Boundaries

The limitation of having to send bills to a big number of customers within a limited period of time by a single courier has been one of the big challenges Maynilad has faced from the very start.

Working around this limitation gave birth to the creation of the Bill Cycles. Bill Cycles determined different cut-off dates depending on the location of the customer. This allowed enough time to manage the printing and dispatching of the bills. In addition, to be able to have more options in case a courier fails to deliver the bills, Maynilad has resorted to contracting several couriers.

Moreover, a bill-tracking system being utilized by PLDT will be adapted shortly to include Maynilad bills and couriers, to make sure that all customers receive their monthly bills.

5.4.4 Proactive Customer Credit Management

A dedicated group to monitor accounts of customers shall proactively call them when they are exceeding their due dates. This helps the customers avoid disruption of service and helps the Company as well in effective collection of payment. The customer relations activities of the zone management team will help in nurturing personal contact with the customers.

5.5 REVENUE METERING

As early as now, researches are being conducted on possible remote meter reading. Backed by PLDT and Smart's technologically advance infrastructure and proclivity for innovation, a tele-metric system and data logger powered by a SIM card and the Smart wireless transmission backbone may be introduced. This would prospectively allow remote and real-time monitoring of usage for revenue protection.

These approaches make up the current Customer Care's billing and collection practices. More than the skill and dynamism of the people developing and implementing these processes, centering the service on its customers to achieve one customer experience and first contact resolution is the ultimate driver of these innovations. This perhaps is the only approach appropriate to any industry aiming to stay long in the business of taking care of customers.

5.6 CORPORATE SOCIAL RESPONSIBILITY

The new Maynilad seeks to further strengthen and expand its CSR program not only as part of its strategic goals to enhance viability, attain growth and meet concession targets but also in recognition of the pivotal role it plays in ensuring a better quality of life for the people.

The new Maynilad aims to attain this through its CSR projects that promote poverty alleviation, sustainable water and sanitation management, and community development and well-being, create better cooperation and partnership among government and people, and provide assistance to calamity victims and charitable organizations.

The new Maynilad acknowledges that more than just being a water and sanitation services provider for the West Zone, it is a catalyst for growth and progress of the communities it serves.

5.6.1 Poverty Alleviation

The new Maynilad believes that, by providing reliable, affordable and clean water and sanitation service to the poor communities of the West Zone, it will empower these communities with the means and opportunities to move out of their destitution and upgrade their lives.

Bayan Tubig

Through the **Bayan Tubig** program that it began in 1999, Maynilad has provided residents of poor communities in the West Zone with their own individual water

service connections. As of this year, more than 107,000 households involving 1,070,000 people have benefited from this program.

The latest project which installed individual water service connections to a poor community is the **Baseco Mainline Extension Project** at the Baseco Compound, Port Area, Manila, which was inaugurated last March 25, 2008. The Baseco project is a joint effort of President Arroyo's Patubig Program, Manila City Mayor Alfredo Lim and Maynilad. Eight hundred forty eight (848) homes of the Gawad Kalinga, Habitat for Humanity and New Site communities now have their own water connections, and paying three times less than the water they were getting at the public faucets. The project will eventually cover all 2,848 households at the Baseco Compound.

Bayanihan Bayan Tubig

An offshoot of Bayan Tubig is the **Bayanihan Bayan Tubig,** wherein the beneficiaries themselves contribute their labor in installing the pipes under the supervision of Maynilad engineers. This has not only allowed Maynilad to cut costs but to also foster a strong relationship with the community and instill in the recipients a sense of ownership of the project, thus making them effective partners in combating illegal connections and other irregularities and in maintaining the facilities.

The most important benefit of the Bayan Tubig program is the cheaper and clean water that the beneficiaries enjoy. Before being connected to Bayan Tubig, residents were paying as much as eleven times more for the water of dubious quality sold to them by vendors.

Aside from the economic benefit, Bayan Tubig beneficiaries have become more productive. Freed from having to queue to get their water, the Bayan Tubig residents now engage in livelihood endeavors and other home-based economic activities.

Special Low Tariff for Low Income Households

A component of Maynilad's Poverty Alleviation Program is the implementation of the 20% tariff reduction for low-income residential customers consuming 10 cu.m. or less monthly. This is in line with President Gloria Macapagal-Arroyo's pro-poor policy of ensuring the affordability of water which will provide around 150,000 low income families with savings from their water bill which could be used for other basic needs such as food or medicine.

An additional component of Maynilad's Poverty Alleviation Program is the proposed special lower tariff for low-income households in the West Zone.

5.6.2 Sustainable Water and Sanitation Management

Maynilad's CSR program puts into practice the principle of Sustainable Water and Sanitation Management, which means adopting practices that would ensure the viable and wise use of our water resources, from the moment water is collected at our watershed areas to the point it is used and discharged back into nature. This principle lies at the core of Maynilad's corporate philosophy and operational processes and practices, by which Maynilad is able to nurture the environment, thus giving flesh to its mission of "protecting the environment to conserve our water resources for future generations."

Maynilad's commitment to sustainable water management took many forms and included the following activities:

1. Regular tree planting at the La Mesa, Ipo and Angat watersheds. This activity continues the efforts started in 2000 when Maynilad teamed up with the ABS-CBN Foundation to reforest 20 hectares of the La Mesa Watershed.
2. The Green is Good marathon (GIG Run) last Feb. 3, 2008 at the U.P. Diliman campus, participated in by 1,300 runners, initiated by the U.P. Mountaineers Club with Maynilad Water as the major sponsor. The marathon-raised-funds for the reforestation of the Ipo Dam watershed and at the same time made the public aware of the need to protect Metro-Manila's water sources.
3. Participation in the annual observance of Earth Day, and, currently, the World Water Day and the International Year of Sanitation. Of the latter, Maynilad's sanitation or domestic septic tank desludging project will be featured in ABS-CBN's new program, "Matanglawin," hosted by Kim Atienza, on March 31, 2009, at 11 pm.
4. Sponsorship of conferences and assemblies on sustainable water management, the latest of which was Maynilad's major sponsorship of the UNESCO-International Hydrological Program International Conference on Hydrology and Water Resources Management for Hazard Reduction and Sustainable Development, held last November 19 to 23, 2007 at the Intercontinental Hotel, Manila. The conference was organized by the Philippine National Commission for UNESCO, the National Academy of Science and Technology, and the Philippine Water Partnership, and participated in by delegates from around the world.
5. Maynilad as part of its environmental advocacy and its effort to ensure sustainability of its program have included its service and product providers in its program for tree planting. 'Greening the Supply Chain' is a continuing program being implemented in conjunction with its 'Greening the facilities' program. The aim is to cascade Maynilad green mission to its business partners.

Operationally, the entire West Zone hydraulic infrastructure is being transformed and subdivided into 36 more manageable and efficient hydraulic areas, with each HA normally having only one inflow and outflow for better control and monitoring. With the institutionalization of the HAs, Maynilad will be able to significantly reduce its NRW and improve its service levels, without having to put up major infrastructure projects. As the water and sanitation services are improved in this HA set up coupled with CSR programs which uplift the living conditions and relations in the community, Maynilad will surely foster the best cooperation and partnership among the people and organizations to help it realize the gains of new Maynilad.

5.6.3 Community Development and Well-being

Over the past years, Maynilad has initiated several projects designed to develop and maintain the well-being of the West Zone communities by giving special attention to the needs of certain sectors of the populace and by adopting schemes and methodologies designed to facilitate the provision of water and sanitation services and the payment of these services.

Tubig NGO Sustainable Livelihood Projects for the Poor

Maynilad will encourage livelihood projects for the lowly members of the community, in coordination with LGUs, government and non-government offices such as TESDA, PCUP, NAPC, NGOs, by giving out seminars, workshops and even assist the members to secure flexi-financing. This aims to provide sustainable access to safe drinking water and modest sanitation services to the members and at the same time provide basic business sense to make the member households economically active, self reliant and become productive members of the community. Maynilad may encourage the households to produce materials, such as hollow blocks, barricades, etc., that will be patronized by suppliers/service providers. Members can avail of materials and equipment at affordable costs using flexi-financing mechanism responsive to the needs of the people.

Senior Citizen Discount

For the **senior citizen sector**, Maynilad recently implemented a policy granting a 50% discount on the water consumption of senior citizen centers and residential care/group homes. The policy covers non-stock, non-profit domestic corporations that are organized and operated exclusively for the purpose of promoting the well-being of abandoned, neglected, unattached or homeless senior citizens.

Lingkod Eskwela

For the public school (337 public elementary and 50 high school) students and teachers in the West Zone, Maynilad has established the Lingkod Eskwela project, whose aim is to put up drinking stations in all of the 337 public elementary schools

in the Wesr Zone within a year from the signing of a Memorandum of Agreement with the Department of Education, assuring availability and quality of services.

This effort was initiated in cognizance of the fact that most public schools have limited or no resources to regularly and properly maintain their own water system, which results to unsanitary conditions that make schoolchildren vulnerable to water-borne diseases.

Under the program, Maynilad provided beneficiary schools with a potable water drinking station, as well as technical assistance in the improvement and maintenance of the internal water distribution system inside the campus. This technical assistance covers inspection of cisterns, fixing of plumbing systems especially in comfort rooms, cleaning of sewer lines, and desludging of septic tanks.

Under the project, Maynilad will also conduct regular sprucing up of the schools' toilets to ensure proper sanitation, increase public awareness on the value of water and sanitation and support the promotion of eradicating water-borne diseases under the Health Education Reform Order (HERO).

Lingkod Eskwela forms the first phase of the **Tubig Maynilad Para sa Lahat** program, under which Maynilad will provide reliable, clean water to all government service institutions.

Lingkod Ospital and Health Centers

Maynilad has established the Lingkod Ospital and Health Center project covering the 33 public and DOH hospitals and 78 health centers in the West Zone, whose aim is to put up drinking stations, upgrade restrooms, monitor water quality and conduct public educations, assuring availability and quality of services.

Lingkod Palengke

For the 15 public markets in the West Zone, Maynilad has established the Lingkod Palengke project, whose aim is to put up drinking stations, upgrade restrooms, monitor water quality and conduct public educations, assuring availability and quality of services.

Lingkod Social Welfare

For the 20 orphanages, home for the aged and social welfare centers in the West Zone, Maynilad has established the Lingkod Social Welfare and Health Centers project, whose aim is to put up drinking stations, upgrade restrooms, monitor water quality and conduct public educations, assuring availability and quality of services.

Lingkod Presinto

For the 15 city/municipal jails in Manila and Cavite in the West Zone, Maynilad has established the Lingkod Presinto project, whose aim is to put up drinking stations, upgrade restrooms, monitor water quality and conduct public educations, assuring availability and quality of services.

Rate Downgrading for Public Schools, Public Hospitals and Jails

In consideration to the complaints and appeals made by the local executives and heads of government agencies to downgrade rate classification of government agencies performing basic services, the **rate classification of the public schools, hospitals and jails,** shall be downgraded from Business Group 1 (or Commercial) to Semi-Business (or Residential B). This would provide these public institutions with financial relief by lowering their water bills.

Participation in PGMA's Serbisyo Muna Caravan and Patubig Program

For the **unserved and underserved sector** of the West Zone, Maynilad is a regular participant in President Arroyo's **"Serbisyo Muna Caravan,"** during which problems and issues related to water and sanitation brought up to President Arroyo's attention are given solutions. Maynilad likewise has contributed significantly to President Arroyo's **"Patubig ni PGMA"** which targets unserved communities.

5.6.4 Better Cooperation and Partnership Among Government and People

Aside from the obvious benefits derived from the provision of water and sanitation services, Maynilad's various CSR projects, especially Bayan Tubig, has also served to enhance cooperation and partnership among the government, NGOs and POs, and the residents of the West Zone.

The Streams of Knowledge and IPD projects are prime examples of this---NGOs working hand in hand with the local government, with the homeowners of Bagong Silang, and with Maynilad to help achieve a better life for the less fortunate.

Already, Maynilad is firming up plans with two NGOs regarding the provision of affordable water service to Caloocan City residents.

Streams of Knowledge, a non-stock, non-profit private organization, seeks to provide water service to Barangays 181 and 182 at Pangarap Village, Quirino Highway, Caloocan City through a special bulk selling scheme termed as **"Tubigan ng Bayan."** In effect, it will become a small water service provider, responsible for constructing and managing the internal water system, and billing and collecting payments of the project's customers.

Another NGO, the **Institute for Popular Democracy,** is proposing serving another area of Bagong Silang by also becoming a small water service provider. However, what differentiates the IPD proposal from that of Streams is that IPD will organize the residents of the area into a cooperative which will construct and operate their own internal water system and be responsible for billing and collecting payments. Thus, the cooperative will be the owner and operator of the project, not the NGO.

This is also true in Quezon City in the case of Congresswoman Nanette Castelo-Daza of District 4 and Congresswoman Annie Rosa Susano and Councilor Winnie Castelo of District 2, the barangay officials and the constituents of these districts. Congresswomen Daza and Susano have devoted their Countryside Development Fund or CDF on constructing as many Bayan Tubig projects as are needed in their districts, together with Councilor Castelo. The trio has brought water to around 40,965 households or to more than 400,000 people in their combined districts.

In general, Maynilad's CSR projects are designed to draw the cooperation and participation of local government officials, government offices, and community organizations. This, in the belief that Maynilad, will not succeed if it does not get the assistance and involvement of the other stakeholders in the community.

Toward this end, Maynilad has constantly conducted public consultations as part of project planning and implementation. Before plans are drawn up and construction began, consultations with the affected sectors are held, to get their views or comments, gain feedback and enlist their support.

5.6.5 Relief Missions and Donations and Grants

Other CSR activities of Maynilad involved donations and grants to charitable organizations and relief missions to communities beyond its concession area affected by the recent calamities that hit the country.

Under the aegis of the MWSS, Maynilad has been part of the relief work for the victims of the floods and typhoons that hit the Bikol Region in December 2006, and, lately, the victims of the flood and landslides in the Visayas and Bikol Region this March. In February this year, Maynilad also took part in the relief mission for the Dumagat tribe living within the Angat Watershed.

5.6.6 Democratizing Water and Sanitation Services Thru Corporate Social Responsibility

The new Maynilad will vigorously pursue its CSR programs, cognizant of the fact that, as the water and sanitation services provider for the West Zone, it has the duty to ensure that these services---basic and necessary to having quality life---reach all sectors of its populace, in fulfillment of its motto---***Water is life. Water for all.***

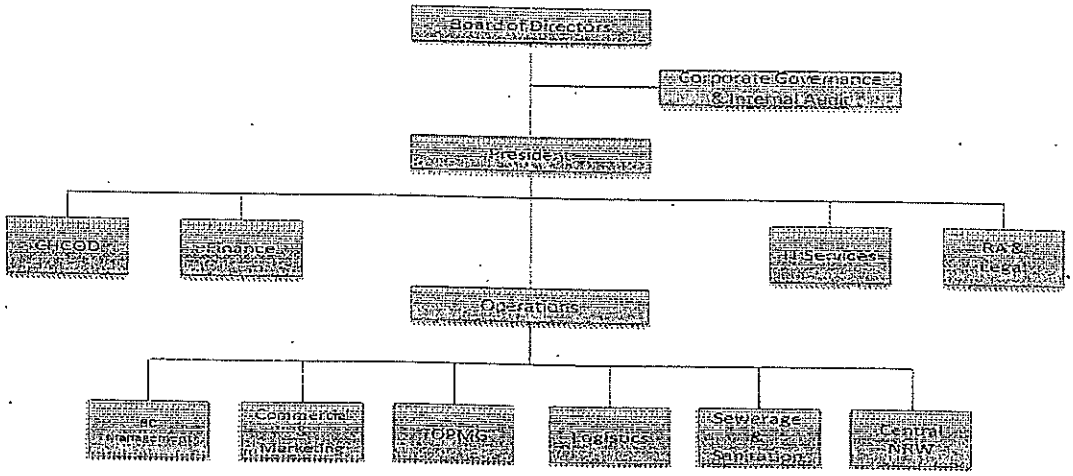
Maynilad will continue to nurture its CSR programs in support of nation building and to further enhance cooperation and partnership with its customers and other stakeholders. This will also contribute to the Maynilad's vision of being one of the world's best service providers.

6 ORGANIZATION AND MANAGEMENT

6.1 MANAGEMENT STRUCTURE

Besides formulating the mission and vision statements of Maynilad, the organization with the aid of consultants from Watson Wyatt, undertook a thorough process of corporate restructuring and development. At a more specific level of analysis, five (5) strategic points were identified upon which the new shape of the organization was based namely: a) improve network and operational efficiency; b) organizational efficiency, c) financial viability, d) improved customer services, and e) corporate image. Nearly all business processes were slid under the microscope for detailed review and benchmarking. Some processes required more attention than others. Each group accomplished job analysis questionnaires to identify the sections under them and its key results areas (KRAs). Focus group discussions were conducted for each group to further understand current corporate structure and validate success factors of each function and acquire observations and suggestions in remodeling the structure. The results of the data collection and process reviews, revealed that Maynilad has no marketing and selling function; the function of regulatory affairs is not consolidated; monitoring and checking activities which may be addressed by computerization are done through manual processes; some KRAs are misplaced or not aligned with the functions of the specific section to which they belong; duplication where several work processes or portions of work processes reside in more than one section; highly centralized structure limiting responsiveness; and several opportunities for outsourcing non-core activities. Top management workshops were carried out to craft a proposed new organization structure. The Organization Development (OD) efforts resulted in substantial improvements in terms of properly putting in place units at more strategic loci. In a bid to standardize the naming of the organization, designations that can be used at each hierarchical level have been unified. The top tiers of the organization are labeled as Divisions except for Operations which shall be called Group. Under them are called Departments. Under each Department are Sections and/or Units depending on their functions. The current Table of Organization is presented in the Figure 6-1.

Figure 6-1: Table of Organization



In addressing two (2) of the crucial issues in the 5-year management plan – manage water asset and reduce NRW to 40% and pilot consumer marketing efforts, the organization spun off two (2) new groups from various areas in Operations, Corporate Management Services, and Revenue Enhancement and reformulate them as Central NRW Division and the Commercial and Marketing Division both of which are now tactically placed under the Operations Group. The new structure was adopted in the first quarter of 2008.

The organizational study also resulted in outsourcing, emerging as a cost-effective alternative due to its benefits like specialization in the field and bundled services set at a single price. Thus, the operation of call center, meter reading, and fleet and premises management were outsourced to third party service providers all of which are located domestically.

An integral part of management's initiative to improve the network and operational efficiency of Maynilad is the shift to a HA configuration for the Business Centers. The adoption of this new setup is necessary for the better management of supply, pressure and losses in our distribution system. It will also give rise to other benefits, namely: enhancement of service levels and customer satisfaction, increase in water volume, minimization of dependencies and conflicts between areas, and an improved system to measure performance for the giving of incentives.

A core team composed of officers and managers from the BCs and the Head Office has been working on the new operational setup, and their recommendation is that the West Zone will be divided into 36 HAs. Twenty-nine of these are being prioritized for implementation while the rest are prospective expansion areas. These 29 HAs will be administratively assigned to the 15 BCs.

Once the new HA boundaries for the BCs are fully implemented, the zoning of the complex distribution network into small manageable networks will be possible, with supply and NRW levels being monitored using district meters.

6.2 CORPORATE HUMAN CAPITAL AND ORGANIZATION DEVELOPMENT (CHCOD)

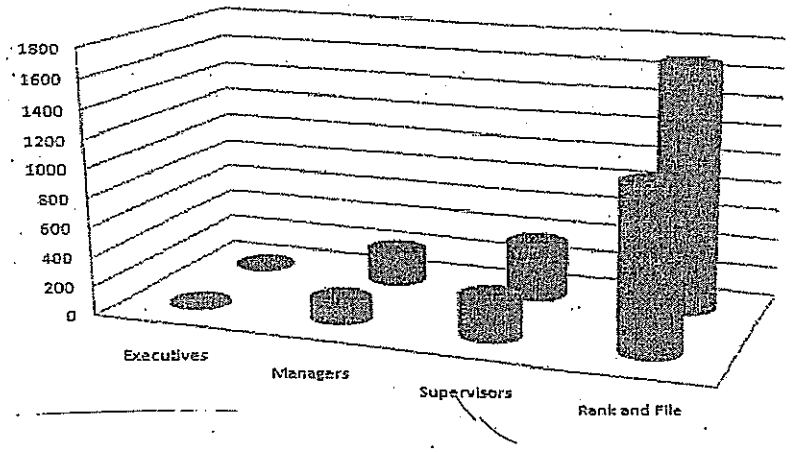
6.2.1 The Current Situation

6.2.1.1 Employee Profile

As of December 31, 2007, Maynilad's regular workforce stood at 2,325 employees. Of these, 1,695 are rank and file employees, 383 are supervisory employees, 229 are managerial employees and the remaining 16 are the officers and executives of Maynilad. Approximately eighty per cent (80%) of the workforce belongs to the Operations and Business Areas while the rest provide back office support functions. Majority of the workforce were inherited from MWSS. The work force has an average age of 46, considered old relative to the labor market population.

In early December 2007, Maynilad implemented the Right-sizing Program as part of its strategy for sustainable growth. The Program resulted in the reduction of the workforce by 33% bringing the original population of 2,325 down to 1,555 on January 13, 2008. Figure 6-2 shows the distribution of the workforce before and after the Right-sizing Program.

Figure 6-2: Distribution of Maynilad's Workforce by Level

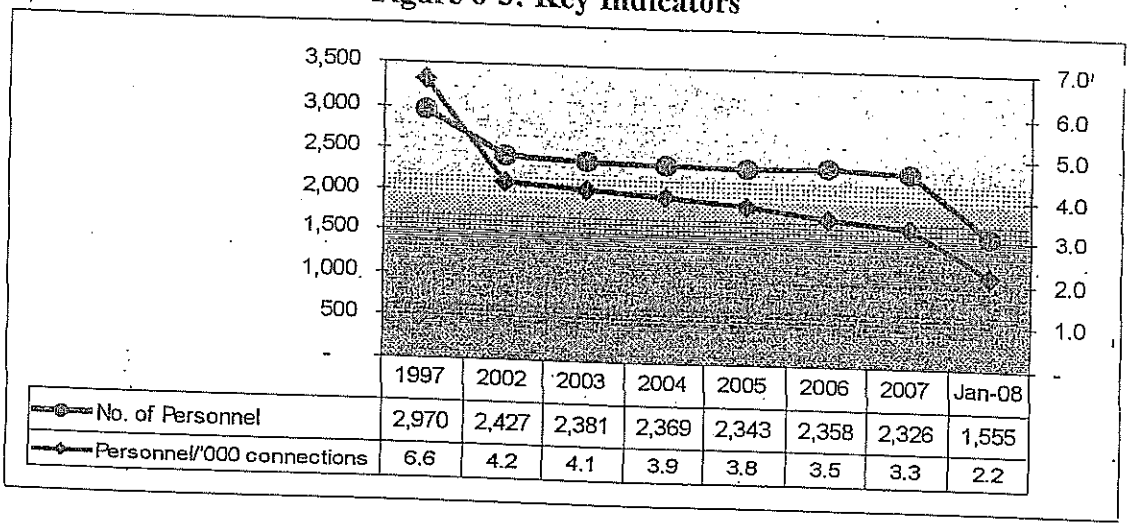


	Executives	Managers	Supervisors	Rank and File
Post-RRP	16	155	260	1104
Pre-RRP	16	229	383	1695

Figure 6-3 below shows that at the beginning of the concession in 1997, there were a total of 2,983 employees and after ten years, the number decreased by 22% yielding a total population of 2325. The current ratio of employees per thousand connections, which is the main productivity index used by most water utility companies worldwide, decreased by 50% - from 6.6 in 1997 to 3.3 in 2007. This

was further reduced to 2.2 after the implementation of the Rightsizing Program notwithstanding all of Maynilad's operational challenges since its privatization.

Figure 6-3: Key Indicators



	1997	2002	2003	2004	2005	2006	2007	Jan-08
No. of Personnel	2,970	2,427	2,381	2,369	2,343	2,358	2,326	1,555
Personnel/'000 connections	6.6	4.2	4.1	3.9	3.8	3.5	3.3	2.2

6.2.1.2 Highlights 2002-2007

Towards the end of 2004, under the stewardship of the then president Dr. Fiorello R. Estuar, Maynilad implemented the Employee Care Program (E-Care) as one of the pillars of the Viability Program. In order for the viability strategy to succeed, it is important to upgrade the skill levels of employees, encourage commercially-oriented mindset, and provide the necessary incentives to ensure performance excellence. This involved the implementation of various HROD programs aimed at changing the organizational culture into one where employees are competent and empowered, customer-focused, performance-driven and results-oriented. These are:

- Employee Communication and Engagement
- Motivation/Rewards and Recognition, Competency Development
- Improving Working Conditions

Organizational interventions needed to be directed at both behavioral and system components of the change efforts to ensure a more holistic approach to managing the organizational transformation process. The system components include: a) Performance Management System; b) Organizational Policies and Procedures; and c) Core Business Systems Improvement through SAP, GIS, etc. The behavioral components, on the other hand, include: a) Team Empowerment; b) Customer Service Excellence; and Competency Building.

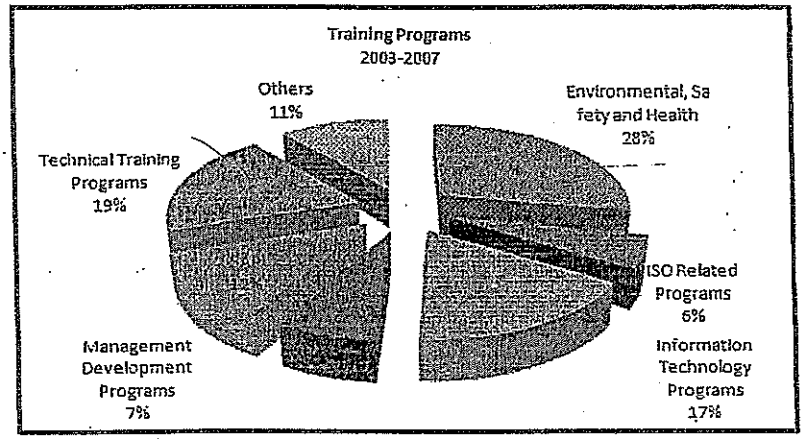
Organizational Restructuring

The BCs were launched in November 2005, still as part of the Company's Viability Program to bring management initiatives down to the smallest business units – 15 BCs with 128 zones. This set-up was conceptualized for the purpose of restructuring the organization in order to transform earlier operating units into profit centers. The major purpose for the organization was to create smaller business units which are nimbler, more agile, efficient, and more competitive. These smaller units are seen to be more focused and cohesive in pursuing NRW reduction, revenue generation, efficiency improvement, addressing customer needs, as well as strategic initiatives.

Training and Development

This section provides insight into the last five (5) years of Training and Organization Development. Records show that there's been a great demand for Environmental, Safety, and Health Training Programs beginning 2003 and much of it were in compliance with the requirements for international standards. The previous size of Operations Group and foregoing operational goals accounted for 19% percent of technical training programs held to uphold efficiency and to support Operations in pursuit of achieving their goals. Information Technology programs have been conducted perennially from the time that SAP was introduced in 2005 while Management Development Programs did not turn out to be profuse owing to copious amount of consideration exhausting various technical and safety training programs.

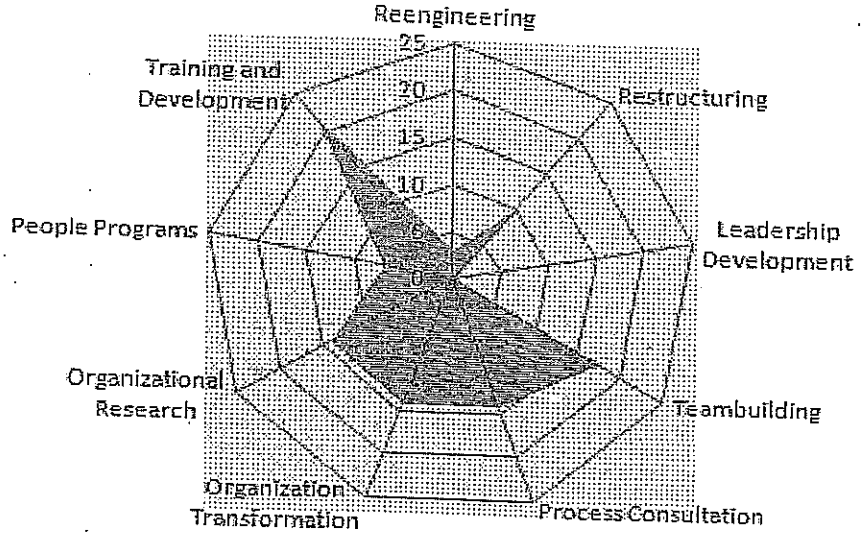
Figure 6-4: Training Programs Conducted



In terms of OD exercises, the organization consumed copious organization transformation interventions that involved Service Excellence workshops which encompassed performance management, quality improvement, and the epoch of developing competency standards. In 2004, the organization used benchmarking to gather intelligence about other utility companies such as Manila Water, Meralco,

and Bayantel for the implementation of SAP. In 2005, SAP was fully implemented. This also brought forth the merging of meter reading and revenue analysis units, the removal of bill custodians and billing management function from Customer Service, and the merging of Billing Support with IT. Minor realignment in the structure of Corporate Financial services followed yielding the deployment of accounting personnel to the branches. In the same year, the move from Business Areas to BCs happened. The year 2006 spawned new roles in the BC to streamline operations process, improve communications, and stamp out overlapping jobs. These positions included zone specialists, hydraulic specialists, front and back office heads, branch finance specialists, and network specialists to name a few. Improvement in the HR processes was also earmarked as a major area requiring OD. In 2007, HR launched HR Desk that fulfilled addressing the requirements of employees needing HR assistance in various areas such as compensation, benefits, recruitment, training, and the address of grievances. HR also upgraded its webpage to improve its service delivery. The launching of SIKAP egged employees on submitting ideas on ways to improve the status quo. This program enabled management to receive suggestions from the most trivial to the more monumental fashion of restructuring processes. Year 2007 also fell witness to a Rightsizing program that trimmed down the organization from 2325 to 1555 employees.

Figure 6-5: OD Exercises in the Last Five Years



Labor-Management Relations

There are two (2) labor unions that co-existed with privatization. These unions are recognized by Management to take up any and all issues affecting the rights and welfare of their members. Maynilad has consistently supported these unions and

believes that these labor organizations have been an effective mechanism towards forging labor-management partnerships to accomplish Maynilad's mission.

The Maynilad Water and Sewerage Union (MWSU) has been recognized as the sole and exclusive bargaining agent of all rank-and-file employees. It has an existing Collective Bargaining Agreement (CBA) with Maynilad for five (5) years that provides an economic package of bonuses and benefits. One of the highlights of MWSU-PTGWO cooperation to Maynilad Management is the overwhelming support for the rehabilitation plan of the Company. The Management and the Rank and File Union were able to renegotiate the economic provision of the CBA (2007-2008) within 3-4 months.

The Maynilad Water Supervisors Association (MWSA) is the second certified union. The first CBA was concluded with the supervisory union in December 2001. It provided substantial improvements in compensation and benefits for the covered employees without any disruption in operations. The Management and the Supervisors union successfully concluded the CBA contract for the first three years of the five-year contract to end in December 2009.

While some unresolved issues with MWSA still exist, these issues are now with the labor courts awaiting resolution. Maynilad management, however, has established closer and more significant ties with the employees' organizations across the Company. It has produced tangible positive results in the short-run and demonstrated a high probability of being able to continue to achieve the goals of Maynilad in the future.

Labor-Management Council

During the ten years of existence of Maynilad, it has been successful in maintaining harmonious relationships with the two (2) labor organizations in the Company. These were attained because of the accessible line of communication that provides a forum to address issues and concerns before the onset of any labor problem.

The Labor-Management Council plays a significant role in strengthening and maintaining healthy relationships with the unions through constant communication and through the implementation of different programs involving labor and management. It fosters industrial peace and stability.

Maynilad also promotes the preferential use of voluntary modes in settling disputes, including conciliation. To date, a grievance procedure was seen to be effective in addressing issues and concern in the interpretation of personnel policies.

6.2.2 Strategic CHCOD Roles, Plans and Programs

6.2.2.1 Role

The roadmap for sustainable growth envisioned by the current administration in the medium term includes improving organizational efficiency and right-sizing the organization as one of its priority goals.

The role of CHCOD is critical for developing strategies that maximize performance and productivity in the workplace. The CHCOD helps the organization gain competitive advantages by developing a highly trained workforce; aligning people, processes, and technologies; and creating and managing change at the individual, group, and organizational levels.

Consistent with its avowed role, the mission of the CHCOD is "to change lives" where the personal and professional well-being of the employees are well taken care of so as to make them more productive and effective in the workplace.

Mission

To change lives

Objectives

CHCOD is committed to working strategically for the organization in supporting its mission and in identifying and responding to its changing needs.

CHCOD is committed to provide a full range of centralized, comprehensive human resource management services for its stakeholders: employees, customers, and shareholders.

CHCOD is committed to act as a catalyst enabling an optimal work environment for obtaining sustained high productivity, continuous improvement, organizational renewal, and excellent customer service.

Strategies

Championing of change within the organization focusing on the employee lifecycle (Talent Acquisition, Employee Retention, Training and Development, and Organization Development).

Championing of industrial peace through effective employee communication, compensation and rewards solutions that address the needs of the employees, the business, and the times.

Serves as a corporate advocate for organizational health, safety, and security, providing corporate-level leadership and strategies to facilitate and integrate these critical programs.

6.2.2.2 Strategic Programs

Moving forward, leadership and management development programs are set for this year to advance the level of cultural change that is needed for transformative leadership. The organization also proposes to develop continuing education curricula to bring in programs on management, communication, ethics, and human resources. This will include a vast array of certificate courses, workshops, seminars, lectures and classroom-based learning not only to provide domain specific knowledge but also facilitate culture change, skills development, and succession.

1. Culture Change Program

Cultural change is a form of organizational transformation that is radical and fundamental form of change. Cultural change involves changing the basic values, norms, beliefs, etc., among members of the organization in order to improve organizational performance.

a) Conduct Watson Wyatt Organizational Study

Maynilad engaged the services of Watson Wyatt, a public company traded on the New York Stock Exchange with office in the Philippines, to conduct study on the current organization and HR practices and recommend appropriate changes that will suit the best interest of the Company. Watson Wyatt is a global consulting firm that specializes in the four areas of employee benefits, human capital strategies, technology solutions and insurance and financial services.

The study focused on the following areas:

1) Job analysis and review of current organizational structure
2) Articulate human resources strategy
3) Review of rewards system
4) Design of salary structure
5) Implementation of right-sizing strategy

b) Implement Culture Change Programs

Culture and behavior within organization is as important as the systems and processes that support performance management. The following culture change workshops will be conducted to jump-start organizational transformation across the workplace.

Management and Supervisory Workshop on Organizational Transformation

Organizational transformation is the radical rethinking of how an organization looks at its functions. Organizational transformation is not just a reorganization of the Company, it is a shift in the way people think about how things are done. Organizational transformation efforts start by identifying the business drivers that necessitate the need for change. A transformation initiative looks across a whole organization to discover how it can measurably improve the way it operates. The Company will conduct workshops for its managers and supervisors to ensure clear understanding of their role in the transforming the organization into a world-class entity.

Teambuilding Workshops

Of all the challenges faced by organizations today, team-building ranks as one of the biggest—and most critical. With organizations increasingly dependent on high-performance teams for virtually every imaginable activity, teamwork has become a major business strategy—and getting teams to work an absolute necessity.

New Customer Service Mantra

As the organization shifts to a new paradigm from its engineering orientation to a customer service orientation, a new customer service mantra becomes necessary to serve the organization's rallying point in achieving its business objectives.

5S Program

The key targets of 5S are workplace morale and efficiency. The assertion of 5S is, by assigning everything a location, time is not wasted by looking for things. Additionally, it is quickly obvious when something is missing from its designated location. 5S advocates believe the benefits of this methodology come from deciding *what* should be kept, *where* it should be kept, and *how* it should be stored. This decision making process should lead to a dialog which can build a clear understanding, between employees, of how work should be done. It also instills ownership of the process in each employee. As a result, it is often executed in tandem with standard work which standardizes the processes in which the items organized in 5S are used.

2. FUN AND PEOPLE PROGRAMS

Fun and people programs are instruments that will facilitate open discussion between management and employees as well as initiate action planning for organizational development. Among the different programs to be implemented are as follows;

a) Sikap Program

An idea generation program that will encourage the origination and incubation of innovation at all levels. It aims to; a) provide a venue for employees to contribute and take responsibility for improving Company's performance, b) to foster commitment and ensure employee engagement; and c) to discover and develop underutilized talents of people and build competency levels within the organization.

b) Ugnayam (Townhall Meeting)

A short for *ugnayan-at panayam* sa pangulo. It is a series of regular meetings to be conducted every month with the president of the Company and different employee groups across the organization. By drawing these employees, *ugnayam* creates the forum and discussion of topics that promotes issues affecting the welfare of employees. It will also build support and implementation of programs and thrusts of the Company.

c) Spot Awards

A program aimed to recognize and express instantaneous or direct recognition and positive reception for the job well done or contribution of individual or group of employees.

d) Rewards and Recognition Program

This program enables the prompt acknowledgement and reward of individuals or groups of employees who achieve high standards of performance in the workplace.

e) Akap (Birthday Roundtable)

Akap means '*Araw ng Kapanganakan*' and is intended to celebrate an employees' special day and at the same time, communicate to each and every employee. Birthday celebrants for the month will be invited and the president of the Company will sponsor a cake and host the occasion.

f) Sports and Wellness Programs

Employee wellness programs are the best approach to reducing employer, employee and overall healthcare costs. This program aims to reduce costs by increasing worker productivity by lowering absences from work and direct medical costs.

3. Employee Communication and Employee Welfare and Assistance Program

a) Text-Me-Ur-Concern

This program is a communication tool which serves as a medium in gathering feedback and allowing employees to express concerns, ask inquiries through text on matters related and/or affecting their job.

b) Quarterly General Assembly

This is a quarterly gathering and meeting of all executives, group/department managers, heads/supervisors and all rank & file employees. On this occasion, employees are informed of the various information, operational reports, Company policies and matters related to employees' welfare and benefits. It is also on this affair where employees are having fellowship to one another.

c) Corporate Philosophy of Behavior

The purpose of discipline at Maynilad is to correct misconduct and modify unacceptable behavior rather than to punish. Disciplinary action may be imposed for violation of the Company rules and regulations but the general objective is more of the prevention of the infraction rather than the administration of the penalty. Maynilad is now applying the positive discipline approach in the imposition of discipline for all employees.

4. Application of the Highest Standards of Excellence in Improving Employee Workplace

A positive working environment is clearly influenced by the quality of buildings, interior decoration and cleanliness, personal and property security, as well as out personal and corporate approach to the environment. The Company planned to transfer its headquarters to a new site within the West Zone to be fitted-out in accordance with the new corporate image that the organization wants to project.

a) Creation of a Continuously Learning Organization

The learning organization is one in which all systems, processes, and structures–at all system levels (individual, group, department, system-as-a-whole)–constantly seek data on system performance and use it at all levels to make the organization more productive/creative now (integration) and position it as best it can to succeed in an uncertain future and an uncertain environment (adaptation). The central feature of the learning organization is its commitment to seeking and using feedback for development. Training is one strategy of a continuously learning organization.

Values Formation Program

The Values Formation Workshop was created to provide a venue for all employees to align their attitudes and values to the Company's own vision, mission and values. It is a 2-day workshop that discusses the development of values, personal accountability, the Company's own values and calls for the participants' commitment to pursuing all these.

Leadership Development and Training Program

Leadership Program - The Maynilad Leadership Development Program (MLDP) represents the new management's serious commitment to developing line managers for the new Maynilad. Through its partnership with Ancilla Consulting, Ateneo de Manila, Management Visions, Inc., and Abundance Corporate Training, the MLDP provides its participants with strategies to handle the formidable challenges that are associated with moving into new and increasingly more complex leadership roles in an evolving organization. Participants will acquire a better business sense of their own approaches to leadership and will gain new function-specific ideas to optimize and sustain their potential. They will leave the program with fresh, updated perspectives and tangible action plans for taking charge and inspiring leadership throughout their place of business.

Supervisors Development Programs (SDP) – Similar to MLDP, the SDP aims to develop and enhance supervisory skills and facilitate the ability of supervisors to manage processes to ensure their timely completions.

Professional Development Courses – Formal continuing education courses are also made available to provide ongoing support and assistance to employees with induction, retention, and professional development activities that will enable them to meet and exceed set and targeted standards.

Manpower Planning / Career Development - The objectives of talent inventory are to; a) promote organizational success by forecasting talent needs, b) conduct internal and external research and analysis for the purpose of forecasting talent needs and for continuous renewal of succession management strategies and c) develop company-wide strategy for talent identification/review.

b) Succession Plan

The purpose of succession planning is to prepare the organization for risks associated with the planned or unplanned loss of knowledge that is critical to its success of the agency. Succession planning accomplishes this by developing employees to ensure that the organization has highly qualified employees who are capable of filling critical positions.

c) Management & Professional Training Program

The management and professional training program aims to; a) strengthen professional skill and understandings related to current roles and responsibilities and, b) develop, expand and augment effectiveness and efficiency of management team members.

d) Cadet Engineers' Training Program

Maynilad underwent different water supply and sewerage projects. The objective of the program is to train and prepare engineers in various technical fields, environment and culture. This provided an answer to the manpower requirements of developmental thrusts that the organization implemented. Also, this program provided a steady pool of trained engineers ready to fill up regular manpower requirements of the organization.

5. Performance Management & Meritocracy

Performance management is the process of creating a work environment or setting in which people are enabled to perform to the best of their abilities. Performance management is a whole work system that begins when a job is defined as needed. Meritocracy is a system in which advancement is based on individual ability or achievement.

a) Pay for Performance

Maynilad will implement pay-for-performance where employee pay is tied to performance on the job. Pay-for-performance programs attract and retain better employees and offer incentives to motivate and reward improved performance. Uniform employee salary schedules are ineffective in attracting and retaining sufficient numbers of effective employees and are out of touch with compensation practices in other industries that tie salary to employee performance.

b) Balanced Scorecard (BSC)

The Balanced Scorecard is a conceptual framework enabling an organization in clarifying its vision and strategy, thus effectively translating them into action. This performance management approach provides feedback around both the internal processes and external outcomes, essentially focusing on four indicators: Customer Perspective, Internal Business Processes, Learning and Growth and Financials. Maynilad will implement the BSC initially among executives and line managers as a framework for performance management.

c) Implementation of Results of Watson Wyatt Organization Study, Salary and Benefits

As earlier mentioned, Watson Wyatt has reviewed the current HR practices more particularly the salary structure and rewards system with the end in view of benchmarking the same with practices in other companies. Maynilad will implement a Total Rewards Strategy based on the recommendation of Watson Wyatt.

6. Social Advocacy

Social advocacy promotes change and improvement in social institutions, systems and practices that affect individuals, families, groups, and communities through a planned organizational service to which personnel and organizational resources are allocated, and which involves the active participation of the organization in partnership with relevant community stakeholders. Among the programs to be adopted are the following;

a) Adopt a Barangay Program

In partnership with the local government units, our objective is to adopt at least one barangay per Business Center where Maynilad has presence. It includes the effective delivery of social services by spearheading the organization and formation of cooperatives that will address the sanitation and health concern of the community as well as livelihood opportunities and resources.

b) Maynilad Scholarship Program

This scholarship program intends to grant scholarship to deserving students who are willing to work with the Company after their graduation. The Company believes that investment in human capital is of great importance. Financing the education of the scholars is one thing, but assuring them of work right after graduation is another thing. This loyalty will work not only for the Company but also to the customers for efficient and satisfactory services.

6.3 QUALITY MANAGEMENT, ENVIRONMENT, SAFETY AND HEALTH

6.3.1 The Current Situation

Under Maynilad's existing organizational structure, the Quality Assurance Planning and Environment is under the Legal and Regulatory Group while the Safety and Health Group is under the Corporate Human Capital and Organization Development Division. This set-up will ensure compliance to the Government's environmental standards and requirements. To date, all completed and on-going water supply projects of Maynilad are covered with the necessary environmental permits. These projects consist of water line extensions, pumping stations, NRW reduction, pipe replacement and installation of gauging points. Maynilad will continue to obtain all the necessary environmental permits for its future projects.

6.3.1.1 Environmental Plan and Environmental Management System

Maynilad is geared to perform the following key obligations:

- To provide and manage within acceptable quality and reliability standards an effective and efficient system for the collection, storage, treatment and supply of potable water; and
- To provide and manage within acceptable reliability and environmental standards an effective and efficient sewerage and sanitation system for the collection, conveyance and treatment of the current and future sewage and septic tank discharges.

To implement the CA and to fulfill the above obligations, the Company's mission is the protection of the environment to conserve our water resources for future generations.

The mission likewise recognizes the need to satisfy the requirements of its key audiences and stakeholders namely; its customers, employees, community, regulators, owners and investors.

6.3.1.2 Maynilad's Policies, Procedures and Resources for Environmental Due Diligence

The Company's basic policy statement is "Maynilad is committed to excellence and leadership in protecting the environment".

In keeping up with this policy, the Company's objective is to preserve the environment by minimizing the environmental impacts of its operations. By optimizing the use of resources, Maynilad will achieve cost savings, increase operational efficiencies, improve the quality of services, maintain a safe and healthy

work place for its employees and improve the environment. it will operate and manage resources in a way that best protects the avowed environment values while maintaining the business goals for growth and viability."

Maynilad's environmental guidelines include the following:

- Recognition that environmental management is among its highest corporate priorities;
- Environmental performance is an integral part of business management;
- Environmental considerations are incorporated at the earliest possible stage of any project development;
- Demonstration of its responsible corporate citizenship by adhering to all environmental regulations and laws and ability to anticipate changes thereof; and
- Ensuring that its operations comply with established international requirements.

6.3.1.3 Environmental Programs

To fulfill its environmental policy, the Company will adopt strategic programs which will address the following goals within a certain prescribed period:

- Determine the current position of the organization with regards to the environment.
- Establish an environmental management system with structures, responsibility, practices, procedures, process and resources for implementing the policies, objectives and targets.
- Evaluate performance against internationally accepted standards, secure recognition and achieve third party certification/registration or declaration of the organization's performance. Maynilad will seek the relevant ISO 9000 and ISO 14000 certifications as earlier mentioned.
- A management process will be adopted and undertaken at a defined schedule based on the above international specifications. This process will audit and review the system, and identify opportunities for improvement.

6.3.1.4 Environmental Impact Statement (EIS) System

The Philippine EIS System, established under Presidential Decree No. 1586, requires new projects classified as Environmentally Critical Projects (ECP) and/or located in Environmentally Critical Areas (ECA) to obtain an Environmental Compliance Certificate (ECC) from the DENR before any construction and operation activities are undertaken. The evaluation of the ECC application is based on the submission of the following documents:

a. Environmental Impact Statement (EIS) for ECPs – to be submitted to the Environmental Management Bureau (EMB) under the DENR; or

b. Initial Environmental Examination (IEE) for non-ECPs located in ECAs – to be submitted to the DENR Regional Offices concerned. The Regional Executive Director of the DENR may, however, still require the submission of an EIS for the project if deemed necessary following evaluation of the project.

For projects not covered by the EIS system (which include projects that are not ECPs and not located in ECAs), a Certificate of Non-Coverage (CNC) may be issued by the DENR upon request by the project proponents. For this purpose, an application form with a brief project description (PD), a detailed location map and Environmental Management Plan (EMP) needs to be submitted to the appropriate DENR Regional Office or to the EMB for their review and action. However, monitoring of the ECC, its conditions and the operations of the projects and conformance to the submitted environmental monitoring plan are carried out by the regional offices concerned.

6.3.1.5 ECC Conditionalities

All ECCs issued to Maynilad have several conditions attached. One key condition requires the project's full compliance to the Environmental Management Plan (EMP) submitted to and subsequently approved by the DENR. The EMP contains, among others, the mitigating measures that the project proponent have committed to put in place to ensure that the environmental impact of the project as well as the concerns of affected parties are properly addressed.

While DENR conducts regular monitoring of the projects, Maynilad is also required to submit a monitoring report detailing its compliance to the ECC conditions. Maynilad has satisfied the requirements of its projects' ECCs except for minor infractions on unattended excavation cases. To date, none of the projects have been issued a Cease and Desist Order (CDO). CDOs are issued by the DENR if the proponents fail to comply with the ECC conditions.

Maynilad has not been required to submit an EIS since its major water project, the Umiray development, made use of the ECC granted by EMB to MWSS in October 1992. Similarly, for the MSSP, an ECC has been issued by EMB in October 1996. This ECC covers all the projects and activities of the MSSP, including ocean dumping, barge loading stations, septage treatment plant in Dagat-Dagatan, rehabilitation of the pumping station and the CMSS.

In addition to the ECC granted for the MSSP, Maynilad has also obtained an ECC for the temporary storage of septage in Dagat-Dagatan and for the Pilot Project of Septage Composting in UP.

From year 2005 to date, 26 PD's and one (1) EPRMP for Water Supply Services Recovery Project, a World Bank funded project, have been submitted by Maynilad to the DENR. Of the 27 projects, 26 have been issued the necessary environmental certificates. Maynilad has been issued ECC for the Water Supply Services Recovery Project and for the World Bank Project - Project 7 Imhoff Tank.

6.3.1.6 Other Environmental Permits

Aside from the ECC granted to the projects, separate permits to cut trees must also be obtained. The permits are issued by the DENR for cutting any types of trees except coconut trees. Permits to cut coconut trees are issued by the Philippine Coconut Authority (PCA).

Discharge Permit (DP)

With the implementation of CWA, Maynilad is mandated to obtain discharge permit for all its wastewater discharges. This permit is issued by the respective water quality management area body, i.e., LLDA, DENR-EMB-NCR or DENR-EMB-Region IVA.

To date Maynilad has been issued discharge permits for its Dagat-Dagatan Sewage and Septage Treatment Plants and the Tondo Pumping Station by LLDA.

Plans are underway to secure the discharge permits for the following facilities:

Facility	DP Issuing Body
1. Project 7 Imhoff Tank	LLDA
2. La Mesa Treatment Plant II	LLDA

It has completed the necessary sludge management facilities of La Mesa Treatment Plant 2, resulting in a zero wastewater discharge for both La Mesa Treatment Plants 1 and 2. These facilities comply with the LLDA requirements and are awaiting release of the discharge permits, pending inspection of the new facilities.

For the Project 7 Imhoff Tank, Maynilad has already secured the World Bank grant last May 2, 2007. The grant calls for the pilot project for joint sewage/septage treatment. The project is scheduled for bidding following the GEF-WB-DENR-MWSS procedure. With this, Maynilad has started preparing the documents for the submission of the discharge permit application for the Project 7 Plant.

There is also a need to secure discharge permits for the following facilities:

1. Roosevelt St Communal Septic Tank
2. Legal St Communal Septic Tank
3. Hereford Communal Septic Tank

4. Grant Communal Septic Tank

Administrative arrangements are being made to settle the issue on the ownership of these facilities. While the facilities are being operated by Maynilad, the ownership of the facilities is still with the Quezon City government.

Maynilad is still awaiting the effluent standards currently being formulated by DENR specifically for domestic sewage sector as required by the CWA. This will enable the provision of rational fee structures for sewage which has caused Maynilad to defer application of its discharge permit.

6.3.2 Quality Monitoring Activities

6.3.2.1 Monitoring of Bodies of Water

The pursuit of water quality monitoring in the areas to be affected by the project is part of the ECC conditions for the MSSP Concession Fee Project. For Maynilad, this exercise involves water quality monitoring of Manila Bay.

Since 1999, Maynilad has continued MWSS' Manila Bay Monitoring Program (MBMP) as part of its pro-active measures to determine levels of changes in the water resulting from the operations of the outfall and the sea dumping activities. MBMP covers the coastal zones in Manila, Parañaque and Cavite. The program covers bi-monthly monitoring for physical, chemical and biological quality of water at Manila Bay.

6.3.2.2 Effluent from Facilities

Maynilad submits quarterly reports on the quality of its sewage effluent to the Regulatory Office. These reports cover the effluent from the following facilities:

- Submarine outfall at Manila Bay
- Dagat-Dagatan Sewage and Septage Treatment Plants
- Communal Septic Tank in Project 7

Effluent samples are taken and analyzed according to physical, chemical and bacteriological parameters. Water quality at various stages of the above-mentioned facilities is monitored. For the outfall, samples are obtained from the influent in the pumping station and at the discharge point. Similarly, influent and effluent analyses are undertaken for the Dagat-Dagatan Sewage and Septage Treatment Plants and the communal septic tank.

Maynilad has designated the Maypajo River as a monitoring station to include the upstream and downstream locations from the discharge point of Dagat-Dagatan. Data obtained from this station will help assess stream conditions and facilitate

monitoring of any aberrations that might result from the discharge of treated effluent from the Dagat-Dagatan Sewage and Septage Treatment Plants.

As earlier mentioned, there are now works being done to define industry sector effluent standards. Similarly these studies will define fees (Discharge Permit) for sewage.

There are no specific effluent standards yet for outfall discharges in the Philippines. For assessment purposes, discharge samples are analyzed based on the DENR's Department Administrative Order (DAO) 35 which sets the parameters for effluent standards. In addition, Maynilad also conducts water sampling at the discharge point and analyze water quality based on DAO 34, which provides the criteria for coastal water quality. In most cases, Maynilad has met the required standards for outfall effluents except for minor deviations in some parameters.

Similarly, while the effluent of the Dagat-Dagatan Sewage and Septage Treatment Plants meets the DAO 35 and bacteriological test standards, minor deviations from some parameters were observed.

Meantime, the communal septic tanks have not been meeting the effluent standards for Class C (agriculture/fishery) water. Given the tanks' inaccessibility due to problems on squatters and property rights, Maynilad is not able to perform the necessary measures to rectify the situation. Nevertheless, MWSS is aware of the situation as Maynilad seeks for a moratorium on compliance until the property issues are resolved. Maynilad recently has agreed to file for a discharge permit with LLDA negating the administrative requirement on ownership of facilities.

6.3.2.3 Other Monitoring

Sectoral Monitoring

One of the ECC conditions for MSSP is the creation of a Multi-Partite Monitoring Team (MMT) to ensure the effective operation of all project components and the active participation of the various stakeholders. Funded by the Concessionaires, the MMT is headed by the DENR and includes the following parties:

- The Concessionaires (Maynilad and Manila Water)
- MWSS
- Department of Public Works and Highways (DPWH)
- Department of Health (DOH)
- Bureau of Fisheries and Aquatic Resources (BFAR)
- Philippine Coast Guard (PCG)
- Metro Manila Development Authority (MMDA)

A Memorandum of Agreement (MOA) has been drafted to define the roles and responsibilities of the different participants, the work plan, reporting and

assessment of the program. To date, the connection has not met and there is an issue to terminate the connection owing to the completion of all projects of MSSP last June 30, 2005.

Air Quality

Beginning Year 2000, Maynilad has been conducting air quality monitoring on selected project sites to comply with ECC requirements. Similarly, air quality analysis in the main office (Balara) and other premises is also undertaken. To date, Maynilad has been able to comply with the air quality standards set forth in the Clean Air Act.

Noise Level

Since Year 2000, Maynilad has also been monitoring the sound/noise levels in the facilities listed below. To date, Maynilad has been able to meet DENR's standards regarding noise levels.

- La Mesa Booster Pumping Station
- La Mesa Treatment Plant No. 2
- Proposed Commonwealth reservoir
- Tondo Pumping Station
- Fairview Pumping Station
- Fairview #3 Mini-Booster Pumping Station
- Fairview #4 Mini-Booster Pumping Station
- Philtrade Mini-Booster Pumping Station
- Villamor Pumping Station
- Pasay Pumping Station

6.3.2.4 Integrated Management System (IMS) and ISO Certification

The Company will formulate and institute a company-wide IMS applying the scopes of the following management systems:

- ISO 9001 for Quality Management Systems (QMS)
- ISO 14001 for Environmental Management Systems (EMS)
- ISO 18001 for Occupational Health and Safety Management Systems (OHSMS)

These standards will be used and adopted with the end view of pursuing the certification of the Company's systems with international certification body.

The management will ensure that Maynilad will continue to implement its current Quality, Environment, Safety and Health Policy (QESH Policy) and the Safety Code. It will likewise ensure that Maynilad will achieve the vision of being the top

water service firm of the country and its commitment for service excellence, environmental protection and to personnel safety and health in workplace.

Maynilad has secured the ISO 9001 and ISO 14000 for the Dagat-Dagatan Septage and Sewage Treatment Plant and ISO 9901 for the La Mesa Treatment Plants 1 and 2.

6.3.2.5 Environmental Systems

The Company will also continue to employ the current MWSI Quality, Environment, Safety and Health Management Team which established the Quality and Environmental-Management Systems (QEMS) for Dagat-Dagatan Sewage and Septage Treatment Plants and the Quality Management Systems (QMS) for La Mesa Treatment Plants 1 and 2. The team conducts regular management review of the QEMS. This team will ensure that all its partners; suppliers, contractors, service providers and all its business partners will adopt similar integrated management system in the future.

The current policy will be regularly reviewed to ensure its continual improvement, suitability and application to emerging requirements.

Maynilad will pursue implementation of all its management systems to ensure that it will comply with the annual surveillance audit for its ISO certified facilities.

- ISO 9001 for La Mesa Water Treatment Plants 1 and 2 issued on October 18, 2006
- ISO 9001 and 14001 for Dagat-Dagatan Sewage and Septage Treatment Plants issued on October 18, 2006

The planned program on ISO 18001 certification for both facilities will be pursued. Maynilad will continue its strategy for IMS implementation. It will identify key areas for the selective implementation of the scopes of the management systems until all the Company's operations have established the IMS.

6.3.2.6 Occupational Health and Safety

In a similar manner, the Company will continuously be guided in all its operations by the following principles:

- Safety is one of its highest corporate priority
- Safety performance is an integral part of its business management
- Adherence to all safety regulations and law of the country where they operate
- Application of international guidelines and requirements on safety

- Safety consideration is not limited to the people within its workplace but also within the community where it operates

The Company will strictly adhere to the occupational safety and health standards as provided by the Labor Code of the Philippines and all its implementing Rules and Regulations issued and to be issued by the Department of Labor and Employment (DOLE).

Maynilad will strictly implement government's requirements on health and safety and strengthen the current MWSI Safety Code to include best practices on occupational health and safety.

The Company will, likewise, pursue new programs on:

- Safety control and emergency preparedness.
  - Safety innovations
  - Personnel protective equipment
  - Emergency preparedness drill to include participants of neighboring communities in the drill
- Industrial hygiene program
  - Emphasis on its chlorine handling
  - Emphasis on the Company's sewage and septage treatment plants
- Occupational health program
  - Environmental protection and community relations
  - Social accountability program
  - Capacity building in occupational safety and health
- International safety rating
  - Certification and audit with ISO scope for key areas and eventually for the entire Maynilad

6.3.3 Gawad Kaligtasan at Kalusugan Award

With the Occupational Safety and Health Association (OSHA), under the DOLE, as its cooperating partner, Maynilad launched the Gawad Kaligtasan at Kalusugan (GKK) in 2005. This award is in recognition of the most outstanding achievements by operating units, projects and individuals in promoting safety and health of workers and of work places.

6.3.4 Other Environmental Programs in Coordination with Government Agencies

6.3.4.1 Asset From Waste

Triggered by its inability to pursue its ocean barging plan for its sanitation program, Maynilad has forged an agreement with the Sugar Regulatory Administration to study the use of septage or human waste taken from septic tanks in combination with chemical fertilizers to enhance soil nutrients and improve its moisture retention capacity for a higher sugar cane yield. This will also be tried on biosolids - septage that has been drained or dewatered using unit operations and processes.

The research team has realized that while septage can be used directly in watering plants, biosolids can be mixed with farm residues such as bagasse, mudpress and mill ash to be converted into organic fertilizer through composting.

Septage and biosolids were applied in the experimental sugar cane farms of The Luzon Agricultural Research and Extension Center in Paguiruan, Floridablanca, Pampanga.

Parallel to these activities, information and education campaigns were conducted through the Pampanga Mill District Farmers Cooperatives to educate the farmers on the effective and proper use of septage and biosolids and to dispel the negative perceptions and biases on the application of human waste on food crops.

The use of septage and biosolids is also environment-friendly. The waste disposal system being applied by Maynilad has already passed the safety standards set by the government. Initially, its septage and biosolids have been given experimental use permit by the Fertilizer and Pesticide Authority. Last year, Maynilad has secured the full registration of its organic fertilizer from its septage plant in Dagat-Dagatan Plant from the Fertilizer and Pesticide Authority. It has registered the organic fertilizers under the brand name MWSI Biogrow and has launched the product in Pampanga last July 27, 2007. It is now partnering with other groups like, MMDA, Caritas for free distribution of these fertilizers. It has also continued to supply the farmers with free organic fertilizers, bearing the cost of the hauling of the same.

It will also enlist the help of the ITDI, Department of Science and Technology or UP Los Baños, in providing a prototype model which can be used for the commercial preparation of bagged or packaged biosolids for easier transportation and longer shelf life.

In actual farm demonstration, the farmers were further educated on the precautionary measure and actual application of septage and biosolids on the farms.

The Company will vigorously pursue this program not only for its commercial viability but as a response to the global challenge of using organic fertilizer.

6.3.4.2 *Agreement with Occupational Health and Safety Center (OSHC)*

In 2005, Maynilad forged an agreement with the Occupational Health and Safety Center, Dr. Dulce P. Estrella – Gust, Executive Director, OSHC. This is to support the Zero Accident Program of the government. Under this program Maynilad uses the Man-Hour No Lost Time Accident (MHNLTA) to monitor its accidents. Maynilad has divided the company into operating units to measure its safety performance.

6.3.4.3 *Fluoride Study*

Maynilad has partnered with the DOH, Center for Health Development for Calabarzon (IVA) and the Local Government Unit of Cavite to work on the conduct of a study on the prevalence of dental fluorosis and dental caries and its relation to high fluoride in the drinking water. The project aims to determine if there is indeed a correlation between dental fluorosis/dental caries/periodontal cases and drinking water with fluoride level of more than 1.0 mg/L; and, to rationalize the standards and propose management measures in areas where the level of fluoride in the drinking water exceeds the standards.

Levels of fluoride in the water supplied by Maynilad's deepwells in Cavite City, Noveleta, Rosario and Kawit have exceeded the limit allowed by the PNSDW.

To mitigate this, the Company pursued the following:

- Mix deep well water with surface water
- Total replacement of deep well water
- Continue working with DOH & LGU to study the actual effects of fluoride

This project was completed last year.

6.3.4.4 *Water Safety Plan*

Maynilad has forged an agreement with the DOH and the World Health Organization (WHO) on the conduct of a Water Safety Plan (WSP). This program was envisioned to safeguard water from possible contamination to maintain quality water to the consuming public at all times. WHO, in its new 3rd edition Guidelines for Drinking Water Quality, recognizes that the most effective means of consistently ensuring the safety of drinking water supply is through the use of a comprehensive risk assessment and management approach. The risk assessment and management approach encompasses all stages in water supply, from catchments to consumer.

The Water Safety Plan has been developed to organize and systematize a long history of management practices applied to drinking water and to ensure the applicability of these practices to the management of drinking water quality.

Following the new concept of WSP and its importance in monitoring and maintaining quality drinking water, DOH has undertaken a demonstration project on WSP to determine the applicability of the WHO guidelines to our local water supply system.

The result of the study will be used as a template for water utilities in the Philippines.

This water safety plan was submitted last year to DOH and WHO. WHO commented that this is one of the best WSP submitted and it intends to use it as a model for Southeast Asian countries. DOH intends to use it as a model for Water Districts in the Philippines, being the first WSP in the country and the first to heed the recommendations of the 2007 PNSDW for WSP.

6.3.5 Current Environmental Issues (Including Compliance with CWA)

There are several environmental issues which confront Maynilad:

1. **Sludge lagoon in LMTP 1.** These lagoons are now filled up and have to be drained. There is now an outflow to the nearby creek in violation of effluent standards. The Water Supply Services Rehabilitation Project, which will be funded through a loan from the World Bank, will resolve this problem. The Company will provide funds to cover contingent liabilities resulting from non-compliance pending completion of the project.

2. **Discharge of filtrate water in LMTP 2.** The plant does not have a sludge management facility for its alum sludge. Presently, the sludge is being discharged to a creek, which is in violation of a provision in the CWA. While Maynilad already has a design to address this issue, the project plan has yet to be implemented. Upon project implementation, the Company will:

    - Address the issue and put the necessary intervention to resolve the problem.
    - Apply for the needed discharge permit if the scheme to be adopted will call for the discharge of the treated effluent.
    - Provide the necessary funds to cover for the back penalties and the fees for the discharge permit.

    This was completed last November, 2007.

3. The LMTP 2 has also been the cause of complaints from adjoining residents on the noise/nuisance resulting from the operations of its blower. While Maynilad has instituted remedial measures to mitigate and mask the noise, a permanent solution will be put in place to reduce the noise/nuisance to acceptable levels/limits.

4. Maynilad operates five (5) communal septic tanks. While this septic tank/septage management is allowed under the Sanitation Code and CWA, the effluent of these facilities will not be able to meet the DENR DAO 35 Effluent Water Quality Standards which is enforced in the absence of new standards under this 2004 CWA now.

   At present, one these facilities the Project 7 communal septic tank will be converted into a full scale Sewage/Septage Treatment Plant using the proceeds from grant from the DENR-GEF World Bank Project. The project grant was approved last May, 2007.

   For the other remaining communal septic tanks, the following will be adopted.

   - Convert the septic tank into a secondary sewage treatment facility to ensure that the effluent meets the requirements of the CWA.
   - Apply for a discharge permit from the concerned DENR Unit.
   - Provide necessary sludge management program for the sludge produced.
   - Secure new sewer services connections for the new treatment facility
   - Accommodate septage for treatment mainly along the areas within the proximate neighborhood of the new facilities.

5. **Ocean Outfall**– Maynilad currently operates a 3.9-km outfall discharging raw sewage to Manila Bay. These discharges, while approved by the National Environmental Protection Council (formerly Environmental Management Bureau) and the National Pollution Control Commission have been the subject of complaints from environmental groups. There used to be a pending LLDA notice of violation lodged against Maynilad in the operation of this outfall. Maynilad has complied with the effluent standards and has secured the discharge permit for the outfall from LLDA after settling the Discharge Permit and Users Fees.

   Maynilad will also pursue the following:

   a) Coordinate with DENR to help them establish the wastewater effluent guidelines for industry sector-sewage.
   b) Prepare engineering plans for the treatment of the sewage conveyed to the pumping station in anticipation for the possible discontinuance of the operations of the outfall.
   c) Establish the financial requirements to implement item (4).
   d) Arrange discussion between Maynilad and the National Government agencies to fund the project using ODA funds.
   e) Secure commitment from Local Government City of Manila or the National Government to provide the land requirements for the desired treatment as provided for by the CWA.
   f) Provide the necessary management plan to handle the final sludge produced from the treatment process.

g) The treatment process must ensure the following;
   - Treated water for reuse
   - Sludges be converted to usable products
     - Organic fertilizers
     - Fuel/energy
     - Building materials

6.3.6 Sanitation /Sewerage

While the CWA acknowledges the use of sanitation scheme (septic tanks) to handle sewage; it should be noted that Metro Manila is a Highly Urbanized City (HUC) and an environmental hotspot, and is already considered a non-attainment area for environmental consideration under the same Act. As such, the government might require Maynilad to have provisions for a separate sewage system. The Company will adopt the following measures:

1. Adopt the sanitation plan (targets and schedules).
2. Although the sewerage targets under the Concession Agreement have been deferred; the Company will have to anticipate potential restoration of these targets.
3. While the Concession Agreement provides for the deferment of sewerage targets; the Company acknowledges that the Concession Agreeement must likewise subscribe to existing laws. The government is now formulating the sewage and septage management plan for the Philippines. The Company will continuously discuss with DENR and ensure that Maynilad concerns are considered in the formulation of the Plan. Maynilad has to adopt the National Plan to be developed, with consideration on cost recovery, government incentives, and subsidiaries and investment arrangements.

Table 6-1: Summary Matrix of Rules and Regulations Pertinent to Sanitation and Sewerage Projects and Proposed Maynilad's Strategies for Compliance

WASTES	RELEVANT LAWS, RULES AND REGULATIONS	PROPOSED MAYNILAD'S STRATEGIES FOR COMPLIANCE
Liquid Wastes		
Effluents of individual/ household septic tank	PD 856 – Sanitation Code • 1995 IRR of Chapter XVII	• Implement guidelines for appropriate design and maintenance of septic tanks • Whenever available, sewage disposal must be by means of Maynilad's sewage collection system
	RA 9275 – Clean Water Act	• Impose mandatory connection to existing sewerage system
Effluent discharge of communal septic tanks, sewage treatment plants (STPs), septage treatment plants (SpTPs), and sewage outfalls	PD 856 – Sanitation Code • 1995 IRR of Chapter XVII	• Adopt internationally accepted procedures for design approval, construction, operation and maintenance
	RA 9275 – Clean Water Act • DAO 35 series of 1990 (provisional DAO which may amended in the coming months)	• Secure necessary discharge permit for all facilities discharging effluents • Report and apprehend unauthorized dumping of untreated sewage and septage • Ensure that effluents from STPs and SpTPs comply with provisional DAO 35 or the existing Philippine effluent standards • Conduct study and recommend effluent standards for sewage treatment via outfall-diffuser system
Domestic wastes from offshore sources (i.e. sea dumping)	PD 979 – Marine Pollution Law	• Unauthorized dumping of untreated sewage shall not be tolerated • Any sea dumping activity shall be applied for

WASTES	RELEVANT LAWS, RULES AND REGULATIONS	PROPOSED MAYNILAD'S STRATEGIES FOR COMPLIANCE
		permits from the Philippine Coast Guard and Maynilad's shall secure necessary permits/approval from affected LGUs
Effluents for recycling/re-use	RA 9275 – Clean Water Act	• Secure permit from the Department of Agriculture and shall observe guideline for safe re-use of wastewater for irrigation and agricultural purposes
Septage/ Bio-solids and other Solid Wastes		
Septage from individual household septic tank	PD 856 – Sanitation Code • 2004 IRR of Chapter XVII	• Secure necessary permits such as Environmental Sanitation Clearance as an operator involved in collection, handling, treatment and disposal of septage • Implement government-approved processing and treatment of septage prior to disposal
Biosolids from STPs and SpTPs	PD 856 – Sanitation Code • 2004 IRR of Chapter XVII RA 9275 - Clean Water Act	• Comply with the allowable and acceptable limits for nutrients, heavy metals and pathogens as prescribed by the Department of Agriculture thru the Bureau of Solid and Water Management
Preliminary treatment residues i.e., oil and grease, grits and screenings	RA 9003 – Ecological Solid Waste Management Act • DAO 2001-34	• Comply to disposal and transport requirements prescribed by EMB or the appropriate LGUs.

6.3.7 Quality Management System (QMS)

Maynilad will adopt a company-wide QMS following 14001:2004. The scope of the QMS describes the business process of design and construction.

This system is similar to those which were adopted for the La Mesa Treatment Plants 1 & 2 and Dagat-dagatan Sewage Treatment Plant which are already ISO 14000 Certified. These plants will undergo their annual quality surveillance audit.

6.3.8 Laboratory Management System

With the completion of the upgrading program for its central laboratory, it will implement a management system under ISO 17000 for laboratories.

By next year the central laboratory will seek the ISO 17000 certification of its system. Maynilad will likewise apply for the same certification for all its process laboratories - two in La Mesa and one in Dagat-dagatan.

6.3.9 Integrated Management Systems (IMS)

Maynilad will pursue an IMS in the next five (5) years. Currently it is the only company which has an ISO 9000 and 14000 certified system for a water utility company in Asia and Pacific Region. The integrated management system will cover the following;

- ISO 9000 (Quality Systems)
- ISO 14000 (Environmental Management System)
- ISO 18000 (Safety and Health)

The IMS can initially be pursued for its Dagat-dagatan Septage and Sewage Treatment Plant and LMTP 1 & 2. The ISO 9000 and 18000 can be pursued for its construction area and business centers if a company-wide management system cannot be put in place immediately.

6.3.10 Watershed Management

Maynilad will continue to team up with Manila Water/MWSS/DENR for the rehabilitation protection of the La Mesa Watershed, Ipo Watershed and Angat Watershed. It will also support programs for the protection of the watersheds covering the Laguna Lake basins.

6.3.11 Other Programs

6.3.11.1 Balik Baterya Project

Maynilad will continue to send its waste battery to the Philippine Recyclers Inc., the proceeds of which will be turned to the UP Engineering Alumni Foundation in accordance with an existing MOA.

6.3.11.2 *Greening the Facilities*

Maynilad will continue its tree planting projects within its facility under a MOA which it has entered into with the DENR-NCR Director. This will ensure that Maynilad employees will be part of the Adopt a Tree program, under its Plant for the Planet (UN Project), Trees and for Life Project (DENR).

Moreover, Maynilad will continue its participation for the Green Army Project and Green Highways which are DENR Projects.

6.3.11.3 *Greening the Supply Chain*

Last year, Maynilad encouraged its external Legal Consultant, Tantoco Villanueva De Guzman & Llamas Law Offices, and its chlorine supplier, Mabuhay Vinyl Corporation, to participate in its greening the facilities program. Maynilad will ensure more partners from its suppliers and service providers for this undertaking.

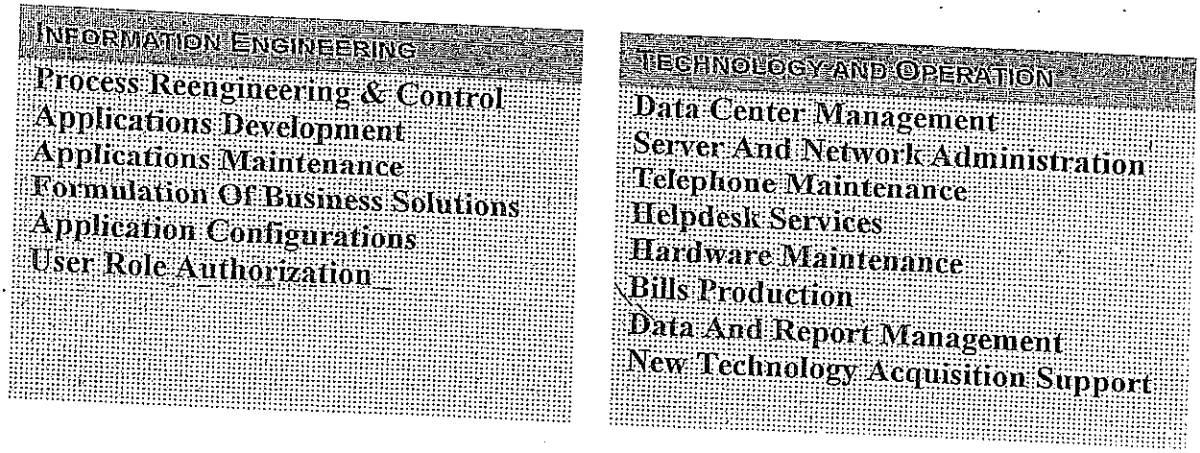
6.4 INFORMATION TECHNOLOGY

6.4.1 The Current Situation

6.4.1.1 *The IT Organization*

The Information Technology Services (ITS) is currently organized as a division under the Office of the President. The division has two (2) major departments, namely, Information Engineering and Technology and Operation. The roles and functions of the ITS are shown in Figure 6-6 below:

Figure 6-6: Roles / Major Functions of ITS



6.4.1.2 *The Main Transaction Processing System*

Maynilad's backbone application is handled by the SAP Industry Solution for Utilities (ISU) software module. This application covers account creation, meter reading, customer file updates, bill generation and customer subsidiary ledger which contains the payment and adjustment posting of transactions. The ISU module is integrated with the SAP Finance and Controlling (FICO) module that handles accounts payable, fixed assets, accounts receivables, cost accounting and general ledger including financial statement generation.

6.4.1.3 *Non-SAP Applications*

There are key applications developed internally by the ITS. These are the Customer Application System (CAS), Bills Recalculation System (BRS), Inquiry System, Complaints Routing and Monitoring System (CRMS), Massive Meter Replacement (MMR), Collection Facility (CF), Contractor's Billing and Job Tracking System (CBJTS), Run After Illegal Connection System (RAIC), Key Performance Indicators-Business Efficiency Measurement System (KPI-BEMS) and Water Production System (WPS) and Annual Materials Requisition System (AMRS).

Meter reading is done through the use of HP IPAQ handheld computers, the data from which are uploaded in each of the 15 BCs on a daily basis.

Recently, the Company outsourced to Soluziona the meter reading including delivery of Statement of Accounts (SOA) and disconnection notices (DN) to customers, disconnection and reconnection functions. Almost simultaneously implemented is the outsourcing of Maynilad's Call Center to E-PLDT's E-Ventus which will initially be using the CRMS for logging and tracking of complaints.

Other developed systems include the Warehouse Information System (WIS), the Personnel Information and Payroll System (PIPS), Geographic Information System (GIS), Telemetry systems, Document Management System, Fleet Monitoring, and HR and Logistics Intranet Websites.

6.4.1.4 ICT Infrastructure

Maynilad consists of 17 major sites including the two (2) outsourced Data Centers. The primary data center (ePLDT Vitro starting May 2008) serves as the network hub. The Head Office where the small servers are housed and the secondary data center (Soluziona Data Center starting May 2008) are connected via 10 mbps fiber optic link while the rest of the sites are connected via 256 / 512 kbps bandwidth.

The primary data center houses the SAP Production and Development servers while the secondary data center contains several clones of the SAP Production for purposes of back-up and disaster recovery, report generation and testing. Other less critical servers are distributed among the two data centers and the Head Office server room.

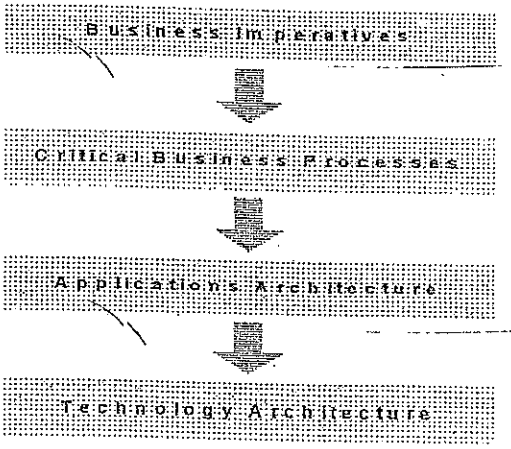
The secondary data center serves as the disaster recovery site for the SAP Production system. SAP at the main data center is being replicated regularly to the secondary site through EMC's mirror view technology. On top of this, Maynilad adopts the disk-to-disk back-up strategy. This will allow Maynilad to recover fast in case there is a need to restore data.

High availability and security are the main considerations in building the IT infrastructure. The main data center's electrical and cooling facilities, the EMC storage, the HP blade servers, the CISCO switches and firewalls as well as the application servers are fully redundant to ensure high availability of the critical systems. Firewalls and content filtering software are in place to safeguard the servers from viruses and hackers both from the internet and the intranet users. Physical security is of course the main strength of the Data Centers.

6.4.2 Information and Communications Technology (ICT) Plans

In April 2006, the Company's Information and Communications Technology ("ICT") Strategic Plan was approved for implementation. The key components of this plan are shown in Figure 6-7:

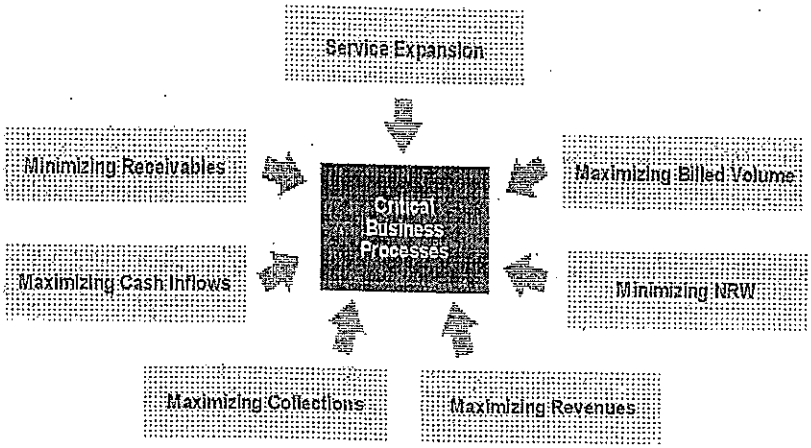
Figure 6-7: Key Components of the ICT Strategic Plan



6.4.2.1 Business Imperatives

Seven (7) inter-connected business imperatives have been identified that drive critical business processes. These imperatives are shown in the following diagram

Figure 6-8: Seven Inter-Connected Business Imperative



6.4.2.2 *Critical Business Processes*

The processes can be categorized as those pertaining to:

- The Commercial Process that encompasses Customer Application, Billing, Payment, and Customer Servicing
- The management and operation of the Water Distribution Network Infrastructure
- Executive Information System and Business Intelligence

6.4.2.3 *Applications Development Direction*

Maynilad's suite of applications is aligned to the business direction of the Company to be more process centric and to conform to the best business practices in the industry. These applications consist mainly of SAP applications as its core system with proven non- SAP systems complementing SAP functionalities. The Company has opted to use other SAP modules to maximize its upgraded functionalities. It will also implement other non-SAP applications which are known in the industry and dynamic enough to meet the Company's growing and complex business requirements.

One of the major changes the Company is implementing is its taking full responsibility and control of material procurement including those to be used for all major construction projects, thus making the related processes crucial due to the huge investment value and complexity of the processes involved. This demands an IT strategy to implement a Materials, Asset, and Project Management system that is fully integrated with the existing Financial System. Hence, SAP's Enterprise Asset Management is the most appropriate and logical choice. Other non- SAP modules which are planned for implementation are Customer Relation Management (CRM), to replace the existing Customer Complaints and Routing System (CRMS), Business Intelligence System to replace the existing internally developed Business Efficiency Measurement system (BEMS) and which is robust enough to meet the increasing demand for operational, analytics and executive information for decision making purposes.

With the widespread use of SMS technology and Internet, IT is planning to implement a portal to integrate the most critical of information and make them readily available to identified users. This will allow logging of complaints, sending of messages to personnel directly in the field, remote updating or even modifying data in the system, paying of bills, etc.

Other minor applications are likewise to be developed as stopgap solutions or as support to less critical processes or to serve as pre- and post-processors (interfaces). One of the systems ongoing development is the Sanitation Information System (SIS) which caters to the need of the Sewerage and Sanitation personnel to automate their desludging activities that will in turn result to more efficient and

faster scheduling and updating of their data and output. Also underway is the development of the Anti-Illegal System (AIS), the second phase of the Run After Illegal Connection (RAIC) System, based on the continuing efforts of the Anti-Illegal Task Force (AITF) to fight against illegalities.

The roadmap for SAP's pre and post processors applications is definite with the Company's decision to outsource selected but repetitive and routine functions. This will require development of major interface applications to link the system of these Service Providers with SAP. These applications will serve as stand-alone systems with specific and customized functionalities and, at the same time feeding to and tapping data from SAP.

This approach is supported by the ICT industry's espousal of Service Oriented Architecture (SOA) that supports through various vendor middleware platforms, particularly SAP's Netweaver, the integration of applications within an enterprise.

6.4.2.4 Applications Architecture

The Company has identified a number of key applications that are required to support the critical business processes noted above. Most of these applications are already in place, and are being used by the Company, although as indicated in Figure 6-9, some applications are planned, are under development or are being enhanced.

Figure 6-9: Key Applications

SUPPORTING THE COMMERCIAL PROCESSES	
Existing Applications	Planned Applications
SAP-ISU; SAP-FI/CO	SAP Technical Upgrade
Customer Application System	New CRM System (Microsoft)
Bills Recalculation System	Integrated Disbursement System (Check Cutting and Disbursement Outsourcing via BDO)
Inquiry System	Collection Through SMS Network
Massive Meter Replacement	Interactive SMS Response System for CRM
Collection Facility	CRM Integration with SAP-ISU
Contractor's Billing and Job Tracking System	SAP FI/CO Functional Upgrade
Meter Reading via IPAQ	Profit Center
Complaints Routing and Monitoring System	Cost Center Upgrade
Run after Illegal Connection System	Project System/Internal Order
	Financial Accounting (incl. Accrual, Bank Accounting and Upgrading of Fixed Asset & Contract Accounting)

	Treasury Management (incl. Cash Liquidity Management) E-Procurement Meter Reading and Billing Outsourcing (Including Bills Presentment Upon Meter Reading)

SUPPORTING THE WATER DISTRIBUTION NETWORK INFRASTRUCTURE MANAGEMENT	
Existing Applications	Planned Applications
Purchasing Warehouse Information System Fleet Management System Geographic Information System Water Production System Collection Facility Flow Monitoring (Telemetry) Hydraulic Simulation (Epanet)	SAP Enterprise Asset Management Project System/Planning Materials Planning Sourcing and Procurement Inventory Management & Warehousing Management Plant Maintenance & Operations Meter & Device Management Workforce Management Geogrphic Information System (GIS) Integration of GIS with SAP, BEMS and CRM Integration of GIS to Hydraulic Simulation GIS and Flow Monitoring Integration Water Network Monitoring System (Integration of GIS, Telemetry System and WPS)

SUPPORTING THE EXECUTIVE INFORMATION SYSTEM	
Existing Applications	Planned Applications
Key Performance Indicators-Business Efficiency Measurement System (KPI-BEMS)	KPI-BEMS (Business Intelligence) Via Qlick View SAS Capex Optimization And Water Distribution Models Performance Monitoring Data Warehouse

SUPPORTING THE ADMINISTRATIVE SYSTEM	
Existing Applications	Planned Applications
Personnel Information and Payroll System (PIPS) and Attendance Recording Facility (ARF) Document Archiving Intranet Systems	SAP Human Capital Management System Corporate Intranet Corporate Website

6.4.2.5 Technology Architecture

The business-critical applications that have been identified above are supported by a robust technology infrastructure, which consists of the various components shown in the schema below. Most components of the technology infrastructure have been implemented whilst others are planned, or under development or enhancement, as is indicated in Figure 6-10.

Figure 6-10: Technology Architecture

DATABASE	
Existing	Planned
MS SQL Server 2000 Oracle 8i MySQL Access	Standard DBMS Platform SAP Archiving MS SQL 2005

HARDWARE	
Existing	Planned
HP Blade Servers IBM Application and Data Servers EMC Data Storage Compaq/HP/Fujitsu Servers Laptops and Generic Desktops (P1, P2, P3, P4) IPAQs for Meter Reading Others, Including Printers, Plotters, Back Up Devices, UPS and the Like LTO3 Tape Subsystems	Storage & Server Upgrade Branded Desktops Maintenance-free Scheme for Printers LTO4 Tape Subsystem

NETWORK	
Existing	Planned
Storage Area Network (SAN) Local Area Network (LAN) Ethernet-based Metropolitan Area Network (MAN) Network Management System (NAGIOS) Virtual Private Network (VPN) High Speed Internet	New PABX Structured Cabling and/or Wireless LAN and WAN for all Sites Internet Based e-mail Network Redundancy EMC MirrorView / Snapview

SECURITY	
Existing	Planned
Anti-Virus/Anti-Spam/Anti-Spyware E-Mail Filtering	Integrated Security Appliance Server Room And Communication Equipment Security Cabinet Cisco & Linksys Firewalls

SUPPORT	
Existing	Planned
IT Help Desk (solution manager)	Desktop Management System

DATA CENTER OPERATIONS	
Existing	Planned
Data Center Operations Hosted and outsourced In-house Systems Operated Internally	Server Consolidation Disaster Recovery Site

SYSTEM SOFTWARE AND ADMINISTRATION	
Existing	Planned
Supported In-house Windows 2000 Advance Server	SAP Netweaver Tools Windows 2003 Servers SAP Solution Manager Networker Back-Up Software Acronis

6.5 CORPORATE GOVERNANCE AND INTERNAL AUDIT

With the entry of DMCI Holdings Inc. and Metro Pacific Investment Corporation as Maynilad's new owners early in 2007, good corporate governance at Maynilad became imperative, considering that both parent companies are publicly-listed and have to comply with the Securities and Exchange Commission's Code of Corporate Governance.

To fulfill this imperative, the company's Board of Directors first created three (3) important committees which would ensure Maynilad's compliance with the tenets of good corporate governance: Audit, Compensation, and Nomination Committees.

The Audit Committee will oversee internal and external audits, risk management, internal controls, financial reporting and compliance; the Compensation Committee would take charge of executive remuneration of corporate officers and directors; and the Nomination Committee would review qualification of persons nominated to the Board or to other positions requiring Board approval.

Subsequently, the Board created the Corporate Governance and Internal Audit Office (CGIA) to oversee the company's overall adherence to the goals and objectives of good governance.

With the new set-up, the Audit Committee, through its regular reports, provides the Board of Directors with guidance and information on whether key organizational and procedural controls have been complied with.

The CGIA likewise supports the Board of Directors and Management in the effective discharge of their duties and responsibilities by providing them with independent and objective appraisal of the Company's financial, operational and control activities.

It helps the Company attain its objectives by using systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes. It establishes a risk-based plan to determine priorities, develop programs and employ adequate and effective resources in order to meet its objectives.

It assists the organization by:

a. Evaluating the organization's internal control process to determine its effectiveness and efficiency and to help prevent losses due to fraud or gross negligence and indifference.
b. Ensuring accuracy, reliability and timeliness of information provided to management by reviewing financial and other related reporting systems.

c. Managing risks by evaluating and assessing the organization's risks and improving risk management process.

With Maynilad implementing its Capex projects, CGIA started reviewing Capex - related activities, i.e. contractor accreditation, bids and awards, project implementation and post implementation. Considering the magnitude of these projects, CGIA's plan is to provide Management with an objective and independent appraisal of Capex implementation. Contractors must be properly accredited to determine their capacity to handle projects, focusing on financial capabilities, track record, resources and reputation as a reliable and dependable contractor. The tendering process must be reviewed to ensure awards are given to the lowest complying bidder, not only in the area of cost but also in terms of quality, time, and proven construction methodology.

Project implementation is another high priority engagement by CGIA. This is to ensure that delays are minimized or totally eliminated, and there will be zero variation orders, zero quality defects, and zero lost manhours due to unsafe construction practices. CGIA will extend its audit activities to determine whether or not the project targets, i.e. billed volume, revenues, cost reduction/efficiency, reduction in NRW, etc. were attained.

Procurement of construction materials and supplies is another priority of the CGIA. Maynilad shifted its strategy from contractors' supplied materials to owner's (Maynilad) supplied materials, thus the need to install adequate and reliable control systems. CGIA looks into the bidding process, the awarding process, and the compliance/delivery process.

The Business Centers operation is another priority area. The revenue-generation-to-collection activity involves several processes such as meter reading, delivery of Statement of Accounts, collections, etc., will have to be reviewed to make sure that controls are adequate and operational efficiency is optimized.

On the Good Governance side, Maynilad is currently conducting an inventory of all laws, regulations, circulars both from the national and local government to check compliance and avoid penalties and sanctions.

Likewise a Corporate Governance Manual is being prepared for better understanding of Maynilad's business philosophy, mission, vision, values, policies, and aspirations to guide and protect all stakeholders.

The new Maynilad envisions itself as a "world-class water service company committed to excellence and improved quality of life." The CGIA will help to ensure that Maynilad will realize that vision.

7 FINANCIAL PROJECTIONS

This chapter provides the main financial assumptions of the Business Plan and results as shown in the financial model. It includes the following:

Financial Background
Macro-economic Assumptions
Accounting and Fiscal Assumptions
Performance Bond
Capex Investment
Concession Fees
Appropriate Discount Rate
Financial Risk Management
Conclusions
Schedules

7.1 BACKGROUND

The financial background provides an overview of several key events which transpired beginning 2003, which is also the first year of the 2nd Rate Rebasing Period. Hence, it is important to discuss the major events of such period and how these events have affected and will continue to affect the financial projections of Maynilad.

Petition for Rehabilitation

On November 13, 2003, Maynilad filed with the Rehabilitation Court a "Petition for Rehabilitation with Prayer for Suspension of Actions and Proceedings." The Rehabilitation Court, on November 17, 2003 issued a Stay Order (i) staying enforcement of all claims against Maynilad; (ii) prohibiting Maynilad from selling, encumbering, transferring, or disposing in any manner any of its properties except in the ordinary course of business; (iii) prohibiting Maynilad from making any payment of its liabilities outstanding as at the date of filing of the petition; (iv) prohibiting the suppliers of Maynilad from withholding supply of goods and services in the ordinary course of business for as long as Maynilad makes payments for the services and goods supplied after the issuance of the Stay Order; and (v) directing Maynilad to pay in full all administrative expenses incurred after the issuance of the Stay Order. The Rehabilitation Court also appointed a Receiver.

Rebased Rate Implementation

On November 24, 2004, the MWSS approved the rebased tariff of PhP30.19 per cubic meter (average all-in tariff, including STM) which was based on the approved rebased tariff for 2003, adjusted to 2005 prices and which became effective starting

January 1, 2005. Following the Supreme Court ruling, the MWSS drew the US$120 million Performance Bond and received the proceeds thereof on January 20, 2005.

Rehabilitation Plan

After submitting several rehabilitation plans to the Rehabilitation Court, Maynilad finally submitted the 2005 Rehabilitation Plan and the DCRA (which was incorporated into the plan) on April 29, 2005. The 2005 Rehabilitation Plan assumed the full implementation by Maynilad of the rebased tariff of PhP30.19/cu.m. beginning January 1, 2005. On June 1, 2005, the Rehabilitation Court approved the 2005 Rehabilitation Plan and the DCRA for immediate implementation.

Debt and Capital Restructuring Agreement or the DCRA

On April 29, 2005, Maynilad, the Lenders under the DCRA (consisting of the Bridge Banks, SBLC Banks and Peso Loan Lenders), Benpres Holdings Corporation (BHC), MWSS, and the Suez Group, consisting of Suez S.A., Suez Environnement (Suez Env), Lyonnaise Asia Water (Holdings) Pte Ltd (LAWL) and Ondeo Services Philippines, Inc. (OSPI), executed the DCRA to set out the terms and conditions of their understanding and to govern their respective rights and obligations in connection with the restructuring of the debt and capital of the Maynilad. The DCRA took effect on July 20, 2005.

The capital restructuring required under Clause 2 of the DCRA (Capital Restructuring) paved the way for the subscription by MWSS, through the conversion of certain receivables of MWSS from Maynilad amounting to US$22,670,408.00, to approximately 83.97% of Maynilad's outstanding capital stock following an increase in its authorized capital stock to PhP1,475,000,000.00. After granting several extensions, the Rehabilitation Court imposed a non-extendible deadline of January 31, 2007 to complete the Capital Restructuring.

As of December 31, 2006, Maynilad's shareholders were as follows: BHC, a publicly listed Philippine entity, at 59%; Suez Env, a French company, at 20%; LAWL, a Singaporean company, at 20%; and Metropolitan Bank and Trust Company (Metrobank), a Philippine company, at 1%. BHC remained the registered owner of Class A common shares representing 59% of the outstanding capital stock of Maynilad considering that the Capital Restructuring had not yet been completed as of such time.

Assignment of the MWSS Receivables and Subscription Right under the DCRA

Instead of exercising its right under the DCRA to subscribe to 83.97% of the shares of Maynilad in consideration for the conversion of its receivables to equity as part of the Capital Restructuring, MWSS opted to assign such subscription right to a private investor pursuant to Clause 24 of the DCRA. After a process of competitive public bidding conducted by MWSS from June 2006 to January 2007 with the assistance of the Privatization Council, DMCI-MPIC was designated by MWSS as its assignee. Such assignment was effected by MWSS (MWSS Assignment) through an Assignment & Assumption Agreement executed by MWSS and DMCI-MPIC on December 27, 2006, which was acknowledged by Maynilad on the same date. Also on the same date, Maynilad, DMCI-MPIC and LAWL executed the Debt Conversion & Subscription Agreement, which governed the agreement of the parties on the conversion of debt to equity required in connection with the Capital Restructuring.

The MWSS Assignment became effective on January 10, 2007 upon the satisfaction of all closing conditions. One of the closing conditions was the execution and coming into effect of the agreement between MWSS and the Company that would effect the adjustments to the Company's obligation to post the Performance Bond under Section 6.9 of the Concession Agreement. On December 15, 2006, the Agreement on the Performance Bond was executed by MWSS and the Company, incorporating the terms and conditions of MWSS Board of Trustees Resolution No. 2006-249 dated November 17, 2006 (Agreement on the Performance Bond). Such agreement provided, among others, that the aggregate amount drawable in one or more installments under each Performance Bond during the Rate Rebasing Period to which it relates has been adjusted to US$30 million until the Expiration Date and that upon the completion of the Capital Restructuring, the Sponsor shall post the Performance Bond and shall maintain the same until the Company is already in a position to do so, subject to compliance with the DCRA and, as necessary, the recommendation of the Receiver and the approval of the Rehabilitation Court. Further, it provided that while the Company is under corporate rehabilitation, any Capex commitment of the Sponsor not exceeding US$18 million to be infused into the Company for a period of three (3) years shall be deemed in compliance with the obligation of the Sponsor or the Company to deliver the equivalent amount of the Performance Bond, subject to the agreement between MWSS and the Sponsor. The Republic of the Philippines issued its acknowledgment of the terms of the Agreement on the Performance Bond on January 4, 2007.

On January 19, 2007, the Securities and Exchange Commission approved all corporate transactions required to be implemented by Maynilad to complete the Capital Restructuring, including the simultaneous decrease and increase in its authorized capital stock and the amendments to its Articles of Incorporation. As of such date, the Capital Restructuring was deemed completed.

On April 13, 2007, the SEC likewise approved the amendments to the by-laws of Maynilad, which were approved by the board of directors (BOD) and stockholders of Maynilad during their respective meetings held on February 9, 2007.

As of December 31, 2007, the capital structure of Maynilad, after the completion of the Capital Restructuring is as follows:

Shareholder	Class	Total Subscription (No. of Shares)	%
DMCI-MPIC	Class A Common	1,149,976,000	77.97
DMCI-MPIC	ESOP	88,500,000	6.00
Metrobank	Class A Common	524,000	.03
LAWL	Class B Common	236,000,000	16.00
	All classes	1,475,000,000	100.00

Rehabilitation Exit Plan

On August 9, 2007, Maynilad entered into the PSA with the Sponsor, the Lenders under the DCRA, Suez, S.A., Suez Env, and MWSS. The PSA prescribed the procedure for the full prepayment of the USD Tranche, SBLC Tranche, Peso Tranche, Suez Env and the Tranche A2 Concession Fees and the Recognized Tranche B Concession Fees, to be funded from cash contribution to be provided by the Sponsor to Maynilad, for the purpose of enabling Maynilad to successfully effect an early exit from corporate rehabilitation. The PSA further sets out the procedure for the settlement of approved claims of contractors and suppliers and the resolution of the disputed claims of MWSS and Suez Env.

As mentioned, the PSA was executed to enable Maynilad to effect an early exit from corporate rehabilitation. As this rehabilitation exit will result in the termination of the 2005 Rehabilitation Plan and the DCRA, certain transitional arrangements, including those relating to the second Rate Rebasing, the Service Obligations of Maynilad as well as the recovery or compensation of Forex losses or gains relating to the full prepayment of the Company's USD Concessionaire Loans, the Tranche A2 Concession Fees and the Recognized Tranche B Concession Fees were deemed necessary. Thus, contemporaneously with the signing of the PSA, the Company entered into the TCA with MWSS for the purpose of providing for these transitional arrangements that will apply from and after the termination of the DCRA and the 2005 Rehabilitation Plan.

The TCA also prescribes the procedure for the resolution of the dispute between MWSS and Maynilad on MWSS' pending claims for additional Tranche B Concession Fees and for the 364-day Treasury Bill rate penalty interest under Section 6.9 of the Concession Agreement which were disallowed by the Receiver and the Rehabilitation Court.

The terms and conditions of the TCA were thereafter acknowledged by the Republic of the Philippines, acting through Finance Secretary Margarito B. Teves in an acknowledgment letter dated January 7, 2008.

On August 16, 2007, Maynilad, together with the Lenders, Suez, S.A., Suez Env, OSPI and MWSS, filed the Joint Omnibus Motion dated August 14, 2007 (Joint Omnibus Motion) praying for the Rehabilitation Court's approval of the PSA and seeking further the termination of the rehabilitation proceedings on account of the successful implementation of the 2005 Rehabilitation Plan following the implementation of the requirements of the PSA, citing that upon such implementation, Maynilad shall have already completed both the Capital Restructuring and the Debt Restructuring which are the key elements mandated by the 2005 Rehabilitation Plan for the rehabilitation of Maynilad and the restoration of its financial viability.

On December 19, 2007, the Rehabilitation Court issued an Order approving the PSA and declaring that Maynilad successfully implemented the 2005 Rehabilitation Plan on the date it has implemented the "Full Prepayment" and the "Settlement" as set forth in the PSA and has satisfied all other payment requirements under Clause 5 of the PSA, all in accordance with the terms of the PSA, and that accordingly, the rehabilitation proceedings are terminated, effective on such date, pursuant to the last sentence of Section 27 of Rule 4 of the Interim Rules of Procedure on Corporate Rehabilitation upon issuance by the Rehabilitation Court of a subsequent Order confirming the termination of the rehabilitation proceedings after submission by Maynilad and the Receiver of separate sworn certifications on the said implementation of the PSA and submission of proof of payment of the proper filing/docket fees. The Rehabilitation Court further resolved the disputed claims of the Suez Group and MWSS in favor of Maynilad, ruling that no amount is due to the said claimants for their respective disputed claims, upholding the recommendations of the Receiver.

After receiving the Monetary Board approval of the proposed prepayment under the PSA, Maynilad implemented the full prepayment of the USD Tranche, SBLC Tranche, Peso Tranche, Suez Loan, Tranche A2 Concession Fees and the Recognized Tranche B Concession Fees pursuant to the PSA on January 16, 2008. Further, on January 17, 2008, Maynilad implemented the full settlement of the discounted amount of approved claims of contractors/suppliers who have granted Maynilad a 10% discount prior to the effective date of the PSA and satisfied all other payment requirements under Clause 5 of the PSA. Through a Manifestation with Motion (for Issuance of Order Confirming Termination of Corporate Rehabilitation Proceedings) dated January 18, 2008, Maynilad submitted to the Rehabilitation Court the required sworn certification on the implementation of the PSA. The Receiver also submitted on such date to the Rehabilitation Court her required sworn certification on Maynilad's implementation of the PSA.

On February 6, 2008, the Rehabilitation Court finally issued the Order confirming the termination of Maynilad's corporate rehabilitation proceedings on account of its successful implementation of the 2005 Rehabilitation Plan, in accordance with Section 27 of Rule 4 of the Interim Rules of Procedure on Corporate Rehabilitation. In view of the immediately executory nature of orders issued by the Rehabilitation Court, Maynilad is considered officially out of corporate rehabilitation on the date of such confirmation order, which is February 6, 2008.

7.2 MACRO-ECONOMIC ASSUMPTIONS

Inflation Assumption

The projected Philippine inflation used in this Business Plan is 5% which is based on the original projection of the Bangko Sentral ng Pilipinas (BSP) which ranges between 3%-5%.

The financial projections were made on 2008 values.

Exchange Rate Assumption

US Dollar	- PhP 43.00
Japanese Yen	- Php 00.3885
Euro	- Php 62.9576

7.3 ACCOUNTING AND FISCAL ASSUMPTIONS

Bad Debts Provision

The assumption for bad debt provision is 5% of total revenues throughout the remaining life of the Concession Period.

Days Receivable

The financial projections assume a collection period of 60 days until the end of the Concession Period.

Days Payable

The financial projections assume a payment period of 60 days throughout the projected period.

VAT

The financial projections assume that the following are subject to 12% VAT:

100% of Revenues
65% of Operating Expenses
100% of Capital Expenditure

Customers Deposit

The Financial Projections assume that each new Domestic Customer will be charged PhP500 per connection representing Customers' deposit.

Taxation

Corporate Income Tax

The Income Tax Holiday for Maynilad which expired on July 31, 2007 was extended until December 31, 2008. Starting 2009 up to the end of Concession, Corporate Income Tax is at 30%.

Local Business Tax (LBT)

These include Local Business Tax of 0.875% of revenues for previous year and Real Property Taxes on Maynilad fixed assets, some MWSS fixed assets including those in Norzagaray.

Amortization of Concession Assets and Commencement Fee

The amortization of Concession Assets and the Commencement Fee is made over the life of the Concession from 2008 using the billed volume.

Depreciation of Fixed Assets (MWSS including Rehabilitated Facilities)

Fixed Assets are depreciated on a straight-line basis over the commercial life starting from the year of acquisition or over the remaining life of the Concession, whichever is shorter. The salvage value is assumed to be 0% of book value and the commercial life is between a period of 5 to 50 years.

Deferred Assets Account

This represents Forex losses arising from the payment of Maynilad's foreign currency-denominated loans and the Concession Fees. The amortization of the deferred assets is dependent on the Forex recovery per year, wherein the amount that is amortized is the same as the revenue arising from the Forex recovery for the particular year.

Revenue Assumptions

The sources of revenues for Maynilad are as follows:

Water revenues
Sewerage and Environmental revenues
Maintenance Service Charge (MSC)
Miscellaneous revenues

Water Revenues

The critical drivers of water revenues are billed volume and basic tariffs. The projected billed volume follows the technical business plan of Maynilad. A detailed discussion on billed volume is found in Chapter 3.

In calculating for water revenues, the effective tariff as of December 31, 2007 was used as the baseline. For 2008, the 2007 baseline was inflated by CPI of 2.6%. For 2009 onwards, effective tariff is increased by the rebased rate. Also included in the water revenue is the CERA of PhP1.00/cu.m.

Sewerage and Environmental (Sanitation) Revenues

Under the Concession Agreement, the sewerage charge, for those connected to the sewerage system and environmental charge are billed at the rate of 50% and 10%, respectively, of the water revenue.

The Business Plan provides for the rationalization of the Sewerage and Environmental (Sanitation) charges and programs starting 2009. Sewerage charges will drop to 20% from 50% starting 2009. Meanwhile, we will allow for a gradual increase in the Environmental (Sanitation) charge from 10% in 2008 to 20% by 2012. Shown below is the sewerage and sanitation charges schedule.

	2008	2009	2010	2011	2012
Not connected to Separate Sewerage System					
Sanitation Charge	10%	12%	14%	17%	20%
Separate Sewerage System (Sewerage Charge)					
Domestic Sewer Charge	50%	20%	20%	20%	20%
Non-domestic Sewer Charge *	50%	20%	20%	20%	20%
Combined Sewerage System					
Domestic Sewer Charge	**	**	**	**	**
Non-domestic Sewer Charge	**	**	**	**	**

* Non-domestic customer connected to separate sewerage system pays the Sewerage Charge plus the corresponding Sanitation Charge

** Rate equal to Sanitation Charge for the 3rd RR Period

Beginning January 1, 2012, the nomenclature of "environmental charge" shall be appropriately changed to "sanitation charge".

Maintenance Service Charge (MSC)

The MSC is a fixed charge per month per connection, which varies depending on the size of the water meter. An average charge of PhP1.75 per connection is assumed in the projections. This charge is not subject to any adjustment.

Miscellaneous Revenues

These include the water connection charge which is a one-time fee charged to Customers upon application for a water service connection. The updated 2008 connection charge of PhP5,426.00 per connection is adopted. However, the connection charge for additional and clustered meters for low income and depressed communities was reduced in line with the new policy on the matter issued by the Regulatory Office, as approved by the MWSS Board of Trustees.

Hereunder is the tabulation of Annual Billed Volume (in million m^3) with the corresponding revenue amounts (in MPhP).

	2008	2009	2010	2011	2012	2013	2014	2015
Billed Volume	330	381	437	495	539	576	620	662
Revenue	8,068	13,419	15,659	18,191	19,961	21,769	23,566	25,040

	2016	2017	2018	2019	2020	2021	2022
Billed Volume	686	711	734	757	779	795	476
Revenue	25,815	26,738	27,592	28,464	29,294	29,907	17,942

Foreign Currency Differential Adjustment

As provided for in Amendment No. 1, Maynilad is allowed to implement a rate adjustment with respect to present and future Forex losses or gains, including all accruals and carrying costs thereof, from the period January 1, 2002 until the Expiration Date on a quarterly basis.

The Business Plan assumes the base exchange rates for foreign currencies, as follows:

US Dollar	-	PhP 43.00
Japanese Yen	-	PhP 00.3885
Euro	-	PhP 62.9576

As confirmed by Maynilad to the Regulatory Office during the said July 2, 2008 meeting, Maynilad has accepted the Regulatory Office's earlier ruling that forex losses/gains arising from payments made in relation to USD loans resulting from MWSS' drawing of Maynilad's US$120 million Performance Bond on January 20, 2005 are not subject to recovery or compensation

Also included in the Business Plan is the estimated compensation for the Forex gain arising from the implementation of the PSA. The Forex losses or gains arising from the payments made by Maynilad in relation to USD loans resulting from MWSS' drawing of Maynilad's US$120 million Performance Bond on January 20, 2005 was excluded from the calculation in view of Maynilad's acceptance of the earlier position of the Regulatory Office on this matter that these Forex losses or gains are not subject to recovery or compensation. The TCA provides that the recovery/compensation arising from the PSA implementation shall be for a maximum period of four (4) years. In order to mitigate the impact to Customers and/or Maynilad, the Business Plan assumes a 4-year compensation of the Forex gain arising from the PSA implementation.

Operating Expenses

The annual operating expenses are presented hereunder:

	2008	2009	2010	2011	2012	2013	2014	2015
Personnel Cost	1,385	1,576	1,658	1,766	1,847	1,847	1,847	1,847
Light & Power	410	484	565	681	743	766	789	812
Supplies & Materials	238	248	255	267	268	279	293	305
Repair & Maintenance	232	307	379	436	487	523	555	582
MWSS MOE	182	182	182	182	182	182	182	182
Other Expenses	1222	1476	1639	1858	1685	1611	1806	1760
Total	3,668	4,273	4,678	5,189	5,213	5,208	5,472	5,488

	2016	2017	2018	2019	2020	2021	2022
Personnel Cost	1,847	1,847	1,847	1,847	1,847	1,847	1,077
Light & Power	834	856	869	882	896	908	531
Supplies & Materials	311	319	330	340	351	359	212
Repair & Maintenance	595	603	605	598	572	532	386
MWSS MOE	182	182	182	182	182	182	106
Other Expenses	1,780	1,826	1,831	1,852	1,861	1,829	1,120
Total	5,549	5,634	5,663	5,703	5,708	5,658	3,432

The 2008 corporate budget is used as base number for the Opex projection.

Personnel Costs

Due to the outsourcing of some functions, 2.7 persons per thousand connections were adopted starting 2008. After 2012, the level of personnel at 2,639 will be maintained notwithstanding increase in billed services, and this will be attributed to efficiency.

Employees per Thousand Connection		
Year	Emp/'000 conn	
2008 - 2012	2.7	2.7
2013 - 2017	2.6	2.3
2018 - 2022	2.2	2.0

Supplies and Materials

a. Chemicals

These pertains to chemicals used in the purification/ treatment of water such as liquid chlorine, aluminum sulfate, polymer, caustic soda and others as well as chemicals used in the treatment of wastewater like lime, chlorine, etc. The consumption of chemicals is primarily dependent on volume of water produced or wastewater treated.

b. Other Supplies and Materials

These include the office supplies (cost of forms used/consumed in the discharge of office work like bond papers, pencils, pencil lead, etc.), electrical supplies &

accessories, automotive and spare parts (cost to replace worn-out automotive tires and batteries only to ensure and maintain their continuous and efficient functioning/performance, including compressors and other field equipment) and others. These are pegged on the billed service connection growth rate.

Light and Power

Power consumption is largely anchored on water supply produced and distributed. In addition to the two (2) existing treatment plants (La Mesa Treatment Plant Nos. 1 and 2), the 300 Mld Muntinlupa Water Treatment Plant and the North Caloocan Treatment Plant will implemented in 2009 and 2012, respectively. For better management of water, pumping and booster stations are commissioned /added. Light and power are also utilized in the operation of sewerage pumping. lift stations, sewage treatment plant and other sewerage and sanitation facilities as well as the Maynilad Head Office, BCs, warehouses and other facilities.

Repairs and Maintenance

This pertains to non-capitalizable cost of supplies and services incurred in the repair and maintenance of all water and sewer facilities including administrative building, vehicles and equipment to ensure continuous and efficient operations. Construction materials and hardware acquired for the purpose of repair and maintenance of buildings, structures, facilities, vehicles, equipment etc. are included in this account. The cost of repairs and maintenance is projected to increase substantially. The repair and maintenance of transmission lines and water service connection are pegged on fixed asset growth rate while for the rest, Maynilad has assumed a 10% annual growth.

MWSS Budget

This represents Maynilad's annual contribution to the budget of MWSS, both Corporate and Regulatory Offices.

Other Operating Expenses

Outside Services - – These refer to services rendered by third-party service providers such as security, janitorial, meter reading, call center, messengerial and delivery services, fleet and facilities services, bill printing/delivery, contractual services, and others.

Advertising, Promotions and Recreation- This pertains to the cost of enhancing the image of Maynilad, developing harmonious relations with different local government units and rapport with tri-media, advertisement and publication of notices in any newspaper and magazines of general circulation, TV/Radio broadcast, website, on ground and cost of sponsorships. It also includes athletic, recreational and annual cultural celebrations.

Rentals - These include fees for the use of facilities or equipment belonging to others or third parties. Rented facilities may include branch office buildings/spaces; office and other equipment like photocopying machines; other maintenance equipment like compressors, pavement breakers. Rentals also include transportation equipment to complement existing vehicle fleet and water tankering in major water interruption/emergency cases.

Insurances - These include premiums paid for insurance coverage of properties/equipment against theft, fire, etc. and surety bonds.

Trainings, Workshops, Seminars and Conferences – These include expenses for the conduct of training purposely for the development, enhancement, and furtherance of employee skills and potentials. These also include professional fees, honoraria and gifts for the resource persons and facilitators, training/seminar/enrollment fees, training materials, giveaways, transportation expenses incurred by an official or employee, and other incidental expenses.

Representation & Transportation -These include expenses incurred by the various officers of the Company to represent the Company; to promote as well as establish and maintain good public image and relations. This account includes but shall not be limited to gifts, flowers and other tokens for all occasions, food expenses during meetings, seminars, and conferences, official entertainment either by the officer or his authorized representative.

Transportation & Travel - These refer to the cost of fuel (gasoline and diesel), including brake fluids, oils, etc., consumed/utilized by the Company's transportation equipment in the normal course of operation of the business. These pertain also to expenses of officers and employees while traveling on official business within the country and abroad (including the cost of airfare, hotel accommodations, and other travel-related expenses in connection with regional visits). The costs of tolls and parking expenses are also covered under this account.

Professional Fees - These pertain to compensation/fees of consultants and professionals engaged by Maynilad for a specific purpose, for a definite period of time and on agreed rates as contained in the contract agreement. These include audit, legal and consulting services and other services acquired by and paid for by the Company.

Utilities - These refer to the cost of communications which includes expenses for telephone, cellular phone including cell cards, handheld radio/two-way radio transceivers, frame relay, wireless and cable charges and tolls, postage charges, messengerial & courier services, and other expenses incurred in operating and maintaining the communication system of the Company. Utilities include also the cost of water and sewer consumed/used in the Company's facilities such as in branch offices, warehouses, etc.

Water Service Connection Expenses - – These represent labor and material costs incurred in installing house service connections from the tapping point up to the meter set assembly. The cost of the meter set assembly (water meter included) is capitalized

Others – These include taxes, donations & contributions, semi-expendable items, subscriptions periodic, meetings and conferences, collection charges, water quality assurances membership fees, waste water disposal services, annual water charge, abstraction fees, and other expenses related to various memoranda of agreement with MWSS, Corporate and Regulatory.

7.4 PERFORMANCE BOND

As provided for in the TCA, the Performance Bond shall be updated to US$30 million upon implementation of the rebased rate on January 1, 2009.

7.5 CAPEX INVESTMENT

The Capital Expenditures of Maynilad are anchored on the following five (5) strategic goals in order to achieve Maynilad's objectives for a sustainable growth:

- Improve network and operational efficiency
- Improve organizational efficiency and right size
- Ensure financial viability and enhance shareholder value
- Upgrade customer
- Improve corporate image

The Technical Plan of the Business Plan provides the details of the Capital Expenditures at 2008 prices. The total cash requirements of the Capex investment of Maynilad are shown hereunder.

	2008	2009	2010	2011	2012	2013	2014	2015
Capex	7,527	8,500	8,611	7,500	7,417	6,000	6,000	6,000

	2016	2017	2018	2019	2020	2021	2022
Capex	5,000	5,000	5,000	5,000	4,000	4,000	2,000

7.6 CONCESSION FEES

As provided for in the Concession Agreement, the Concession Fees to be paid to MWSS include the following:

90% of the aggregate Peso equivalent due under MWSS Loans which has been disbursed prior to the Commencement Date on the relevant payment date set forth in Schedule 8 to the Concession Agreement; plus

90% of the aggregate Peso equivalent due under any MWSS Loan designated for the UATP project which has not been disbursed prior to the Commencement Date on the relevant payment date set forth in Schedule 8 to the Concession Agreement; plus

90% of the Local Component costs and Cost Overruns related to the UATP project in accordance with Schedule 9 to the Concession Agreement; plus

100% of the Peso equivalent due under the MWSS Loan designated for Existing Projects, which have not been disbursed prior to the Commencement Date and have been either awarded to third party bidders in accordance with Section 6.13.1(i) of the Concession Agreement or been elected by the Concessionaire for continuation in accordance with Section 6.13.1(ii) of the Concession Agreement; plus

100% of the Local Component costs and Cost Overruns related to Existing Projects in accordance with Schedule 9 to the Concession Agreement.

In addition to the above Concession Fees, we have considered new concession fees for MWSS water supply projects. Hereunder is the schedule of Concession Fee payments.

	2008	2009	2010	2011	2012	2013	2014	2015
Scheduled CF	1,430	1,105	949	895	777	669	683	511
New CF	159	425	701	1,461	848	320	319	322
Total CF	1,589	1,530	1,651	2,356	1,626	989	1,002	834

	2016	2017	2018	2019	2020	2021	2022
Scheduled CF	470	373	376	382	365	11	5
New CF	325	329	332	336	340	344	347
Total CF	795	702	708	718	705	355	352

7.7 APPROPRIATE DISCOUNT RATE (ADR)

A key factor for determining the Rate Rebasing Adjustment in the Rate Rebasing exercise is the ADR. In the recent Rate Rebasing exercise of Manila Water, the ADR was determined to be at 9.3% for Future Cash Flows. The parameters used to arrive at 9.3% are given below:

Borrowing cost of the Republic of the Philippines	8.8%
US Inflation Rate	2.5%
Debt Premium	1.5%
Equity Premium	7.0%
Gearing Ratio	50:50

The Business Plan assumes the same ADR for Future Cash Flows of 9.3% approved for Manila Water during its last Rate Rebasing exercise, subject to discussions with the Regulatory Office on the appropriateness of this rate, pursuant to the requirements of the Concession Agreement.

7.8 FINANCIAL RISK MANAGEMENT

The Maynilad BOD reviews and approves the policies for managing the financial risks. Maynilad monitors market price risk arising from all financial instruments and regularly report financial management activities and the results of these activities to the BOD.

The main risks arising from Maynilad principal financial instruments are foreign currency exchange risk, credit risk and liquidity risk.

Foreign Exchange Risk

Maynilad's foreign currency risk results primarily from movements of the Philippine peso against the United States dollar, European Euro and the Japanese Yen. The servicing of designated foreign currency-denominated loans of MWSS through Concession Fee payments by the Company is among the requirements of the Concession Agreement. Majority of the revenues are generated in Philippine pesos. However, there is a mechanism in place as part of the Concession Agreement wherein Maynilad (or the Customers) can recover currency fluctuations through the FCDA that is approved by the Regulatory Office.

Credit Risk

Maynilad trades only with recognized, creditworthy third parties. It is Maynilad's policy that except for connection fees and other highly meritorious cases, the Company does not offer credit terms to its Customers. Being a basic need service company, historical collection efficiency of Maynilad is at 95%. Credit exposure is

widely dispersed. Receivable balances are monitored on an ongoing basis resulting in an insignificant exposure of Maynilad to bad debts.

With respect to credit risk arising from the other financial assets, consisting of cash and cash equivalents and short-term cash investments, the Company's exposure to credit risk arises from default of the counterparty, with a maximum exposure equal to the carrying amount of these instruments. Maynilad transacts only with institutions or banks which have demonstrated financial soundness for the past five (5) years.

Maynilad has no significant concentrations of credit risk.

Liquidity Risk

On December 5, 2006, the DMCI-MPIC consortium won the right to be designated as the assignee of MWSS' right to subscribe to 83.97% of Maynilad's outstanding capital stock pursuant to the DCRA. Through the Sponsor's partial infusion of this capital commitment, Maynilad was able to prepay its DCRA obligations to finally complete the Debt Restructuring in January 2008.

On August 9, 2007, Maynilad signed a PSA with all its major creditors namely, the Lenders, MWSS and Suez Env. The implementation of the PSA, approved by the Rehabilitation Court on December 19, 2007, effected an early exit of Maynilad from rehabilitation proceedings to ensure a continued and improved delivery of efficient and reliable water, sewerage and sanitation services to its customers.

On February 6, 2008, the Rehabilitation Court finally issued the order confirming/declaring the termination of Maynilad's rehabilitation proceedings on account of the successful implementation of the 2005 Rehabilitation Plan.

Maynilad continues to enjoy the financial backing of its principal owners to cover its short-term and capital expenditure funding requirements. Maynilad monitors its risk to a shortage of funds using a recurring liquidity planning. Cash planning considers the maturity of both its financial investments and financial assets (e.g. accounts receivables, other financial assets) and projected cash flows from operations.

7.9 CONCLUSION

Under these assumptions, the financial projections resulted in an Opening Cash Position of negative PhP35,440 million. Correspondingly, the basic tariff will increase by 52.01% over the 2008 basic tariff or PhP11.99 per cubic meter

7.10 SCHEDULES

Schedule 1	Revenue Sheet
Schedule 2	Opex Sheet
Schedule 3	Capex Sheet
Schedule 4	Concession Fee Sheet
Schedule 5	Profit and Loss Statement Sheet
Schedule 6	Rate Rebasing Sheet

Revenue break-up - Calculation of basic tariff

Ia. Water revenue															
Volume															
Total volume billed (mn m3)	330	381	437	495	539	576	620	662	686	711	734	757	779	795	476
Basic water tariffs billed															
Residential + Semi Business	3,399	5,968	6,847	7,743	8,433	9,010	9,706	10,364	10,746	11,131	11,487	11,847	12,193	12,448	7,445
Residential Tariff (PHP/m3)	13.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.390	20.4	20.4	20.4	20.4	20.4	20.4
Semi-business Tariff (PHP/m3)	17.1	26.0	26.0	26.0	26.0	26.0	26.0	26.0	25.966	26.0	26.0	26.0	26.0	26.0	26.0
Total volume billed (mn m3)	330	381	437	495	539	576	620	662	686	711	734	757	779	795	476
Residential Consumption breakdown	67.72%	67.72%	67.72%	67.72%	67.72%	67.72%	67.72%	67.72%	0.677	67.72%	67.72%	67.72%	67.72%	67.72%	67.72%
Semi-business Consumption breakdown	7.10%	7.10%	7.10%	7.10%	7.10%	7.10%	7.10%	7.10%	0.071	7.10%	7.10%	7.10%	7.10%	7.10%	7.10%
Commercial & Industrial	3,082	5,411	6,209	7,021	7,647	8,170	8,801	9,398	9,744	10,093	10,416	10,743	11,056	11,287	6,751
Commercial Tariff (PHP/m3)	36.7	55.8	55.8	55.8	55.8	55.8	55.8	55.8	55.8	55.8	55.8	55.8	55.8	55.8	55.8
Industrial Tariff (PHP/m3)	40.7	61.8	61.8	61.8	61.8	61.8	61.8	61.8	61.8	61.8	61.8	61.8	61.8	61.8	61.8
Total volume billed (mn m3)	330	381	437	495	539	576	620	662	686	711	734	757	779	795	476
Commercial Consumption breakdown	19.1%	19.1%	19.1%	19.1%	19.1%	19.1%	19.1%	19.1%	19.1%	19.1%	19.1%	19.1%	19.1%	19.1%	19.1%
Industrial Consumption breakdown	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%
Raw water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tariff (PHP/m3)	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Volume billed (mn m3)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sea transport	53	93	107	121	132	141	151	162	168	174	179	185	190	194	116
Tariff (PHP/m3)	44.8	68.1	68.1	68.1	68.1	68.1	68.1	68.1	68.1	68.1	68.1	68.1	68.1	68.1	68.1
Total volume billed (mn m3)	330	381	437	495	539	576	620	662	686	711	734	757	779	795	476
Consumption breakdown	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
Basic water tariffs billed	6,534	11,472	13,163	14,886	16,212	17,321	18,658	19,924	20,658	21,398	22,081	22,775	23,439	23,929	14,312
Ib. Sewerage charge revenue															
Water volume with sewerage billed (mn m3)	42	42	43	43	44	46	49	51	54	56	59	61	64	66	39
Sewerage tariff as a % of water tariff	50.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Basic sewerage tariff	28.80	43.78	43.78	43.78	43.78	43.78	43.78	43.78	43.78	43.78	43.78	43.78	43.78	43.78	43.78
Basic sewerage tariffs billed	605	368	373	377	383	404	425	448	470	493	515	537	560	582	339
Ic. Environmental/Sanitation revenue															
Environmental tariff as a % of water tariff	10%	12%	14%	17%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Basic water tariffs billed	6,534	11,472	13,163	14,886	16,212	17,321	18,658	19,924	20,658	21,398	22,081	22,775	23,439	23,929	14,312
Reversal of environmental charges for domestic accts with sewer connections	-	(41)	(49)	(62)	(75)	(85)	(95)	(105)	(116)	(126)	(137)	(147)	(157)	(168)	(98)
Basic environment tariffs billed	653	1,336	1,794	2,469	3,167	3,380	3,637	3,880	4,016	4,153	4,280	4,408	4,531	4,618	2,765
I. Total basic tariffs billed	7,793	13,175	15,329	17,732	19,762	21,105	22,720	24,251	25,144	26,044	26,876	27,720	28,529	29,129	17,416

Revenue break-up - calculation of CERA component

IIIa. Water															
Total volume billed (mn m3)	330	381	437	495	539	576	620	662	686	711	734	757	779	795	476

Revenue break-up - Calculation of basic tariff																
Volume for raw water (mn m3)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CERA rate (PHP/m3)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
CERA component for water	330	381	437	495	539	576	620	662	686	711	734	757	779	795	476	
IIIb. Sewerage																
Water volume with sewerage billed (mn m3)	42	42	43	43	44	46	49	51	54	56	59	61	64	66	39	
Sewerage tariff as a % of water tariff	50.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	
CERA rate (PHP/m3)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
CERA component for sewerage	21	8	9	9	9	9	10	10	11	11	12	12	13	13	8	
IIIc. Environment																
CERA component for water	330	381	437	495	539	576	620	662	686	711	734	757	779	795	476	
Environmental tariff as a % of water tariff	10.0%	12.0%	14.0%	17.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	
CERA rate (PHP/m3)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
CERA component for environment	33	46	61	84	108	115	124	132	137	142	147	151	156	159	95	
II. Total CERA	384	435	507	587	655	700	754	805	835	865	892	920	948	968	578	
Revenue adjusted for tariff increases	8,177	13,611	15,836	18,320	20,417	21,805	23,474	25,056	25,978	26,909	27,768	28,640	29,477	30,097	17,994	
Revenue break-up - Calculation of other revenues																
IV. Service charges																
New connections (m)	0.04	0.05	0.07	0.09	0.03	0.03	0.05	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.03	
Ending connections (m)	0.75	0.80	0.87	0.96	0.99	1.02	1.07	1.10	1.13	1.17	1.20	1.24	1.27	1.31	1.34	
Average (m)	0.73	0.77	0.84	0.91	0.97	1.00	1.04	1.08	1.12	1.15	1.18	1.22	1.25	1.29	1.32	
Service rate (PHP/connection)	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	
Service charge (in real terms)	15	16	18	19	20	21	22	23	23	24	25	26	26	27	28	
V. Incidental revenue																
Installation rate (PHP/connection)	5,426	5,426	5,426	5,426	5,426	5,426	5,426	5,426	5,426	5,426	5,426	5,426	5,426	5,426	5,426	
New connections (m)	0.04	0.05	0.07	0.09	0.03	0.03	0.05	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.03	
Reduction in connection fee due to clustering & add'l meter policy (RO initiated)	(29)	(63)	(80)	(71)	(46)	(45)	(44)	(44)	(44)	(42)	(42)	(42)	(42)	(42)	(39)	
Installation revenue (in real terms)	211	222	298	407	127	98	236	138	133	136	139	149	151	151	145	
Other revenue (IV & V)	227	238	315	426	147	119	258	161	156	160	164	174	178	179	173	
Revenue from operations (I - V)	8,403	13,849	16,151	18,746	20,564	21,924	23,732	25,216	26,134	27,069	27,933	28,815	29,655	30,275	18,168	
Revenue break-up - forex recovery due to special transitory mechanism ("STM")																
Forex recovery due to STM	914															
Revenue break-up - forex recovery due to foreign currency differential adjustment ("FCDA")																

Revenue break-up - Calculation of basic tariff																
I. FCDA - concession fees	(241)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
II. FCDA - debt servicing																
Loan repayment - World bank Loan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loan repayment - Bridge loan	(481)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loan repayment - MWSS financial assistance	(336)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loan repayment - Performance Bond banks	(548)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loan repayment - Suez shareholders' loan	(853)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total FCDA - loan repayment	(2,218)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest payment - World Bank Ploan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest payment - Bridge loan	(1)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest payment - MWSS financial assistance	(2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest payment - Performance Bond banks	(2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest payment - Suez shareholders' loan	(4)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total FCDA - interest payment	(10)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
II. Total FCDA - debt servicing	(2,228)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total FCDA (I & II)	(2,469)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FCDA - TCA agreement	2,228	(324)	(371)	(420)	(457)	-	-	-	-	-	-	-	-	-	-	-
Discounting Scheme:																
20% Discount on Residential accounts consuming 10 cum or less	(39)	(46)	(52)	(59)	(64)	(69)	(74)	(79)	(82)	(85)	(88)	(90)	(93)	(95)	(57)	
Residential rate for 1st 10 cum of SB accounts	(42)	(49)	(55)	(62)	(68)	(73)	(78)	(84)	(87)	(90)	(93)	(95)	(98)	(100)	(60)	
Reclassification of Govt. accounts from BG-I to SB rate	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	
Total Discount Scheme	(94)	(107)	(121)	(135)	(146)	(155)	(166)	(176)	(182)	(188)	(193)	(199)	(205)	(209)	(130)	
Revenue	8,982	13,419	15,659	18,191	19,951	21,769	23,566	25,040	25,952	26,881	27,739	28,616	29,450	30,067	18,038	

Schedule 2

Maynilad Water Services, Inc.

OPEX

Operating Expenses															
Personnel cost	1,385	1,576	1,658	1,766	1,847	1,847	1,847	1,847	1,847	1,847	1,847	1,847	1,847	1,847	1,077
Light & power	410	484	565	681	743	766	789	812	834	856	869	882	896	908	531
Supplies & materials	238	248	255	267	268	279	293	305	311	319	330	340	351	359	212
Repairs & maintenance	232	307	379	436	467	523	555	582	595	603	605	598	572	532	386
MWSS MOE	182	182	182	182	182	182	182	182	182	182	182	182	182	182	106
Other expenses	1,222	1,476	1,639	1,858	1,685	1,611	1,806	1,760	1,780	1,826	1,831	1,852	1,861	1,829	1,120
Total	3,668	4,273	4,678	5,189	5,213	5,208	5,472	5,488	5,549	5,634	5,663	5,703	5,708	5,658	3,432

Schedule 3

Maynilad Water Services, Inc.

Capex

Year ended December (PHPm)	Notes	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Calculation of nominal capex and annual depreciation																
Inflation index - capped by DCRA		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Capex with useful life of 25 years	25															
Real cost		7,527	8,500	8,611	7,500	7,417	6,000	6,000	6,000	5,000	5,000	5,000	5,000	4,000	4,000	2,000
Nominal cost		7,527	8,500	8,611	7,500	7,417	6,000	6,000	6,000	5,000	5,000	5,000	5,000	4,000	4,000	2,000
Salvage value		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Net cost of equipment		7,527	8,500	8,611	7,500	7,417	6,000	6,000	6,000	5,000	5,000	5,000	5,000	4,000	4,000	2,000
Depreciation period		15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Annual depreciation for current year's capex		-	538	654	718	682	742	667	750	857	833	1,000	1,250	1,667	2,000	6,000
Total capex - real terms (2008 Values)		7,527	8,500	8,611	7,500	7,417	6,000	6,000	6,000	5,000	5,000	5,000	5,000	4,000	4,000	2,000

[illegible]

Year ended 31 December (PHPm)	Notes	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Calculate annual concession fees to be paid																
Foreign loans translated into USD (USDm)		27.3	25.7	22.0	20.8	18.0	15.5	15.8	11.9	10.9	8.7	8.7	8.9	8.5	0.2	0.1
Exchange rate capped at rebased rates (PHP/USD)		51.9	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
Foreign loans translated into PHP - rebased rate		1,416	1,104	948	893	776	668	682	511	469	373	375	381	364	11	5
Peso loans		14	1.50	1.27	1.20	1.03	0.88	0.91	0.66	0.60	0.46	0.46	0.48	0.50	-	-
New Concession Fees in Pesos		159	425	701	1,461	848	320	319	322	325	329	332	336	340	344	347
Nominal concession fees payments at rebased rate		1,589	1,530	1,651	2,356	1,626	989	1,002	834	795	702	708	718	705	355	352
Calculation of the FCDA on concession fees																
Concession fees payments at current exchange rate																
Current exchange rate		43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
Foreign loans translated into PHP		1,174	1,104	948	893	776	668	682	511	469	373	375	381	364	11	5
Concession fees forex losses		(241)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Paid portion of the concession fees		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Amount recovered in the same year		(241)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deferred FCDA on concession fees		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total deferred FCDA on concession fees																
Amortization of deferred FCDA on concession fees																
Total FCDA on concession fees		(241)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calculate total concession fees to be amortized																
Total nominal concession feess payments		15,911														
Add: Concession fees paid to date (Balance Sheet audite		13,021														
Total amount to be amortized		28,932														
Calculate annual concession fees to be amortized																
Billed volume (mn m3)		330	381	437	495	539	576	620	662	686	711	734	757	779	795	476
Total billed volume for remaining life		8,978														
% of total		3.7%	4.2%	4.9%	5.5%	6.0%	6.4%	6.9%	7.4%	7.6%	7.9%	8.2%	8.4%	8.7%	8.9%	5.3%
Annual amortization		1,064	1,229	1,410	1,594	1,736	1,855	1,998	2,134	2,212	2,292	2,365	2,439	2,510	2,563	1,533
Concession Fee Tranche A Schedule																
Concession Fees A1 during the year (Notes 6, 9, 8, 8 & 8 c		0														
Concession Fee A2 (Note 12 of 2006 and 2007 audited FS		(2,004)														
		2,004														

Maynilad Water Services, Inc.

Profit and Loss Statement

YE 31st December PHPm	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Income statement															
Revenue	8,068	13,419	15,659	18,191	19,961	21,769	23,566	25,040	25,952	26,881	27,739	28,616	29,450	30,067	18,038
Operating expenses	(3,668)	(4,273)	(4,678)	(5,189)	(5,213)	(5,208)	(5,472)	(5,488)	(5,549)	(5,634)	(5,663)	(5,703)	(5,708)	(5,658)	(3,432)
Documentary stamp tax	(46)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Local taxes	(222)	(288)	(496)	(692)	(877)	(1,012)	(1,129)	(1,196)	(1,244)	(1,269)	(1,250)	(1,210)	(1,146)	(1,052)	(735)
Provision for doubtful accounts	(415)	(687)	(802)	(931)	(1,021)	(1,088)	(1,178)	(1,252)	(1,298)	(1,344)	(1,387)	(1,431)	(1,473)	(1,503)	(902)
Total operating expenses	(4,352)	(5,247)	(5,975)	(6,811)	(7,111)	(7,309)	(7,779)	(7,936)	(8,091)	(8,247)	(8,300)	(8,343)	(8,327)	(8,214)	(5,069)
EBITDA	3,716	8,171	9,684	11,380	12,851	14,461	15,787	17,104	17,862	18,634	19,439	20,272	21,123	21,853	12,969
Depreciation of fixed assets	(540)	(1,078)	(1,732)	(2,450)	(3,131)	(3,758)	(4,425)	(5,175)	(6,032)	(6,866)	(7,866)	(9,116)	(10,782)	(12,782)	(18,782)
Depreciation of completed rehabilitation work-in-prog	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)	(108)
Amortization of deferred assets	241	324	371	420	457	-	-	-	-	-	-	-	-	-	-
Amortization of concession fee	(1,064)	(1,229)	(1,410)	(1,594)	(1,736)	(1,855)	(1,998)	(2,134)	(2,212)	(2,292)	(2,365)	(2,439)	(2,510)	(2,563)	(1,533)
Amortization of commencement fee	(5)	(5)	(6)	(7)	(8)	(8)	(9)	(9)	(10)	(10)	(10)	(11)	(11)	(11)	(7)
Depreciation & Amortisation	(1,476)	(2,096)	(2,884)	(3,739)	(4,526)	(5,729)	(6,540)	(7,426)	(8,362)	(9,275)	(10,349)	(11,673)	(13,411)	(15,464)	(20,430)
EBIT	2,240	6,075	6,800	7,641	8,325	8,731	9,247	9,678	9,500	9,359	9,091	8,599	7,712	6,389	(7,461)

8 RATE REBASING FRAMEWORK

Rate Rebasing is one of the rate adjustment mechanisms provided for in the Concession Agreement that affect the Standard Rates, forming as one of the components of the Rates Adjustment Limit (RAL) applicable for each Charging Year of the Concession. After the completion of a Rate Rebasing exercise, the Rebasing Adjustment and the Rebasing Convergence Adjustment for each of the five (5) Charging Years of the Rate Rebasing Period or what is referred to as the "R" component of the RAL are set by the Regulatory Office and approved by the MWSS Board of Trustees, to come into effect on the relevant Rate Rebasing Date. The RAL applicable for each Charging Year of the Concession is the sum of: (i) the annual rate adjustment for the change in the Consumer Price Index for the Philippines to account for inflation or the "C" factor; (ii) any Extraordinary Price Adjustment (EPA) approved pursuant to Section 9.3 of the CA to account for the impact of unforeseen or extraordinary events on the Cash Flows of the Concessionaire or the "E" factor; and (ii) the "R". By virtue of Amendment No. 1 to the CA, the recovery or compensation of Forex losses or gains which was previously within the purview of the EPA provisions of the Concession Agreement, are now covered under the FCDA mechanism (or the AEPA mechanism or STM for certain Forex losses or gains).

The CA sets forth the guiding principles for Rate Rebasing, at the core of which is revenue neutrality, as enshrined in Section 9.4 as follows:

> 9.4 General Rate Setting Policy/Rate Rebasing Determination
>
> The maximum rates chargeable by the Concessionaire for water and sewage services hereunder applicable to the period through the second Rate Rebasing Date (subject to interim adjustments as described in this Article 9) are set out in Schedule 5 to this Agreement. It is the intention of the parties that, from and after the second Rate Rebasing Date, the rates for water and sewerage services provided by the Concessionaire **shall be set at a level that will permit the Concessionaire to recover over the 25-year term of the Concession (net of any grants from third parties and any possible Expiration Payment) operating, capital maintenance and investment expenditures efficiently and prudently incurred, Philippine business taxes and payments corresponding to debt service on the MWSS Loans and Concessionaire Loans incurred to finance such expenditures**, and to earn rate of return (referred to herein as the "Appropriate Discount Rate") on these expenditures for the remaining term of the Concession in line with the rates of return being allowed from time

to time to operators of long-term infrastructure concession arrangements in other countries having a credit standing similar to that of the Philippines. The parties further agree that the maximum rates chargeable for such water and sewerage services shall be **subject to general adjustment at five-year intervals** commencing on the second Rate Rebasing Date; provided that the Regulatory Office may exercise its discretion to make a general adjustment of such rates on the First Rate Rebasing Date, but, if it does not do so, the Regulatory Office shall implement the assumptions set out in paragraph 2 of Exhibit E on the fifth anniversary of the Commencement Date. It is understood that the determination of the appropriate rate of return will be made separately at the time of each generalized rate rebasing.

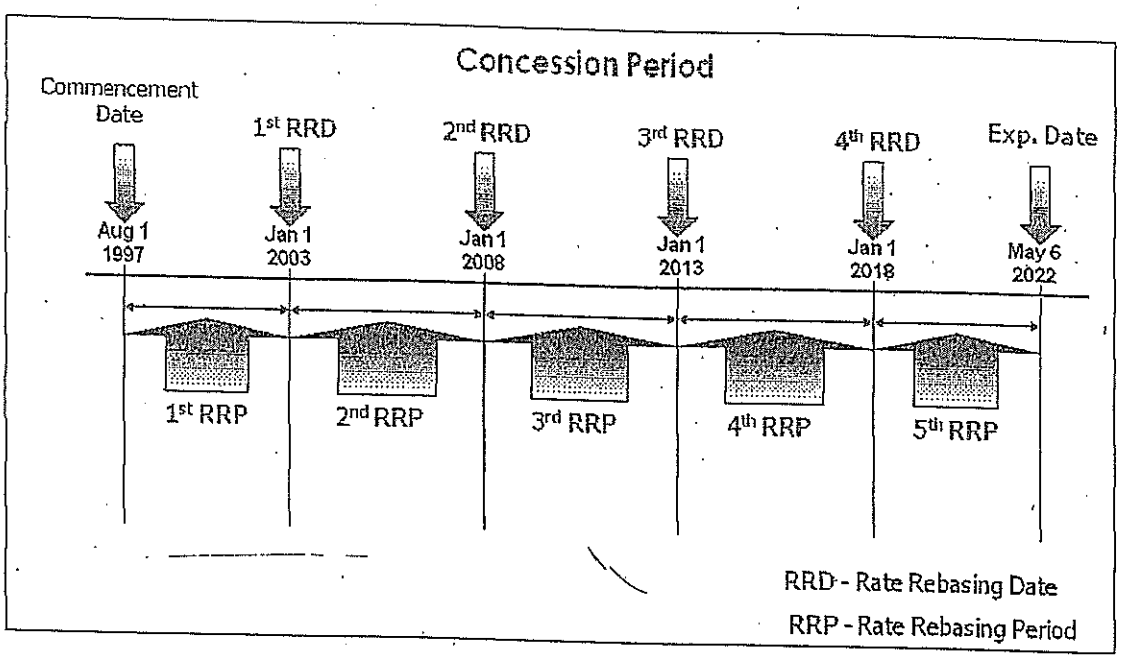
It is also the intention of the parties that rates be set in such a way as to provide appropriate efficiency incentives to the Concessionaire, with a view toward benefiting both the Customers and the Concessionaire.

The Regulatory Office shall determine the Rebasing Adjustment to be used for the purposes of calculating the Rates Limit for each of the five Charging Years of each Rebasing Period, in accordance with the provisions set forth below. (*Emphasis and underscoring supplied*)

Rate Rebasing Periods and Rate Rebasing Dates

In contrast to the other rate adjustment mechanisms, Rate Rebasing effects a general review and adjustment to the tariff at five-year intervals, each known as a Rate Rebasing Period, to take effect on the Rate Rebasing Date following such Rate Rebasing Period.

Figure 8-1: Rate Rebasing Periods and Rate Rebasing Dates



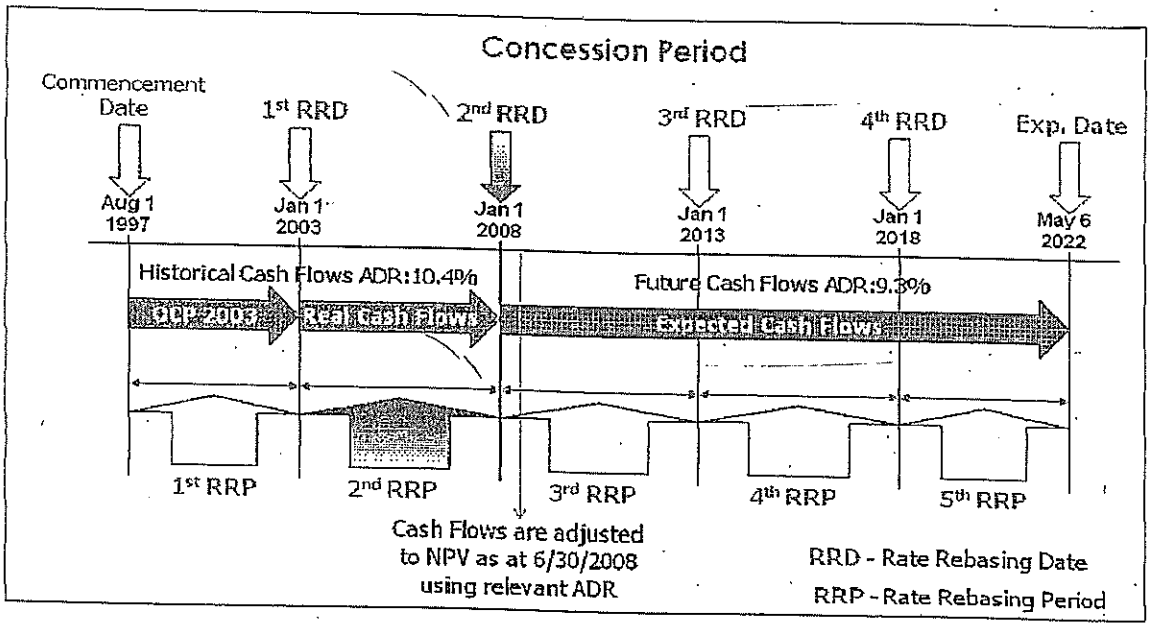
Under the Concession Agreement, Rate Rebasing is required to commence and is mandatory beginning on the second Rate Rebasing Date of January 1, 2008. However, pursuant to Amendment No. 1, the Regulatory Office exercised its discretion to make a general adjustment of the rates on the first Rate Rebasing Date of January 1, 2003. Certain events, however, resulted in the implementation of the first rebased tariff only two (2) years after the first Rate Rebasing Date or on January 1, 2005, as shown in Annex 4 (*Key Events of the West Concession*). Further, the TCA provided for a one-year deferment of the second Rate Rebasing exercise originally scheduled in 2007 by the CA to enable the Regulatory Office and Maynilad to undertake this process in the most efficient and effective manner, given that Maynilad had yet to complete its major rehabilitation exit plan at that time, while preserving the second Rate Rebasing Date at January 1, 2008.

Cash Flows for Rate Rebasing

The general adjustment contemplated by Rate Rebasing takes account of the Concessionaire's historical Cash Flows until the relevant Rate Rebasing Date through the Opening Cash Position (OCP) (adjusted to current prices by the Appropriate Discount Rate (ADR) determined at the last Rate Rebasing Date and the approved CPI adjustment) vis-à-vis its Future Cash Flows after such Rate Rebasing Date until the Expiration Date affected by the general adjustment (adjusted to current prices by the ADR determined during the current Rate Rebasing exercise and the approved CPI adjustment). Basically, the Net Present Value (NPV) of the Future Cash Flows (using the tariff adjusted for "R" in the RAL) should equal but must be opposite in sign to the NPV of the Opening Cash Position. This will ensure that the Concessionaire will be able to recover all of its efficiently

and prudently incurred expenditures throughout the remaining life of the Concession and at the same time earn a rate of return similar to that allowed from time to time to operators of long-term infrastructure concession arrangements in other countries having a credit standing similar to that of the Philippines. Because of the inherent corrective function of the Cash Flows reviewed during a Rate Rebasing exercise, Rate Rebasing is intended to capture items which are not addressed by the other rate adjustment mechanisms and provides a process that allows the tariff to be set at a reasonable level using a market-driven rate of return, at all times following the principle of revenue neutrality.

Figure 8-2: Relevant Cash Flows for 2008 Rate Rebasing



Key Considerations and Objectives of the 2008 Rate Rebasing Exercise

After having just emerged from corporate rehabilitation upon the initiative of its new Sponsor, the new Maynilad is committed to working hand-in-hand with the Regulatory Office in ensuring the successful completion of the on-going Rate Rebasing exercise. For this purpose, Maynilad believes that the success of this exercise is hinged on ensuring that the key considerations and objectives set out below are achieved.

5. All pending issues and concerns that impact the tariff should be finally resolved and appropriately addressed, following the principle of revenue neutrality.

6. Pursuant to and in accordance with the TCA, the enhanced Service Obligations of Maynilad should be established vis-à-vis those set out in the 2005 Rehabilitation Plan, taking into account all relevant factors and

unforeseen circumstances which have affected the ability of Maynilad to properly carry out its Service Obligations under the CA pursuant to Section 5.1 and other applicable provisions of the CA. As further required by the TCA, due notification must be made to the Republic of the Philippines, through the Secretary of Finance, of the approved and agreed enhanced Service Obligations of Maynilad established pursuant to the current Rate Rebasing exercise.

7. In relation to the approved and agreed enhance Service Obligations of Maynilad, Key Performance Indicators (KPIs) and Business Efficiency Measures (BEMs) as a regulatory tool to measure the performance of Maynilad (including provisions for rewards and penalties) for the remaining term of the Concession should be agreed and accordingly adopted.

8. A review of the Concession Agreement will be undertaken by the Regulatory Office to identify the specific provisions that need to be revisited in order to, among other things, further improve and strengthen customer service and the reduce impact of water tariff increase for the benefit of the consumers, the Government and Maynilad which will include a careful evaluation of Maynilad's proposed extension of the Concession term to primarily reduce tariffs, among other benefits.

ANNEX 1

Estimated Length of Primary Lines by Material and Size

DIAMETER	LENGTH (in meters)						
	ASBESTOS CEMENT PIPE (ACP)	CAST IRON PIPE (CIP)	CONCRETE PIPE	HDPE	STEEL PIPE (SP)	UNKNOWN (for verification)	TOTAL LENGTH (By Size)
350	233	2,182			118	0	2,534
355				308		0	308
400	15,833	22,376			33,065	95	71,368
450	907	496			17,334	59	18,795
500	9,277	18,142			22,439		49,858
550		1,082					1,082
600	7,080	8,113			48,081	41	63,315
650		3,222				0	3,222
700					3,228		3,228
750		6,478			17,427	18	23,923
800					3,701	0	3,701
900		5,690			39,799	14	45,502
1,000					2,569		2,569
1,050	889	4,243			10,211		15,343
1,100					4,116		4,116
1,200		2,242	1,099		13,432	14	16,788
1,350	158		1,262		3,773		5,193
1,400					2,383		2,383
1,500		230			15,256		15,486
1,600					880		880
1,650					1,369		1,369
1,800					1,167		1,167
2,000					2,217		2,217
2,200					20,669		20,669
2,600					2,744		2,744
2,800					1,859		1,859
3,000		961			5,638		6,599
3,200			783		2,391	0	3,174
TOTAL LENGTH	34,376	75,456	3,144	308	275,866	240	389,391

NOTES :

1. Based on GIS database entry as of 30 August 2007.

2. GIS updating and validation are continuous activities; data entry such as pipe length, material and diameter are subject to change.

ANNEX 2

Maynilad's Boosters, Mini-Booster Stations and Reservoirs

STATION	Unit No.	Reservoir Size	REMARKS Pumping Station
La Mesa Inside La Mesa Compd. near LMTP.2, Quezon City (Telephone No. 430-74-14) (Radio - Code Booster 2) MERALCO SIN	North C – 1 North C – 2 North C – 3 North C – 4 North A – 1 North A – 2 North A – 3 North A –4 North B – 1 North B – 2 North B – 3 North B – 4 North B – 5	50 ML (In Operation)	OPERATIONAL
Pasay Location: F.B. Harrison St. cor. K. Ambo St., Pasay City Tel. # 831-56-81	Booster # 1 Booster # 2 Booster # 3 Storage # 4 Storage # 5 Booster # 6	18.9 ML (In Operation)	OPERATIONAL
Villamor South Luzon Expressway cor. Sales Rd., Villamor, Pasay City (Means of Contact - 2-Way) Radio - Villamor Booster)	Booster # 1 Booster # 2 Booster # 3	No Reservoir	OPERATIONAL
Ermita Location : Belen St., Ermita, Manila Tel. # 525-00-09	Storage # 1 Storage # 2 Storage # 3 Storage # 4	18.9 ML (In Operation)	OPERATIONAL
Algeciras Location : España Blvd. cor. Algeciras St., Sampaloc, Manila	Booster # 1 Booster # 2 Booster # 3 Storage # 1 Storage # 2	37.8 ML (In Operation)	No Operation

STATION	Unit No.	Reservoir Size	REMARKS Pumping Station
Tel. # 731-39-86	Storage # 3		
	Storage # 4		
	Storage # 5		

STATION	Unit No.	Reservoir Size	REMARKS Pumping Station
Espiritu Location: Espiritu St., Malate, Manila Tel. No. 525-41-93	Storage # 1 Storage # 2 Storage # 3 Storage # 4	18.9 ML (In Operation)	OPERATIONAL
Caloocan Location: 7th Avenue, Caloocan City Tel. # 361-13-38	Storage # 1 Storage # 2 Storage # 3 Storage # 4 Storage # 5	18.9 ML For reactivation	For reactivation
Tondo Location: Alvarado St., Tondo, Manila Tel. # 252-22-48	Booster # 1 Booster # 2 Storage # 5 Storage # 6 Storage # 7	18.9 ML For reactivation	For reactivation
D. Tuazon Location: D.Tuazon St. Quezon City Tel. # 731-75-31	Booster # 1 Booster # 2 Booster # 3 Storage # 1 Storage # 2	18.9 ML For reactivation	For reactivation
Fairview Location : Ruby St. North Fairview, Q.C.	Booster # 1 Booster # 2	Direct pumping from LMTP1	The station is not operated since 30-Jun-00
MANGA along the Manga Ave., near Magsaysay Blvd., Sta. Mesa, Manila	Booster # 1 Booster # 2	No Reservoir	OPERATIONAL

(turned-over by Central Business Area-11/16/00)			
Philtrade Mini-B. Location : Philtrade Compd. Roxas Blvd., Pasay	Storage # 1 Storage # 2	New Cistern Tank w/ 6,183 liters pressure tank (In Operation)	OPERATIONAL
STATION	**Unit No.**	**Reservoir Size**	**REMARKS Pumping Station**
Fairview # 3 Mini-Booster Stn. Location : Pearl St. East Fairview Park, Q.C. Tel. No. 938-04-47	Storage # 1 Storage # 2	1.51 ML (In Operation)	OPERATIONAL
BAGBAG RESERVOIR (Tel. # 417-52-55)	Booster # 1 Booster # 2 Vertical-Turb. RS2 Sub. Pump	200 ML (In Operation)	OPERATIONAL
Fairview # 4 Mini-Booster Stn. Location: Alarka St., North Fairview, Q.C. Tel. No. 418-85-67	Storage # 1 Storage # 2	1.14 ML (Not in Operation)	Shutdown last 10/20/00 due to pressure improvement in its area of influence
Novaliches Location: Malvar St., T.S. Cruz Subd., Nov. Quezon City Tel. No. 937-28-83	Storage # 1 Storage # 2 Storage # 3	7.0 ML	For reactivation
Noveleta Location: near Noveleta Public Cemetery, Cavite Tel. No. 046-4384929	Vertical-Pump 1 Vertical-Pump 2 Vertical-Pump 3 Vertical-Pump 4 Vertical-Pump 5 Vertical-Pump 6	6 ML (In Operation)	Operational

LIST OF IN-LINE BOOSTERS

STATION	Unit No.	STATUS
1. Pag-Asa	2	Operational
2. Fatima	2	Operational
3. Pio Mini	1	Operational
3. Dampalit Mini	1	Operational
4. Zapote Mini	1	Operational
5. EDSA Roosevelt	1	Operational
6. Lebanon	1	Operational
7. Magallanes	3	Operational
8. Reparo (Malabon)	1	Operational
9. Assistant 1 (Proj.8)	3	Operational
10. Assistant 2 (Proj. 8)	3	Operational
11. Vitas Mini (2 stations) (Tondo, Manila)	2	Operational
12. Maharlika Mini-Booster		Operational
13. Hemlock Mini-Booster		Operational
14. Vitalez On-line Booster		Booster/Abandoned well
15. Naga On-line Booster		Operational Operational Booster/ Abandoned well
16. Protacio On-line Booster		For relocation/Disc. Power supply

ANNEX 3

List of Deepwells

I. Turned Over To MWSI Per Punongbayan Report as of July 31, 1997

City/ Municipalit	Deepwell Name	Location	Status as of June 2006	Remarks
CAVITE	Aguinaldo *	Aguinaldo Elem. School, Kawit, Cavite	For repair of well	included in Cuervo Appraisal 2005
CAVITE	Antonio *	Antonio St., Cavite City	Active	included in Cuervo Appraisal 2005
CAVITE	Bacoor Central *	Bacoor Central Elem. School, Bacoor, Cavite	Standby	
CAVITE	Bagong Pook *	Bagong Pook, Cavite City	Active	included in Cuervo Appraisal 2005
CAVITE	Daang Bukid *	Daang Bukid, Bacoor, Cavite	Standby	included in Cuervo Appraisal 2005
CAVITE	Dulong Bayan *	Dulong Bayan, Bacoor, Cavite	Standby	
CAVITE	J. Felipe *	J. Felipe Blvd., Cavite City	Active	included in Cuervo Appraisal 2005
CAVITE	Josephine Resort *	Josephine Tropical Resort, Kawit, Cavite	Active	included in Cuervo Appraisal 2005
CAVITE	Magcauas *	Magcauas St., Cavite City	Active	included in Cuervo Appraisal 2005
CAVITE	Manalac *	Manalac St., San Roque, Cavite City	Active	included in Cuervo Appraisal 2005
CAVITE	Militar *	Militar St., Cavite City	Active	included in Cuervo Appraisal 2005
CAVITE	Noveleta Well Field 1 *	Abandoned Railroad, Rosario, Cavite	Active	included in Cuervo Appraisal 2005
CAVITE	Noveleta Well Field 2 *	Abandoned Railroad, Rosario, Cavite	Active	included in Cuervo Appraisal 2005
CAVITE	Noveleta Well Field 3 *	Abandoned Railroad, Rosario, Cavite	For repair of transformer	included in Cuervo Appraisal 2005
CAVITE	Noveleta Well Field 5 *	Abandoned Railroad, Rosario, Cavite	Active	included in Cuervo Appraisal 2005
CAVITE	Noveleta Well Field 6 *	Abandoned Railroad, Rosario, Cavite	Active	included in Cuervo Appraisal 2005
CAVITE	Noveleta Well Field 8 *	Abandoned Railroad, Rosario, Cavite	Active	included in Cuervo Appraisal 2005

City/ Municipality	Deepwell Name	Location	Status as of June 2006	Remarks
CAVITE	P. Garcia *	P. Garcia Plaza, Imus, Cavite	Active	included in Cuervo Appraisal 2005
CAVITE	Rivera "	Rivero St., Cavite City	Active	included in Cuervo Appraisal 2005
CAVITE	S. Nicolas *	S. Nicolas cor. Auditor Sts., Cavite City	Active	included in Cuervo Appraisal 2005
CAVITE	Samonte Park *	Samonte Park, Cavite City	Active	included in Cuervo Appraisal 2005
CAVITE	Tirona *	Tirona Nat'l. High School, Kawit, Cavite	Active	included in Cuervo Appraisal 2005
MUNTINLUPA	Alabang Junction *	Alabang Intersection, Muntinlupa City	Active	included in Cuervo Appraisal 2005
MUNTINLUPA	Sucat 1 *	Sucat, Muntinlupa City	Blow-off optn/Standby	included in Cuervo Appraisal 2005
MUNTINLUPA	Tunasan Deepwell *	Tunasan, Muntinlupa City	Active	included in Cuervo Appraisal 2005
PARANAQUE	NAIA # 3 *	NAIA Complex, Pasay City	Standby	included in Cuervo Appraisal 2005
PARANAQUE	NAIA # 4 *	NAIA Complex, Pasay City	Standby	included in Cuervo Appraisal 2005
PASAY	Maricaban # 1 *	Maricaban, Pasay City	Active	included in Cuervo Appraisal 2005
PASAY	Maricaban # 2 *	Maricaban, Pasay City	Standby/Disc. Power supply	included in Cuervo Appraisal 2005
PASAY	Maricaban # 3 *	Maricaban, Pasay City	Active	included in Cuervo Appraisal 2005
QUEZON CITY	Fairview 1*	Valiant St., Fairview Park Subd., Quezon City	Inactive	included in Cuervo Appraisal 2005
QUEZON CITY	Fairview 3 *	Pearl St., Fairview , Quezon City	Inactive	included in Cuervo Appraisal 2005/Titled
QUEZON CITY	Fairview 4 *	Alarka St., North Fairview, Quezon City	Inactive	included in Cuervo Appraisal 2005
QUEZON CITY	Fairview 5 *	Kamagong St., Neopolitan Subd. Ph 6, Pasong Putik, Fairview, Quezon City	Inactive	
QUEZON CITY	Lagro 1 *	Ascencion St., Lagro Subd., Greater Lagro, Quezon City	Active	included in Cuervo Appraisal 2005
QUEZON CITY	Lagro 2 *	Ascencion St., Lagro Subd., Greater Lagro, Quezon City	Inactive	included in Cuervo Appraisal 2005

City/ Municipality	Deepwell Name	Location	Status as of June 2006	Remarks
QUEZON CITY	Lagro 3 *	Blk 31 32 LT Flores de Mayo St., Lagro Subd., Greater Lagro, Quezon City	Inactive	included in Cuervo Appraisal 2005
QUEZON CITY	IBP ***	Yellow Bell, IBP Road, Batasan Hills, Quezon City	Inactive	
II. Turned over Subdivision to MWSI with MOA not in MWSS Asset Register				
CALOOCAN	Castle Spring ***	Blk. 2, Castle Spring Hts.Subd., Camarin, Caloocan City	Inactive	
CALOOCAN	Cristina ***	7 Lt. Narra St. or 7 Le Molave St., Cristina Homes, Camarin, Cal. City	Inactive	
CALOOCAN	Del Rey ***	Del Rey Ville, Sta. Quiteria, Caloocan City	Active	(El Nino Project) - included in Cuervo Appraisal 2005
CALOOCAN	Good Harvest ***	Rl Bluberry St., Good Harvest Subd., Camarin, Caloocan City	Inactive	
CALOOCAN	Hillcrest 1 ***	United Hill Crest Subd., Camarin, Caloocan City	Inactive	
CALOOCAN	Hillcrest 2 ***	United Hill Crest Subd., Camarin, Caloocan City	Inactive	
CALOOCAN	Kingstown 1 ***	Rainbow Ave., Rainbow Vill. 5, Kingstown Subd., Bagumbong, Cal. City	Inactive	
CALOOCAN	Kingstown 2 ***	Lot 36 Blk 2, Kingstown Subd.,Bagumbong, Caloocan City	Inactive	
CALOOCAN	Natividad 1 ***	Lot 4 Blk 10 Ph 1, Natividad Subd., Deparo, Caloocan City	Active	
CALOOCAN	Natividad 2 ***	Lot 36 Blk 2 Ph 2, Natividad Subd., Deparo, Caloocan City	Inactive	
CALOOCAN	Natividad 4 ***	Lot 6 Blk 5 Ph 4, Natividad Subd., Deparo, Caloocan City	Active	
CALOOCAN	Parkview ***	Lot 31 Blk 3, Parkview Subd., Bagumbong, Caloocan City	Active	El Nino Project
CAVITE	Balsahan *	Balsahan, Kawit, Cavite	Active	included in Cuervo Appraisal 2005

City/ Municipality	Deepwell Name	Location	Status as of June 2006	Remarks
CAVITE	Garcia Ext. *	Garcia Ext., Cavite City	Active	included in Cuervo Appraisal 2005
CAVITE	Georosville *	Georosville Subd., Pag-asa, Imus, Cavite	Active	
CAVITE	Imus Sector Compound ***	17 Aguinaldo Hi-way Palico, Imus, Cavite	Active	included in Cuervo Appraisal 2005/Titled
CAVITE	Magdalo ***	Magdalo Hi-way, Kawit, Cavite	Active	included in Cuervo Appraisal 2005
CAVITE	Malagasang II-A *	Malagasang II-A, Imus, Cavite	Active	included in Cuervo Appraisal 2005
CAVITE	Malamok *	Malamok, Kawit, Cavite	Active	included in Cuervo Appraisal 2005
CAVITE	Molino ***	Molino Heights, Molino IV, Bacoor, Cavite	Active	included in Cuervo Appraisal 2005
CAVITE	New Criscini ***	Cavite Nat'l. High School, Criscini St., Cavite City	Active	included in Cuervo Appraisal 2005
CAVITE	New Noveleta Central ***	Noveleta Central Elem. School, San Rafael, Noveleta, Cavite	Active	included in Cuervo Appraisal 2005
CAVITE	New Noveleta Well Field 4 ***	Abandoned Railroad, Rosario, Cavite	Active	included in Cuervo Appraisal 2005
CAVITE	Noveleta Well Field 7 *	Abandoned Railroad, Rosario, Cavite	For repair of transformer	included in Cuervo Appraisal 2005
CAVITE	Pandawan *	Rosario Nat'l. High School, Rosario, Cavite	Active	included in Cuervo Appraisal 2005
CAVITE	Rosario Town Plaza *	Town Plaza, Rosario, Cavite	Active	
CAVITE	Topacio (Yengco) *	Topacio Elem. School, Imus, Cavite	Active	included in Cuervo Appraisal 2005
MAKATI	Magdalena *	Magdalena Circle, Magallanes Village, Makati	Standby/Disc. Power supply	included in Cuervo Appraisal 2005
MAKATI	San Geronimo *	San Geronimo St., Magallanes Village, Makati	Standby/Disc. Power supply	included in Cuervo Appraisal 2005
MALABON	Dona Juana *	Dona Juana Subd., Dampalit, Malabon City	Active	included in Cuervo Appraisal 2005
MUNTINLUPA	Bliss *	Bliss, Muntinlupa City	Active	included in Cuervo Appraisal 2005
MUNTINLUPA	Buendia ***	Buendia St., Tunasan, Muntinlupa City	Active	

City/ Municipality	Deepwell Name	Location	Status as of June 2006	Remarks
MUNTINLUPA	JPA Subd. ***	JPA Subd., Tunasan, Muntinlupa City	Active	
MUNTINLUPA	Lakeview ***	Lakeview Elem. School, Putatan, Muntinlupa City	Active	
MUNTINLUPA	Mutual 1 *	Mutual Subd., Putatan, Muntinlupa City	Active	
MUNTINLUPA	Pedro Diaz ***	P: Diaz High School, Alabang, Muntinlupa City	Active	
MUNTINLUPA	Villa Carolina 1 ***	Villa Carolina 1 Subd., Tunasan, Muntinlupa City	Active	
PARANAQUE	Better Living *	Bless St. cor Ferrer St., Better Living, Paranaque City	Standby/Disc. Power supply	included in Cuervo Appraisal 2005
PARANAQUE	#4 Phase 10 *	Marcelo Green Village, Paranaque City	Active	
PARANAQUE	Buensuceso Homes 3 *	Buensuceso Homes 3, MGV, Paranaque City	Active	
PARANAQUE	Champaca *	Marcelo Green Village, Paranaque City	Standby	
PARANAQUE	Coral *	Marcelo Green Village, Paranaque City	Active	
PARANAQUE	Don Aguedo Bernabe *	Cattleya St., Don Aguedo Bernabe Subd, Paranaque City	Active	
PARANAQUE	Esmeralda *	Marcelo Green Village, Paranaque City	Active	
PARANAQUE	Maharlika *	Marcelo Green Village, Paranaque City	Standby	
QUEZON CITY	Don Jose ***	Dona Carmen Ave., Don Jose Subd., Commonwealth, Quezon City	Inactive	
QUEZON CITY	Filinvest I No. 1 ***	104 RI Mt. Rainier St., Filinvest Homes Ph 1, Batasan Hills, Quezon City	Active	included in Cuervo Appraisal 2005
QUEZON CITY	Filinvest II No. 3 ***	Pratt St. Filinvest Homes Ph 2F, Batasan Hills, Quezon City	Active	
QUEZON CITY	Filinvest II No. 4 ***	Palma St., Filinvest Homes Ph 2F, Batasan Hills, Quezon City	Active	included in Cuervo Appraisal 2005

City/ Municipality	Deepwell Name	Location	Status as of June 2006	Remarks
QUEZON CITY	Filinvest II No. 5 ***	Sierra Monte Villas Ph II, Batasan Hills, Quezon City	Active	included in Cuervo Appraisal 2005
QUEZON CITY	Filinvest II No. 6 ***	Jade St., Northview 1 Subd., Batasan Hills, Quezon City	Active	included in Cuervo Appraisal 2005
QUEZON CITY	Filinvest II No. 7 ***	Molave St., Northview II & II-A Subd., Batasan Hills, Quezon City	Active	included in Cuervo Appraisal 2005
QUEZON CITY	Filinvest II No. 8 ***	Gold St., Filinvest Homes Ph 2K1, Batasan Hills, Quezon City	Active	included in Cuervo Appraisal 2005
QUEZON CITY	Goodwill 1 ***	32 Diligence St., Goodwill Homes I, San Bartolome, Quezon City	Active	(El Nino Project)included in Cuervo Appraisal 2005
QUEZON CITY	Greenfields 3 ***	Dona Engracia St., Greenfields 3, San Agustin, Quezon City	Active	(El Nino Project)included in Cuervo Appraisal 2005
QUEZON CITY	Greenfields I ***	Marytown Cir. Q.C. Greenfields I, Kailgayahan, Novaliches, Quezon City	Inactive	
QUEZON CITY	Greenview 2 ***	Blus Sky St., Greenview Exec. Vill. Ph 2, Sauyo, Quezon City	Active	included in Cuervo Appraisal 2005
QUEZON CITY	Greenview 3 ***	Green Field St., Greenview Exec. Vill. Ph 3, Sauyo, Quezon City	Active	included in Cuervo Appraisal 2005
QUEZON CITY	Greenview I ***	Harvard St., Greenview Exec. Vill. Ph I, Sauyo, Quezon City	Active	included in Cuervo Appraisal 2005
QUEZON CITY	Ideal ***	50 Liezl St., Ideal Subd., Commonwealth, Quezon City	Inactive	
QUEZON CITY	Jordan Heights ***	Gethsemane St., Jordan Heights Subd., Nagkaisang Nayon, Quezon City	Inactive	
QUEZON CITY	Jordan Park Homes ***	23 BE Simon St., Jordan Park Homes, Commonwealth, Quezon City	Inactive	
QUEZON CITY	Lagro 4 *	49 LT Bida Sari St., Lagro Subd., Greater Lagro, Quezon City	Standy	included in Cuervo Appraisal 2005
QUEZON CITY	Lagro 5 *	62 La Naval St., Lagro Subd., Greater Lagro, Quezon City	Standy	included in Cuervo Appraisal 2005

City/ Municipality	Deepwell Name	Location	Status as of June 2006	Remarks
QUEZON CITY	Nelsonville ***	Diamond St., Nelsonville Subd., Batasan Hills, Quezon City	Active	
QUEZON CITY	Neopolitan 4/Brittany ***	Neopolitan Ave., Fairview, Quezon City nr. SM Fairview	Active	
QUEZON CITY	New Haven ***	Camilo Osias, New Haven Vill., Kaligayahan, Quezon City	Inactive	
QUEZON CITY	North Point ***	Block 6 Philips St., North Point, San Bartolome, Quezon City	Active	
QUEZON CITY	Northridge Park ***	Circle St., North Ridge Park, Sta. Monica, Quezon City	Inactive	
QUEZON CITY	Pamahay ***	Feria St., Pamahay Homes, Novaliches, Pasong Putik, Quezon City	Inactive	
QUEZON CITY	Rainbow 1 ***	Bluebird St., Rainbow Homes, San Bartolome, Quezon City	Inacyive	
QUEZON CITY	Remarville ***	2 Asteroid St., Remarville Subd., Bagbag, Quezon City	Active	(El Nino Project) -included in Cuervo Apraisal 2005
QUEZON CITY	Richland 1 ***	Richland Ave., Sauyo, Novaliches, Quezon City	Active	included in Cuervo Appraisal 2005
QUEZON CITY	Rockville II ***	Jade cor. Pearl St., Rockville 2 Subd., San Bartolome, Quezon City	Active	included in Cuervo Appraisal 2005
QUEZON CITY	Rolling Meadows I ***	Marigold St., Rolling Meadows I Subd., San Bartolome, Quezon City	Active	included in Cuervo Appraisal 2005
QUEZON CITY	Rolling Meadows II ***	Garnet St., Rolling Meadows 1 Subd., San Bartolome. Quezon City	Active	included in Cuervo Appraisal 2005
QUEZON CITY	San Pedro 7 ***	St. Andrew St., San Pedro 7 Subd., San Bartolome, Quezon City	Active	included in Cuervo Appraisal 2005
QUEZON CITY	Smile Citihomes ***	Novaliches beside Diamond Vill. (Old Zabarte)	Active	included in Cuervo Appraisal 2005
QUEZON CITY	Sugartown ***	Sugartown Reg. Admin. Housing, Filinvest Road II, Batasan Hills, QC	Active	included in Cuervo Appraisal 2005
QUEZON CITY	Villa Gracia ***	Mla. Gravel pit Road, Payatas, Quezon City	Inactive (w/ surface water)	included in Cuervo Appraisal 2005

City/ Municipality	Deepwell Name	Location	Status as of June 2006	Remarks
VALENZUELA	Ciudad Grande ***	31 Fr. Romeo St., Ciudad Grande, Lingunan, Valenzuela City	Inactive	
VALENZUELA	Pacheco ***	San Sebastian St., Pacheco Ville, Malinta, Valenzuela City	Inactive	included in Cuervo Appraisal 2005
VALENZUELA	Tanada ***	Tanada Subd., Gen T. de Leon, Valenzuela City	Standby	(El Nino Project) - included in Cuervo00 Appraisal 2005

ANNEX 4

Key Events of the West Concession

DATE	FACTS/EVENTS
February 21, 1997	The West Concession Agreement (CA) was signed between MWSS and Maynilad (at that time, known as Benpres-Lyonnaise Waterworks, Inc.)
July 31, 1997	The Closing Date under the CA took place with the satisfaction of all Closing Conditions under the CA, including the execution of the following agreements: ➢ Technical Corrections Agreement between MWSS and Maynilad ➢ Common Purpose Facilities Agreement between Maynilad and Manila Water Company, Inc. (MWC) and approved by MWSS ➢ Agreement on the Supervision of Existing Projects between MWSS and Maynilad ➢ Shared Facilities Agreement among MWSS, Maynilad and MWC ➢ Corporate Headquarters Facilities Agreement among MWSS, Maynilad and MWC ➢ Interconnection Agreement between Maynilad and MWC ➢ Operational Satellite Facilities Agreement between Maynilad and MWC The Undertaking Letter of the Republic of the Philippines (ROP) was also issued.
August 1, 1997	The Commencement Date of the CA took place. Maynilad officially took over the management and operation of the West Concession, as agent and contractor of MWSS.
January 25, 2000	In order to finance its obligations to pay Concession Fees to MWSS and to undertake capital expenditure (Capex) projects, Maynilad obtained a BSP-approved US$30 million (later increased to around US$50 million) short term loan facility from Credit Agricole Indosuez (Credit Agricole Loan). Maynilad's payment obligations under the said loan was fully guaranteed by Suez, S.A. This loan was later registered by the BSP.
March 10, 2000	Maynilad obtained a US$100 million bridge loan (Bridge Loan) facility from a syndicate of foreign commercial banks which were to comprise the participating commercial bank lenders of Maynilad's BSP-approved US$350 million project finance facilities proposed to be provided by multilaterals, the Asian Development Bank, European Investment Bank and the said commercial bank lenders, with the participation of COFACE of France. The Bridge Loan financed exclusively Concession Fees and Capex. Maynilad's payment obligations under the Bridge Loan were fully guaranteed by its then shareholders, Benpres Holdings Corporation (Benpres) and Lyonnaise des Eaux since Maynilad did not provide any security/collateral to said commercial banks to ensure *pari passu* arrangement of all its creditors prior to its term loan project finance. This loan was later registered by the BSP. Financial closure of Maynilad's proposed US$350 million term loan was necessary to effectively refinance Maynilad's obligation to fund Concession Fee payments to MWSS and at the same time provide additional funds for Capex. This is because 90% of the responsibility for servicing MWSS Loans through Concession Fee payments fell on Maynilad, coupled with the fact that the MWSS Loan repayment schedule was front-end loaded, with huge amounts coming due in the first several years of the West Concession when its revenues are projected to be the lowest.
July 14, 2000	To ensure continued compliance with the Performance Bond requirements of the CA, Maynilad obtained a BSP-registered Standby Letter of Credit (SBLC) facility from various international banks. Maynilad's payment obligations under the SBLC facility agreement are likewise fully guaranteed by Benpres and Suez, S.A. since Maynilad did not provide any collateral/security to the SBLC Banks to ensure the pari passu arrangement of all its creditors prior to its term loan project finance.
October 2000	Since Maynilad took over the West Concession on August 1, 1997, various factors adversely affected both its financial position and operations. Due to its huge burden of servicing MWSS Loans via Concession Fee payments which were denominated in foreign currency, the adverse'

DATE	FACTS/EVENTS
	impact of the Peso devaluation on Maynilad due to the Asian financial crisis of 1997 was massive, especially since the Forex loss recovery mechanism provided by the EPA provision of the CA proved inadequate to afford the necessary relief to Maynilad. The severe El Niño phenomenon in 1997 to 1998 (which was the worst in 150 years of recorded history) and the delay in completion of major raw water supply projects of MWSS further aggravated Maynilad's financial losses. As a result, by the end of 2000, almost all of Maynilad's revenues from operations were paid to MWSS for Concession Fees, thus requiring Maynilad to use stop-gap funds through its bridge and short-term loans and paid-in cash equity from shareholders to finance operating expenditures and essential Capex to ensure continued provision of water services. To address the continuing problem, Maynilad applied with MWSS for an automatic currency exchange rate adjustment mechanism similar to that implemented by other utility/service providers in order to obtain adequate relief.
March 8, 2001	Maynilad's financial position became very precarious early years of the Concession as it could not obtain adequate relief since its application for automatic currency exchange rate adjustment had not been favorably considered and acted upon despite several discussions with MWSS and the Regulatory Office on the matter, thus putting to danger its viability. These problems undermined Maynilad's ability to close its long term project finance, which was serious since its bridge and short-term loans which were intended to be taken out by such long term project finance were already falling due. This constrained Maynilad to suspend payment of Concession Fees to MWSS starting March 8, 2001 in order to sustain its operations and be able to continue to provide water, sanitation and sewerage services to its customers.
October 5, 2001	Amendment No. 1 to the CA was signed between Maynilad and MWSS and acknowledged by the ROP, to address immediate and urgent concerns that threatened the viability and continued operation of the West Concession. Among others, it provided for the following: ➢ MWSS/Regulatory Office exercise of option to implement Rate Rebasing effective on January 1, 2003 ➢ more effective mechanisms (through the AEPA, FCDA and STM) for the recovery or compensation of Forex losses/gains arising from MWSS Loans and any Concessionaire Loans used for Concession Fee payments and capital expenditures efficiently and prudently incurred, in lieu of the EPA Forex loss recovery mechanism
October 30, 2002	After the conduct of the first Rate Rebasing exercise, the Regulatory Office issued RO Resolution No.02-006 granting Maynilad a Rebasing Adjustment of 141.5% or 144.1% including the "C" factor or an average tariff increase of P10.34/cu.m. which would result in a basic tariff rate of P17.52/cu.m. or an all-in average tariff (one time adjustment) of P26.75/cu.m, effective January 1, 2003. RO Resolution No. 02-006 further established, as part of the recommended all-in average tariff the STM rates scheduled for implementation from 2003 to 2006. The MWSS Board of Trustees (MWSS BOT) issued Resolution No. 298-2002 approving RO Resolution No. 02-006. After the conduct of public consultation, the said approved rebased tariff was reduced in Net Present Value terms to an all-in average tariff of P24.28/cu.m. effective February 1, 2003.
November 5, 2002	The rebased rate of P26.75/cu.m. was not accepted by Maynilad as it was deemed inadequate to support the viability of the Concession and would not allow Maynilad to obtain long-term financing. Due to various disputes that have arisen between Maynilad and MWSS, Maynilad elected to exercise, in good faith, its right under the CA to terminate the Concession, by first sending to MWSS a cure notice pursuant to Section 10.1(iii) of the CA.
December 9, 2002	Maynilad sent MWSS a notice of early termination of the Concession pursuant to Sec. 10.3.1 of the CA, declaring February 7, 2003 as the Early Termination Date.

DATE	FACTS/EVENTS
	MWSS disputed the said early termination notice (Termination Dispute) with the Appeals Panel for Major Disputes (Major Panel).
February 7, 2003	An interim order was issued by the Major Panel, staying the termination of the Concession. In the meantime, in order to preserve its rights and remedies under the CA, but at the same time, be able to sustain its operations and to provide water supply, sanitation and sewerage services to its customers, Maynilad continued to charge its customers the pre-rebased tariff of P19.92/cu.m. which was in effect since January 2002. Maynilad sought to preserve the status quo until such time that a final resolution of the Termination Dispute could be achieved. Such pre-rebased tariff included the AEPA of P4.21/cu.m. and the FCDA of P4.07/cu.m.
April 25, 2003	Maynilad proposed to MWSS that the 2003 Rebased Tariff be implemented during the pendency of the arbitration "*without prejudice to the arguments or claims of the parties*" and that, in accordance with the terms of its proposed agreement, Maynilad be permitted to continue to recover the current rate of P19.92, with MWSS being paid the incremental revenue resulting from the rate increase. The said agreement proposed by Maynilad was not accepted by MWSS.
May 5, 2003	Maynilad received written notice that the MWSS BOT had approved the RO resolutions ordering Maynilad to cease and desist (CDO) from continuing to collect the AEPA of P4.21/cu.m. and the FCDA of P4.07/cu.m on the ground that the AEPA should have ended on December 31, 2002 and that Maynilad was not entitled to the FCDA as it had suspended paying Concession Fees to MWSS.
May 9, 2003	Maynilad filed a Dispute Notice with the Appeals Panel questioning the CDO (CDO Dispute). The Appeals Panel for Minor Disputes (Minor Panel) confirmed its jurisdiction for this dispute.
October 7, 2003	Maynilad formally suspended payment of all principal and interest on the Bridge Loan.
November 7, 2003	Relative to the Termination Dispute, the Major Panel issued an arbitral award pursuant to UNCITRAL Arbitration Rules, declaring that there was neither a Concessionaire Event of Termination nor a MWSS Event of Termination and that consequently, the CA shall continue in force, with both MWSS and Maynilad being directed to perform their respective obligations under the CA until the termination of the Concession. In its said award, the Major Panel further confirmed that the very large disallowance in the Opening Cash Position corresponding more or less to the whole of Maynilad's invested capital (approximately P8.8B) on the basis that receipts were subjected by the RO to the "efficient and prudent test" was improper and further, that Maynilad had no specific Service Obligation on NRW under the CA.
November 13, 2003	Maynilad filed a petition for corporate rehabilitation with Branch 90 of the Regional Trial Court of Quezon City (Rehabilitation Court), submitting a rehabilitation plan as required under applicable legal requirements.
November 17, 2003	A stay order was issued by the Rehabilitation Court prohibiting Maynilad from, among other things, making any payment of its liabilities outstanding as at the date of the filing of the petition.
July 31, 2004	Maynilad proceeded to comply with its obligations under the CA and renewed its Performance Bond in the form of a US$120 million SBLC issued by the SBLC Banks in favor of MWSS pursuant to the SBLC Facility Agreement signed on July 14, 2000 (as amended).
September 9, 2004	Maynilad filed with the Rehabilitation Court a revised rehabilitation plan which was recommended for approval by the court-appointed Rehabilitation Receiver. The 2004 Revised Rehabilitation Plan assumed the implementation of the 2003 Rebased Tariff as a crucial component of Maynilad's corporate rehabilitation.
November 24, 2004	The MWSS BOT issued Resolution No. 2004-301 approving Resolution No. 04-014-CA of the Regulatory Office recommending:

DATE	FACTS/EVENTS
	➢ the implementation, beginning on January 1, 2005, of an all-in average tariff of ₱30.19/cu.m. which was based on the 2003 Rebased Tariff, computed at 2005 prices, including the STM ➢ joint submission by Maynilad and MWSS to the Minor Panel, in relation to the CDO Dispute, of a request for arbitral award based on agreed terms that conform to the proposals in RO Resolution No. 04-014-CA ➢ the conduct of a "*a post-implementation review and validation of the tariff rate in order to ensure that at the next Rate Rebasing Date any excess or deficiency in collections as a result of the above tariff rate will be appropriately addressed in the Opening Cash Position (OCP) and a proper adjustment to the tariff would be done under the principle of revenue neutrality*".
January 1, 2005	Maynilad commenced implementation of the all-in average tariff of ₱30.19/cu.m. approved under RO Resolution No. 04-014-CA and MWSS BOT Resolution No. 2004-301.
January 20, 2005	MWSS was able to draw upon the Performance Bond and received the entire US$120 million proceeds of the SBLC for unpaid Concession Fees as of such date. This triggered Maynilad's obligation to reimburse the SBLC Banks for payment made to MWSS under the Performance Bond, resulting in the SBLC Loan.
February 16, 2005	Maynilad and MWSS filed with the Minor Panel a "Joint Submission Relating to Claimant's Request for Termination of Arbitration Proceedings by Reason of the Withdrawal of the Notice of Dispute", in compliance with the condition prescribed in RO Resolution No. 04-014-CA and MWSS BOT Resolution No. 2004-301.
March 4, 2005	The Minor Panel terminated the arbitration proceedings on the CDO Dispute by issuing an Arbitral Award on Agreed Terms pursuant to Art. 34(1) of the UNCITRAL Arbitration Rules. The issuance of the said arbitral award was specifically made subject to the condition that "*[t]he issues with respect to (1) alleged under-recovery of the revenues that Maynilad failed to collect between the period January 1, 2003 up to December 31, 2004 and (2) the over-recovery of Forex losses by Maynilad due to continued collection of AEPA and FCDA in 2003 and 2004, shall be resolved through mutual consultation and negotiations, as mandated by Clause 12.1 of the Concession Agreement, and through such other means available in the Concession Agreement and existing laws*".
April 29, 2005	In order to address the concerns raised by several creditors of Maynilad, the terms of the 2004 Revised Rehabilitation Plan had to be further modified. Maynilad signed a Debt and Capital Restructuring Agreement (DCRA) with MWSS (with the assistance of the Department of Finance), its then shareholders and major lenders. Maynilad then submitted its 2005 Revised Rehabilitation Plan (2005 Rehabilitation Plan) incorporating therein the terms of the DCRA. The 2005 Rehabilitation Plan contained the plans, assumptions, projections and terms by which Maynilad can achieve rehabilitation and restore its financial viability by undertaking a debt and capital restructuring pursuant to the terms and conditions set out in the DCRA. The 2005 Rehabilitation Plan contemplated the following: ➢ restructuring of Maynilad's debts which included the BSP-registered Credit Agricole Loan (which was paid by the Suez Group), Bridge Loan and SBLC Loan (portions of which were also paid by the Suez Group) into the USD Tranche, SBLC Tranche, Suez Loan and Peso Tranche ➢ restructuring and rescheduling of Concession Fees into Tranche A1 Concession Fees (current), Tranche A2 Concession Fees and Tranche B Concession Fees ➢ all liabilities were expected to be paid in full by year 2013. ➢ implementation of a Capital Restructuring for the purpose of reducing its capital deficit in order to facilitate and ensure the speedy restructuring of its financial obligations. The Capital Restructuring required under Clause 2 of the DCRA paved the way for the subscription by MWSS, through the conversion of certain receivables of MWSS from Maynilad

DATE	FACTS/EVENTS
	amounting to US$22,670,408.00 to approximately 83.97% of Maynilad Water's outstanding capital stock following an increase in Maynilad Water's authorized capital stock to ₱1,475,000,000.00. After granting several extensions, the Rehabilitation Court imposed a non-extendible deadline of January 31, 2007 to complete the Capital Restructuring. MWSS' participation in Maynilad's rehabilitation was fully authorized by the ROP. The Amended Government Transition Acquisition and Rehabilitation of Maynilad, as recommended by then Acting Finance Secretary Cesar Purisima, Acting Public Works and Highways Secretary Hermogenes Ebdane, Jr, Government Corporate Counsel Agnes VST Devanadera and MWSS Administrator Orlando Hondrade in their Joint Memorandum for the President dated April 25, 2005, was approved by President Gloria Macapagal-Arroyo herself who issued a Special Authority for the purpose.
June 1, 2005	The Rehabilitation Court approved, for immediate implementation and execution, the 2005 Revised Rehabilitation Plan and the DCRA, stating that *"[t]he increase in tariff rates from PhP19.92 (see Petition, p. 24) to PhP30.19 that was implemented on January 1, 2005 certainly would generate the needed cash flows to enable Maynilad to pay all its debts and liabilities during the whole period of rehabilitation ending by year 2013"*. In its Order, the Rehabilitation Court specifically enjoined the parties to strictly comply with the terms and conditions as provided in the 2005 Rehabilitation Plan and the DCRA.
June 23, 2005	The Monetary Board approved the restructured USD loans of Maynilad under the DCRA
July 20, 2005	Effective Date of the DCRA took place.
September 8, 2005	Instead of directly subscribing to Maynilad's shares as a requirement for the Capital Restructuring, MWSS passed Resolution No. 2005-303 resolving to exercise its option under Clause 24 of the DCRA to assign its subscription right to a private investor. Accordingly, the Capital Restructuring could only be completed after MWSS had itself completed its own process of selecting its assignee.
January 9, 2006	MWSS took over the management and control of Maynilad.
June 26, 2006	MWSS commenced a competitive public bidding process for the selection of its assignee (MWSS Selection Process). The MWSS Selection Process was undertaken by MWSS with the assistance of the Privatization Council of the ROP which approved all key aspects of the MWSS Selection Process. As part of the requirements of the MWSS Selection Process, the qualified bidders were asked to submit, in addition to a financial bid, a technical bid which shall meet the minimum requirements set out in the 2005 Rehabilitation Plan.
November 17, 2006	Resolution No. 2006-249 was issued by the MWSS BOT approving the adjustments to the Performance Bond provisions of the CA
December 5, 2006	The new Sponsor, DMCI-MPIC Water Company, Inc., won the bid to be designated as MWSS' assignee of its receivables and subscription right under the DCRA.
December 6, 2006	The Privatization Council approved the award to the Sponsor.
December 15, 2006	The Agreement on the Performance Bond (incorporating the terms of MWSS BOT Resolution No. 2006-249) was signed between MWSS and Maynilad, formalizing the adjustments to the Performance Bond provisions of the CA. This agreement is one of the closing conditions of the MWSS Selection Process.
December 27, 2006	All transaction documents (Assignment and Assumption Agreement and Debt Conversion and Subscription Agreement) to effect the MWSS assignment and the Capital Restructuring were executed by all parties.
January 4, 2007	The ROP issued its acknowledgment of the terms of the Agreement on the Performance Bond between MWSS and Maynilad

DATE	FACTS/EVENTS
January 10, 2007	The Closing Date under the MWSS Selection Process took place, which resulted in the following: ➢ The assignment of MWSS' receivables and subscription right to the Sponsor became effective. ➢ The Sponsor effectively extended the US$31 million Financial Assistance required under Clause 14 of the DCRA.
January 19, 2007	The Capital Restructuring was completed upon approval by the Securities and Exchange Commission of all corporate transactions required to implement the Capital Restructuring, resulting, among others, in the following: ➢ the total outstanding capital stock of Maynilad US$1.475 billion, with the Sponsor holding approximately 83.97% and Lyonnaise Asia Water Holdings (Pte) Ltd.'s shareholding being reduced to 16%; and ➢ the shareholdings of Benpres Holdings Corporation and Suez Environnement were reduced to zero.
January 24, 2007	The Completion Date under the MWSS Selection Process took place in ceremonies held at Malacañang Palace in the presence of President Gloria Macapagal-Arroyo. All Completion Conditions had been satisfied.
February 9, 2007	The Sponsor was officially able to take over the management and control of Maynilad through the holding of its first stockholders' meeting to elect new directors.
April 18, 2007	Upon the initiative of the Sponsor, Maynilad commenced discussions with MWSS and the DCRA lenders on the Sponsor's rehabilitation exit plan for Maynilad.
August 9, 2007	After several discussions and negotiations, the following agreements were signed to pave the way for Maynilad's early rehabilitation exit: ➢ *Prepayment and Settlement Agreement (PSA) among* Maynilad, MWSS and DCRA' lenders providing for the mechanics for implementing a full prepayment of Maynilad's obligations under the DCRA ➢ Transitional and Clarificatory Agreement (TCA) between Maynilad and MWSS providing for the transitional arrangements on Rate Rebasing, compensation of Forex gains arising from the prepayment and Service Obligations, among others
December 19, 2007	The Rehabilitation Court approved the PSA for immediate implementation.
January 7, 2008	The ROP issued its acknowledgment of the terms of the TCA.
January 10, 2008	The Monetary Board approved the prepayment of Maynilad's USD and PHP loans, Tranche A2 Concession Fees and Tranche B Concession Fees. Maynilad received the BSP implementing letter on the said approval on January 11, 2008.
January 16, 2008	Maynilad effected full prepayment of Maynilad's DCRA loans, Tranche A2 Concession Fees and Recognized Tranche B Concession Fees in accordance with the PSA.
February 6, 2008	The Rehabilitation Court finally issued the Order confirming the termination of Maynilad's rehab proceedings on account of Maynilad's successful implementation of the 2005 Rehabilitation Plan.

DATE	FACTS/EVENTS
February 21, 1997	The West Concession Agreement (CA) was signed between MWSS and Maynilad (at that time, known as Benpres-Lyonnaise Waterworks, Inc.)
July 31, 1997	The Closing Date under the CA took place with the satisfaction of all Closing Conditions under the CA, including the execution of the following agreements: ➢ Technical Corrections Agreement between MWSS and Maynilad ➢ Common Purpose Facilities Agreement between Maynilad and Manila Water

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	Company, Inc. (MWC) and approved by MWSS ➢ Agreement on the Supervision of Existing Projects between MWSS and Maynilad ➢ Shared Facilities Agreement among MWSS, Maynilad and MWC ➢ Corporate Headquarters Facilities Agreement among MWSS, Maynilad and MWC ➢ Interconnection Agreement between Maynilad and MWC ➢ Operational Satellite Facilities Agreement between Maynilad and MWC The Undertaking Letter of the Republic of the Philippines (ROP) was also issued.
August 1, 1997	The Commencement Date of the CA took place. Maynilad officially took over the management and operation of the West Concession, as agent and contractor of MWSS.
January 25, 2000	In order to finance its obligations to pay Concession Fees to MWSS and to undertake capital expenditure (Capex) projects, Maynilad obtained a BSP-approved US$30 million (later increased to around US$50 million) short term loan facility from Credit Agricole Indosuez (Credit Agricole Loan). Maynilad's payment obligations under the said loan was fully guaranteed by Suez, S.A. This loan was later registered by the BSP.
March 10, 2000	Maynilad obtained a US$100 million bridge loan (Bridge Loan) facility from a syndicate of foreign commercial banks which were to comprise the participating commercial bank lenders of Maynilad's BSP-approved US$350 million project finance facilities proposed to be provided by multilaterals, the Asian Development Bank, European Investment Bank and the said commercial bank lenders, with the participation of COFACE of France. The Bridge Loan financed exclusively Concession Fees and Capex. Maynilad's payment obligations under the Bridge Loan were fully guaranteed by its then shareholders, Benpres Holdings Corporation (Benpres) and Lyonnaise des Eaux since Maynilad did not provide any security/collateral to said commercial banks to ensure *pari passu* arrangement of all its creditors prior to its term loan project finance. This loan was later registered by the BSP. Financial closure of Maynilad's proposed US$350 million term loan was necessary to effectively refinance Maynilad's obligation to fund Concession Fee payments to MWSS and at the same time provide additional funds for Capex. This is because 90% of the responsibility for servicing MWSS Loans through Concession Fee payments fell on Maynilad, coupled with the fact that the MWSS Loan repayment schedule was front-end loaded, with huge amounts coming due in the first several years of the West Concession when its revenues are projected to be the lowest.
July 14, 2000	To ensure continued compliance with the Performance Bond requirements of the CA, Maynilad obtained a BSP-registered Standby Letter of Credit (SBLC) facility from various international banks. Maynilad's payment obligations under the SBLC facility agreement are likewise fully guaranteed by Benpres and Suez, S.A. since Maynilad did not provide any collateral/security to the SBLC Banks to ensure the pari passu arrangement of all its creditors prior to its term loan project finance.
October 2000	Since Maynilad took over the West Concession on August 1, 1997, various factors adversely affected both its financial position and operations. Due to its huge burden of servicing MWSS Loans via Concession Fee payments which were denominated in foreign currency, the adverse impact of the Peso devaluation on Maynilad due to the Asian financial crisis of 1997 was massive, especially since the Forex loss recovery mechanism provided by the EPA provision of the CA proved inadequate to afford the necessary relief to Maynilad. The severe El Niño phenomenon in 1997 to 1998 (which was the worst in 150 years of recorded history) and the delay in completion of major raw water supply projects of MWSS further aggravated Maynilad's financial losses. As a result, by the end of 2000, almost all of Maynilad's revenues from operations were paid to MWSS for Concession Fees, thus requiring Maynilad to use stop-gap funds through its bridge and short-term loans and paid-in cash equity from shareholders to finance operating expenditures and essential Capex to ensure continued provision of water services. To address the continuing problem, Maynilad applied with MWSS for an automatic currency

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	exchange rate adjustment mechanism similar to that implemented by other utility/service providers in order to obtain adequate relief.
March 8, 2001	Maynilad's financial position became very precarious early years of the Concession as it could not obtain adequate relief since its application for automatic currency exchange rate adjustment had not been favorably considered and acted upon despite several discussions with MWSS and the Regulatory Office on the matter, thus putting to danger its viability. These problems undermined Maynilad's ability to close its long term project finance, which was serious since its bridge and short-term loans which were intended to be taken out by such long term project finance were already falling due. This constrained Maynilad to suspend payment of Concession Fees to MWSS starting March 8, 2001 in order to sustain its operations and be able to continue to provide water, sanitation and sewerage services to its customers.
October 5, 2001	Amendment No. 1 to the CA was signed between Maynilad and MWSS and acknowledged by the ROP, to address immediate and urgent concerns that threatened the viability and continued operation of the West Concession. Among others, it provided for the following: ➢ MWSS/Regulatory Office exercise of option to implement Rate Rebasing effective on January 1, 2003 ➢ more effective mechanisms (through the AEPA, FCDA and STM) for the recovery or compensation of Forex losses/gains arising from MWSS Loans and any Concessionaire Loans used for Concession Fee payments and capital expenditures efficiently and prudently incurred, in lieu of the EPA Forex loss recovery mechanism
October 30, 2002	After the conduct of the first Rate Rebasing exercise, the Regulatory Office issued RO Resolution No.02-006 granting Maynilad a Rebasing Adjustment of 141.5% or 144.1% including the "C" factor or an average tariff increase of P10.34/cu.m. which would result in a basic tariff rate of P17.52/cu.m. or an all-in average tariff (one time adjustment) of P26.75/cu.m, effective January 1, 2003. RO Resolution No. 02-006 further established, as part of the recommended all-in average tariff the STM rates scheduled for implementation from 2003 to 2006. The MWSS Board of Trustees (MWSS BOT) issued Resolution No. 298-2002 approving RO Resolution No. 02-006. After the conduct of public consultation, the said approved rebased tariff was reduced in Net Present Value terms to an all-in average tariff of P24.28/cu.m. effective February 1, 2003.
November 5, 2002	The rebased rate of P26.75/cu.m. was not accepted by Maynilad as it was deemed inadequate to support the viability of the Concession and would not allow Maynilad to obtain long-term financing. Due to various disputes that have arisen between Maynilad and MWSS, Maynilad elected to exercise, in good faith, its right under the CA to terminate the Concession, by first sending to MWSS a cure notice pursuant to Section 10.1(iii) of the CA.
December 9, 2002	Maynilad sent MWSS a notice of early termination of the Concession pursuant to Sec. 10.3.1 of the CA, declaring February 7, 2003 as the Early Termination Date. MWSS disputed the said early termination notice (Termination Dispute) with the Appeals Panel for Major Disputes (Major Panel).
February 7, 2003	An interim order was issued by the Major Panel, staying the termination of the Concession. In the meantime, in order to preserve its rights and remedies under the CA, but at the same time, be able to sustain its operations and to provide water supply, sanitation and sewerage services to its customers, Maynilad continued to charge its customers the pre-rebased tariff of P19.92/cu.m. which was in effect since January 2002. Maynilad sought to preserve the status quo until such time that a final resolution of the Termination Dispute could be achieved. Such pre-rebased tariff included the AEPA of P4.21/cu.m. and the FCDA of P4.07/cu.m.

DATE	FACTS/EVENTS
April 25, 2003	Maynilad proposed to MWSS that the 2003 Rebased Tariff be implemented during the pendency of the arbitration "*without prejudice to the arguments or claims of the parties*" and that, in accordance with the terms of its proposed agreement, Maynilad be permitted to continue to recover the current rate of P19.92, with MWSS being paid the incremental revenue resulting from the rate increase. The said agreement proposed by Maynilad was not accepted by MWSS.
May 5, 2003	Maynilad received written notice that the MWSS BOT had approved the RO resolutions ordering Maynilad to cease and desist (CDO) from continuing to collect the AEPA of P4.21/cu.m. and the FCDA of P4.07/cu.m on the ground that the AEPA should have ended on December 31, 2002 and that Maynilad was not entitled to the FCDA as it had suspended paying Concession Fees to MWSS.
May 9, 2003	Maynilad filed a Dispute Notice with the Appeals Panel questioning the CDO (CDO Dispute). The Appeals Panel for Minor Disputes (Minor Panel) confirmed its jurisdiction for this dispute.
October 7, 2003	Maynilad formally suspended payment of all principal and interest on the Bridge Loan.
November 7, 2003	Relative to the Termination Dispute, the Major Panel issued an arbitral award pursuant to UNCITRAL Arbitration Rules, declaring that there was neither a Concessionaire Event of Termination nor a MWSS Event of Termination and that consequently, the CA shall continue in force, with both MWSS and Maynilad being directed to perform their respective obligations under the CA until the termination of the Concession. In its said award, the Major Panel further confirmed that the very large disallowance in the Opening Cash Position corresponding more or less to the whole of Maynilad's invested capital (approximately P8.8B) on the basis that receipts were subjected by the RO to the "efficient and prudent test" was improper and further, that Maynilad had no specific Service Obligation on NRW under the CA.
November 13, 2003	Maynilad filed a petition for corporate rehabilitation with Branch 90 of the Regional Trial Court of Quezon City (Rehabilitation Court), submitting a rehabilitation plan as required under applicable legal requirements.
November 17, 2003	A stay order was issued by the Rehabilitation Court prohibiting Maynilad from, among other things, making any payment of its liabilities outstanding as at the date of the filing of the petition.
July 31, 2004	Maynilad proceeded to comply with its obligations under the CA and renewed its Performance Bond in the form of a US$120 million SBLC issued by the SBLC Banks in favor of MWSS pursuant to the SBLC Facility Agreement signed on July 14, 2000 (as amended).
September 9, 2004	Maynilad filed with the Rehabilitation Court a revised rehabilitation plan which was recommended for approval by the court-appointed Rehabilitation Receiver. The 2004 Revised Rehabilitation Plan assumed the implementation of the 2003 Rebased Tariff as a crucial component of Maynilad's corporate rehabilitation.
November 24, 2004	The MWSS BOT issued Resolution No. 2004-301 approving Resolution No. 04-014-CA of the Regulatory Office recommending: ➢ the implementation, beginning on January 1, 2005, of an all-in average tariff of P30.19/cu.m. which was based on the 2003 Rebased Tariff, computed at 2005 prices, including the STM ➢ joint submission by Maynilad and MWSS to the Minor Panel, in relation to the CDO Dispute, of a request for arbitral award based on agreed terms that conform to the proposals in RO Resolution No. 04-014-CA ➢ the conduct of a "*a post-implementation review and validation of the tariff rate in order to ensure that at the next Rate Rebasing Date any excess or deficiency in collections as a result of the above tariff rate will be appropriately addressed in the Opening Cash Position (OCP) and a proper adjustment to the tariff would be done under the principle of revenue neutrality*".

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January 1, 2005	Maynilad commenced implementation of the all-in average tariff of ₱30.19/cu.m. approved under RO Resolution No. 04-014-CA and MWSS BOT Resolution No. 2004-301.
January 20, 2005	MWSS was able to draw upon the Performance Bond and received the entire US$120 million proceeds of the SBLC for unpaid Concession Fees as of such date. This triggered Maynilad's obligation to reimburse the SBLC Banks for payment made to MWSS under the Performance Bond, resulting in the SBLC Loan.
February 16, 2005	Maynilad and MWSS filed with the Minor Panel a "Joint Submission Relating to Claimant's Request for Termination of Arbitration Proceedings by Reason of the Withdrawal of the Notice of Dispute", in compliance with the condition prescribed in RO Resolution No. 04-014-CA and MWSS BOT Resolution No. 2004-301.
March 4, 2005	The Minor Panel terminated the arbitration proceedings on the CDO Dispute by issuing an Arbitral Award on Agreed Terms pursuant to Art. 34(1) of the UNCITRAL Arbitration Rules. The issuance of the said arbitral award was specifically made subject to the condition that "*[t]he issues with respect to (1) alleged under-recovery of the revenues that Maynilad failed to collect between the period January 1, 2003 up to December 31, 2004 and (2) the over-recovery of Forex losses by Maynilad due to continued collection of AEPA and FCDA in 2003 and 2004, shall be resolved through mutual consultation and negotiations, as mandated by Clause 12.1 of the Concession Agreement, and through such other means available in the Concession Agreement and existing laws*".
April 29, 2005	In order to address the concerns raised by several creditors of Maynilad, the terms of the 2004 Revised Rehabilitation Plan had to be further modified. Maynilad signed a Debt and Capital Restructuring Agreement (DCRA) with MWSS (with the assistance of the Department of Finance), its then shareholders and major lenders. Maynilad then submitted its 2005 Revised Rehabilitation Plan (2005 Rehabilitation Plan) incorporating therein the terms of the DCRA. The 2005 Rehabilitation Plan contained the plans, assumptions, projections and terms by which Maynilad can achieve rehabilitation and restore its financial viability by undertaking a debt and capital restructuring pursuant to the terms and conditions set out in the DCRA. The 2005 Rehabilitation Plan contemplated the following: ➢ restructuring of Maynilad's debts which included the BSP-registered Credit Agricole Loan (which was paid by the Suez Group), Bridge Loan and SBLC Loan (portions of which were also paid by the Suez Group) into the USD Tranche, SBLC Tranche, Suez Loan and Peso Tranche ➢ restructuring and rescheduling of Concession Fees into Tranche A1 Concession Fees (current), Tranche A2 Concession Fees and Tranche B Concession Fees ➢ all liabilities were expected to be paid in full by year 2013. ➢ implementation of a Capital Restructuring for the purpose of reducing its capital deficit in order to facilitate and ensure the speedy restructuring of its financial obligations. The Capital Restructuring required under Clause 2 of the DCRA paved the way for the subscription by MWSS, through the conversion of certain receivables of MWSS from Maynilad amounting to US$22,670,408.00 to approximately 83.97% of Maynilad Water's outstanding capital stock following an increase in Maynilad Water's authorized capital stock to ₱1,475,000,000.00. After granting several extensions, the Rehabilitation Court imposed a non-extendible deadline of January 31, 2007 to complete the Capital Restructuring. MWSS' participation in Maynilad's rehabilitation was fully authorized by the ROP. The Amended Government Transition Acquisition and Rehabilitation of Maynilad, as recommended by then Acting Finance Secretary Cesar Purisima, Acting Public Works and Highways Secretary Hermogenes Ebdane, Jr, Government Corporate Counsel Agnes VST Devanadera and MWSS Administrator Orlando Hondrade in their Joint Memorandum for the President dated April 25, 2005,

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	was approved by President Gloria Macapagal-Arroyo herself who issued a Special Authority for the purpose.
June 1, 2005	The Rehabilitation Court approved, for immediate implementation and execution, the 2005 Revised Rehabilitation Plan and the DCRA, stating that *"[t]he increase in tariff rates, from PhP19.92 (see Petition, p. 24) to PhP30.19 that was implemented on January 1, 2005 certainly would generate the needed cash flows to enable Maynilad to pay all its debts and liabilities during the whole period of rehabilitation ending by year 2013".* In its Order, the Rehabilitation Court specifically enjoined the parties to strictly comply with the terms and conditions as provided in the 2005 Rehabilitation Plan and the DCRA.
June 23, 2005	The Monetary Board approved the restructured USD loans of Maynilad under the DCRA
July 20, 2005	Effective Date of the DCRA took place.
September 8, 2005	ly subscribing to Maynilad's shares as a requirement for the Capital Restructuring, MWSS passed Resolution No. 2005-303 resolving to exercise its option under Clause 24 of the DCRA to assign its subscription right to a private investor. Accordingly, the Capital Restructuring could only be completed after MWSS had itself completed its own process of selecting its assignee.
January 9, 2006	MWSS took over the management and control of Maynilad.
June 26, 2006	ıced a competitive public bidding process for the selection of its assignee (MWSS Selection Process). The MWSS Selection Process was undertaken by MWSS with the assistance of the Privatization Council of the ROP which approved all key aspects of the MWSS Selection Process. As part of the requirements of the MWSS Selection Process, the qualified bidders were asked to submit, in addition to a financial bid, a technical bid which shall meet the minimum requirements set out in the 2005 Rehabilitation Plan.
November 17, 2006	2006-249 was issued by the MWSS BOT approving the adjustments to the Performance Bond provisions of the CA
December 5, 2006	or, DMCI-MPIC Water Company, Inc., won the bid to be designated as MWSS' assignee of its receivables and subscription right under the DCRA.
December 6, 2006	ı Council approved the award to the Sponsor.
December 15, 2006	on the Performance Bond (incorporating the terms of MWSS BOT Resolution No. 2006-249) was signed between MWSS and Maynilad, formalizing the adjustments to the Performance Bond provisions of the CA. This agreement is one of the closing conditions of the MWSS Selection Process.
December 27, 2006	documents (Assignment and Assumption Agreement and Debt Conversion and Subscription Agreement) to effect the MWSS assignment and the Capital Restructuring were executed by all parties.
January 4, 2007	ı its acknowledgment of the terms of the Agreement on the Performance Bond between MWSS and Maynilad
January 10, 2007	e under the MWSS Selection Process took place, which resulted in the following: ➢ The assignment of MWSS' receivables and subscription right to the Sponsor became effective. ➢ The Sponsor effectively extended the US$31 million Financial Assistance required under Clause 14 of the DCRA.

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Schedule 6

Rate Rebasing Sheet

Maynilad Water Services, Inc.

YE 31 December, PhP m	Notes	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Receipts																						
Revenues from Income Statement			2,606	2,638	6,259	6,673	7,377	8,068	13,419	15,659	18,191	19,961	21,769	23,566	25,040	25,952	26,881	27,739	28,616	29,450	30,067	18,038
Add-back FCDA/STM			995	19	744	719	(307)															
Add-back AEPA			1,366	1,308	57	-	-															
Total Receipts			4,967	3,965	7,061	7,392	7,070	8,068	13,419	15,659	18,191	19,961	21,769	23,566	25,040	25,952	26,881	27,739	28,616	29,450	30,067	18,038
Less:																						
Operating Expense			(2,814)	(2,614)	(2,911)	(3,078)	(3,277)	(3,668)	(4,273)	(4,678)	(5,189)	(5,213)	(5,208)	(5,472)	(5,488)	(5,549)	(5,634)	(5,663)	(5,703)	(5,708)	(5,658)	(3,432)
Premium on Performance bond									(65)	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)	(19)
Local Taxes			(11)	(37)	(361)	(390)	118	(222)	(288)	(496)	(692)	(877)	(1,012)	(1,129)	(1,196)	(1,244)	(1,269)	(1,250)	(1,210)	(1,146)	(1,052)	(735)
Foreign Exchange Losses			(2,085)	(1,139)	(606)	(664)	313	241	324	371	420	457	-	-	-	-	-	-	-	-	-	-
+/- Change in Working Capital			2,696	2,372	(7,338)	3,031	(938)	(2,960)	1,834	(204)	(733)	(273)	(836)	(214)	(208)	(568)	(149)	(156)	(174)	(617)	(207)	(1,809)
Capex and Work in Progress (Direct Method)			(445)	(414)	(1,766)	(1,172)	(2,984)	(7,527)	(8,500)	(8,611)	(7,500)	(7,417)	(6,000)	(6,000)	(6,000)	(5,000)	(5,000)	(5,000)	(5,000)	(4,000)	(4,000)	(2,000)
Concession Fees Due - Tranche A			(1,147)	(833)	(3,708)	(1,617)	(1,367)	(1,589)	(1,530)	(1,651)	(2,356)	(1,626)	(989)	(1,002)	(834)	(795)	(702)	(708)	(718)	(705)	(355)	(352)
Concession Fees - Tranche B							-	(1,316)														
Other Capital Items			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tax on EBIT								-	(1,822)	(2,040)	(2,292)	(2,497)	(2,619)	(2,774)	(2,903)	(2,850)	(2,808)	(2,727)	(2,580)	(2,313)	(1,917)	-
2003 OCP			(13,418)																			
Recoverable past forex losses arising from Bridge Loan					(81)																	
Free Cash Flows			(12,258)	1,299	(9,711)	3,503	(1,065)	(8,973)	(902)	(1,668)	(171)	2,497	5,085	6,956	8,392	9,927	11,300	12,215	13,212	14,941	16,858	9,690
Philippine Inflation Index			100	106	114	121	124	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
Adjustment Factor to bring Free Cashflows to 2008 (beg)			1.30	1.23	1.14	1.08	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Free Cash Flows at 2008 Prices			(15,995)	1,600	(11,110)	3,774	(1,118)	(8,973)	(902)	(1,668)	(171)	2,497	5,085	6,956	8,392	9,927	11,300	12,215	13,212	14,941	16,858	9,690
Appropriate Discount Rate (ADR)			10.40%	10.40%	10.40%	10.40%	10.40%	9.30%	9.30%	9.30%	9.30%	9.30%	9.30%	9.30%	9.30%	9.30%	9.30%	9.30%	9.30%	9.30%	9.30%	9.30%
ADR Adjustment Factor			1.64	1.49	1.35	1.22	1.10	1.00	0.91	0.84	0.77	0.70	0.64	0.59	0.54	0.49	0.45	0.41	0.38	0.34	0.31	0.29
FREE CASH FLOWS WITH ADR APPLICATION			(26,232)	2,376	(14,949)	4,599	(1,234)	(8,973)	(825)	(1,396)	(131)	1,749	3,260	4,080	4,503	4,873	5,076	5,020	4,968	5,140	5,306	2,790

RATE REBASING RESULT:

Opening Cash Position (2003-2007)	(35,440)
PV of Future Cash Flows (2008-2022)	35,440
Opening Cash Position + PV of Future Cash Flows (NPV)	[illegible]
Incremental Rebasing Adjustment (over 2008 basic only)	11.99
% Rebasing Adjustment (over 2008 basic only)	52.01%