SCHEDULE 1

Service Area

A. Table of municipalities and cities in each Service Area

Service Area West	Service Area East
BACOOR	ANGONO
CALOOCAN	ANTIPOLO
CAVITE	BARAS
IMUS	BINANGONAN
KAWIT	CAINTA
LAS PINAS	CARDONA
MALABON	JALA-JALA
MAKATI (part)(2)	MAKATI (part)(2)
MANILA (part)(2)	MANDALUYONG
MARIKINA (part)(2)	MANILA (part)(2)
MUNTINLUPA	MARIKINA (part)(2)
NAVOTAS	MORONG
NOVELETA	PASIG CITY
PARAÑAQUE	PATEROS
PASAY	PILILA
QUEZON CITY (part)(1)	QUEZON CITY (part)(1)
RODRIGUEZ (part)(1)	RODRIGUEZ (part)(1)
ROSARIO	SAN JUAN
SAN MATEO (part)(2)	SAN MATEO (part)(2)
VALENZUELA	TAGUIG
	TANAY
	TAYTAY
	TERESA

1. The Service Area division of Quezon City by barangay is supplied in Section B below.

2. The cities or municipalities of Makati, Manila, Marikina, Rodriguez and San Mateo are located in both the Service Areas West and East, as described in Section E below.

B. Barangays of Quezon City in Service Area East [1]

Service Area East Zone	
Matandang Balara	Central
Pasong Tamo	Botocan
Tandang Sora	Amihan
Culiat	Project 3
Bago Bantay	Quirino
R. Magsayasay	East Kamias
Alicia	Pinahan
Santo Cristo	South Triangle
Bagong Pag-asa	West Kamias
Project 6	Silangan
Vasra	Quirino 3
Diliman	Duyan Duyan
San Vicente	Marilag
Pansol	Escopa
Old Capitol Site	Milagrosa
Krus na Ligas	Bagumbayan
West Triangle	Manga
Sta. Cruz	Tagumpay
Paligsahan	Project 4
Roxas	Z. Dioquino
Kalusugan	Bayanihan
Damayan Lagi	San Roque
Cubao	Masagana
E. Rodriguez	Libis
Sacred Heart	Villa Ma. Clara
Kamuning	Santolan
Immaculate Concepcion	Bagumbuhay
Kanluran	Talampas
Horse Shoe	Ugong Norte
Valencia	Murphy
Mariana	Bagong Lipunan
New Manila	Socorro
Kristong Hari	San Martin
Obrero	

[1] All other barangays in Quezon City are serviced under Service Area West.

C. Map showing the boundary between the Service Areas West and East

See attached map.

MWSS shall prepare, update, and make available to the Concessionaires, reference maps of a more detailed scale describing the boundaries between the Service Areas West and East. MWSS shall also make available the technical description or the meters and bounds of each Service Area. In the event of a conflict between the Concessionaires as to which Zone covers a particular area the determination of the MWSS based on its reference maps or available technical descriptions shall be controlling.

D. Undefined Targets in Schedules

For all cases that are not defined in the target tables in Schedules 2, 4 and 5, coverage figures for cities or municipalities divided by concession boundaries are percentages of the proportion of the population in the city or municipality in the respective concession areas.

E. Notes on the boundary between the Service Areas West and East/MWSS

The boundary between the Service Areas West and East which coincides generally with the existing MWSS sector boundaries, is drawn, from North to South, as follows:

i. The boundary coincides with the Marikina River in the northern part: Quezon City ("QC") is largely in the Service Area East. San Mateo and Rodriguez are also substancially in the Service Area East. However, due to a small extension of the Rosario settlement (Rodriguez municipality, Service Area East), across the Marikina river, supplied by existing 150mm mains, the Zone limit departs locally from the sector boundary up to the closest Marikina River's right bank watershed limit.

ii. The boundary follows the Marikina River down to the Loyola Subdivision. Rodriguez, San Mateo and Marikina are municipalities substantially in the Service Area East; however, any lands of these municipalities which would be located on the right bank of the Marikina River will be in the Service Area West. The parts of Quezon City located in the left bank of Marikina River are in the Service Area East.

iii. The boundary cuts west across northern Quezon City before joining the North Central Boundary, close to Pasong Tamo (see table of the barangays). This departure from the North Sector boundary is justified by the AWSOP plan to supply La Mesa 2 water the BF and Filinvest Homes Subdivisions, which presently receive water pumped by Capitol station from Balara Plant.

The following barangays in Quezon City, among others, will be served under the Service Area East:

Matandang Balara, Pasong Tamo, Tandang Sora, Project 6, Bagong Pag-asa, Alicia and Magsaysay.

The following barangays, among others will be served under the Service Area West:

Talipapa, Bahay Toro and Tali Solo.

iv. The boundary is then drawn generally North to South slong Mindanao Avenue (QC), Dakilang Lumpo, Pluto, Congressional, Epifanio de los Santos Avenue (QC) down to Del Monte Avenue.

v. The City of Manila is in the Service Area West except the left bank of San Juan River and between the Philippine national Railways ("PNR") railroad tracks, the Manila/Pasay City boundary and the left bank of the Pasig River which are in the Service Area East.

vi. The PNR railroad tracks provides the boundary from Pasig River to South Superhighway/Pres. Quirino Avenue crossing.

vii. The South Superhighway provides the boundary down to Dilain Creek Bridge. The 2200 mm primary mains along the South Superhighway are in Service Area West, while the 400 mm Pasong Tamo mains are in the Service Area East.

viii. Part of Cosmopolitan Subdivision and part of Magallanes Village, both in Makati City located West of the PNR railroad tracks will be included in the Service Area West, and the rest of Makati is part of the Service Area East.

ix. Part of Cosmopolitan Subdivision and part of Magallanes Village, both in Makati City located West of the PNR railroad tracks will be included in Service Area West, and the rest of Makati is part of the Service Area East.

x. The western and southern boundaries of Taguig from the Dilain Creek bridge provide the boundary up to Laguna de Bay.

In the interest of clarity, MWSS may update the foregoing textual description of the boundary between Service Area East and Service Area West.

F. <u>Creation, division, merger, abolition or alteration of boundaries of local government units</u>

In the event that provinces, cities, municipalities, or barangays in the MWSS jurisdiction are created, divided, merged, abolished, or their boundaries altered during the course of the Concession, the following shall remain controlling in determining the boundary between the Service Area West and East:

i. The boundary as plotted on the map which appears in Section C, and the reference maps and technical descriptions as may be prepared and updated from time to time by the MWSS; and

ii. The description of the boundary between the Zones in Section E, as it may be updated from time to time by the MWSS.

SCHEDULE 2 – New Water Supply Coverage Targets (Service Area West)

City/Municipality	2001	2006	2011	2016	2021
MANILA	100%	100%	100%	100%	100%
PASAY	100%	100%	100%	100%	100%
QUEZON CITY	100%	100%	100%	100%	100%
CALOOCAN	100%	100%	100%	100%	100%
LAS PINAS	58%	91%	93%	95%	98%
MALABON	84%	100%	100%	100%	100%
VALENZUELA	84%	100%	100%	100%	99%
MUNTINLUPA	53%	86%	88%	90%	95%
NAVOTAS	92%	100%	100%	100%	100%
PARANAQUE	76%	100%	100%	100%	100%
CAVITE	100%	100%	100%	100%	100%
BACOOR	58%	90%	92%	93%	95%
IMUS	36%	61%	63%	65%	72%
KAWIT	84%	100%	100%	100%	100%
NOVELETA	60%	100%	100%	100%	100%
ROSARIO	42%	90%	90%	90%	90%
Total Area	**87.4%**	**97.1%**	**97.4%**	**97.7%**	**98.4%**

Expressed as a percentage of the total population in the designated city or municipality at the time of the target (excluding users who are connected to a piped source of water other than from the MWSS System). A blank indicates no specified target for years indicated.

The Concessionaire shall also be responsible for meeting the new water supply coverage targets (but not the corresponding sewerage targets), in the percentages set out in this Schedule 2 as it appears in the Other Operator's Concession Agreement, for parts of the following cities or municipalities in Service Area East: Makati, San Mateo, Marikina and Rodriguez.

SCHEDULE 2 – New Water Supply Coverage Targets (Service Area East)

City/Municipality	2001	2006	2011	2016	2021
MANDALUYONG	100%	100%	100%	100%	100%
MAKATI	92%	100%	100%	100%	100%
MARIKINA	92%	100%	100%	100%	100%
QUEZON CITY	100%	100%	100%	100%	100%
PASIG	92%	100%	100%	100%	100%
PATEROS	84%	100%	100%	100%	100%
SAN JUAN	96%	100%	100%	100%	100%
TAGUIG	44%	100%	100%	100%	100%
ANGONO	51%	96%	98%	100%	100%
ANTIPOLO	78%	95%	95%	95%	97%
BARAS	34%	51%	53%	55%	58%
BINANGONAN	40%	81%	83%	85%	87%
CAINTA	64%	80%	77%	75%	79%
CARDONA	34%	51%	53%	55%	58%
JALA-JALA	34%	51%	53%	55%	58%
MORONG	34%	51%	53%	55%	58%
PILILLA	34%	51%	53%	55%	58%
RODRIGUEZ	83%	95%	95%	95%	98%
SAN MATEO	84%	100%	100%	100%	100%
TANAY	39%	75%	75%	75%	76%
TAYTAY	92%	100%	100%	100%	100%
TERESA	52%	60%	60%	60%	61%
Total Area	**77.1%**	**94.1%**	**94.1%**	**94.1%**	**94.6%**

Expressed as percentage of the total population in the designated city or municipality at the time of the target (excluding users who are connected to a piped source of water other than from the MWSS system). A blank indicates no specified target for years indicated.

The Concessionaire shall also be responsible for meeting the new water supply coverage targets (but not the corresponding sewerage targets), in the percentages set out in this Schedule 2 as it appears in the Other Operator's Concession Agreement, for parts of the following cities or municipalities in Service Area West: Manila.

SCHEDULE 3 – Sewer Coverage Targets (Service Area West)

City/Municipality	2001	2006	2011	2016	2021
MANILA	55%	71%	77%	83%	91%
PASAY	0%	0%	0%	16%	95%
QUEZON CITY	0%	0%	0%	0%	54%
CALOOCAN	3%	2%	2%	32%	79%
MANDALUYONG					
LAS PINAS	0%	0%	0%	0%	50%
MAKATI					
MALABON	2%	2%	2%	38%	94%
MARIKINA					
MUNTINLUPA	0%	44%	57%	54%	61%
NAVOTAS	3%	3%	3%	36%	90%
PARANAQUE	0%	0%	0%	0%	52%
PASIG					
PATERAS					
SAN JUAN					
TAGUIG					
VALENZUELA	0%	0%	0%	24%	59%
CAVITE	0%	0%	0%	0%	0%
BACOOR	0%	0%	0%	0%	0%
IMUS	0%	0%	0%	0%	0%
KAWIT	0%	0%	0%	0%	0%
NOVELETA	0%	0%	0%	0%	0%
ROSARIO	0%	0%	0%	0%	0%
ANGONO					
ANTIPOLO					
BARAS					
BINANGONAN					
CAINTA					
CARDONA					
JALA-JALA					
MORONG					
PILILLA					
RODRIGUEZ					
SAN MATEO					
TANAY					
TAYTAY					
TERESA					
Total Area	16%	20%	21%	31%	66%

Expressed as percentage of the total population in the designated city or municipality connected to the Concessionaire's water system at the time of the target. A blank indicates no specified target for years indicated. For areas designated by the cities or municipalities as depressed area, these target may be met by the installation of one standpipe for each 475 people.

SCHEDULE 3 – SEWER COVERAGE TARGETS (SERVICE AREA EAST)

City/Municipality	2001	2006	2011	2016	2021
MANILA					
PASAY					
QUEZON CITY	0%	0%	83%	87%	98%
CALOOCAN					
MANDALUYONG	0%	0%	100%	100%	100%
LAS PINAS					
MAKATI	22%	52%	100%	100%	100%
MALABON					
MARIKINA	0%	0%	0%	0%	0%
MUNTINLUPA					
NAVOTAS					
PARANAQUE					
PASIG	0%	41%	68%	68%	68%
PATERAS	0%	60%	100%	100%	99%
SAN JUAN	0%	0%	100%	100%	100%
TAGUIG	0%	52%	75%	84%	100%
VALENZUELA					
CAVITE					
BACOOR					
IMUS					
KAWIT					
NOVELETA					
ROSARIO					
ANGONO	0%	0%	0%	0%	0%
ANTIPOLO	0%	0%	0%	0%	0%
BARAS	0%	0%	0%	0%	0%
BINANGONAN	0%	0%	0%	0%	0%
CAINTA	0%	0%	0%	0%	14%
CARDONA	0%	0%	0%	0%	0%
JALA-JALA	0%	0%	0%	0%	0%
MORONG	0%	0%	0%	0%	0%
PILILLA	0%	0%	0%	0%	0%
RODRIGUEZ	0%	0%	0%	0%	0%
SAN MATEO	0%	0%	0%	0%	0%
TANAY	0%	0%	0%	0%	0%
TAYTAY	0%	0%	0%	0%	15%
TERESA	0%	0%	0%	0%	0%

(continued)

The Concessionaire will also be responsible for meeting sewer coverage targets specified in Schedule 4 in the part of the city of Manila covered by the Other Operator unless obstructed from doing so by a natural waterway.

Expressed as percentage of the total population in the designated city or municipality connected to the Concessionaire's water system at the time of the target. A blank indicates no specified target for years

City/Municipality	2001	2006	2011	2016	2021
Total area	3%	16%	51%	52%	55%

The Concessionaire will also be responsible for meeting sewer coverage targets specified in Schedule 4 in the part of the cities or municipalities of Makati, San Mateo, Marikina and Rodriguez covered by the Other Operator unless obstructed from doing so by a natural waterway.

SCHEDULE 4—Sanitation Coverage Targets (Service Area West)

City/Municipality	2001	2006	2011	2016	2021
MANILA	9%	9%	9%	9%	9%
PASAY	73%	68%	66%	47%	0%
QUEZON CITY	41%	37%	38%	97%	45%
CALOOCAN	30%	61%	47%	42%	21%
MANDALUYONG					
LAS PINAS	46%	57%	50%	41%	27%
MAKATI			--		
MALABON	7%	42%	39%	35%	6%
MARIKINA					
MUNTINLUPA	27%	36%	31%	26%	24%
NAVOTAS	14%	65%	60%	54%	10%
PARANAQUE	53%	59%	53%	46%	42%
PASIG					
PATERAS					
SAN JUAN					
TAGUIG					
VALENZUELA	67%	90%	80%	68%	36%
CAVITE	100%	89%	84%	91%	86%
BACOOR	52%	67%	60%	56%	50%
IMUS	11%	15%	15%	24%	24%
KAWIT	67%	68%	61%	52%	47%
NOVELETA	28%	41%	39%	35%	33%
ROSARIO	14%	25%	23%	20%	18%
ANGONO					
ANTIPOLO					
BARAS					
BINANGONAN					
CAINTA					
CARDONA					
JALA-JALA					
MORONG					
PILILLA					
RODRIGUEZ					
SAN MATEO					
TANAY					
TAYTAY					
TERESA					
Total Area	43%	46%	43%	39%	27%

Expressed as percentage of the total population in the designated city or municipality connected to the Concessionaire's water system at the time of the target. A blank indicates no specified target for years indicated.

The Concessionaire shall also be responsible for meeting sanitation coverage targets (in the percentages set out in this Schedule 5 as it appears in the Other Operator's Concession Agreement) for parts of the following cities or municipalities in Service Area East: Makati, San Mateo, Marikina and Rodriguez.

SCHEDULE 4 – Sanitation Coverage Targets (Service Area East)

City/Municipality	2001	2006	2011	2016	2021
MANILA					
PASAY					
QUEZON CITY	24%	21%	16%	12%	2%
CALOOCAN					
MANDALUYONG	0%	0%	0%	0%	0%
LAS PINAS					
MAKATI	0%	0%	0%	0%	0%
MALABON					
MARIKINA	63%	79%	73%	64%	20%
MUNTINLUPA					
NAVOTAS					
PARANAQUE					
PASIG	83%	58%	32%	27%	25%
PATERAS	0%	0%	0%	0%	0%
SAN JUAN	0%	0%	0%	0%	0%
TAGUIG	0%	0%	0%	0%	0%
VALENZUELA					
CAVITE					
BACOOR					
IMUS					
KAWIT					
NOVELETA					
ROSARIO					
ANGONO	19%	30%	49%	44%	41%
ANTIPOLO	57%	53%	63%	50%	44%
BARAS	0%	0%	0%	0%	0%
BINANGONAN	12%	21%	26%	23%	22%
CAINTA	38%	40%	34%	28%	27%
CARDONA	10%	13%	12%	10%	10%
JALA-JALA	0%	0%	0%	0%	0%
MORONG	0%	0%	0%	0%	0%
PILILLA	0%	0%	0%	0%	0%
RODRIGUEZ	0%	0%	0%	0%	0%
SAN MATEO	66%	65%	58%	49%	44%
TANAY	0%	0%	0%	0%	0%
TAYTAY	82%	78%	70%	60%	54%
TERESA	25%	25%	23%	21%	20%
Total Area	38%	32%	27%	24%	19%

Expressed as percentage of the total population in the designated city or municipality connected to the Concessionaire's water system at the time of the target. A blank indicates no specified target for years indicated.

The Concessionaire shall also be responsible for meeting sanitation coverage targets (in the percentages set out in this Schedule 5 as it appears in the Other Operator's Concession Agreement) for parts of the following cities or municipalities in Service Area West.

SCHEDULE 5

Standard Rates

The Standard Rates effective on the Commencement Date are shown on the attached pages.

Code	Customer Classification	Definition
BG II	BUSINESS GROUP II	The water/sewer service is for the use of any person, establishment and institution, both private and government, engaged in the following non-domestic/economic activity: 1. Bakery and Confectioneries 2. Car Assembly 3. Ceramics/Pottery 4. CHB and Concrete Products Mftr. 5. Construction Activities 6. Cottage Industry 7. Electrical Manufacturing/Assembly 8. Electronics Manufacturing/Assembly 9. Engineering Works 10. Filter Factory 11. Flour Manufacturing 12. Foundry 13. Furniture Manufacturing 14. Galvanizing 15. Glass Factory 16. Handicraft Factory 17. Knitting Factory 18. Machine Shop 19. Mechanical Manufacturing/Assembly 20. Metal Forming 21. Mill 22. Paper Toy Maker 23. Plastic Factory 24. Printing Press 25. RTW/Garment Factory 26. Rubber Manufacturing 27. Semi-Conductor 28. Shoe Factory 29. Soap Factory 30. Taho Factory and the Like 31. Tailoring and Dressmaking 32. Toy Making 33. Brewery 34. Cement Factory 35. Chemical Manufacturing 36. Cooking Oil Factory

Code	Customer Classification	Definition
BG II	BUSINESS GROUP II (cont.)	37. Drug Manufacturing 38. Dry Ice Maker 39. Food Manufacturing 40. Ice Plant 41. Laboratory 42. Leather Tannery 43. Paint Manufacturing 44. Paper Mill 45. Petroleum Refinery 46. Softdrinks Manufacturing 47. Textile Mill 48. Thread Factory 49. Toiletries Manufacturing 50. Utilities

Establishments classified in the PSIC* under Mining and Quarrying; manufacturing; Electricity, Gas and Water; Construction are included under this group.

PSIC stands for Philippine Standard Industrial Classification

Code	Customer Classification	Definition
	MIXED BUSINESS	The water/sewer service is for the use of person, establishment, institution for a combination of industrial, commercial, and/or residential activity, on which case the highest classification shall be applied. The user should be advised to apply for a separate meter for each activity.
	RAW WATER	Water which did not under go any purification or treatment.
	SEA TRANSPORT	Water directly sold to ships or to any sea transport.
	BULK WATER	Water which are sold in bulk at some withdrawal point.
	SPECIAL CASES	This type of service shall be referred to the Corporate Planning Group which shall study and make recommendation to the Board.

Sewerage charge

For all customers connected	-	50% of the applicable water charge

Environmental charge

For all customers	-	10% of the applicable water charge

SCHEDULE 6

Service Performance Information

Information will be required annually in the form of a formal report for the prior year, so that the Regulatory Office is able to compare actual performance against precasts and actual performance among the Concessionaire and the Other Operator. The annual report will be submitted within 60 calendar days from the anniversary date of the Commencement Date.

Data submissions will be in table form supported by text commentaries, maps and plans. Where appropriate, information on cost as well as physical measures shall be provided. Hard copy and computerized forms will be required. The following information should be provided:

- Updated maps, plans, and GIS files, as appropriate, showing:

  (i) water supply;

  (ii) sewerage services;

  (iii) areas served;

  (iv) areas in which services are being introduced, expanded and/or rehabilitated;

  (v) areas planned for future expansion; and

  (vi) residual areas within the Service Area.

- Locations and physical features of key surface and underground infrastructure assets shown and information provided in such format that the relationship of systems in place, under construction and contemplated can be related to service provision at macro and micro levels.

Historic and current information and predictions shall be supplied on the following, indicating sources of data, means of and methodologies for generation of figures, assumptions, projections and trends, and other factors that may affect the conclusions:

- Population and demographic distribution.

- Numbers and location of Customers, differentiating between household, commercial and industrial and for water between individual, shared,

common services (stand pipes), or by other means and for sewerage between those connected to:

(i) sewerage system with or without treatment;

(ii) septic tanks and cesspits; or

(iii) lacking a formal sewerage system.

- The water cycle indicating Raw Water drawn, water treated, water supplied to distribution system, water delivered to Customers, calculation of NRW by leakage, unregistered consumption and total expressed as percentages of Raw Water drawn, sewerage generated, sewerage collected, sewerage treated, effluent discharged, sludge produced by weight and volume. For each stage, system losses, quantities for operational use, amounts taken legally but not billed, amounts taken illegally, shall be identified.

- Compliance with water quality and waste discharge standards.

- Customer relations including queries, complaints, notices and responses, and response times, with respect to levels of service parameters.

- Capital and operational investment compared to base assets, expansion, new quantity and service level enhancement, and differentiating between backlog and long term stable serviceability of the asset block.

- Labor and staff levels and procurement of goods and services.

- Disposal of inventories, assets and land.

The data shall indicate:

- Percentages of population receiving water, sewerage and sanitary services-differentiating between existing and new Customers-categories of Customers, and means of delivery.

- Periodic average and peak availability of water supply and whole water cycle constraints.

- Performance efficiency relationships.

- Changes from previous reports resulting from better information.

At any time following receipt of the performance report but no later than 90 calendar days prior to the submittal date of the subsequent report, the Regulatory Office can require that the Concessionaire modify its presentation of data, methodology for determining relationships, calculation(s) of coverage as compared to targets, reporting on capital improvements to the asset base, and/or any other parameters seemed necessary to monitor contract compliance.

SCHEDULE 7

Financial Performance Information

I. Balance Sheet Related Items

- Balance Sheet movements from prior period (including changes in assets, capital and reserves)

- Analysis of Fixed Assets by Asset Type (including: (I) replacement costs of underground and surface assets for water, sewerage and other assets; (ii) accumulated depreciation; and (iii) opening and closing positions and related adjustments)

- Analysis of Fixed Asset Additions and Capital Maintenance (including breakdown by sub-sector)

- Analysis of Asset Additions by Useful Life:

- short term (less than five years)
- medium term (20 years)
- long term (60 years)
- very long term (underground networks)

- Accumulated Depreciation by asset Type

- Analysis of reserve movements (indicating adjustments for periodic review and inflation)

II. Profit and Loss Related Items

- Profit and Loss Account Statement (indicating extraordinary revenues and/or income)

- Analysis of Revenue and Operating Income (including (I) connections and industrial effluent treatment (ii) disposal of assets and (iii) exceptional items)

- Activity Cost Analysis for each of Water and Sewerage Services (including (I) direct costs such as labor, power and chemicals and (ii) business operating costs). Operating and capitalized expenditures to be identified separately.

- Expenditures for each Service by purpose

III. Cash Flow Related Items

- Cash Flow Statement (including interest paid and received, tax payments, grants, loans and new share proceeds). Interest payments may include the interest component of the Concession Fee.

- Reconciliation of Operating Profit to Net cash Flow

IV. Working Capital Related items

- Working capital Movements from prior period

V. Other

Transactions with affiliated companies including (including (I) the number and value of transactions, (ii) procurement methods indicated for capital expenditures, (iii) profit and loss charges and (iv) any other payments in the nature of management or consultant fees to any shareholder of the Concessionaire, or affiliate of such a shareholder).

SCHEDULE 8

MWSS Loans

(See attached pages)

SCHEDULE 9

Existing Projects

See Attached pages

Designate (East) / (West)

West	East
MSWDP	MSSP
MSSP	AWSOP
AWSOP	Rizal

BWTPRP

Existing Projects

1. ANGAT WATER SUPPLY OPTIMIZATION PROJECT (AWSOP)

Description of the project

The objectives of the Project are to maximize the capacity of the main water-supply source of the Borrower and to meet projected water demand in the Project area through construction of additional supply, treatment and distribution facilities. The Project components are as follows:

Part A: construction of a 77-meter (m) branch penstock and a power house equipped with a turbine and generator, transformer, overhead crane and ancillary equipment;

Part B: excavation and lining of an estimated 6.2-kilometer (km) pressure tunnel;

Part C: construction of an estimated 16.1-km aqueduct;

Part D: construction and installation of a water-treatment plant with 900,000 cubic (cu) m per day of treatment capacity, composed of sedimentation, filtration and disinfection facilities;

Part E: construction of one water reservoir with storage volume of 260,000 cu m and 500-m aqueduct connected to the treatment plant;

Part F: (1) construction of about 420 km of primary and secondary distribution pipes and five pumping stations, and (2) construction of about 100km of tertiary distribution pipes and about 345,000 service connections;

Part G: provision and installation of a telemetering system; and

Part H: construction of an estimated 12-km transmission line for the bulk supply of water to the Bulacan Towns.

The Project includes the provision of consulting services for Project implementation.

2. MANILA SOUTH WATER DISTRIBUTION PROJECT (MSWDP)

Description of the Project

1. The primary objective of the Project is to improve the water supply services of MWSS in the Project Area. The secondary objective of the Project is to reduce the use of ground water, to prevent saline intrusion and land subsidence, as the main source of water for the remaining population not served by MWSS in the Project Area.

2. The Project consists of the following components:

Part A: Reservoirs and Pumping Stations

Construction of two clear water reservoirs, one in Muntinlupa and the other in Las Pinas, with a total storage volume of about 7,000 cu m and three pumping stations, the first at the boundary of Taguig/Paranaque, the second in Las Pinas and the third in Muntinlupa with a total pumping capacity of about 848,000 cu m per day.

Part B: Transmission Mains

Construction of about 31 km of transmission mains.

Part C: Distribution Reticulation

Construction of about 308 km of secondary and tertiary distribution pipes.

Part D: Service Connections and Public Standpipes

Installation of about 45, 7000 service connection and about 330 public standpipes.

Part E: Branch Office Buildings

Construction of three MWSS branch office buildings in Muntilupa, Paranaque, and Las Pinas respectively.

Part F: Consulting Services

Provision of consulting services.

3. UMIRAY ANGAT TRANSBASIN PROJECT (UATP)

Description of the Project

1. The primary objectives of the Project are to divert an average annual flow of about 15.7 cubic meters per second from the Umiray river basin to the Angat reservoir and to augment the treated water supply capacity of the Borrower by about nine cubic meters per second by 1999. The secondary objective of the Project is to reduce NRW by providing support for leak detection and repair activities.

2. The Project consists of the following:

Part A: Diversion Works

(i) excavation and lining of the main diversion tunnel, with a length of approximately 13 kilometers and an internal (lined) diameter of approximately 4.3 meters, together with two branch tunnels and a ventilation shaft;

(ii) installation of a suspended rail-car system inside the main tunnel;

(iii) installation of a mini-hydro power plant at the outlet of the main tunnel (including two turbines and one generator), with average power production of approximately 970 kilowatts;

(iv) installation of a power transmission line, with a length of approximately 18 kilometers, from the Angat power plant to the Macua tunnel outlet;

(v) construction of three permanent diversion weirs (one main weir on the Umiray river and two supplementary weirs on the Alin and the Sumag rivers), and construction of one temporary diversion weir;

(vi) construction of four housing units and one office-warehouse building at the Umiray site; and

(vii) river training works along the Umiray river to maintain river navigability.

Part B: NRW Control Program

(i) replacement of 3,000 fire hydrants with underground type;

(ii) installation of about 900 level II service facilities (public faucets);

(iii) installation of new 150 km tertiary mains, under the Water Improvement Program for Depressed Areas;

(iv) replacement of five production meters;

(v) replacement of 420, 000 small size meters; and

(vi) other NRW related activities including leak detection and repair.

Part C: Consulting Services

Provision of consulting services for supervision of construction for Part A of the project.

3. The Project is expected to be completed by 31 December 1999.

4. MANILA SECOND SEWERAGE PROJECT (MSSP)

Description of the Project

The objectives of the Project are to assist the Borrower to: (a) reduce the pollution of Metro Manila waterways and Manila Bay; (b) reduce the health hazards associated with human exposure to sewerage in Metro Manila; and (c) establish a gradual low-cost improvement of sewerage services in Metro Manila by expanding the Borrower's septage management program.

The project consists of the following parts, subject to such modifications thereof as the Borrower and the Bank may agree upon from time to time to achieve such objectives:

Part A: Construction of:

1. a pilot septage treatment plant at Dagat-Dagatan with a capacity of about 200 cubic meters per day (m3/d); and

2. three barge-loading stations at Napindan, Estero de Vitas and Paranaque, each with a capacity to transfer about 500 m3/d of septage from collecting vehicles to barges.

Part B:

1. Upgrading of the Metro Manila central sewerage system, including the repair of defective pipes and pumping stations and minimizing of the entry of rain water to the system.

2. Upgrading the Ayala sewerage system, including the repair of the pumping station and sedimentation tanks to provide mechanical treatment of septage.

3. Construction of about 10, 000 new sewer connections in Metro Manila.

Part C:

Strengthening of the Borrower's central laboratory through the provision of specialized furniture, equipment and materials.

Part D:

Strengthening of the technical capabilities of SSD to operate and maintain sewerage systems through the provision of staff training, vehicles, machinery and tools, and consultants' services.

Part E:

Strengthening the Borrower's technical capabilities in construction supervision, development of a pilot septage management program, environmental monitoring and preparation of follow-up sewerage and water supply projects through the provision of consultants' services.

The Project is expected to be completed by June 30, 2001.

5. Rizal Province Water Supply Improvement Project (RPWSIP) (EAST)

Description of the Project

LOCATION	:	Angono/Morong/Bara/Pililia/Cardona Tanay/Jala-Jala/Taytay/Teresa
BENEFICIARIES	:	333, 827 population

SUPPLY SOURCE	:	Laguna de Bay for Angono and Taytay Groundwater for Baras, Cardona, Jala-Jala, Morong, Pililia, Taytay and Teresa
VOLUME OF SUPPLY	: :	47, 500 cu m/day (Angono and Taytay) 20, 338 cu m/day (7 other towns)
PROJECT COMPONENTS	:	For Angono and Taytay (Phase I) - Intake Structure - Raw Water Pumping Station - Treated Water Pumping Station - Reservoir - Distribution Pipes For the Seven Other towns - Deepwells and Elevated Tanks - Distribution Pipes
PROJECT COST	:	P 580.41 Million (Angono and Taytay) P 512.78 Million (7 other towns plus Binangonan)

6. Balara Water Treatment Plant Rehabilitation Project (BWTPRP) (EAST)

Description of the Project

LOCATION	:	Balara, Quezon city
BENEFICIARIES	:	6 Million
SERVICE COVERAGE	:	National Capital Region

The objectives of the Projects are to:

- To recover the current design capacity of the existing treatment process and equipment.

- To assure the rapidly increasing population of Metro Manila with potable water supply.

- To improve the efficiency of the existing plants and reduce operational cost as well as chemical cost.

PROJECT COMPONENTS :

Part A: Portion Funded by Japanese Grant Aid

Replacement of deteriorated facilities and equipment for the intake gates, coagulation, flocculation, sedimentation, filtration, backwashing and waste water recovery, chemical dosing, electrical and mechanical equipment as well as instrumentation. Provision of water quality analysis equipment. Consultant services for the study, detailed design and construction supervision.

Part B: Portion Funded with Internal Cash Generation of MWSS

- Minor civil works repairs of building structure and plant component, rehabilitation of mechanical facilities at the filtration which were not covered by the Grant Aid, and improvement of plumbing and electrical facilities and illumination.

- Modification of pump houses for backwash and recovery pumps, construction of by-pass drainage line and cleaning and widening of discharge creek.

- Rehabilitation and restoration of playground, resort and parks, and similar facilities within the Balara Filters compound.

PROJECT COMPONENTS : P 1, 159, 688 Million

SCHEDULE 10

Guidelines for the Interconnection Agreement

Pursuant to Section 6.3 of the Concession Agreement, the Concessionaire and the Other Operator shall, within thirty days following the date thereof, enter into an Interconnection Agreement in form and substance satisfactory to MWSS. The Interconnection Agreement should be consistent with the following guidelines, unless MWSS expressly agrees to a departure from these guidelines.

1. Water Interconnections

(A) Coverage. The Interconnection Agreement shall cover both inter-Zone water transfers that represent incidental cross-border flows ("Incidental Transfers"), and longer-term water transfers which represent permanent Bulk Water flow making efficient use of the gravity head in the total system ("Permanent Transfer"). The Interconnection Agreement shall distinguish between Short-term transfers and Long-term Transfers with as much specificity as possible. Such specific long-term contracts will be negotiated between the Concessionaire and the Other Operator, and all water supplied under such long term contracts shall not be part of the conditions and limitations imposed on short-term transfers. Copies of such long-term transfer contracts will be filed with the Regulatory Office.

(B) Interconnection Points. A list of water interconnection points is set out in Part 3 below. These interconnection points may be modified or moved by mutual agreement between the Concessionaire and the Other Operator, with written notice to the Regulatory office.

(C) Cap. The Interconnection Agreement will allow for the unrestricted movement of water between both Zones: provided, however, that neither the Concessionaire nor the Other Operator shall be required to permit Incidental Transfers (as defined below) which exceed, in any calendar month, 5% of the potable water produced by that operator during that month.

(D) Authority to Override Cap. The Interconnection Agreement shall recognize the authority of the Regulatory Office to override the cap on Incidental Transfers referred to in (B)

above in any case where, in the judgement of the Regulatory office, such an override is necessary to mitigate the effects of an Event of Force Majeure on the receiving Zone or is necessary to avoid undue hardship to Customers in the receiving Zone, in either case weighing the hardship in the receiving Zone against that caused in the supplying Zone.

(E) Pricing. The charged of water transferred as an Incidental Transfer shall equal the weighted average rate in the recipient Zone per cubic meter as charged to Residential A and B, Commercial and Industrial Customers in the highest consumption block for the prior calendar year (or, in the event of a change in rate structure, to the category of Customer most closely resembling that described in this sentence). The charge for water transferred as a Permanent Transfer shall be determined by mutual agreement between the Concessionaire and the Other Operator.

(F) Settlement. The Interconnection Agreement shall contain a mechanism for metering and monitoring inter-Zone transfers of water during each month of the Concession Agreement. The Concessionaire and the Other Operator shall settle monthly, on a net basis, all interconnection charges through a cash transfer made by the net recipient not later than the last day of the following month.

(G) Works. The work required to design, construct, decommission, meter and monitor the interconnection arrangements shall be performed by the Concessionaire or by the Joint Venture, and the Concessionaire’s share of such expenses shall be treated as an Expenditure.

(H) Disputes. Any disputes arising under the Interconnection Agreement which cannot be resolved by discussion between the two parties shall be referred to the Appeals Panel as provided in Section 12.4(iv) of the Concession Agreement.

(I) Amendments. The Interconnection Agreement may be amended at any time pursuant to a written agreement signed by the Concessionaire and the Other Operator and consented to by the Regulatory Office.

2. Sewerage Interconnections

The Concessionaire and the Other Operator may enter into separate contracts regarding the interconnection of sewerage collection and treatment services between the two Zones. Copies of any such agreements shall be filed with MWSS and the Regulatory Office. In the event that such a contract or contracts cannot be amicably negotiated between the Concessionaires and one of the parties can provide an evidence that an intra-Zone system could result in sewerage service that is 5 per cent or higher in cost per cubic meter than an inter-Zone system, the Regulatory Office will have the right to compel arbitration between the Concessionaires to develop the more cost-effective system(s).

3. Water Interconnection Points

Subject to such modification as the Concessionaire and the Other Operator may agree, the provisional water interconnection points will be the following:

From north to south, along the East-West boundary:

- Ø400 Don Mariano Marcos Avenue : to be metered temporarily before being valved off when AWSOP is commissioned.

- Ø600 and Ø2800 along La Mesa-Balara aqueducts, under construction (AWSOP) : Ø2800 to be metered and Ø600 valved and closed

- 2 x Ø250 Tandang Sora : to be valved and closed

- Ø400 Edsa : to be closed

- Ø300 Tolosa : to be temporarily metered and then closed

- Ø400 Del Monte Avenue : to be closed

- Ø350 Roces / Cebu Avenue : to be closed

- Ø1200 Rodriguez Avenue : to be metered

- Ø1500 Aurora Boulevard : to be metered

- Ø1500, Ø1200, Ø650 Magsaysay Boulevard : to be metered

- Ø600 Dangal : to be closed

- Ø250 Gil : to be temporarily metered and then closed (after reinforcement from Ø750 Esguerra)

- Ø750 F. Esguerra Avenue : to be metered

- Ø600 Vito Cruz : to be metered

- Ø600 Buendia : to be metered

- Ø400 Pasay Road : to be metered

- Ø400, Ø1050 Edsa : to be metered