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6.1 COWD Annual Report 2013 (抜粋)



CAGAYAN DE ORO CITY WATER DISTRICT

Corrales Avenue, Cagayan de Oro City

ANNUAL REPORT

For the Period from JANUARY 1 to DECEMBER 31, 2013

I. GENERAL

A. ADMINISTRATIVE

- | | |
|---|----------------|
| 1. Attach approved organization charts in effect as of report year's end. | 表-2.2.1 参照 |
| a. Functional Chart – showing unit board functions. | <u>Annex A</u> |
| b. Position/Organizational Chart (key employees only) – showing permanent positions and incumbents | 図-2.2.1 参照 |
| | <u>Annex B</u> |
| 2. Attach list of employed personnel with pertinent information.
(Annex C –List of Plantilla of Personnel for the Fiscal Year 2013) | 省略 |
| | <u>Annex C</u> |
| The following summarizes the District's staffing | |
| a. Total number of employees/laborers | 430 |
| b. Number of permanent employees | 300 |
| c. Number of casual/temporary employees/laborers | 130 |
| d. Number of employees meeting minimum qualifications per job description adopted by the District | 300 |
| e. Number of employees not classified as casual/temporary who do not meet the minimum qualifications established by the District | None |
| 3. Has the District adopted a policy prohibiting hiring of personnel related up to the <i>fourth degree</i> by affinity or consanguinity?
(Yes or No) | Yes, CSC Rules |
| If not, how many of the employees are related to other employees or officials within the fourth degree by <i>affinity</i> or <i>consanguinity</i> ? | |
| | - |
| 4. Has the District adopted rules and regulations regarding the following:
(Yes or No) | Yes |
| a. Personnel matters | Yes |
| b. Utility customers relations | Yes |
| c. General utility operations | Yes |
| During the year, in how many instances (or how many times) have exemption to these rules and regulations has been in special cases? | |
| | None |
| 5. Attach list of policy – setting resolutions adopted, repealed or amended by the District Board including those adopting LWUA guidelines.
(Annex D –Summary of Policy-Setting Resolutions) | 省略 |
| | <u>Annex D</u> |
| 6. Has the District written and properly updated, reliable records of the following? (A field check may be undertaken, if necessary) Yes or No | |
| a. Customer complaints | Yes |
| b. Billing and collection | Yes |
| c. Delinquencies in payment of water bills | Yes |
| d. Meter histories | Yes |
| e. Service connections | Yes |
| f. Equipment histories | Yes |
| g. Equipment downtime | Yes |
| h. Bacteriological tests | Yes |
| i. System pressure | Yes |
| j. Leak reports | Yes |

k. Unaccounted for water	Yes
l. Pump efficiencies	Yes
m. Water production	Yes
n. Water consumption	Yes
o. Valve and pipeline location	Yes
p. General accounting	Yes
q. Stock inventory	Yes
r. Stores usage	Yes
s. Employees record	Yes, 201 Files
t. Minutes of the Board meetings	Yes
7. For this year, Auditing has been done by the Commission on Audit.	Yes
8. Attach list of reports being prepared regularly by the District on a monthly basis as required in the <i>Commercial Practice Manual</i> . (Omit this item if the District has not yet installed the commercial practices system in which case, indicate that the said system has not been installed yet. (Annex E –List of Reports Prepared Regularly)	省略 Annex E

B. FINANCIAL/COMMERCIAL

1. Attach the District's financial statements for the report year including a comparison of the immediate past year. (See Annexes F, F-1 to F12 Financial Reports)	一部省略 Annexes F-1 to F-12
2. For the year under report, the District's total <i>budgetary outlay</i> was broken down into: (Source: Approved Budget)	798,981,900.00
a. Operating outlay (original budget)	536,945,693.00
b. Capital Outlay (original budget)	116,854,267.00
c. Special budgets, if any (<i>additional budgets</i>) – Contingency	1,500,000.00
d. Debt Service	138,051,204.00
e. Reserve	5,630,736.00
3. For this same <i>one-year</i> period, the District's Gross Revenue was broken down into: (Source: Financial Report)	709,283,166.19
a. Collection from water sales	668,894,930.01
b. Other water revenues	35,901,558.28
c. Other non-operating income	4,486,677.90
d. Proceeds of <i>LWUA loan</i> to finance new service connections	None
4. For this same <i>one-year</i> period, the District's expenditure was broken down into: (Source: Financial Report)	P 1,083,205,374.38
a. Operational (operation & maintenance expenses, including Depreciation of 69,137,043.07)	564,705,782.55
b. Capital Outlay	15,123,167.92
c. Annual debt servicing (Annex G –Summary of Loan Payments-LWUA and DBP)	503,376,423.91
5. For this same <i>one-year</i> period, the total salaries, wages & other emoluments paid for the District's employees were broken down into:	P 101,414,300.41
a. For permanent employees	80,315,619.53
b. For casual/temporary	21,098,680.88
6. Expenses for power/fuel for pumping during the year (Acct. #726, if Commercial Practices Accts. are in effect):	P 100,086,559.61

7. Total amount *billed* during the year is broken down into:
- | | |
|--|----------------|
| a. Total Billings (Current and Old Accounts) | 667,912,246.65 |
| b. Old Accounts | - |
8. Total amount *collected* (*water sales* only during the year) was broken down into: (FOH)
- | | |
|-------------------------|----------------|
| a. Current billings | 693,960,035.39 |
| b. Old Accounts-Arrears | 385,837,660.68 |
| | 308,122,374.71 |
9. Total amount *uncollected* (*delinquent*) at year's end *excluding* Bad Debts. (Source: COWD Year-End Water Sales Report)
- | | |
|--|----------------|
| | 165,987,437.12 |
|--|----------------|
10. Total reserves at year's end. (LBP-Gen. Reserve & DBP-Reserve Fund)
- | | |
|--|---------------|
| | 11,081,104.04 |
|--|---------------|
11. Complaints filed, processed and settled during the year
- | | |
|--|--------|
| a. Total number filed, processed and settled during the year | 22,089 |
| b. Number dismissed for lack of merit/withdrawn | - |
| c. Number investigated | 22,089 |
| d. Number settled to the satisfaction of complaints | 16,944 |
| e. Number elevated to the district Board | None |
| f. Number settled by the Board | None |
| g. Number elevated to the higher authorities | None |
12. At year's end, the following water rate charges were in force:
(Annex H-Water Rates Schedule)
- | | |
|--|--------------------------|
| Had these rates been submitted to LWUA for review? (Yes or No) | 表-2.2.9~10 参照
Annex H |
| | Yes |
13. Every water district would want to know what its water users think of their water system and the quality of their services in order that it could do what is best to insure maximum satisfaction for its customers. During the year, the district conducted a random survey covering **300** water users (*not less than 40*), and herewith is the result of such survey:

QUESTIONS	NO. OF CUSTOMERS REPLYING	
	YES	NO
1. Do you receive 24-hours water service?	209	91
2. Is your water pressure usually adequate?	206	94
3. Does your water taste good?	231	69
4. Do you have confidence that the water is safe?	231	69
5. Are you satisfied with the water service?	231	69

N = 300

C. TECHNICAL

- | | |
|--|-----------------------------|
| 1. Has the district adopted by Board resolutions, a set of design and construction standard? (Yes or No) | Yes |
| If so, who prepared it? | LWUA & COWD |
| Is it being adhered to strictly? | Yes |
| 2. Does the district undertake bacteriological test of its water? Yes or No) | Yes |
| How often are these tests made per year? | Monthly |
| Is LWUA being furnished copies of these test reports? (Yes or No) | Yes |
| For the report year, how many such reports were submitted to LWUA? | 12 |
| 3. State the method of water treatment employed by the district, if any | Disinfection & Chlorination |

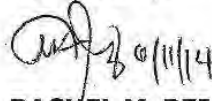
4. Does the district undertake regular pump efficiency tests? (<i>Yes or No</i>)	Yes
How many of these pumps does the district have in its system?	28
How many of these pumps are operational?	26
Attach list of pumps now in operation. (Annex I –Pump in Operation: Efficiency Test)	省略 Annex I

D. OPERATIONAL

1. Total water production during the year in cubic meters. Annex J –Summary of Water Production and Consumption)	57,156,233
Total <i>water billed</i> in cubic meters	25,362,677
Average <i>per capita consumption</i> in lpd	122 lpd
2. Attach list of COWD Water Sources (Annex K –COWD Water Sources)	Annex K
3. Is the District provided with measuring devices to measure their water production? (<i>Yes or No</i>)	Yes
If <i>yes</i> , what type? <u>Orifice plate, meter propeller type and Venturi type & flow meters</u>	Orifice plate & electromagnetic flow meter
If <i>not</i> , how do you measure productions?	-
4. As of year's end, the district has the following existing service connection and related information. (Annex L –Service Connection Growth)	Annex L
a. Total number of <i>existing</i> connections (Active & Inactive Conn.)	116,188
b. Number of active connections	83,016
c. Number of metered connections	83,016
1. With functioning meters	83,016
2. With non-functioning meters	-
d. Numbers of <i>flat</i> rate connections	None
e. Number of connections (customers) regularly billed	83,016
f. Number of delinquent customers (Annex Q – Aging of Accounts Receivable–Active Connections as of December 31, 2013)	36,008
ii. Average number of customers per connection (HH)	7
5. Estimated population of <i>district service area</i>	710,020
a. Estimated population served by utility whether fully or partially	581,112
6. Because of inadequate facilities, the <i>district</i> had to provide <i>partial service</i> in accordance with the following <i>average</i> length of time each 24-hours day:	No. of Connections
a. Less than 6 hours service	None
b. 7-12 hours service	None
c. 13-18 hours service	None
d. 19-24 hours service	83,016
(Note: You may vary the number of hours as may be necessary to suit actual conditions)	
7. Attach list of all major equipment and machinery (with an initial cost of at least P10, 000.00 including pertinent information. (Annex M –List of Major Equipments)	Annex M

- | | |
|---|--------------------|
| 8. Does the District keep written record of requests for service?
(Yes or No) | <u>Yes</u> |
| a. Does the record show the date when such requests were
made and the nature of the service requested? (Yes or No) | <u>Yes</u> |
| b. On the <i>average</i> , how long (in days) does it take the
District to respond and attend to such requests? | <u>1 to 4 days</u> |
| c. How many such <i>reports</i> were received during the year? | <u>22,089</u> |
| d. How many these <i>reports</i> were attended to during the year? | <u>16,944</u> |

Submitted by:



RACHEL M. BEJA
General Manager



CAGAYAN DE ORO CITY WATER DISTRICT
Location: Corrales Avenue, Cagayan de Oro City

II. PROFILE

1.) THE WATER DISTRICT & ITS PHYSICAL SYSTEM'S FACILITIES

A. ORGANIZATION

1. Date Formed:	August 1, 1973	Age (months) as of 12/31/12	<u>473</u>
2. Date CCC Issued:	January 4, 1974	CCC No.	<u>001</u>
3. Date Advisory Service Started:			<u>1975</u>
4. Personnel: (include 127 casual employees)			<u>430</u>
<i>Comments: (Adequacy, qualification, performance & others)</i>			<u>Adequate & qualified</u>

B. EXISTING SYSTEM'S FACILITIES

1. Service:

1.1 Service Area:	48,885.83 Person/Ha.	<u>10</u>
1.2 Population of service area		<u>581,112</u>
1.3 No. of Households (1.2/1.4)		<u>83,016</u>
1.4 No. of Persons/Households		<u>7</u>
1.5 Service Time (hrs./day)		<u>24 hours/day</u>

2. Structure and Equipment:

2.1 Administration Building

Office Area :	2,052 sq. meters	
Office Equipment :	(Annex M-List of Major Equipments)	<u>Annex M</u>

2.2 If **rented**, how much per month? N/A

2.3 Type of **water source** Surface Water, Spring & Deep Wells

Rated Capacity per day (cu.m./day) 176,342.67

2.4 Reservoir (description, built, dimension and capacity)

2 units	5,303	cu.m.	Each concrete reservoir @Carmen & Camaman-an
1 unit	95	cu.m.	Each steel tank reservoir @ Aluba Subdivision
1 unit	170	cu.m.	Elevated concrete reservoir @ Gaston Park, Poblacion (<i>non-operational</i>)
1 unit	443	cu.m.	Concrete reservoir @ Bantiles, Bugo (<i>non-operational</i>)
1 unit	2,900	cu.m.	Concrete reservoir @ Bulua
1 unit	2,100	cu.m.	Concrete reservoir @ Tablon
1 unit	4,000	cu.m.	Concrete reservoir @ Puerto Heights

2.5 Water Sources (Annex K-COWD Water Sources)

Water Sources	Discharge*(as of Dec. 31, 2013)		Actual, YTD (in cu.m.)
	(lps)	(gpm)	
a. Deep Well Source (26)	1,460	23,135	-
b. Spring Source (1)	2	30	-
Total Wells & Spring	1,462	23,165	42,375,733
Booster Pumps (16)	659	10,499	-
BWSP (1 Bulk Water)			14,780,500

2.6 Transmission Piping System maintained (size, make, length)
(Annex N-Summary of Pipelines)

Annex N

Size	Make	Maintained	Unit	Size	Make	Maintained	Unit
50mm	2"Ø uPVC	13,159	lm	150mm	6"Ø Steel	28,503	lm.
50mm	2"Ø GI	499	lm	150mm	6"Ø ACP	2,280	lm.
50mm	2"Ø BI	405	lm	150mm	6"Ø CCI	998	lm.
50mm	2"Ø PE	65,622	lm	150mm	6"Ø CI/BI	198	lm.
63mm	2.5"Ø PE	3,055	lm	200mm	8"Ø uPVC	23,224	lm.
63mm	2.5"Ø GI	660	lm	200mm	8"Ø Steel	4,760	lm.
75mm	3"Ø uPVC	58,188	lm	200mm	8"Ø CCI	2,322	lm.
75mm	3"Ø ACP	5,422	lm	200mm	8"Ø BI	20	lm.
75mm	3"Ø GI	96	lm	250mm	10"Ø Steel	10,842	lm.
75mm	3"Ø CI	120	lm	250mm	10"Ø uPVC	3,747	lm.
100mm	4"Ø uPVC	108,273	lm	300mm	12"Ø Steel	62,906	lm.
100mm	4"Ø Steel	5,072	lm	350mm	14"Ø Steel	2,531	lm.
100mm	4"Ø ACP	6,048	lm	400mm	16"Ø Steel	29,586	lm.
100mm	4"Ø CCI	320	lm	500mm	20"Ø Steel	5,687	lm.
100mm	4"Ø GI	75	lm	600mm	24"Ø Steel	14,960	lm.
100mm	4"Ø CI/BI	363	lm	800mm	30"Ø Steel	2,638	lm.
150mm	6"Ø uPVC	81,239	lm				
Total Maintained						543,817	

2.7 Service Connections:

Type	Flat	Metered	Total
Domestic/Government	N/A	77,205	75,782
Commercial/Industrial	N/A	5,811	5,811
Wholesale/Bulk	N/A	N/A	N/A
TOTAL	N/A	83,016	83,016

2.8 Production:

Average Monthly Production (cu.m.)	
a. Booster/Pumping Stations (cu.m.)	<u>3,531,311</u>
b. Bulk Water Supply (cu.m.)	<u>1,231,708</u>
Production Efficiency % (average/month) (Total Water Utilized)/(Total Production)	<u>89.05%</u>
Unaccounted for Water-NRW% (average/mo.)	<u>54.03%</u>

2.) **CURRENT OPERATION/FINANCIAL HIGHLIGHTS:**

A. Existing Water Rates: (Annex H–Water Rates Schedule)	表-2.2.9~10 参照 <u>Annex H</u>
B. Operating Income/Expense:	
Average Water Sales (average/mo.)	<u>P 57,904,853.32</u>
Average Collection (average/mo.)	<u>P 58,563,760.82</u>
Average Expenses-O & M for the year (average/mo.)	<u>P 1,297,394.96</u>
C. Financial Highlights (rate & status)	
Current Ratio = $\frac{\text{Current Assets}}{\text{Current Liabilities}}$	<u>3.14 : 1.00</u>
Long Term Debt/Equity Ratio	<u>0.62 : 0.38</u>
Monthly Billing (average/mo.)	<u>P 55,659,353.88</u>
Collection Efficiency--% of On-Time Payment (YTD)	<u>75.15%</u>

3.) **COMMUNITY ECONOMIC PROFILE:**

A. Total Population (covered by the Water District)	<u>710,020</u>
B. Income Levels in the area: (based on Reg. 10-NSO data 2009)	

Northern Mindanao	No. of Families (thousand)	Income		Expenditure	
		Total (million)	Average (thousand)	Total (millions)	Average (thousand)
All Income Class	839	138,259	165	16,690	139.08
Under 40,000	71	2,128	30	2,324	32.28
40,000– 59,999	123	6,181	50	6,376	51.42
60,000– 99,999	229	17,868	78	17,516	76.82
100,000–249,999	274	41,810	151	37,984	137.62
250,000 and Over	143	70,271	485	52,490	362.00

C. Major Source of Income	<u>Salary & Wages</u>
----------------------------------	---------------------------

D. Average Monthly Bills: (per customer)	
1. Water bill:	<u>P 81.87</u>
2. Electric bill: (per customer in pesos)	
a. Residential	<u>P 1,312.00</u>
b. Commercial	<u>8,050.00</u>
c. Industrial	<u>305,341.00</u>
d. Bulk Power	<u>9,306,100.00</u>
e. Streetlights	<u>32,892.00</u>

E. Wages Paid (per month) to:	
1. Common Laborer	P 8,272.00
2. Carpenter	<u>10,401.00</u>
3. Truck Driver	<u>11,181.00</u>
4. Plumber	<u>11,181.00</u>
F. City/Municipal Revenue (P2,212,640,226.11 in 2013), per person	P <u>3,116.31</u>
G. Average rate of mortality per 100,000 population due to waterborne diseases (e.g. diarrhea) based from 2012 data	<u>1.71</u>
H. Average rate of morbidity per 100,000 population due to waterborne diseases (e.g. diarrhea)	<u>59.04</u>
I. Major Agricultural, Industrial and Commercial activities: Rice, corn, vegetables, mango, food processing, HB concrete products, clay products, ceramics, furniture, cottage industries	

4.) OTHER INFORMATION:

1. The District has been paying the **Rio Verde Water Consolidated Consortium Inc.** (RVWCI) for **40,000 cubic meters of bulk water a day** with a constant flow rate of **1,667 cubic meters per hour** and a **minimum pressure of 20 psi** at the designated *take-off point* located at the intersection of Airport Road and South Diversion Road, Cagayan de Oro City.
2. The District has *served* **562,056 linear meters** of pipelines ranging from **50mmØ to 800mmØ** and *maintained* around **543,817 linear meters** of pipelines with the balance still *not turned-over* by some subdivision developers/owners. (**Annex N**–Summary of Pipelines 2013)
3. The District has implemented the **Meter Clustering System** to help alleviate *water pilferage*.
4. The District has installed **eleven (11) GSM monitoring device**, six (6) in the **Eastern** area and one (5) in the **Western** area.
5. The District has regularly monitored the **Residual Chlorine** in various strategic points of its water supply system. (**Annex O**–Summary of Bacteriological Analysis 2013)
6. The District has maintained its established **safety programs** and **standard operating procedure**.
7. The COWD has continued extending **technical** and **financial assistance** to its neighboring water districts. Also, the District has continued extending *free technical assistance* and *services* to subdivisions and rural barangays.
8. The District has continued implementing the **50% discount** for water bill of **Accredited Senior Citizens Center** and **Accredited Residential/Group Homes** and the **5% discount** for water bill of **Senior Citizens**.

9. The District has a new set of **Board of Directors for 2013–2014** as follows:
(B.R. No. 001, s-2013 dated January 04, 2013).

Chairman : **MR. RUBEN A. VEGAFRIA**
Vice Chairman : **MR. SOC ANTHONY M. DEL ROSARIO**
Secretary : **ATTY. EMMANUEL A. GAABUCAYAN**
Members : **MR. SANDY R. BASS JR.**
: **MR. JOEL A. BALDELOVAR**

10. The District has revised the framework for the **re-categorization** of the **Cagayan de Oro City Water District** in consonance with its structure as **Category "A"** by the Local Water Utilities Administration (LWUA) amending Resolution No. 038, s-2013 dated April 18, 2013. (B.R. No. 67, s-2013 dated August 1, 2013).
11. The District has approved the 2013 **Budget and Plantilla of Personnel** of the Cagayan de Oro City Water District for calendar year 2013 with a total Utility Operating Expense and Revenue of **Seven Hundred Ninety Eight Million Nine Hundred Eighty-One Thousand and Nine Hundred Pesos** (P798,981,900.00) (B.R. No. 14, s-2013 dated March 07, 2013).
12. The District has managed well its **Provident Fund (PF)** and has benefited many qualified personnel through its *Salary Loan, Educational Loan, Emergency Loan, All-Purpose Loan, Small Loan* and other types of loans with an interest (**8%**) and service charge of **1%** (PF Board Res. No. 85, s-2012).

Type of PROVIDENT FUND LOANS	Year				
	2013	2012	2011	2010	2009
All-Purpose Loan	219	200	232	194	196
Dividend Loan	165	153	166	367	214
Educational Loan	-	-	-	-	-
Emergency/Hospitalization Loan	77	63	53	28	33
Employee's Cont. Loan	12	146	5	4	187
Salary Loan	71	68	76	33	36
Small Loan (Consol)	744	678	684	739	495
Special Aid/Small Loan	579	424	516	355	339
Water Bill Loan	42	50	21	80	-
Memorial	-	-	1	-	-
Special Legal Aid	-	-	1	-	-
Calamity Loan	-	167	42	-	-
TOTAL	1,909	1,949	1,797	1,800	1,500

Note: The **total assets** of PF as of 2013 – P **116,911,408.99**

13. The District has approved the **Annual Gender and Development Plan and Budget for Calendar Year 2013** of **Thirty Nine Million Six Hundred Sixty Five Thousand One Hundred One Hundred Seventeen Pesos** (P39,665,117.00) in compliance with Republic Act 9710 (B.R. No. 39, s-2013 dated April 18, 2013).
14. The District has renewed the **Collective Negotiation Agreement** of the **First Labor Organization of the Cagayan de Oro City Water District (FLOW)**. (B.R. No. 94, s-2013 dated November 11, 2013).
15. The District has adopted the **Strategic Performance Management System (SPMS)** of the Cagayan de Oro City Water District for *submission* and *approval* by the **Civil Service Commission (CSC)**. (B.R. No. 66, s-2013 dated August 1, 2013).

16. The District has appropriated enough funds to support its **Public Relations Program** and has extensively used the *print* and *broadcast media* for disseminating information on drives, projects and emergencies. The District has also continued its *information drive* and *seminars* for its would-be concessionaires.
17. The District has religiously paid the *principal* and *interest* of its **Comprehensive Loan to LWUA**, and has financed new *service connections*, new *pipeline extensions* and other construction of the *system's facilities* as part of its **capital improvement**.
18. The District has authorized the General Manager, Rachel M. Beja, to negotiate and enter into agreement and sign loan documents with the **Development Bank of the Philippines** (DBP) under the terms and conditions to **refinance outstanding loans with LWUA** amounted to **P376,375,905.00** (B.R. No. 007, s-2013 dated February 04, 2013).
19. The District has approved the **Merchant Agreement** between **Development Bank of the Philippines** (DBP) and **Cagayan de Oro City Water District (COWD)** for the provision of its banking services with installation of **Point-Of-Sale (POS) Terminals** and **Internet Payment Gateway (IPG)** (B.R. No. 49, s-2013 dated May 15, 2013).
20. The District has adopted the **Unsolicited Joint Venture** as the mode of contracting partnership for our proposed **Non-Revenue Water (NRW) Management Project** (B.R. No. 32, s-2013 dated April 2, 2013).
21. The District has authorized the General Manager, Rachel M. Beja to sign the amendments in the **Memorandum of Understanding** between **Japan International Cooperation Agency (JICA)** and the Government of the Republic of the Philippines on "**The Rehabilitation Project for Cagayan de Oro City Water District's Facilities Damaged by Typhoon Sendong**" for and in behalf of COWD. (B.R. No. 51, s-2013 dated May 15, 2013).
22. The District has approved to install **Water Supply System** at **Villa Flora Subdivision** in **Cugman**, this city, with estimated project cost of **P1,683,597.00** charged to the P6 Million Fund. Provided that the lot acquisition for *sump* and *reservoir* location and the *donation* of the same to COWD shall be executed by Villa Flora Subdivision or the City Government of Cagayan de Oro prior to the implementation of the project. (B.R. No. 23, s-2013 dated March 18, 2013).
23. The District has approved the following **Memorandum of Understanding (MOU)** and authorized General Manager Rachel M. Beja to sign the said MOU for and in behalf of COWD, as follows:

Agreed Party	Particulars	Board Res. No./Date
Mr. Noel A. Tan, Vice President for Operations, Liberty Land Corporation	Proposed water supply system at Phase 4 & 5, Bloomingdale Subd., Bulao, Iponan	B.R. No. 11, s-2013 dated Feb. 11, 2013
Mr. Noel A. Tan, Vice President for Operations, Liberty Land Corporation	Proposed water supply system at Phase 1,2,& 3, Bloomingdale Subd., Bulao, Iponan	B.R. No. 27, s-2013 dated Mar. 18, 2013

Agreed Party	Particulars	Board Res. No./Date
Mr. Frederick D. Go, President & COO, Robinsons Land Corporation	Proposed turn-over of water supply system at Richmond Hills Subd., Camaman-an	B.R. No. 72, s-2013 dated Aug. 12, 2013
Phoenix Philippines Foundation (PPF)	Phoenix Philippines Foundation (PPF)	B.R. No. 95, s-2013 dated Nov. 11, 2013

Source: Summary of Policy Setting Resolutions 2013.


24. The District has accepted the **Deed of Absolute Donation** between **Liberty Land Corporation** represented by its Vice-President for Operations, Mr. Noel A. Tan and COWD for the proposed Water Supply System at **Phase 1, 2, 4 & 5** of **Bloomington Subdivision** located at Bulao, Iponan, Cagayan de Oro City. (B.R. No. 28, s-2013 dated March 18, 2013).
25. The District has approved the **Memorandum of Agreement, Memorandum of Understanding** and the **Deed of Absolute Donation** of Water Supply System with **Johndorf Development Corporation** represented by its President, Mr. Richard D. Lim, and to authorize General Manager, Engr. Rachel M. Beja to sign the same for and in behalf of COWD. (B.R. No. 43, s-2013 dated April 18, 2013).
26. The District has approved the following **Memorandum of Agreement (MOA)** and authorized General Manager Rachel M. Beja to sign the said MOA for and in behalf of COWD, as follows:

Agreed Party	Particulars	Board Res. No./Date
Sabal Hospital, Inc.	Services and facilities of work-related injuries	B.R. No. 26, s-2013 dated Mar. 18, 2013
San Vicente Village	Revised water supply connection at Purok 3, Casinglot, Tagoloan	B.R. No. 42, s-2013 dated Apr. 18, 2013
Dr. Alfonso C. de Fierro, Jr., Provincial Head, Gawad Kalinga Development Foundation, Inc.	Gawad Kalinga Development Foundation, Inc	B.R. No. 71, s-2013 dated Aug. 12, 2013
Jaime Joshua A. Frias II, Chairman, Barangay 23	Pipeline extension with one (1) meter stub-out at Zone 5, Barangay 23	B.R. No. 77, s-2013 dated Sept. 4, 2013
Hazel G. Padero, Acting Branch Manager, Development Bank of the Philippines (DBP) - Capistrano Branch	Deposit pick-up arrangement at Macasandig Office	B.R. No. 81, s-2013 dated Sept. 13, 2013
Atty. Chito M. Cruz, Acting General Manager, National Housing Authority (NHA)	Development of water source with Overhead Steel Tank at NHA-CDO Bayanihan Village Phase I	B.R. No. 100, s-2013 dated Dec. 9, 2013

Agreed Party	Particulars	Board Res. No./Date
Japan International Cooperation Agency (JICA)	Special Assistance for Project Sustainability (SAPS) for Provincial Cities Water Supply Project Phase III	B.R. No. 108, s-2013 dated Dec. 18, 2013
Mr. Victor S. Uy	Cinderella Homes Subdivision	B.R. No. 109, s-2013 dated Dec. 18, 2013
Mr. Lino B. Rabanes	Just compensation of pipe right-of-way subject to agreed terms and conditions of both parties	B.R. No. 111, s-2013, dated Dec. 18, 2013

Source: Summary of Policy - Setting Resolutions 2013.


Prepared by:


VIRGINIA J. DIAZ
Senior Research Analyst A


Checked by:


SULDIE D. LARANJO
Manager, Corp. Planning Division

Recommending Approval:


ELVA A. UBAY-UBAY
Manager, Mgmt. Services Dept.

Approved by:


RACHEL M. BEJA
General Manager

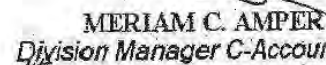
FINANCIAL REPORT

December 31, 2013

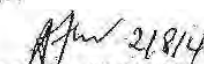
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PREPARED BY:


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APPROVED BY:


ELVA A. UBAY-UBAY
Finance Manager
2/18/14


ENGR. RACHEL M. BEJA
General Manager

Annex F

CAGAYAN DE ORO CITY WATER DISTRICT
FINANCIAL AND OPERATING HIGHLIGHTS
(For the Month Period Ended December 31, 2013)

	CURRENT MONTH			YEAR TO DATE		
	ACTUAL	BUDGET	OVER (UNDER) BUDGET	ACTUAL	BUDGET	OVER (UNDER) BUDGET
FINANCIAL OPERATING HIGHLIGHTS						
Operating Revenues	62,996,408.90	73,250,935	(10,254,526.10)	704,796,488.29	795,833,900	(91,137,411.71)
Operating Expenses	59,906,159.74	50,849,816	(9,056,343.74)	584,705,782.55	610,387,726	45,681,943.45
Utility Operating Income	3,090,249.16	22,401,119	(19,310,869.84)	140,090,705.74	185,536,174	(45,445,468.26)
Net Other Income/(Deductions)	(5,550,419.15)	(7,756,842)	2,206,422.85	(81,103,124.04)	(84,837,301)	13,834,176.96
Net Income/(Loss)	(2,460,169.99)	14,644,277	(17,104,446.99)	58,987,581.70	90,598,873	(31,611,291.30)
Amount per cubic meter billed:						
Operating Revenues	12.49	15	2.20	12.33	13	(0.97)
Operating Expenses	11.88	10	(1.68)	9.88	10	0.32
Utility Operating Income	0.61	4	(3.88)	2.45	3	(0.65)
Net Income/(Loss)	(0.49)	2.94	(3.42)	1.03	1.51	(0.48)
Net Cash Increase (Decrease)	(9,548,420.21)	10,382,211	(19,930,631.21)	(33,980,425.87)	7,008,454	(40,988,879.87)
Net Funds Inflow (Outflow)	(69,626,698.52)	11,010,756	(80,637,454.52)	69,577,351.62	48,996,577	22,680,774.62
Debits to Payroll Clearing Account	8,203,822.30	9,553,658	1,349,835.70	101,414,300.41	114,643,896	13,229,595.59
FINANCIAL CONDITION						
Gross Plant Additions	(45,877,549.96)	9,737,852.00	55,615,401.96	6,696,576.68	116,854,268	110,157,691.32
Gross Plant Retirements	1,151,030,083.49	-	1,151,030,083.49	1,151,030,083.49	-	1,151,030,083.49
Total Utility Plant (Net of Depreciation)	(807,743,068.47)	-	(807,743,068.47)	(807,743,068.47)	-	(807,743,068.47)
Accumulated Depreciation	102,458,871.82	-	102,458,871.82	102,458,871.82	-	102,458,871.82
Paid-in Capital	485,724,011.12	-	485,724,011.12	485,724,011.12	-	485,724,011.12
Retained Earnings - Unappropriated	144,094.00	-	144,094.00	144,094.00	-	144,094.00
Retained Earnings - Appropriated	28,265,234.04	-	28,265,234.04	28,265,234.04	-	28,265,234.04
Appraisal Capital	596,592,210.98	-	596,592,210.98	596,592,210.98	-	596,592,210.98
Total Capital	777,871,393.98	-	777,871,393.98	777,871,393.98	-	777,871,393.98
Long Term Debt						
Periodical Long Term Debt Requirements (Principal & Interest):						
Due next month of Phase I-A Project-Production Wells	38,381.00	38,381	-	460,572.00	460,572	0.00
Due within next 12 months of Phase I-A Project-Production Wells	460,572.00	460,572	-	460,572.00	460,572	0.00
Due next month of Phase I-B Schedule A, B & C Projects	1,031,067.00	1,031,067	-	11,732,359.00	12,372,804	0.00
Due within next 12 months of Phase I-B Schedule A, B & C Projects	12,372,804.00	12,372,804	-	12,372,804.00	12,372,804	0.00
Due next month of Phase II Project (520.128M)	242,597.00	242,597	-	13,550,874.00	13,550,874	0.00
Due within next 12 months of Phase II Project (520.128M)	2,911,164.00	2,911,164	-	2,911,164.00	2,911,164	0.00
Due next month of DBP Refinanced Loan	9,414,849.75	9,905,693	490,843.25	93,689,301.87	96,603,696	490,843.25
Due within next 12 months of DBP Refinanced Loan	65,713,615.00	65,713,615	-	65,713,615.00	65,713,615	0.00
Due next month of LWUA 200M loan - Lateral Project	0.00	0	-	11,717,580.00	11,717,580	0.00
Due within next 12 months of LWUA 200M loan - Lateral Project	0.00	0	-	0.00	0	0.00
Due next month of LWUA-SMHRSpYoungsVie	82,317.00	82,317	-	987,804.00	987,804	0.00
Due within next 12 months of LWUA-SMHRSpYoungsVie	987,804.00	987,804	-	987,804.00	987,804	0.00
Percent of Long Term Debt to Net Utility Plant	67.58		67.58	67.58		67.58
Times Long Term Debt requirement due this month covered by Utility Operating Income	0.29	-	0.29	0.29	-	0.29
Amount in Loan Sinking Fund	0.62 : 0.38	-	0.62 : 0.38	0.62 : 0.38	-	0.62 : 0.38
Debt / Equity Ratio	3.14 : 1.00	-	3.14 : 1.00	3.14 : 1.00	-	3.14 : 1.00

	ACTUAL	BUDGET	OVER (UNDER) BUDGET	ACTUAL	BUDGET	OVER (UNDER) BUDGET
PRODUCTION BILLINGS & COLLECTIONS						
Production -						
Cu. M. produced						
For month/year	5,042,287.09	4,886,088	(66,209.09)	57,156,233.38	59,833,056	2,676,822.62
Production Well	3,786,887.09	3,748,088	(40,799.09)	42,375,733.38	44,983,056	2,617,322.62
Bulk Water - Rio Verde	1,255,410	1,240,000	(15,410.00)	14,780,500.00	14,840,000	59,500.00
Average daily for month/year	182,664.74	180,842	(1,813.20)	187,397.49	196,174	8,776.47
Rated Production Capacity for Month/year (in cu.m.)	6,172,400.91	5,865,986	(693,585.09)	61,555,774.54	70,381,832	(8,838,057.46)
% Utilization of Rated Production Capacity	97%	85%	-12%	93%	85%	-8%
Cu. M. billed and accounted for water	2,119,253.54	2,493,044	(373,790.46)	26,457,651.80	32,908,181	(6,450,529.00)
% Unaccounted for Water	57.97%	50%	-8%	53.71%	50%	-4%
Production and Distribution Cost per cu.m. produced	6.45	5.77	0.68	5.82	5.77	0.05
Water Billings:						
in Cu.M.	2,059,581.00	2,493,044	(433,483.00)	26,457,651.80	32,908,181	(6,450,529)
Amount	59,838,446.66	68,324,781	(8,486,334.34)	687,912,246.65	543,474,170	124,438,076.65
Average Consumption per cust.	24.81	31	(6.18)	318.71	409	(90.37)
Collections -						
Collection of Water Billings:						
For Current month's billings	32,141,463.10	72,517,015	(40,375,551.90)	385,837,660.68	787,126,860	(401,289,199.32)
For Previous month's billings						
For Delinquent Accounts	24,284,409.55	3,480,001	20,814,408.55	308,122,374.71	41,760,012	266,362,362.71
Percent of Collections of Current Water Bill this month's billings - *** NFS #3 ***	54%	106%	52%	58%	145%	87%
Customer Accounts -						
Balances at End of Period	246,875,118.35	-	246,875,118.35	246,875,118.35	-	246,875,118.35
Increase/(Decrease) for the Per.	6,777,325.86	-	6,777,325.86	6,777,325.86	-	6,777,325.86
Allowance for Bad Debts at End of Period - Credit	(80,816,940.85)	-	(80,816,940.85)	(80,816,940.85)	-	(80,816,940.85)
Increase/(Decrease) for the Period	241,667.00	241,667	-	2,900,004.00	2,900,004	-
Bad Debts Written Off during the Period	-	-	-	-	-	-
CAPITAL EXPENDITURES:						
COVD CAPEX:						
Amount Spent - 2013 Capex	1,772,711.36	9,737,852	7,965,140.64	15,123,167.92	116,854,268	101,731,100.08
Total Cost to Complete - 2013 Capex		101,731,100.08			101,731,100.08	
2012 Capex paid in 2013	3,464,290.50			53,323,494.60		
Total Cost 2013 (spent and additional cost to complete)		103,503,811.44			116,854,268.00	
Total Approved Budget					116,854,268.00	
Expected Underrun (Overrun)					-	
Rehab Grant (Sendong):						
Amount Spent (net cash outflow)	1,501,537.69			40,667,092.69	53,791,000.00	13,123,907.31
Total Cost to Complete		13,123,907.31			13,123,907.31	
Total Cost - Sendong Grant (spent and cost to complete amount)		14,625,445.00			53,791,000.00	
Total Approved Budget					53,791,000.00	
Expected Underrun (Overrun)					-	
OTHER PERTINENT STATISTICS:						
No. of Connections:						
Total	83,016	80,448	2,570	83,016	80,446	2,570
Increase/(Decrease)	253	0	253	253	0	253
Metered	83,016	80,446	2,570	83,016	80,446	2,570
Unmetered	0	0	0	0	0	0
Estimated Population Served	651,995	482,676	(169,319.00)	651,995	482,676	(169,319.00)
Kilometers of Mains in Use	465	0	465	465	0	465
Kilometers of Pipes under Service	483	0	483	483	0	483
Total Employees	428	524	(96)	428	524	(96)

CAGAYAN DE ORO CITY WATER DISTRICT
BALANCE SHEET
As of December 31, 2013
(With Comparative Figures for the Date Ended December 31, 2012)

	ACTUAL THIS MONTH		THIS MONTH LAST YEAR		INCREASE/(DECREASE) OVER LAST YEAR	
	AMOUNT	% OF TOTAL	AMOUNT	% OF TOTAL	AMOUNT	% OF LAST YEAR
ASSETS AND OTHER DEBITS						
UTILITY PLANT						
Utility Plant In Service - UPIS (NFS #2)	1,925,905,080.96	124.11	1,828,550,542.38	122.43	97,354,538.57	5.32
Utility Plant Held for Future Use	2,988,731.00	-0.19	3,102,531.00	0.21	(115,800.00)	0.00
Unclassified Utility Plant	12,146,913.81	0.78	6,717,003.54	0.45	5,429,910.07	0.00
Construction Work in Progress - CWIP (NFS #3)	17,734,426.40	1.14	8,482,388.67	0.57	9,252,037.73	109.07
Machinery and Equipment in Transit	0.00	0.00	0.00	0.00	0.00	0.00
Total Utility Plant	1,958,773,151.96	126.23	1,846,852,465.59	123.66	111,920,686.37	6.06
Less: Accumulated Provision for Depreciation and Amortization	(807,743,068.47)	(52.05)	(738,611,374.40)	(49.45)	(69,131,694.07)	9.36
Net Utility Plant	1,151,030,083.49	74.18	1,108,241,091.19	74.20	42,788,992.30	3.86
INVESTMENTS AND FUND ACCOUNTS						
Other Physical Property (NFS #4)	2,607,699.50	0.17	2,607,699.50	0.17	0.00	0.00
Less: Accumulated Provision for Depreciation Net Other Physical Property						
Investments						
Sinking Funds						
Miscellaneous Special Funds						
CURRENT ASSETS AND OTHER DEBITS						
Cash (NFS #5)	90,723,136.99	5.85	124,703,562.85	8.35	(33,980,425.87)	(27.25)
Special Deposits (NFS #6)	48,192,695.83	3.11	39,193,908.38	2.82	8,998,709.45	22.96
Working Funds (NFS #7)	208,000.00	0.01	213,000.00	0.01	(5,000.00)	(2.35)
Temporary Investments	22,583,879.00	1.46	0.00	0.00	22,583,879.00	100.00
Notes Receivable			0.00	0.00		
Accounts Receivable-Customers (NFS #8)	246,875,118.35	15.91	245,647,101.05	16.45	1,228,017.30	0.50
Advances to Officers and Employees	41,887.50	0.00	0.00	0.00	41,887.50	100.00
Accounts Receivable-Others (NFS #9)	1,059,082.08	0.07	1,044,785.76	0.07	14,296.32	1.37
Allowance for Bad Debts	(80,816,940.85)	(5.21)	(77,916,936.85)	(5.22)	(2,900,004.00)	3.72
Materials and Supplies Inventory (NFS #10)	45,175,440.23	2.91	34,537,190.29	2.31	10,638,249.94	30.80
Prepayments (NFS #11)	593,030.57	0.04	456,173.18	0.03	136,857.39	30.00
Other Current Assets and Other Debits	0.00	0.00	0.00	0.00	0.00	0.00
Total	374,635,329.70	24.14	367,878,862.87	24.63	6,756,467.03	1.84
Unamortized Debt Discount and Expenses						
Preliminary Survey and Investigation Charges						
Other Work in Progress						
Other Deferred Debits	23,488,822.98	1.51	14,810,153.57	0.99	8,678,669.41	58.60
Total	23,488,822.98	1.51	14,810,153.57	0.99	8,678,669.41	58.60

	ACTUAL THIS MONTH		THIS MONTH LAST YEAR		INCREASE/(DECREASE) OVER LAST YEAR	
	AMOUNT	% OF TOTAL	AMOUNT	% OF TOTAL	AMOUNT	% OF LAST YEAR
LIABILITIES AND OTHER CREDITS						
CAPITAL						
Capital Contribution-Government (NFS #17)	866,925.40	0.06	866,925.40	0.06	0.00	0.00
Other Paid-in Capital (NFS #18)	101,591,946.42	6.55	58,356,519.92	3.91	43,235,426.50	74.09
Retained earnings - Unappropriated	465,724,011.12	30.01	423,471,859.61	28.35	42,252,151.51	9.98
Retained earnings - Appropriated	144,094.00	0.01	144,094.00	0.01	0.00	0.00
Appraisal Capital (NFS #19)	28,265,234.04	1.82	28,265,234.04	1.89	0.00	0.00
Total	596,592,210.98	38.45	511,104,632.97	34.22	85,487,578.01	16.73
LONG TERM DEBTS						
Bonds Payable						
Loans Payable (NFS #16)	777,871,393.98	50.13	838,017,077.04	56.11	(60,145,683.06)	(7.18)
Other Long Term Debts	0.00	0.00	4,941,943.21	0.33	(4,941,943.21)	(100.00)
Retentions On Contract Payments						
Total	777,871,393.98	50.13	842,959,020.25	56.44	(65,087,626.27)	(7.72)
CURRENT AND ACCRUED LIABILITIES						
Notes Payable						
Vouchers Payable						
Accrued Light & Power						
Current Portion on Long Term Debt (NFS #16)	60,030,831.90	3.87	38,943,612.82	2.61	21,087,219.08	54.15
GSIS/SSS Accounts Payable	9,325,933.89	0.60	2,566,168.55	0.17	6,759,765.34	263.42
Customers' Deposits (NFS #14)	9,056,662.05	0.58	9,056,662.05	0.61	0.00	0.00
Medicare Payable	175,725.00	0.01	169,675.00	0.01	6,050.00	3.57
Interest Payable	0.00	0.00	0.00	0.00	0.00	0.00
Withholding Taxes Payable	5,157,327.96	0.33	3,505,735.63	0.23	1,651,592.33	47.11
Other Current and Accrued Liabilities (NFS #15)	43,060,869.06	2.77	32,686,662.61	2.19	10,374,206.45	31.74
Total	126,807,349.86	8.17	86,928,516.66	6.82	39,878,833.20	45.88
DEFERRED CREDITS						
Unamortized Premium on Debts						
Other Deferred Credits	47,320,457.94	3.05	49,375,114.14	3.31	(2,054,656.20)	(4.16)
Total	47,320,457.94	3.05	49,375,114.14	3.31	(2,054,656.20)	(4.16)
OPERATING RESERVES						
Property Insurance Reserve						
Injuries and Damages Reserve						
Pensions and Benefits Reserve						
Other Operating Reserves (Expansion & Operating) NFS #17	3,170,522.91	0.20	3,170,522.91	0.21	0.00	0.00
Total	3,170,522.91	0.20	3,170,522.91	0.21	0.00	0.00
TOTAL LIABILITIES AND OTHER CREDITS	1,551,761,835.87	100.00	1,493,537,806.83	100.00	58,224,128.74	3.80

DETAILS OF RETAINED EARNINGS

RETAINED EARNINGS - BEGINNING		
Retained Earnings - Unappropriated	P	415,473,044.15
Retained Earnings - Appropriated		<u>144,094.00</u>
TOTAL	P	415,617,138.15
ADD: CREDITS		
Credit Balance Transferred Income Account	P	58,987,581.70
Miscellaneous Credits to Retained Earnings		<u>-</u>
<i>Total Credits</i>		<u>58,987,581.70</u>
TOTAL	P	474,604,719.85
LESS: DEBITS		
Debit Balance Transferred Income Account	P	8,736,614.73
Miscellaneous Debits to Retained Earnings		<u>-</u>
<i>Total Debits</i>		<u>8,736,614.73</u>
RETAINED EARNINGS - END OF PERIOD, December 31, 2013	P	<u>465,868,105.12</u>

CAGAYAN DE ORO CITY WATER DISTRICT
STATEMENT OF INCOME
For the Month Ended December 31, 2013
(With Comparative Budget Figures for the Month Ended December 31, 2013)

CURRENT MONTH						PARTICULARS	YEAR TO DATE					
ACTUAL		BUDGET		OVER (UNDER) BUDGET			ACTUAL		BUDGET		OVER (UNDER) BUDGET	
AMOUNT	%TOTAL	AMOUNT	%TOTAL	AMOUNT	%BUDGET		AMOUNT	%TOTAL	AMOUNT	%TOTAL	AMOUNT	%BUDGET
62,996,408.00	100.00	73,250,935	100.00	(10,254,526.10)	(14.00)	OPERATING REVENUES	704,796,488.29	100.00	795,933,900	100.00	(91,137,411.71)	(11.45)
						LESS: OPERATING EXPENSES						
47,503,445.16	75.41	40,016,713	54.63	(7,486,732.16)	(18.71)	Operation Expenses	445,708,017.14	83.24	478,821,934	80.28	34,113,916.86	7.11
6,549,948.18	10.40	4,728,772	6.46	(1,821,176.18)	(38.51)	Maintenance Expenses	49,860,722.34	7.07	57,323,820	7.20	7,463,097.66	13.02
5,852,708.42	9.29	8,104,331	11.07	2,251,622.89	4.12	Depreciation	69,137,043.07	9.81	73,251,972	9.20	4,114,928.93	5.82
						Amortization of Ltd. Term Utility Inv.						
						Income from Utility Plt. Leased to Others						
						Rent for Lease of Utility Plant						
59,806,159.74	95.09	50,849,810	69.42	(8,956,349.74)	(17.81)	Total Operating Expenses	594,705,762.55	84.12	610,397,726	76.69	15,688,036.45	7.48
3,080,249.16	4.91	22,401,119	30.58	(19,310,869.84)	(85.20)	UTILITY OPERATING INCOME	140,090,705.74	19.88	185,536,174	23.31	(45,445,468.26)	(24.49)
						OTHER INCOME						
						Income from Non-Utility Operations						
						Revenues of Leased of Other Physical Property						
						Dividend Revenues						
75,302.64	0.12	74,000	0.10	(1,302.64)	(1.76)	Interest Revenues	735,486.23	0.10	888,000	0.11	(152,513.77)	(17.17)
601,020.67	0.80	180,000	0.25	(421,020.67)	(76.34)	Revenues from Sinking and Other Fund						
						Miscellaneous Non-Operating Revenues	3,751,191.87	0.53	2,180,000	0.27	1,571,191.87	73.67
						Non-Operating Revenues Deductions						
976,323.31	0.81	294,000	0.35	(682,323.31)	(126.90)	Total Other Income	4,486,677.90	0.64	3,048,000	0.38	1,438,677.90	47.20
3,866,572.47	5.82	22,655,119	30.93	(18,788,546.53)	(83.82)	TOTAL INCOME	144,577,383.64	20.51	188,584,174	23.69	(44,006,790.36)	(23.34)
						MISCELLANEOUS INCOME DEDUCTIONS						
						Miscellaneous Amortization						
						Miscellaneous Income Deductions						
						Extra Ordinary Gains/Losses						
						Total Miscellaneous Income Deductions						
3,866,572.47	5.82	22,655,119	30.93	(18,788,546.53)	(83.82)	NET INCOME BEFORE INTEREST CHARGES	144,577,383.64	20.51	188,584,174	23.69	(44,006,790.36)	(23.34)
						INTEREST CHARGES						
6,126,742.40	9.73	8,010,842	10.94	1,884,099.54	23.52	Interest on Long Term Debts	85,589,801.94	12.14	97,985,301	12.31	12,395,499.06	12.65
						Amortization of Debt Discount and Expenses						
						Amortization of Premium Debt (Credit)						
						Taxes Assumed on Interest						
						Other Interest Charges						
						Interest Charged to Construction (Credit)						
6,126,742.40	9.73	8,010,842	10.94	1,884,099.54	23.52	Total Interest Charges	85,589,801.94	12.14	97,985,301	12.31	12,395,499.06	12.65
(2,460,169.99)	(3.91)	14,644,277	19.99	(17,104,446.99)	(115.80)	NET INCOME (LOSS) FOR THE PERIOD	58,887,581.70	8.37	80,598,873	11.38	(31,811,291.30)	(34.89)

CAGAYAN DE ORO CITY WATER DISTRICT
DETAILED STATEMENT OF REVENUES AND EXPENSES
For the Month Ended December 31, 2013
(With Comparative Figures Against Budget for the Month Ended December 31, 2013)

CURRENT MONTH						PARTICULARS	YEAR TO DATE					
ACTUAL		BUDGET		OVER/(UNDER) BUDGET			ACTUAL		BUDGET		OVER/(UNDER) BUDGET	
AMOUNT	%TOTAL	AMOUNT	%TOTAL	AMOUNT	%BUDGET		AMOUNT	%TOTAL	AMOUNT	%TOTAL	AMOUNT	%BUDGET
						OPERATING REVENUES						
						WATER SALES:						
59,533,409.88	94.50	69,497,824	93.51	(9,964,414.34)	(15.09)	Metered Sales to General Customers *	665,276,144.65	94.39	742,653,349	93.33	(77,377,204.25)	(10.44)
						Unmetered Sales to General Customers						
						Sales to Irrigation Customers						
						Private Fire Protection Service						
						Public Fire Protection Service						
						Sales to Other Water Utilities for Resale						
305,037.00	0.48	594,237	0.81	(289,200.00)	(48.37)	Sales to Government Agencies by Contract	2,638,102.00	0.37	7,139,944	0.90	(4,494,742.00)	(63.03)
73,810.98	0.12	65,000	0.09	8,810.98	13.56	Other Sales of Services	982,693.36	0.14	788,800	0.10	202,893.36	25.99
59,912,257.64	95.10	69,157,121	94.41	(9,244,863.36)	(13.37)	Total Water Sales	668,894,930.01	94.91	750,764,193	84.32	(81,869,262.99)	(10.90)
						OTHERS:						
422,957.97	0.07	620,000	0.85	(197,042.03)	(31.78)	Miscellaneous Service Revenues	7,173,006.43	1.02	7,440,000	0.93	(266,993.57)	(3.59)
2,609,693.29	4.14	3,424,394	4.68	(815,200.71)	(23.80)	Rent of Water Property						
						Penalty Charges **	28,111,189.85	3.99	37,142,667	4.67	(9,031,477.15)	(24.32)
						Rental of Water Meter						
51,500.00	0.08	49,920	0.07	2,580.00	5.27	Other Water Revenues	617,300.00	0.09	587,940	0.07	30,260.00	5.15
3,084,151.26	-4.80	4,093,814	5.59	(1,009,662.74)	(24.69)	Total Others	35,901,558.28	5.09	45,169,707	5.68	(9,268,148.72)	(20.52)
62,996,409.90	100.00	73,250,935	100.00	(10,254,528.10)	(14.00)	TOTAL OPERATING REVENUES	704,796,488.29	100.00	795,933,900	100.00	(91,137,411.71)	(11.45)
						PRODUCTION DEPARTMENT						
						(SOURCE OF SUPPLY & TRANSMISSION/DISTRIBUTION EXPENSES)						
						OPERATION:						
888,089.00	1.41	1,076,955	1.47	(188,866.00)	(17.54)	Operation Supervision and Engineering	11,018,747.21	1.58	12,923,472	1.62	(1,904,724.79)	(14.74)
129,982.89	0.21	151,756	0.21	(21,773.11)	(14.35)	GIS Contributions and Others	1,584,997.58	0.22	1,821,072	0.23	(236,074.44)	(12.66)
12,087.50	0.02	17,738	0.02	(5,650.50)	(31.86)	Philhealth Contributions	151,482.50	0.02	212,956	0.03	(61,363.50)	(28.84)
1,830,364.57	2.91	665,541	0.91	(1,164,823.57)	(175.02)	Employees' Pensions & Benefits	7,792,172.81	1.11	7,986,492	1.00	(194,319.38)	(2.43)
133,213.20	0.21	142,997	0.19	(9,883.80)	(6.25)	COWD Provident Fund Contribution	1,655,445.90	0.23	1,705,144	0.21	(49,718.10)	(2.92)
5,800.00	0.01	3,850	0.01	1,950.00	0.56	COWD Pag-ibig Fund Contribution	66,700.00	0.01	67,896	0.01	(1,100.00)	(1.62)
27,243.40	0.04	42,899	0.06	(15,654.60)	(36.48)	Miscellaneous Operation Dept. Expenses	247,535.47	0.04	314,776	0.06	(67,240.53)	(19.91)
826,736.22	1.31	154,984	0.21	(671,752.22)	(433.43)	Overtime & Holiday Expenses	1,973,525.64	0.28	1,959,898	0.23	(13,626.64)	(0.61)
23,749.80	0.04	23,659	0.04	90.00	0.38	Fuel, Oil and Lubricants	513,305.03	0.07	355,890	0.04	(157,505.03)	(44.27)
15,961.15	0.03	33,000	0.05	(17,038.85)	(51.63)	Office Supplies & Other Expenses	280,565.08	0.04	395,000	0.05	(114,434.91)	(29.15)
	0.00	15,400	0.02	(15,400.00)	(0.00)	Trans./Dist. Labor & Material Expenses	4,834.33	0.01	184,800	0.01	(179,965.67)	(0.00)
12,931,143.50	20.53	12,714,200	17.36	(216,943.50)	(0.00)	Purchased Water	151,815,301.00	21.54	152,570,409	19.17	(755,099.00)	(0.49)
16,824,170.23	26.71	15,040,970	20.55	(1,783,200.23)	(11.79)	Total Operation Expenses	177,104,592.34	25.14	180,594,440	23.08	(3,469,847.66)	(1.93)
						MAINTENANCE:						
	0.00		0.00	0.00	0.00	Maintenance of Collecting & Impchg. Reservoirs		0.00		0.00	0.00	0.00
	0.00		0.00	0.00	0.00	Maintenance of Springs and Tunnels		0.00		0.00	0.00	0.00
0.00	0.00	6,511	0.01	(6,511.00)	(100.00)	Maintenance of Wells	9,116.32	0.00	78,066	0.01	(68,949.68)	(88.32)
	0.00		0.00	0.00	0.00	Maintenance of Supply Mains		0.00		0.00	0.00	0.00
	0.00		0.00	0.00	0.00	Maintenance of Other Source of Supply Plant		0.00		0.00	0.00	0.00
	0.00		0.00	0.00	0.00	Maintenance of Transmission/Distribution Mains		0.00		0.00	0.00	0.00
0.00	0.00	6,511	0.01	(6,511.00)	(100.00)	Total Maintenance of Supply Expenses	9,116.32	0.00	78,066	0.01	(68,949.68)	(88.32)
16,824,170.23	26.71	15,046,381	20.55	(1,777,788.23)	(11.74)	Total Source of Supply Trans./Dist. Expenses	177,113,708.66	25.14	180,672,506	23.09	(3,558,797.34)	(1.97)

CURRENT					
ACTUAL		BUDGET		OVER (UNDER) BUDGET	
AMOUNT	% TO TOTAL	AMOUNT	% TO TOTAL	AMOUNT	% OF BUDGET

174,888.88	0.28	194,672	0.26	19,293.12	9.89
8,604,359.36	13.66	8,500,000	11.60	(104,359.36)	(1.23)
8,779,228.24	13.94	8,694,672	11.87	(85,159.24)	(0.88)

1,660.00	0.00	1,425	0.00	(235.00)	(16.49)
12,737.50	0.02	20,563	0.03	7,845.50	38.12
14,397.50	0.02	72,066	0.03	7,610.50	34.58
8,793,625.74	13.96	8,716,189	11.90	(77,545.74)	(0.89)

178,392.14	0.28	200,000	0.27	21,607.86	10.80
187,695.00	0.30	53,500	0.07	(134,195.00)	(250.83)
366,087.14	0.58	253,500	0.35	(112,587.14)	(44.41)

0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	24,883	0.03	24,883.00	100.00
0.00	0.00	24,883	0.03	24,883.00	100.00
366,087.14	0.58	277,583	0.38	(88,504.14)	(31.88)
25,983,863.11	41.25	24,930,844	32.83	(1,053,019.11)	(4.04)

1,409,803.96	2.24	1,515,781	2.07	105,977.02	6.97
201,012.80	0.32	216,683	0.30	15,675.20	7.23
18,887.50	0.03	24,409	0.03	6,721.80	23.44
3,359,835.43	5.33	1,078,381	1.47	(2,280,654.43)	(211.37)
208,899.82	0.33	215,428	0.29	6,528.35	3.06
10,898.16	0.02	10,700	0.01	(196.16)	(1.85)
420.00	0.00	3,300	0.00	2,880.00	66.00
303,041.96	0.48	81,707	0.11	(221,334.96)	(270.89)
78,078.17	0.12	119,308	0.16	41,229.83	34.72
15,193.70	0.02	39,571	0.05	24,378.30	61.60
270,471.42	0.43	388,281	0.53	117,809.58	30.34
141,540.68	0.22	204,321	0.28	143,110.31	50.28
37,799.31	0.06	177,376	0.24	140,726.69	75.78
462,684.38	0.73	486,363	0.67	25,678.82	5.26
18,678.00	0.03	36,689	0.05	29,010.00	51.72
15,133.05	0.02	35,141	0.05	20,007.85	56.64
0.00	0.00	1,126	0.00	1,126.00	0.00
6,549,948.16	10.40	4,728,772	6.46	(1,821,177.15)	(36.51)

PARTICULARS

PUMPING EXPENSES

OPERATION:

Pumping Labor and Expenses	18,293.12	0.09
Fuel or Power Purchased for Pumping	(104,359.36)	(1.23)
Total Operation Expenses	(85,159.24)	(0.88)

MAINTENANCE:

Maintenance of Structures and Improvements	235.00	(16.49)
Preventive Maintenance of Pumping Plants	7,845.50	38.12
Total Maintenance Expenses	7,610.50	34.58
Total Pumping Expenses	(77,545.74)	(0.89)

WATER TREATMENT EXPENSES

OPERATION:

Operation Labor and Expenses	0.00	0.00
Chemicals and Filtering Materials	21,607.86	10.80
Laboratory Supplies and Other Expenses	(134,195.00)	(250.83)
Total Operation Expense	(112,587.14)	(44.41)

MAINTENANCE:

Maintenance of Structures & Improvements	0.00	0.00
Maintenance of Water Treatment Equipment	24,883.00	100.00
Total Maintenance Expenses	24,883.00	100.00
Total Water Treatment Expenses	(88,504.14)	(31.88)

TOTAL PRODUCTION DEPARTMENT EXPENSES

REPAIR AND MAINTENANCE DEPARTMENT

MAINTENANCE & REPAIRS:

Maint. & Repair Supervision and Engineering	105,977.02	6.97
GIS Contributions and Others	15,675.20	7.23
Public Health Contributions	6,721.80	23.44
Employees' Pensions & Benefits	(2,280,654.43)	(211.37)
COWD Provident Fund Contribution	6,528.35	3.06
COWD Pay-If-Big Fund Contribution	(196.16)	(1.85)
Miscellaneous Repair & Maint. Dept. Expenses	2,880.00	66.00
Overtime & Holiday Expenses	(221,334.96)	(270.89)
Fuel, Oil and Lubricants	41,229.83	34.72
Office Supplies & Other Expenses	24,378.30	61.60
Maintenance & Repair of General Plant	117,809.58	30.34
Maintenance & Repair Pumping Facilities	143,110.31	50.28
Maintenance of Reservoirs and Tanks	9,006.00	0.00
Maintenance of Transmission/Distribution Mains	140,726.69	75.78
Maintenance & Repair of Service Connections	25,678.82	5.26
Maintenance & Repair of Water Meters	29,010.00	51.72
Maintenance & Repair of Hydrants and Valves	20,007.85	56.64
Maintenance & Repair of Miscellaneous Plants	1,126.00	0.00

TOTAL REPAIR & MAINT. DEPT. EXPENSES

YEAR TO DATE					
ACTUAL		BUDGET		OVER (UNDER) BUDGET	
AMOUNT	% TO TOTAL	AMOUNT	% TO TOTAL	AMOUNT	% OF BUDGET

1,879,089.91	0.27	2,320,884	0.29	449,764.09	19.31
100,086,559.61	14.20	102,000,000	12.82	1,913,440.39	1.88
101,965,650.52	14.47	104,328,884	13.11	2,363,204.46	2.27

15,258.00	0.00	17,160	0.00	1,844.00	10.78
109,717.35	0.02	246,996	0.03	138,278.65	55.98
123,973.35	0.02	264,896	0.03	140,122.65	53.06
102,089,832.87	14.48	104,582,880	13.14	2,503,327.13	2.39

2,956,835.36	0.42	2,400,800	0.30	(556,035.36)	(23.21)
589,852.00	0.08	642,000	0.08	52,148.00	8.15
3,546,587.36	0.50	3,042,800	0.38	(504,587.36)	(16.58)

18,210.00	0.00	289,396	0.04	270,786.00	93.70
18,210.00	0.00	289,396	0.04	270,786.00	93.70
3,564,797.36	0.51	3,330,996	0.42	(233,801.36)	(7.02)

TOTAL PRODUCTION DEPARTMENT EXPENSES

16,942,698.85	2.39	19,185,772	2.28	1,243,073.15	7.39
2,434,218.30	0.35	2,606,256	0.33	166,037.70	6.39
223,812.50	0.03	292,908	0.04	69,095.50	23.50
12,819,581.84	1.83	12,047,772	1.63	26,190.38	0.22
2,489,485.82	0.35	2,585,136	0.32	115,650.18	4.47
127,587.17	0.02	126,400	0.02	812.83	0.63
9,571.50	0.00	35,800	0.00	26,428.50	73.41
539,149.43	0.08	980,434	0.12	441,334.57	45.01
1,175,200.83	0.17	1,435,298	0.16	260,095.07	16.12
279,176.95	0.04	474,884	0.06	195,667.05	41.21
3,640,037.65	0.52	4,659,372	0.59	1,019,334.35	21.88
1,565,384.21	0.22	3,415,452	0.43	1,850,067.79	54.17
14,088.30	0.00	108,096	0.01	94,027.70	86.89
975,184.48	0.14	2,135,712	0.27	1,160,527.54	54.34
6,226,583.19	0.88	5,869,356	0.74	(356,227.19)	(6.29)
222,380.80	0.03	464,258	0.06	241,855.20	52.10
60,649.82	0.01	421,692	0.05	361,042.36	85.82
13,080.50	0.00	13,440	0.00	379.50	2.82
49,737,841.82	7.08	55,745,264	7.13	7,007,422.16	12.35

CURRENT MONTH					
ACTUAL		BUDGET		OVER/UNDER BUDGET	
AMOUNT	% TO TOTAL	AMOUNT	% TO TOTAL	AMOUNT	% OF BUDGET
1,390,014.88	2.21	1,886,288	2.27	273,593.12	15.44
202,127.29	0.32	264,958	0.36	62,430.71	23.69
20,337.50	0.03	30,015	0.04	9,077.50	32.24
3,585,704.89	5.69	1,158,293	1.71	(2,335,411.89)	(189.78)
208,592.22	0.33	220,825	0.30	12,532.76	5.68
9,400.00	0.01	11,950	0.02	2,550.00	21.34
417,517.75	0.66	418,644	0.57	1,126.25	0.27
168,285.00	0.27	95,000	0.13	(73,285.00)	(77.56)
93,172.50	0.15	104,000	0.14	10,827.50	10.41
64,547.90	0.10	128,344	0.17	61,846.10	48.23
241,667.00	0.38	241,667	0.33	0.00	0.00
6,401,966.93	10.16	4,427,854	6.04	(1,374,312.93)	(31.59)

PARTICULARS

COMMERCIAL DEPARTMENT
(CUSTOMER ACCOUNT EXPENSES)

OPERATION:

Supervision	18,885,938.62	2.39
GSIS Contributions and Others	2,416,823.83	0.34
Philhealth Contributions	249,675.00	0.04
Employees' Pensions & Benefits	14,002,180.81	1.99
COWD Provident Fund Contribution	2,512,333.47	0.36
COWD Pag-ibig Fund Contribution	111,338.21	0.02
Miscellaneous Commercial Dept. Expenses	4,562,073.46	0.65
Overtime & Holiday Expenses	398,064.10	0.06
Fuel, Oil and Lubricants	1,143,258.58	0.16
Office Supplies & Other Expenses	810,893.84	0.12
Uncollectible Accounts	2,900,004.00	0.41
TOTAL COMMERCIAL DEPARTMENT EXPENSES	45,970,988.72	6.52

YEAR TO DATE					
ACTUAL		BUDGET ***		OVER/UNDER BUDGET	
AMOUNT	% TO TOTAL	AMOUNT	% TO TOTAL	AMOUNT	% OF BUDGET
18,885,938.62	2.39	18,078,406	2.51	3,104,558.38	15.55
2,416,823.83	0.34	3,174,606	0.40	758,072.17	23.88
249,675.00	0.04	366,180	0.05	116,506.00	30.68
14,002,180.81	1.99	15,003,316	1.89	1,001,348.39	6.87
2,512,333.47	0.36	2,651,190	0.33	138,766.53	5.28
111,338.21	0.02	143,400	0.02	32,061.79	22.36
4,562,073.46	0.65	5,823,728	0.63	461,654.54	9.19
398,064.10	0.06	1,140,000	0.14	743,935.90	86.28
1,143,258.58	0.16	1,248,000	0.16	104,741.42	8.34
810,893.84	0.12	1,318,728	0.19	705,834.16	46.54
2,900,004.00	0.41	2,300,804	0.36	0.00	0.00
TOTAL COMMERCIAL DEPARTMENT EXPENSES	45,970,988.72	53,131,848	6.68	7,190,879.28	13.48

ENGINEERING DEPARTMENT

(PLANNING, DESIGN, CONST., ELECTRO-MECHANICAL CONST. AND BLDG./GROUND MAINT. EXPENSES)

OPERATION:

Supervision	8,935,444.50	1.27
GSIS Contributions and Others	1,139,169.55	0.16
Philhealth Contributions	102,450.00	0.01
Employees' Pensions & Benefits	6,505,420.21	0.92
COWD Provident Fund Contribution	1,351,200.72	0.19
COWD Pag-ibig Fund Contribution	52,253.61	0.01
Miscellaneous Engineering Dept. Expenses	1,110,219.88	0.16
Overtime & Holiday Expenses	143,850.81	0.02
Fuel, Oil and Lubricants	125,279.87	0.02
Office Supplies & Other Expenses	345,054.93	0.05
TOTAL ENGINEERING DEPARTMENT EXPENSES	19,810,743.86	2.81

8,935,444.50	1.27	11,840,156	1.38	2,115,711.50	19.13
1,139,169.55	0.16	1,555,248	0.20	416,078.45	28.75
102,450.00	0.01	173,816	0.02	71,366.00	40.99
6,505,420.21	0.92	6,881,552	0.88	476,131.79	6.82
1,351,200.72	0.19	1,481,132	0.18	109,931.28	7.52
52,253.61	0.01	55,800	0.01	3,546.39	6.36
1,110,219.88	0.16	1,277,509	0.16	167,289.12	13.09
143,850.81	0.02	146,712	0.02	2,861.19	1.88
125,279.87	0.02	174,900	0.02	48,720.33	28.00
345,054.93	0.05	351,800	0.04	5,345.07	1.52
TOTAL ENGINEERING DEPARTMENT EXPENSES	19,810,743.86	23,225,124	2.92	3,444,380.12	14.70

ADMINISTRATIVE DEPARTMENT

OPERATION:

Administrative and General Salaries	7,591,230.11	1.08
GSIS Contributions and Others	1,047,293.39	0.15
Philhealth Contributions	93,800.00	0.01
Employees' Pensions & Benefits	5,449,319.57	0.77
COWD Provident Fund Contribution	1,136,853.51	0.16
COWD Pag-ibig Fund Contribution	37,400.00	0.01
Miscellaneous General & Admin. Expenses	3,074,093.89	0.44
Overtime/Holiday Pay	43,254.02	0.01
Fuel, Oil and Lubricants	161,946.28	0.02
Light & Power	3,400,729.66	0.48
Other Outside Services Employed	6,970,435.14	0.97
Travel Expenses & Per Diem	1,302,852.89	0.19
Training Expenses	1,462,554.40	0.21
Insurance Expenses	1,178,909.03	0.17
Injuries and Damages	208,837.10	0.03
Office Supplies & Other Expenses	973,127.49	0.12
Communications	1,220,084.84	0.17
Freight and Handling	2,685.36	0.00
Rents	264,000.00	0.04
Taxes and Licenses	15,279,427.27	2.17
Physical Fitness & Athletics	40,802.00	0.01
TOTAL ADMINISTRATIVE DEPT. EXPENSES	50,738,035.55	7.20

7,591,230.11	1.08	8,878,148	1.12	1,284,917.89	14.40
1,047,293.39	0.15	1,212,900	0.15	164,708.61	13.50
93,800.00	0.01	133,872	0.02	40,372.00	30.08
5,449,319.57	0.77	6,869,968	0.96	1,380,668.43	19.88
1,136,853.51	0.16	1,228,952	0.15	90,098.49	7.34
37,400.00	0.01	39,600	0.00	1,900.00	4.10
3,074,093.89	0.44	3,739,212	0.47	695,118.11	17.79
43,254.02	0.01	45,218	0.01	1,961.06	0.00
161,946.28	0.02	171,050	0.02	9,119.72	5.33
3,400,729.66	0.48	4,620,000	0.51	819,270.34	15.40
6,970,435.14	0.97	6,800,000	0.75	(870,435.14)	(14.51)
1,302,852.89	0.19	3,467,800	0.44	2,165,156.51	82.44
1,462,554.40	0.21	3,638,804	0.46	2,176,449.60	89.80
1,178,909.03	0.17	1,200,000	0.15	21,090.97	1.76
208,837.10	0.03	260,000	0.03	53,162.90	20.45
973,127.49	0.12	340,800	0.11	(33,127.49)	(3.94)
1,220,084.84	0.17	1,485,184	0.18	245,019.36	18.72
2,685.36	0.00	6,000	0.00	3,314.64	55.24
264,000.00	0.04	264,000	0.03	0.00	0.00
15,279,427.27	2.17	16,314,304	2.07	1,235,878.73	7.48
40,802.00	0.01	120,000	0.02	79,298.00	68.17
TOTAL ADMINISTRATIVE DEPT. EXPENSES	50,738,035.55	60,048,861	7.54	9,312,022.45	15.51

586,705.00	0.95	739,679	1.01	142,974.00	19.33
83,282.52	0.13	981,000	0.14	117,717.48	17.58
7,487.50	0.01	11,156	0.02	3,668.50	32.68
1,308,533.05	2.08	567,490	0.77	(741,043.05)	(130.58)
89,505.75	0.14	102,246	0.14	12,740.25	12.38
3,100.00	0.00	3,250	0.00	150.00	4.62
407,914.78	0.65	911,601	0.43	(503,686.28)	(50.91)
25,071.76	0.04	3,768	0.01	(21,303.76)	(666.38)
7,041.24	0.01	14,255	0.02	7,213.76	50.61
279,422.53	0.44	935,000	0.46	655,577.47	18.59
617,417.13	0.98	589,899	0.68	(117,417.13)	(23.48)
63,104.95	0.10	286,984	0.39	223,879.05	76.16
119,871.51	0.19	393,187	0.41	164,266.49	60.79
101,867.51	0.16	100,000	0.14	(1,867.51)	(1.87)
10,812.00	0.02	5,000	0.01	(5,812.00)	(116.24)
54,015.50	0.09	70,000	0.10	15,984.50	22.84
142,348.47	0.23	122,092	0.17	(20,256.47)	(16.59)
22,000.00	0.03	0.00	0.00	0.00	0.00
1,397,539.15	2.22	1,376,182	1.88	(21,347.15)	(1.55)
0.00	0.00	16,804	0.02	16,804.00	100.00
5,336,018.35	8.47	4,897,389	6.81	(348,628.35)	(6.89)

CURRENT MONTH						PARTICULARS	YEAR TO DATE					
ACTUAL		BUDGET		OVER/UNDER BUDGET			ACTUAL		BUDGET		OVER/UNDER BUDGET	
AMOUNT	% TO TOTAL	AMOUNT	% TO TOTAL	AMOUNT	% OF BUDGET		AMOUNT	% TO TOTAL	AMOUNT	% TO TOTAL	AMOUNT	% OF BUDGET
MANAGEMENT DEPARTMENT												
OPERATION:												
546,784.86	0.87	605,473	0.83	58,688.14	9.6%	Supervision	6,328,254.24	0.80	7,285,676	0.91	837,421.76	12.90
72,193.14	0.11	78,500	0.11	7,306.86	9.19	GSIS Contributions and Others	857,143.81	0.12	854,000	0.12	96,856.19	10.15
6,550.00	0.01	8,588	0.01	3,048.00	31.74	Philhealth Contributions	78,650.00	0.01	115,152	0.01	38,502.00	31.70
723,308.60	1.15	928,739	0.45	(395,069.00)	(120.36)	Employees' Pensions & Benefits	3,460,420.75	0.49	3,838,868	0.49	478,447.25	12.15
80,060.35	0.14	82,785	0.11	(2,724.65)	(3.24)	COWD Provident Fund Contribution	962,928.23	0.14	993,428	0.12	30,499.77	3.07
2,300.00	0.00	2,350	0.00	50.00	2.13	COWD Pag-ibig Fund Contribution	27,700.00	0.00	28,280	0.00	580.00	1.77
87,822.01	0.14	158,492	0.21	68,669.99	43.88	Miscellaneous General & Mgmt. Expenses	742,466.44	0.11	1,677,804	0.24	1,135,407.56	60.46
813.50	0.00	1,470	0.00	656.50	58.27	Overtime & Holiday Expenses	2,402.28	0.00	17,640	0.00	15,237.72	86.38
7,212.83	0.01	17,914	0.02	10,701.17	58.34	Fuel, Oil and Lubricants	187,248.07	0.03	287,768	0.03	20,519.93	9.88
33,459.10	0.05	22,380	0.03	110,859.10	(48.71)	Office Supplies & Other Expenses	280,343.85	0.04	278,000	0.03	(10,343.85)	(3.83)
-	0.00	10,808	0.01	10,000.00	100.00	Donations and Contributions	15,500.00	0.00	129,800	0.02	104,500.00	87.08
55,600.00	0.08	52,207	0.07	(3,393.00)	(6.50)	Advertising & Promotions	235,044.87	0.03	625,484	0.08	390,839.03	62.39
584,747.83	0.93	72,500	0.10	(512,247.83)	(708.55)	Corporate Social Responsibility Expenses	711,058.37	0.10	878,000	0.11	166,941.63	19.27
2,208,542.02	3.50	1,448,428	1.97	(760,114.02)	(53.19)	TOTAL MANAGEMENT DEPARTMENT EXPENSES	13,889,789.81	1.97	17,285,112	2.17	3,395,322.19	19.84
OFFICE OF THE GENERAL MANAGER												
OPERATION:												
62,670.00	0.10	81,710	0.11	19,040.00	23.31	Supervision	752,040.00	0.11	884,828	0.12	228,588.00	23.31
19,504.89	0.03	12,316	0.02	(7,188.89)	(58.27)	GSIS Contributions and Others	128,357.48	0.02	147,792	0.02	19,434.52	13.15
1,025.00	0.00	1,078	0.00	53.00	4.74	Philhealth Contributions	7,587.50	0.00	12,812	0.00	5,324.50	41.24
111,178.22	0.18	63,521	0.09	(47,657.22)	(75.03)	Employees' Pensions & Benefits	568,855.54	0.08	782,252	0.10	193,396.46	25.40
9,400.50	0.01	10,183	0.01	782.50	7.41	COWD Provident Fund Contribution	112,806.00	0.02	121,838	0.02	9,030.00	7.41
1,097.97	0.00	350	0.00	(747.97)	(213.71)	COWD Pag-ibig Fund Contribution	3,997.97	0.00	4,200	0.00	202.03	4.81
180,903.16	0.29	121,196	0.17	(59,707.16)	(49.26)	Miscellaneous General & Mgmt. Expenses	1,193,811.11	0.17	1,454,352	0.18	260,440.89	17.91
-	-	-	0.00	0.00	0.00	Overtime & Holiday Expenses	-	0.00	-	0.00	0.00	0.00
8,718.48	0.01	7,800	0.01	(918.48)	(24.55)	Fuel, Oil and Lubricants	80,830.52	0.01	84,000	0.01	23,669.48	27.46
5,279.00	0.01	12,598	0.02	7,319.00	57.77	Office Supplies & Other Expenses	165,385.52	0.02	159,000	0.02	(15,385.52)	(10.26)
10,000.00	0.02	16,780	0.02	6,780.00	40.12	Professional Fees	164,416.70	0.02	200,400	0.03	35,883.30	17.99
18,402.33	0.03	9,187	0.01	(7,215.33)	(78.83)	Discretionary Fund Expenses	108,934.32	0.02	110,904	0.01	189.68	0.15
253,750.45	0.40	25,008	0.03	(228,742.45)	(915.90)	COA Audit Fees	300,000.00	0.04	309,800	0.04	9,800	0.00
679,930.00	1.08	360,898	0.49	(319,232.00)	(89.92)	TOTAL OFFICE OF THE GENERAL MANAGER	3,567,822.66	0.51	4,328,376	0.54	760,453.34	17.57
OFFICE OF THE BOARD OF DIRECTORS												
OPERATION:												
38,567.00	0.06	57,382	0.12	59,825.00	58.16	Supervision	916,018.38	0.13	1,048,794	0.13	132,885.64	12.65
6,515.24	0.01	12,738	0.02	6,222.76	48.65	GSIS Contributions and Others	134,439.28	0.02	152,856	0.02	18,416.72	12.05
600.00	0.00	1,541	0.00	941.00	61.06	Philhealth Contributions	11,775.00	0.00	13,482	0.00	6,717.00	38.32
124,974.01	0.20	60,322	0.08	(65,652.01)	(110.67)	Employees' Pensions & Benefits	828,585.78	0.09	711,864	0.09	82,299.22	11.58
5,485.65	0.01	12,312	0.02	6,826.35	55.74	COWD Provident Fund Contribution	134,891.10	0.02	148,704	0.02	13,812.90	9.29
200.00	0.00	350	0.00	150.00	42.86	COWD Pag-ibig Fund Contribution	3,400.00	0.00	4,200	0.00	800.00	19.05
30,508.79	0.05	31,851	0.04	1,342.21	4.21	Miscellaneous General & Mgmt. Expenses	279,841.08	0.04	382,212	0.05	102,370.92	28.78
-	-	-	0.00	0.00	0.00	Overtime & Holiday Expenses	-	0.00	-	0.00	0.00	0.00
10,224.26	0.02	16,300	0.02	6,075.72	38.09	Fuel, Oil and Lubricants	110,598.68	0.02	138,800	0.02	87,403.32	64.14
2,418.70	0.00	5,588	0.01	3,169.30	58.01	Office Supplies & Other Expenses	48,980.10	0.01	56,000	0.01	19,019.90	28.02
1,084,488.24	1.74	273,420	0.37	(811,068.24)	(300.30)	Directors' Fees and Remunerations	3,270,848.34	0.46	3,281,940	0.41	10,191.66	0.31
1,311,982.31	2.08	501,806	0.68	(810,176.31)	(161.87)	TOTAL OFFICE OF THE BOARD OF DIRECTORS	5,538,355.72	0.78	6,012,072	0.76	473,716.28	7.88
FINANCE DEPARTMENT												
(ACCOUNTING, CASHIER'S & PROPERTY EXPENSES)												
OPERATION:												
890,215.7	1.41	1,160,010	1.58	269,795.25	23.28	Supervision	11,085,246.64	1.57	13,920,228	1.75	2,854,981.36	20.51
126,588.1	0.20	153,191	0.21	26,602.84	18.06	GSIS Contributions and Others	1,478,126.37	0.21	1,836,292	0.23	398,165.63	19.56
11,275.0	0.02	17,790	0.02	6,515.00	36.62	Philhealth Contributions	138,387.50	0.02	213,480	0.03	77,092.50	36.41
1,438,283.6	2.26	583,253	0.80	(855,030.60)	(145.60)	Employees' Pensions & Benefits	6,626,489.58	0.94	6,989,036	0.88	372,546.32	5.32

CURRENT MONTH						PARTICULARS	YEAR TO DATE					
ACTUAL		BUDGET		OVER/UNDER BUDGET			ACTUAL		BUDGET		OVER/UNDER BUDGET	
AMOUNT	% TO TOTAL	AMOUNT	% TO TOTAL	AMOUNT	% OF BUDGET		AMOUNT	% TO TOTAL	AMOUNT	% TO TOTAL	AMOUNT	% OF BUDGET
133,532.37	31.57	144,957	23.38	11,424.63	7.88	COWD Provident Fund Contribution	1,859,882.87	0.24	1,738,484	23.38	79,401.33	4.57
4,600.00	1.15	4,330	0.70	(270.00)	(12.84)	COWD Pay-By Fund Contribution	50,800.00	0.01	52,260	0.70	1,460.00	2.66
138,896.93	0.22	128,759	0.18	(10,137.83)	(7.67)	Miscellaneous Finance Dept. Expenses	1,285,671.10	0.16	1,545,108	0.19	259,438.80	16.79
79,535.68	9.13	7,250	0.01	(72,285.68)	(997.04)	Overtime & Holiday Expenses	141,942.08	0.02	87,800	0.01	(54,942.08)	(63.15)
5,398.97	0.01	9,250	0.01	3,851.03	31.55	Fuel, Oil and Lubricants	72,682.18	0.01	112,260	0.01	39,577.82	35.24
63,637.60	0.10	105,150	0.14	41,512.40	39.46	Office Supplies & Other Expenses	1,031,644.25	0.15	1,281,800	0.15	250,155.75	19.24
2,895,284.15	4.60	2,314,860	3.16	(581,424.15)	(25.12)	TOTAL FINANCE DEPARTMENT EXPENSES	23,548,942.43	3.34	27,768,828	3.49	4,219,885.57	15.20
54,053,383.32	85.80	44,745,485	61.09	(9,307,898.31)	(20.90)	TOTAL OPERATING AND MAINT. EXPENSES	495,568,739.48	70.31	537,145,734	67.49	41,577,014.52	7.74
5,852,766.42	9.29	5,194,331	8.33	658,435.11	4.12	DEPRECIATION	69,137,043.07	9.81	73,251,972	9.20	4,114,928.93	5.62
578,323.31	0.91	254,000	0.35	(324,323.31)	(126.90)	NET NONOPERATING INCOME	4,488,577.80	0.64	3,548,040	0.38	940,537.80	47.20
3,666,572.47	5.82	22,655,119	30.93	(18,988,546.53)	(83.82)	TOTAL INCOME BEFORE MISCELLANEOUS INCOM	144,577,383.64	20.51	188,584,174	23.69	(44,006,790.36)	(23.34)
						Deductions and Interest :						
						Miscellaneous Income-Interest						
						Miscellaneous Amortizations						
						Miscellaneous Income Deductions						
						Extraordinary Gains/Losses						
						Total						
3,666,572.47	5.82	22,655,119	30.93	(18,988,546.53)	(83.82)	TOTAL INCOME BEFORE INTEREST CHARGES	144,577,383.64	20.51	188,584,174	23.69	(44,006,790.36)	(23.34)
						INTEREST CHARGES						
						Interest on Long Term Debt	85,589,801.94	12.14	97,885,381	12.31	12,295,579.06	12.65
						Amortization of Debt Discount & Expense						
						Amortization of Premium on Debt-Credit						
						Taxes Assumed on Interest						
						Interest Charged to Construction-Credit						
						Other Interest Charges						
						Total Interest Charges	85,589,801.94	12.14	97,885,381	12.31	12,295,579.06	12.65
6,126,742.46	9.73	8,010,842	10.94	1,884,099.54	23.52	NET INCOME/(LOSS) FOR THE PERIOD	58,987,581.70	8.37	90,698,793	11.38	(31,711,211.36)	(34.68)
(7,460,189.99)	(3.91)	14,644,277	19.98	(17,104,446.99)	(116.80)							

Notes to Financial Statements (p. 15-22)

CAGAYAN DE ORO CITY WATER DISTRICT
CASH FLOW STATEMENT
 (For the Month Ended December 31, 2013)

	CURRENT MONTH			YEAR TO DATE		
	ACTUAL	BUDGET	OVER/(UNDER) BUDGET	ACTUAL	BUDGET	OVER/(UNDER) BUDGET
RECEIPTS:						
Collection of Water Bills:						
Current	32,141,463.10	72,517,015	(40,375,551.90)	385,837,660.68	787,126,860	(401,289,199.32)
Arrears	24,294,409.55	3,480,001	20,814,408.55	308,122,374.71	41,760,012	266,362,362.71
Other Sales or Services	73,810.98	65,000	8,810.98	982,683.36	780,000	202,683.36
Miscellaneous Service Revenues	495,803.97	620,000	(124,196.03)	7,374,500.43	7,440,000	(65,499.57)
Other Water Revenues	51,500.00	48,920	2,580.00	617,300.00	587,040	30,260.00
Refunds of Employees Cash Advances	103,870.39	-	103,870.39	252,451.78	-	252,451.78
Refunds/Payments of Accts. Receivable and Others	15,335.00	-	15,335.00	621,473.55	-	621,473.55
Interest Revenues	57,029.33	74,000	(16,970.67)	290,469.74	888,000	(597,530.26)
Miscellaneous Non-Operating Revenues	402,299.00	180,000	222,299.00	5,774,434.44	2,160,000	3,614,434.44
LWUA GRANT (OP-Sendong)	-	-	-	-	-	-
Cash Donations - (Sendong)	-	-	-	-	-	-
Loan Proceeds - Guaranty Deposit	-	-	-	-	-	-
Other Receipts/Adjustments/	152,975.42	-	152,975.42	9,277,560.32	-	9,277,560.32
Total Receipts	67,788,496.74	76,884,938	(19,196,439.26)	719,150,909.01	840,741,812	(121,591,002.99)
DISBURSEMENTS:						
Payments of Vouchers Payable	39,370,976.11	33,815,690	(5,555,286.11)	401,126,049.25	405,787,554	4,661,504.75
Payroll	8,203,822.30	9,553,658	1,349,835.70	101,414,300.41	114,643,896	13,229,595.59
Advances to Officers and Employees	520,469.97	-	(520,469.97)	3,014,810.09	-	(3,014,810.09)
Payments of Phase II-A Prodn. Wells	38,381.00	38,381	-	460,572.00	460,572	-
Payments of Phase II-B Schedules A, B & C	1,031,067.00	1,031,067	-	11,732,359.00	12,372,804	640,445.00
Payment of Phase III (520.128M)	242,697.00	242,697	-	13,550,874.00	13,550,874	-
LWUA - 200M Loan - Lateral Project	-	-	-	11,717,580.00	11,717,580	-
LWUA-5 Million HRSp Youngsville	82,317.00	82,317	-	987,804.00	987,804	-
DBP-Refinancing Loan	9,414,849.75	9,905,693	490,843.25	93,689,301.87	96,603,696	2,914,394.13
John-dorf Ventures	617,742.90	205,915	(411,827.90)	3,706,457.40	2,470,980	(1,235,477.40)
Franchise Tax	1,067,932.47	1,376,192	308,259.53	11,751,813.73	16,514,304	4,762,490.27
Capital Improvements	5,237,001.86	9,737,852	4,500,850.14	88,369,406.88	116,854,268	28,484,861.12
Reserve & Contingency	-	613,363	613,363.00	10,695,000.00	7,360,356	(3,334,644.00)
Guaranty Deposit Repayment	-	-	-	-	-	-
Sendong Rehabilitation - 53M Grant	1,509,769.59	-	(1,509,769.59)	20,916,006.25	34,408,770	13,492,763.75
Total Disbursements	67,336,916.95	66,602,725	(734,191.95)	753,131,334.88	833,733,458	80,602,123.12
NET RECEIPTS/(DISBURSEMENTS)	(9,548,420.21)	10,282,213	(19,930,631.21)	(33,980,425.87)	7,008,454	(40,988,879.87)
CASH BALANCE, BEGINNING	100,271,557.20	121,328,806	(21,058,248.66)	124,703,562.86	124,703,563	-
CASH BALANCE, END ***NFS p16***	90,723,136.99	131,712,017	(40,988,879.87)	90,723,136.99	131,712,017	(40,988,879.87)

CAGAYAN DE ORO CITY WATER DISTRICT

FUNDS FLOW STATEMENT

(For the One-Month Period Ended December 31, 2013)

(With Comparative Budget Figures for the Month Period Ended December 31, 2013)

	CURRENT MONTH			YEAR TO DATE		
	ACTUAL	BUDGET	OVER /(UNDER) BUDGET	ACTUAL	BUDGET	OVER /(UNDER) BUDGET
SOURCES OF WORKING CAPITAL						
OPERATIONS:						
NET INCOME /(LOSS) (net of RE adjustment)	(11,196,784.72)	14,644,277	(25,841,061.72)	36,665,106.27	90,598,873	(53,933,766.73)
ADD : EXPENSES NOT USING WORKING CAPITAL						
Depreciation and Amortization of Fixed Assets	5,848,617.42	6,104,331	(254,713.58)	63,522,902.73	73,251,972	(9,729,069.27)
Amortization of Debt Discounts and Expenses						
Provision for Injuries and Benefits Reserve						
Other Deferred Debits						
TOTAL	(5,347,167.30)	20,748,608	(26,095,775.30)	100,188,009.00	163,850,845	(63,662,836.00)
LESS : INCOME NOT PROVIDING WORKING CAPITAL						
Gain on Sale of Fixed Assets						
TOTAL	(5,347,167.30)	20,748,608	(26,095,775.30)	100,188,009.00	163,850,845	(63,662,836.00)
Capital Contribution - Gov't						
Customers Contribution for Service Lines						
Other Paid-in- Capital	40,994,730.00		40,994,730.00	43,235,426.50		43,235,426.50
Appraisal Capital						
Additional Loans Payable	(57,907,497.12)		(57,907,497.12)	(60,145,683.06)		(60,145,683.06)
Other Long Term Debts	(2,470,971.60)		(2,470,971.60)	(4,941,943.21)		(4,941,943.21)
Retentions on Contract Payments						
Proceeds of Sale of Fixed Assets						
Other Deferred Credits	981,757.46		981,757.46	(1,961,880.93)		(1,961,880.93)
Other Operating Reserves						
TOTAL	(18,401,981.26)	-	(18,401,981.26)	(23,814,080.70)	-	(23,814,080.70)
TOTAL SOURCES OF WORKING CAPITAL	(23,749,148.56)	20,748,608	(44,497,756.56)	76,373,928.30	163,850,845	(87,476,916.70)
USES OF WORKING CAPITAL						
Additions to Utility Plant (includes Unclassified Utility Plant)	(45,877,549.96)	9,737,852	(55,615,401.96)	6,696,576.68	116,854,268	(110,157,691.32)
NET INCREASE /(DECREASE) IN WORKING CAPITAL	(69,626,598.52)	11,010,756	11,117,645.40	69,677,351.62	46,996,577	22,680,774.62

CAGAYAN DE ORO CITY WATER DIST.
SCHEDULE OF CHANGES IN WORKING CAPITAL
(For the Month Period Ended December 31, 2013)

	CURRENT MONTH			YEAR TO DATE		
	ACTUAL	BUDGET	OVER (UNDER) BUDGET	ACTUAL	BUDGET	OVER (UNDER) BUDGET
INCREASE /(DECREASE) IN CURRENT ASSETS						
Cash	(9,548,420.21)	N/A	N/A	(36,020,180.37)	N/A	N/A
Special Deposits	110,910.32			8,901,628.37		
Working Funds	0.00			(5,000.00)		
Temporary Investments	0.00			22,583,879.00		
Accounts Receivable-Customers (NFS #9)	6,777,325.86			908,374.57		
Advances to Officers and Employees	(116,525.94)			(65,701.00)		
Accounts Receivable-Others	1.00			9,878.95		
Allowance for Bad Debts	(241,667.00)			(2,658,337.00)		
Materials and Supplies	1,590,514.74			9,349,206.77		
Prepayments	(3,670,236.59)			(1,317,929.42)		
Other Current Assets and Other Debits	0.00			0.00		
Other Deferred Debits	(147,299.89)			8,769,502.99		
Unamortized Debt Discount and Expenses	0.00			0.00		
TOTAL	(5,245,397.71)	N/A	N/A	10,455,324.86	N/A	N/A
INCREASE /(DECREASE) IN CURRENT LIABILITIES						
Current Portion on Long Term Debts	55,078,256.53	N/A	N/A	24,780,866.87	N/A	N/A
GSIS/SSS Accounts Payable	23,870.73			6,769,494.69		
Customers' Deposits	0.00			0.00		
Medicare Payable	(375.00)			2,987.50		
Interest Payable	0.00			0.00		
Withholding Taxes Payable	1,564,546.28			1,231,450.39		
Other Current and Accrued Liabilities	7,715,002.27			14,085,820.77		
Injuries and Benefits Reserve	0.00			0.00		
TOTAL	64,381,300.81	N/A	N/A	46,870,620.22	N/A	N/A
NET INCREASE /(DECREASE) IN WORKING CAPITAL	(69,626,898.52)	N/A	N/A	(36,415,295.36)	N/A	N/A

CAGAYAN DE ORO CITY WATER DISTRICT
DETAILS OF UTILITY PLANT IN SERVICE
For the Month Ended December 31, 2013
(With Comparative Figures for the Period Ended December 31, 2012)

	<u>ACTUAL THIS MONTH</u>		<u>THIS MONTH LAST YEAR</u>		<u>OVER</u>
	<u>AMOUNT</u>	<u>%TO TOTAL</u>	<u>AMOUNT</u>	<u>%TO TOTAL</u>	<u>(UNDER)</u>
UTILITY PLANT IN SERVICE : (NFS #2)					
Intangible Plant - Organization	2,106,586.48	0.11	2,106,586.48	0.12	0.00
Land and Land Rights	36,720,154.95	1.91	36,716,654.95	2.01	3,500.00
Structures and Improvements	20,897,375.34	1.09	20,427,475.43	1.12	469,899.91
Spring and Tunnels	5,000.00	0.00	5,000.00	0.00	0.00
Wells	105,015,725.55	5.45	105,015,725.55	5.74	0.00
Structures and Improvements	67,232,684.65	3.49	67,215,561.85	3.68	17,122.80
Power Production Equipments	35,020,122.65	1.82	23,906,765.55	1.31	11,113,357.10
Pumping Equipments	132,495,188.19	6.88	97,225,441.25	5.32	35,269,746.94
Water Treatment Equipments	6,305,804.35	0.33	5,195,906.35	0.28	1,108,898.00
Structures and Improvements	17,463,201.01	0.91	17,456,979.01	0.95	6,222.00
Reservoirs and Tanks	31,124,565.45	1.62	31,091,052.10	1.70	33,513.35
Transmission and Distribution Mains	932,497,963.19	48.42	929,052,510.02	50.81	3,445,453.17
Fire Mains	3,423.70	0.00	3,423.70	0.00	0.00
Service Connections	216,746,628.41	11.25	207,665,114.87	11.36	9,081,513.54
Meters	178,050,599.12	9.25	161,286,169.78	8.82	16,764,429.34
Meter Installations	7,322,488.53	0.38	2,834,014.00	0.15	4,488,474.53
Hydrants	6,714,114.83	0.35	6,660,830.68	0.36	53,284.15
Structures and Improvements	25,855,795.38	1.34	25,165,943.15	1.38	689,852.23
Office Furnitures and Equipments	24,576,966.65	1.28	22,522,153.22	1.23	2,054,813.43
Transportation Equipments	32,231,737.98	1.67	25,358,837.78	1.39	6,872,900.20
Stores Equipments	38,900.00	0.00	21,900.00	0.00	17,000.00
Laboratory Equipments	4,812,183.28	0.25	1,449,873.66	0.08	3,362,309.62
Communication Equipments	3,864,799.38	0.20	3,165,036.50	0.17	699,762.88
Power Operated Equipments	22,890,275.75	1.19	22,574,348.50	1.23	315,927.25
Tools, Shop and Garage Equipments	15,871,588.31	0.82	14,385,030.18	0.79	1,486,558.13
Surveying Instruments and Accessories	41,207.82	0.00	41,207.82	0.00	0.00
TOTAL UTILITY PLANT IN SERVICE	1,925,905,080.95	100.00	1,828,550,542.38	100.00	97,354,538.57

CAGAYAN DE ORO CITY WATER DISTRICT
NOTES TO FINANCIAL STATEMENTS
 December 31, 2013

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

1.1 Basis of Financial Statements

The financial statements have been prepared in accordance with generally accepted accounting principles applied on a consistent basis.

The chart of accounts provided for in Local Water Utilities Administration's Commercial Practices Manual for Water Districts is used in the recording of the District's financial transactions and presentation of the financial statements.

1.2 Allowance for Bad Debts

Provision for Allowance for Bad Debts is based on 2013 approved budget. Annual Allowance for Bad Debt totaled P2,900,004.00 with an average monthly allowance of P241,667.00.

1.3 Prepaid Expenses

The District adopts the asset method in recording payment for insurance, and vehicle registration which are amortized monthly throughout the period of coverage.

1.4 Materials and Supplies

The District uses the asset method in recording materials and supplies. Expense is recognized upon issuance of the items stored in stocks.

1.5 Cost of Land

Direct cost of land acquired and other incidental expenses are capitalized as part of the cost of land.

1.6 Property and Equipment

Utilities plant in service are carried at cost less accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the properties ranging from 5 to 50 years after deducting the residual value which is 10% of the original cost of the asset from the total cost of the asset.

The cost of maintenance and minor repairs is charged to expense as incurred, while major repairs, which prolong the life of the assets are capitalized. When assets are retired or otherwise disposed of the cost and related accumulated depreciation and amortization are removed from the accounts and any resulting gain or loss is charged to current operation.

1.7 Revenue Recognition

Revenues are recorded using the accrual basis of accounting.

2. UTILITY PLANT IN SERVICE

Items under the Utility Plant in Service are stated at cost.

The breakdown of this account is shown below:

	2013	2012
Intangible Plant	2,106,696.48	2,106,696.48
Land and Land Rights	35,720,154.95	35,710,554.95
Source of Supply Plant	125,018,100.89	125,448,206.88
Pumping Plant	234,747,995.48	189,347,768.65
Water Treatment Plant	6,305,804.35	5,195,926.35
Transmission & Distribution Mains	1,389,022,084.24	1,368,050,084.18
General Plant	120,183,454.53	114,004,330.81
Total	1,825,905,080.95	1,828,550,542.38

3. Construction Work In Progress

Construction Work in Progress includes all on going construction for utility plant which are not ready for use at balance sheet date.

The account consist of the following:

	2013	2012
Construction Work in Progress of Major Works - Youngsville Project (P5000000 loan)	6,100.00	6,100.00
Construction Work in Progress of Major Works - Administration Projects	8,482,231.54	2,926,309.52
Construction Work in Progress of Major Works - REHAB (SENDONG)	26,667.16	87,762.20
Total for Construction Work in Progress of Major Works	8,514,998.70	3,022,171.72
Major maintenance works by administration	6,343,973.60	5,417,833.67
Major maintenance works - REHAB (SENDONG)	2,875,464.01	42,363.28
Total	17,734,426.40	8,482,388.67

4. Investment and Fund Accounts

Other Physical Property consist of land owned by the District but are not being use

5. Cash

Cash includes undeposited collections and deposits in banks available for general expenditures incurred in operations.

	Balance as of
	12/31/13
Cash	
Cash on Hand	2,889,281.68
Cash in Banks:	
PNB	420,408.28
Development Bank of the Philippines	70,977,463.46
Development Bank of the Philippines - Donations from various Water Districts (SENDONG)	653,467.65
Development Bank of the Philippines - LWUA GRANT thru Off. Of Pres.	13,123,907.31
Development Bank of the Philippines - COWD Online Collection Account	27,033.92
Philippine Veterans Bank	146,229.13
United Coconut Planters Bank	1,409,568.31
Queen Bank	232,403.02
Land Bank of the Philippines	193,901.60
Postal Savings Bank	221,307.41
Maybank	234,506.18
Amanah Bank	193,569.04
Total Cash in Bank	87,833,855.31
Total Cash	90,723,136.99

DETAIL - Development Bank of the Philippines - LWUA GRANT thru Off. Of Pres.

Total Grant	53,791,000.00
Less : Disbursements	(40,873,049.66)
Add: Interest Income	206,763.97
Less : Bank Charge	(807.00)
CASH BALANCE, END	13,123,907.31

8. Special Deposits

This account consists of cash deposited to the following:

Office	Purpose	Bal. as of 12/31/2013
CEPALCO	Electric bill deposit	6,162,336.71
MORESCO	Electric bill deposit	83,775.72
MISORTEL	Telephone deposit	51,417.00
COACO	oxygen/acetylene tank deposit	2,500.00
Mabuhay Vinyl Corp.	gas chlorine tank deposit	489,000.00
City Treasurer's Office	bond of projects	1,922,868.09
Metropolitan Circuit Trial Court	bond of projects	10,000.00
DPWH R-10	bond of projects	254,496.56
Pryce Corp. Inc.	tank deposit	7,000.00
Land Bank of the Philippines	general reserve	1,183,983.19
Land Bank of the Philippines	guarantee deposit	17,460.78
Development Bank of the Philippines	special deposit	26,938,812.55
Development Bank of the Philippines	guarantee deposit	2,031,934.99
Cagayan de Oro Corporation	Deposit	150,000.00
COWDA/WUA JSA Reserve Fund	Reserve Fund	9,897,121.25
Total		48,192,695.83

7. Working Fund

Working Fund includes Petty Cash Fund and Change Fund given to designated disbursing officers and tellers. The Petty Cash Fund is operated on an Imprest system.

8. Accounts Receivable - Customers

This account consist all amount due on open accounts arising from the services rendered to customers for water sales and incidental services.

As of Dec'13:			
MONTHLY BILL (net of adjustment)		59,838,446.66	
PENALTY		2,609,693.29	
RETURNED CHECKS & ADJUSTMENTS		1,113,275.77	
COLLECTIONS		(56,569,758.10)	
WATER BILL PAYMENT THRU PAYROLL/PERA/BENEFITS		(224,331.76)	
NET INCREASE/(DECREASE) OF AR		6,777,325.86	
Add: A/R - beginning		240,097,792.49	246,875,118.35

The following are the amounts in Pesos of inactive accounts which are part of the total Accounts Receivable from Customers for the last quarter of CY 2013. (Data taken from CSD)

Inactive amount is net of disconnected accounts to be written-off involving 4,610 concessionaires covering the period from 1986 to 1991 with a total amount of Ph3,554,406.77.

The same was approved by the Board of Directors, this District, per Board Resolution No. 141 dated Dec. 20, 2000. (Refer JV 7-23-03)

Jan.	146,833,680.88	Feb.	147,848,198.05	Mar.	148,640,775.57
Apr.	147,779,790.11	May	151,539,881.26	Jun.	152,099,164.64
Jul.	151,811,626.24	Aug.	151,837,629.48	Sep.	152,804,231.61
Oct.	152,771,928.68	Nov.	149,528,705.83	Dec.	149,504,925.34

9. Accounts Receivable - Others

This account consist of the following balances:

A/R - Officers & Employees	803.13	A/R - Hotels	9,089.66
A/R - COWD Provident Fund	0.00	A/R - Hospitals	2,129.56
A/R - COWD Retirement Plan	0.00	A/R - Insurance Cos.	13,558.36
A/R - Govt Agencies	245,322.92	A/R - Past BOD	132,185.35
A/R - Associations	1,727.06	A/R - Subdvs.	300,757.04
A/R - Customers	112,053.15	A/R - Schools	33,236.28
A/R - Ex-employees	2,393.71	A/R - Suppliers	5,155.73
A/R - Electric Co.	63,844.00	A/R - WDs	86,761.53
A/R - Employees of Other WD	1,150.00	A/R - Contractors	
Sub-total	427,293.96	A/R - Others	48,914.61
		Total	1,059,082.08

10. *Materials and Supplies Inventory*

This account includes items stored in COWD warehouse, such as office supplies, janitorial supplies, fuel, oil & lubricants, plant materials, operating supplies, chemicals, construction materials, finished goods, tools, meters and other supplies.

11. *Prepayments*

This account consists of the following:

Officers & Employees Insurance Co.	0.04	MAWD	12,500.02
MPSC-Cowd Scholars LTO	414,898.26	PRPD-Obando Admno(COWDBugo)	22,000.00
PAWD-Annual Dues	0.00	PRPD-BurofTreasury(FidBond)	36,562.50
CDO Chamber of Commerce	29,053.65	PRPD-Globe Telecom	0.00
PAWWA	3,125.02	PRPD-Malasag COOP Project	0.00
NWRB	0.00	PRPD-Normin NRMC	0.00
PRPD-Advertisement	0.00	PRPD-Ticket	0.00
	74,891.09	PRPD-Realty Tax	0.00
	0.00	PRPD-LWUA Pretermination Fee	0.00
	521,968.06	Total	<u>593,030.57</u>
Sub-total			

12. *Other Operating Reserves*

This account is set up for the Expansion of Operating Reserves in the amount of P3,170,523.00, which was taken from the COWD-DBP General Fund and transferred to a new account at Postal Bank. This reserve was approved by the Board of Directors per Board Resolution No. 159, s-03 dated Sep. 24, 2003. On Sep. 30, 2008, the amount of P3,170,523.00 plus the accumulated interest of P755,010.49 was transferred to DBP-Corrales as holdout deposit for the DBP-P502.011 Million Refinanced Loan.

13. *Current Portion on Long Term Debt*

This account pertains to the portion of long term debts which will fall due within one year from the balance sheet date.

14. *Deposits by Customers*

This account pertains to the deposits made by customers normally before the extension of any service connections as security for the payment of subsequent bills, or as a meter deposit.

15. *Other Current Liabilities*

This account consists of the following:

Officers & Employees	11,980.32
Legal Counsel (Notarial Fee)	925,185.00
COWD Coop	702,940.09
COWD-Provident Fund	31,040.66
PAGIBIG	386,279.19
Suppliers	16,385,262.38
Insurance Companies	0.44
Associations	21,374.00
Hospitals	19,971.68
CEPALCO/MORESCO	8,456,151.76
Various Payables	8,853,015.00
Refunds	4,575.35
Retention on contract payments	6,301,627.73
LWUA-interest on Long-term debt	0.00
OAL-Sendong	961,465.46
Total	<u>43,060,869.06</u>

18. Loans Payable

This account consist of the following loans granted by Local Water Utilities Administration (LWUA) and Development Bank of the Philippines. Details is shown below:

LA Title	Year Contracted	Lender Institution	Interest Rate %	Maturity Date	Loan Terms		Repayment Period (years)	Principal	Repayments	Balance as of 12/31/13
					Start of Amortization					
1-05 Phase II - A Prod. Wells	10/17/1983	LWUA	11%	12/31/2016	1/31/1990		26.00	6,000,000.00	4,202,204.21	787,793.79
1-05 Phase II-B Project - Schedules A, B & C	2/11/1988	LWUA	13%	7/31/2021	8/31/1995		26.00	85,079,394.29	34,993,740.85	60,085,653.44
3-74 Phase III - 520.128M	5/30/1998	LWUA	13%	9/30/2031	10/31/2005		26.00	520,128,000.00	(8,334,940.00)	
Less: Payment as of 08/2008								510,793,160.00		
Balance								(10,334,940.00)		
Less: Amount refinanced by DBP								214,675,056.00		
Loan Amount - Phase 3 214.6M			13%	9/30/2031		9/30/2008	23.08	(10,144,875.00)		
Less: Payments as of April 2013								204,530,481.00		
Balance								(183,623,730.10)		
Less: Amount refinanced by DBP								20,906,750.90	419,205.00	20,487,465.90
Balance for amortization								191,121,060.00		
3-8 Phase 3 - 191.121M	7/5/2006	LWUA	13%					(2,320,113.00)		
Less: Payment as of 08/2008								188,800,887.00		
Balance								(168,800,887.00)		
Less: Amount refinanced by DBP										
Balance								100,000,000.00		
4-23 Phase III - 200M	8/31/2006	LWUA	12.5%	12/31/2026		1/31/2007	20.00	100,000,000.00		
			13.5%					100,000,000.00		
Total								200,000,000.00		
Less: Payments as of April 2013								(20,679,963.00)		
Balance								179,321,147.00		
Less: Amount refinanced by DBP								(179,321,147.00)		
Balance								0.00	0.00	0.00
4-24 Youngsville WSS-4.108M	2/3/2009	LWUA	7.5%	11/30/2016	12/31/2011		5.00	4,108,071.24	1,527,510.00	2,580,561.24
Total - LWUA LOANS								418,982,624.64	41,142,722.06	83,951,494.37
511 502.011 M Refinanced Loan	9/30/2008	DBP		9.00	9/30/2023	10/30/2008	15.00	502,011,688.82	106,338,869.89	395,672,798.73
370.203M Refinance Loan	5/30/2013	DBP	7.6%	5/30/2028	5/30/2013		15.00	370,203,774.84	14,395,813.48	355,808,961.16
Total - LWUA & DBP								1,291,077,804.79	161,876,405.43	835,431,254.29
									Less: Current Portion Long-term Debt	57,559,980.28
									Total Long-term Liabilities	777,871,363.98

SUMMARY:

I. LWUA

- 1-057 Phase II - A Prod. Wells
- 1-051 Phase II-B Project - Schedules A, B & C
- 3-747 Phase III - 520.128M
- 4-231 Phase III - 200M
- 4-254 Youngsville WSS-4.108M
- TOTAL LWUA

II. DBP

- 2008- 502.011M Refinanced Loan
- 2013- 370.203M Refinanced Loan

Acct. 211 Long-term Loans	Acct. 225 - Current Portion	Total Loans
404,985.79	392,808.00	797,793.79
55,328,885.88	4,756,767.56	60,085,653.44
20,148,260.90	339,225.00	20,487,485.90
0.00	0.00	0.00
1,758,420.24	822,141.00	2,580,561.24
77,640,552.81	6,310,941.56	83,951,494.37
369,104,131.89	26,568,667.04	395,672,798.73
331,126,709.48	24,680,251.68	355,806,961.16
700,230,841.17	51,248,918.72	751,479,759.89
777,871,363.98	57,559,980.28	835,431,254.29

GRAND TOTAL

The amount of Php602,011,688.662 was credited to LWUA's LBP-Commonwealth branch saving account no. 611357465-9 on September 30, 2008 and was applied as follows:

LAN	Loan Outstanding as of Aug. 2008	Application of the 50% loan outstanding	2% Preterm. Fee	Total Refinanced Amount	Outstanding Balance
1-051	79,122,331.80				
1-057	2,440,640.00				
3-747	510,793,160.00	295,118,104.00	5,922,362.08	302,040,466.08	214,675,056.00
3-840	189,800,887.00	189,800,887.00	3,776,017.74	192,576,904.74	
4-2317	195,075,261.00				
OAB	7,394,297.80	7,394,297.80		7,394,297.80	
TOTAL	984,626,577.60	482,313,288.80	9,698,379.82	502,011,688.62	

The amount of Php370,203,774.64 was credited to LWUA's LBP Commonwealth Branch Savings Account No. 511357465-9 on May 30, 2013 and was applied as follows:

LAN	Loan Outstanding as of Apr. 2013	Application of the 80% loan outstanding	2% Preterm. Fee	Total Refinanced Amount
1-051	63,600,316.61			
1-057	1,020,592.00			
3-747	204,530,481.00	183,623,730.10	3,672,474.60	187,296,204.70
4-2317	179,321,147.00	179,321,147.00	3,586,422.94	182,907,569.94
4-2547	3,095,481.24			
TOTAL	451,468,017.85	362,944,877.10	7,258,897.54	370,203,774.64

The pretermination fees charged by LWUA and the front-end fees/documentary stamps charged by DBP are being amortized for 15 years as follows:

	2% Preterm Fee LWUA	Front-end fee/ Doc stamp DBP	Start of Amort	No. of years	Total Amount	Per Annum	Per Month
502.011M Refinance Loan	9,698,379.82	6,651,685.27	Oct. 2008	15.00	16,350,045.09	1,090,003.01	90,833.58
370.203M Refinance Loan	7,258,897.54	2,906,039.00	Jun. 2013	15.00	10,164,936.54	677,695.77	56,468.31

17. Other Long Term Debt-Johndorf Ventures Corporation

Per Board Resolution No. 153 S-10 dated November 10, 2010 which approved the Memorandum of Agreement (MOA) between COWD and Johndorf Ventures Corporation, that Johndorf will be reimbursed of the actual expenses incurred to Interconnect Pag-Ibig Citi Homes to the COWD's Main Water Supply Pipe and such is payable w/in three (3) years on a quarterly basis. The computation is as follows:

Actual amount for the contract	P 8,328,262.10
Less: Deductions	
Water Payments Collected	(828,374.28)
Cost of Seepage per MOA	(86,973.00)
Net Payable to Johndorf Ventures	7,412,914.82
Divide: Payment Period	12
Quarterly Payment to Johndorf	P 617,741.90

Principal Amount	P 7,412,914.82
Less: Payments (Jan. 2012-Dec. 2013)	(4,941,943.20)
Balance as of December 31, 2013	P 2,470,971.62

18. Government Contributions

Capital Contribution - Government consist of:

A. City Government

1. Fixed Assets turned over by the City Gov't to WD on Dec. 31, 1973, net of P1,035,562.30	544,711.22
Less: Land reverted to donors (JV 12-60-08)	(18,900.00)
2. A/R -Customers turned over on Dec. 31, 1973	167,199.08
3. Cost of Cogon Market Pipeline	28,419.94
Sub-total	<u>721,430.24</u>

B. USAID Grant

Regional Water Supply Training & Library	145,485.16
Total	<u>866,925.40</u>

19. Other Paid in Capital

This account consist of donated capital for the following:

Laboratory Equipments	102,504.19
Transmission and Distribution Mains	42,631,006.51
Office Furnitures & Figures	86,980.00
Distribution Lines	843,073.25
Fire Hydrants	2,622,454.26
M.STE-Iponan, Westfield Home	941,247.09
UPIS (by LWUA Sendong Grant)	12,626,981.13
UPIS-JICA Donation	40,994,730.00
UPIS-TranspoEquip-Geo-Transprt	763,000.00
Total	<u>101,591,946.42</u>

20. Appraisal Capital

The total amount of P28,442,834.00 was taken up representing under valuation of land and land rights and booked up per JV 11-36-96 and JV12-61-96. The amount of P177,600.00 representing appraisal cost of land reverted to donors per JV 12-20-05. Breakdown of parcels of land and its corresponding appraisal cost are as follows:

Location	Area sq.m.	Appraisal Cost
Aluba Reservoir	1441	386,057.50
Balulang PW No. 14	300	42,325.00
Balulang PW No. 4	200	20,000.00
Balungis PW No. 17	300	90,000.00
Bantiles, Bugo PW No. 11	400	103,127.25
Bontola PW No. 2	600	220,000.00
Bontola Reservoir	2784	395,232.00
Bugo, Reyes PW No.5	482	96,400.00
Bugo Reservoir	420	37,800.00
Bugo PW No. 6	150	21,000.00
Calaanan PW No. 10	1409	650,008.18
Calaanan PW No. 12	400	185,010.00
Calaanan PW No. 15	400	167,780.00
Calaanan	396	172,000.00
Camaman-an Reservoir	2698	187,844.37
Carmen	120	93,600.00
Carmen Reservoir	3600	879,650.00
Corrales Ave., Main Bldg.	991	9,806,307.00
Gaston Park	281	269,760.00
Greehills Reservoir	420	252,000.00
Gusa	490	181,700.00
Kauswagan Shop Bldg.	4789	6,055,985.00
Macasandig Booster Pump	750	810,000.00
Macasandig PW No. 1 Operation Bldg.	1520	2,218,600.00
Macasandig PW No. 4	116	115,416.00
Macasandig PW No. 7	1200	540,000.00
Macasandig PW No. 8	432	140,560.00
Macasandig	252	70.18
Macasandig PW No. 3 & 3A	254	189,616.56
Macasandig	348	156,600.00
Macasandig PW No. 9	7743	3,677,925.00
Macasandig Old Pump	218	320,460.00
Total		<u>28,442,834.04</u>
Land reverted to donor	150	(21,000.00)
Land reverted to donor	348	(156,600.00)
Balance as of 012/31/2012		<u>28,265,234.04</u>

21. Major Commitments Made in CY 2004

A Bulk Water Supply Agreement (BWSA) was entered between Cagayan de Oro City Water District (COWD) and Rio Verde Water Consortium, Inc. with conformer by LWUA on Dec. 23, 2004.

The BWSA was covered with a supplemental agreement on Jan. 21, 2005. The amended agreement stipulated that Rio Verde will supply treated bulk water to COWD, and the latter, in turn guaranteed to purchase at least Forty Thousand (40,000) cubic meters per day of the said treated bulk water throughout the Contract Period of 25 years to start on CY 2007.

2. Taxes Claimed by the Bureau of Internal Revenues Revs. Reg. No. 16

Per BIR Assessment Notice No. RR-16-098-112-06 dated 09/14/06, the following taxes are being claimed by BIR covering the period from 1997 to 2003.

	Basic	Penalty	Total
1 Income	96,816,603.38	150,587,525.05	247,404,128.43
2 Franchise	36,090,527.28	53,756,303.12	89,846,830.40
3 VAT	1,430,967.06	2,286,987.68	3,697,954.74
Total	134,338,097.72	206,630,815.85	340,949,913.57

BIR RR-10 sent a notice dated 03/28/07 informing the District to settle the said tax liability within 10 days from receipt and to avail the One Time Administrative Abatement until 03/30/07.

A meeting with the BIR resulted to a compromise agreement that the District will only pay the 2007 franchise tax while the assessment is still under appeal with the DOJ.

On 04/03/07, the BIR ordered the garnishment of the District Funds from its depository banks. The garnishment was lifted on 04/25/07. The District paid the basic franchise tax for:

1997-2003

EPCIS garnished deposit - ROR# 26606 dtd. 05-02-07	87,588.20
Postal Bank garnished deposit dtd. 05-03-07	17,235.80
CV#05-55 dtd 05-10-07	12,000,000.00
CV#06-254 dtd 06-28-07	5,000,000.00
CV#07-156 dtd 07-19-07	2,000,000.00
CV#07-256 dtd 07-31-07	3,000,000.00
CV#07-259 dtd 07-31-07	2,000,000.00
CV#09-61 dtd 09-07-07	2,500,000.00
CV#11-229 dtd 11-29-07	500,000.00
Year 2011 (Accumulated)	8,985,705.28
Total	36,090,527.28

Remaining Balance as of 12/31/2011

0.00

2004 Total Payable - JV#06-033-11

6,063,622.84

Payments:

Year 2012 (Accumulated)

5,053,522.84

Remaining Balance

0.00

2005 Total Payable - JV#06-033-11

6,562,738.30

Payments:

Year 2012 (Accumulated)

6,562,738.30

Remaining Balance

0.00

2006

9,794,937.43

2009

Jan.	981,355.84
Feb.	961,422.15
Mar.	966,991.06
Apr.	1,036,887.42
Ma.	1,010,809.94
Jun.	1,004,488.57
Jul.	987,837.71
Aug.	1,038,028.80
Sep.	1,033,455.70
Oct.	1,000,908.05
Nov.	1,006,582.13
Dec.	1,005,987.60

Total 12,034,755.27

Less Withheld

32,515.13

Net Tax Paid

12,002,240.14

2010

Jan.	1,017,870.86
Feb.	990,848.25
Mar.	993,568.22
Apr.	1,083,732.96
Ma.	986,118.35
Jun.	1,032,311.43
Jul.	1,041,104.73
Aug.	1,060,164.68
Sep.	1,042,640.32
Oct.	1,035,156.92
Nov.	995,903.77
Dec.	1,047,699.48

Total 12,326,919.97

39,947.47

12,286,972.50

2011

Jan.	1,076,089.41
Feb.	961,556.32
Mar.	1,014,005.93
Apr.	1,011,284.99
Ma.	1,033,664.76
Jun.	1,059,739.96
Jul.	1,055,174.97
Aug.	1,081,839.83
Sep.	1,060,272.80
Oct.	1,300,033.18
Nov.	1,299,404.29
Dec.	835,825.78

12,798,812.22

Less Withheld Taxes

100,202.65

Net Tax Paid

12,698,609.57

2008

Jan - Mar 2008	2,835,518.96
Apr.	953,408.87
Ma.	940,211.57
Jun.	984,563.83
Jul.	950,465.26
Aug.	981,262.18
Sept.	974,306.51
Oct.	960,698.27
Nov.	992,234.66
Dec.	983,441.43

Total 11,556,101.54

Less Withheld Taxes

88,297.24

Net Tax Paid

11,467,804.30

2012

Jan.	602,585.94
Feb.	938,409.08
Mar.	1,760,550.05
Apr.	964,516.31
Ma.	964,516.31
Jun.	1,023,669.60
Jul.	804,413.76
Aug.	860,059.65
Sep.	889,855.47
Oct.	933,573.66
Nov.	857,929.25
Dec.	761,167.42

11,151,266.50

2013

Jan.	911,758.35
Feb.	904,736.83
Mar.	849,446.65
Apr.	864,433.06
Ma.	1,035,896.77
Jun.	977,193.73
Jul.	1,015,110.74
Aug.	1,050,631.27
Sep.	1,047,107.46
Oct.	997,278.11
Nov.	1,030,268.29
Dec.	1,067,932.47

11,751,813.73

It has come to the attention of management that there have been substantial differences in the payments made to Rio Verde Water Consortium between the delivered bulk water supply and the purchase order in terms of cubic meters from the month of Jan. 2007 to Jul. 2007. Since then, starting in the month of Aug., the COWD has only made actual payments based on the purchase order in accordance with the contract with Rio Verde. Nevertheless, management has yet to settle with Rio Verde Water Consortium concerning the excess payments made to Rio Verde from Jan. to Aug. 2007.

* March 2013 - Bulk water supply registered in the monthly consumption report is only 1,072,390 due to cut-off on March 27, 2013. Total Cu.m. of 1,217,770 is total supply as of March 31, 2013.

	Pesos	cu.m.	cu.m.	cu.m.
	Paid	per P.O.	Delivered	Paid(per 40,000 req)
Jan.	12,736,773.50	1,240,000.00	1,247,400.00	1,218,830.00
Feb.	11,534,501.00	1,120,000.00	1,119,490.00	1,103,780.00
Mar.	12,608,029.50	1,240,000.00	1,217,770.00	1,206,510.00
Apr.	11,072,663.00	1,200,000.00	1,151,140.00	1,136,140.00
May	12,622,659.50	1,253,200.00	1,248,220.00	1,207,910.00
Jun.	13,986,384.60	1,341,600.00	1,378,340.00	1,338,410.00
Jul.	12,935,532.50	1,240,000.00	1,262,100.00	1,237,850.00
Aug.	12,949,117.50	1,240,000.00	1,262,900.00	1,239,150.00
Sep.	12,417,317.00	1,200,000.00	1,216,040.00	1,166,260.00
Oct.	12,693,718.50	1,240,000.00	1,245,950.00	1,214,710.00
Nov.	12,527,460.00	1,200,000.00	1,214,300.00	1,198,600.00
Dec.	12,931,143.60	1,240,000.00	1,256,070.00	1,237,430.00
Totals	151,815,301.00	14,754,800.00	14,820,720.00	14,527,780.00

24. Other Deferred Debits (146)

The breakdown of this account are the following:

Visayan Surety	Injunction Bond	400,407.96	
DBP	Pretermination Fees	16,350,044.43	(see NFS# 16)
DBP	Pretermination Fees (2013)	10,183,936.54	(see NFS# 16)
Land Transfer Cost	Deferred Costing	193,658.66	
Non-moving Items for disposal		239,500.20	
DEFDR- Johndorf/Cityhomes		0.00	
DEFDR-COWD Healthcare Program		2,259,056.00	
Total		29,606,602.69	
Amortization		5,722,515.54	
LWUA Pretermination fee 2013 (10,163,936.54 for 15 years)		395,264.17	
Balance		23,488,822.98	

Reference	Date	Particulars	Amount	Amort Period	Annual	Per Mo.
LWUA OAB#10	10/3/2008	Preterm. Fee of Accounts refinanced by DBP: LA 3-747 (296118104*2%) LA 3-840 (188800887*2%) Total - LWUA	6,922,362.08 3,776,817.74 9,699,179.82	15.00	646,558.65	53,879.89
Disclosure Stat on Loan/Credit	9/30/2008	Front-end fee(0.625%) Doc/stamps Total	3,137,572.93 2,510,059.00 6,647,631.93			
Transaction DocStamp	11/5/2008	DocStamps on Mortgage contract	1,004,033.34			
Declaration/Return re: Mortgage Contract	10/30/2008					
CV No. 10-052		Total-DBP	6,651,665.27	15.00	443,444.35	36,953.70
		Grand Total - LWUA/DBP	18,350,045.09		1,090,003.01	90,833.58
		Total per Annum			90,833.58	90,833.58
		Total per Month				
		Oct-Dec. 2008	272,500.76	No. of mos. 3.00		

The DBP Pretermination Fees are being amortized over fifteen years starting Oct. 2008.

25. Additional items included in the total amount of Other Deferred Credits

Other Deferred Credit account includes the following:

LWUA Grant from Office of the President (chk# LBP 310) - COWD-OR# 3542054 dated 1/4/12	52,791,000.00
LWUA Grant from Speaker Belmonte - (chk# LBP 319) - COWD-OR# 3534291 dated 1/24/12	1,000,000.00
	<u>53,791,000.00</u>

This amount is reserved for the rehabilitation of COWD's properties damaged by typhoon Sendong.

26. Increase in Interest Paid to Development Bank of the Philippines

Aside from the principal and interest amortization, the DBP payment includes the following:

- a. Gross receipts tax computed at 1% of amortized interest due for the month; and
- b. As of May 31, 2013, DBP has waived the additional 1% interest rate per annum on unmatured principal for non-compliance of 2% NRW reduction, which was imposed last March 31, 2010.

27. Typhoon Sendong - Effect on the Operations of COWD

The typhoon Sendong has caused major damage to our production facilities and service connection lines that would cost us Php 157 million, more or less, to rehabilitate. Moreover, about 16,330 connections are estimated to have been damaged or washed out during the typhoon. About Php 25.5 million of the expected revenues for December 2011 was determined uncollectible as these were unread and unbilled consumptions of the service connections in the most badly affected parts of the City. Also, bigger portion of this amount may remain unbilled until service lines and water meters shall have been completely restored. Due to the vastness of the areas affected, it will take time until we shall be able to completely rehabilitate and restore service connection lines. Moreover, almost all of our UPIS like office furniture and equipments, tools, water treatment equipments etc. which are identified as severely damaged are now reflected per account number 103-Unclassified Utility Plant. The list of damaged UPIS has been submitted to COA to Request for the Relief of Accountability per COA Circular No. 92-385.

28. Humanitarian Donation of the Government of Switzerland to COWD

As part of the relief operation for the Victims of the Typhoon Sendong, the Government of Switzerland, thru its Swiss Humanitarian Aid (SHA) donated the following Equipments to Cagayan de Oro City Water District with a total amount of Php 2,092,736.60 (CHF 44,647 X Php 46.87295 per CHF to Php exchange rate dtd. 1/30/2012) per Memorandum of Agreement & Letter of Donation between the COWD and the Swiss Humanitarian Aid of the Swiss Confederation dtd. June 1, 2012 and GM Memorandum 15, s-2012.

- 2 Bladders 5,000 litres with drinking water distribution stand
- 1 Bladders 10,000 litres with drinking water distribution stand
- 1 water laboratory
- 1 well cleaning set
- 2 tool kit
- 1 repair kit for drinking water distribution stand
- 18 WATASOL

29. Establishment of Other-Deferred Debts-Non-moving Items for Disposal

As of May 2012 COWD has established a total of P239,510.20 corresponding to non-moving items for disposal. This is shown under account number 146-09. The Committee on Disposal conducted a Pre-Bidding Conference last December 26, 2013 @ COWD Social Hall.

30. Establishment of additional departments

COWD, based on its new recategorization as Very Large Water District under Category A, has added two (2) new departments in its 2013 approved budget namely: 791-Office of the General Manager & 792-Office of the Board of Directors. Previously these were under Management Department budget.

31. GSIS Payable- Premium Deficiency (ER) under MOA signed on October 31, 2013

Approved per Board Resolution Nos. 101, S-12 and 061, S-13, (Annex "A") dated September 25, 2012 and July 15, 2013 respectively the Memorandum of Agreement (MOA) between COWD and GSIS for the settlement of unpaid premiums and interest for the period covered June 1978 to March 1992 with the net total obligation of P 6,410,706.93 and such is payable within a period of sixty (60) months, with interest rate of twelve percent (12%) per annum on a diminishing balance.

32. Adaption and Implementation of 30% Water Rate Adjustment in 3 Tranches.

BOD Resolution No. 086, s-13 dated October 2, 2013 approved the Adaption and Implementation of the New Water Rates of COWD in 3 tranches. In pursuant to it, GM Memorandum-255, s-2013 dated October 10, 2013 hereby directed the implementation of the said water rate adjustment.

Effectivity:

November 01, 2013	1st 10% increase
February 01, 2014	2nd 10% increase
May 01, 2014	3rd 10% increase

Effectivity shall apply to the consumption month, therefore billing shall commence December 01, 2013, March 01, 2014 and June 01, 2014, respectively.

CAGAYAN DE ORO CITY WATER DISTRICT
Corrales Avenue, Cagayan de Oro City

SUMMARY OF LOAN PAYMENTS TO LWUA AND DBP
For the Year 2013

PERIOD COVERED	LWUA			DBP			GRAND TOTAL
	O.R. No.	Date	Amount	O.R. No.	Date	Amount	
January	273389	01/31/13	5,865,820.00	55716	01/30/13	5,453,323.18	11,319,143.18
February	274069	02/28/13	5,865,820.00	57253	02/28/13	5,428,427.77	11,294,247.77
March	274701	03/27/13	5,865,820.00	58693	03/26/13	5,438,408.86	11,304,228.86
April	275464	04/30/13	5,865,820.00	60439	04/29/13	5,448,268.62	11,314,088.62
May	276086	05/30/13	5,865,820.00	62015	05/30/13	5,435,111.13	11,300,931.13
June	276290	06/05/13	2,398,520.40	63447	06/28/13	9,571,158.01	11,969,678.41
DBP Credit Advice	276292	06/05/13	370,203,774.64				370,203,774.64
July	277596	07/22/13	1,394,362.00	64935	07/30/13	9,479,978.19	10,874,340.19
August	278262	08/19/13	1,394,362.00	66522	08/23/13	9,544,238.25	10,938,600.25
September	278784	09/27/13	1,394,362.00	68052	09/30/13	9,530,778.37	10,925,140.37
October	279592	10/31/13	1,394,362.00	69377	10/30/13	9,440,901.12	10,835,263.12
November	280222	11/29/13	753,917.00	70970	11/28/13	9,533,858.62	10,287,775.62
December	280726	12/26/13	1,394,362.00	72451	12/26/13	9,414,849.75	10,809,211.75
TOTAL LOAN PAYMENTS			409,657,122.04			93,719,301.87	503,376,423.91

Source: 2013 Loan Payments Schedule (Finance Dept.)

Note:

The increase in June was due LWUA Loan Refinancing of Php 370,203,774.64.

CAGAYAN DE ORO CITY WATER DISTRICT
Corrales Avenue, Cagayan de Oro City

SUMMARY OF WATER PRODUCTION AND CONSUMPTION
For the Year Ended December 31, 2013

MONTH	PRODUCTION		CONSUMPTION	FLUSHING / OTHERS	UNACCOUNTED WATER	
	(Booster/Pumps) (in cu. m.)	(Bulk Supply) (in cu. m.)	(Metered/Averaged) (in cu. m.)		(in cu. m.)	(in cu. m.)
January	3,469,456	1,247,400	2,062,180	92,597	2,562,079	54.32%
February	3,199,460	1,119,490	2,040,712	76,414	2,201,824	50.98%
March	3,167,479	1,072,390	1,865,231	81,708	2,292,930	54.08%
April	3,701,744	1,255,640	2,216,049	67,494	2,673,841	53.94%
May	3,475,518	1,249,770	2,156,067	52,082	2,517,139	53.27%
June	3,317,700	1,335,380	2,082,836	50,744	2,519,500	54.15%
July	3,832,506	1,303,960	2,120,141	95,924	2,920,401	56.86%
August	3,576,521	1,262,190	2,208,312	63,198	2,567,201	53.06%
September	3,422,633	1,178,440	2,129,321	79,378	2,392,374	52.00%
October	3,740,335	1,285,090	2,219,252	77,771	2,728,402	54.29%
November	3,685,494	1,215,340	2,203,015	76,412	2,621,407	53.49%
December	3,786,887	1,255,410	2,059,561	59,693	2,923,043	57.97%
TOTAL	42,375,733	14,780,500	25,362,677	873,414	30,920,142	54.10%
MONTHLY AVE.	3,531,311	1,231,708	2,113,556	72,785	2,576,678	

Source: 2013 Monthly Operation Report (Commercial Dept.).

Note:

1. Production = Booster/Pumps Supply + Bulk Water Supply
2. Consumption = Metered + Averaged (Billed)
3. Unaccounted for Water = Production - (Consumption + Mainline Flushing & Others)

COWD WATER SOURCES
As of December 2013

SOURCE IDENTIFICATION	LOCATION	DISCHARGE lps (gpm)	MOTOR SIZE	STANDBY POWER
A. Deep Well Source				
PW No. 1	Macasandig	111 (1,767)	125 hp	Genset 1 (G1)
PW No. 2	Macasandig	61 (901)	100 hp	250hp Angle Drive
PW No. 3 A	Macasandig	19 (304)	100 hp	219 kva Genset
PW No. 4	Macasandig	72 (1,135)	75 hp	219 kva Genset
PW No. 5	Bugo	28 (407)	40 hp	75 kva Genset
PW No. 6	Bugo	- (-)		Standby for Rehab
PW No. 7	Macasandig	57 (905)	75 hp	219 kva Genset
PW No. 8	Macasandig	53 (844)	60 hp	250 kva Genset
PW No. 9	Macasandig	118 (1,863)	125 hp	218 kva Genset
PW No. 10	Calaanan	12 (190)	40 hp	75 kva Genset
PW No. 11	Bugo	110 (1,751)	100 hp	288 kva Genset
PW No. 12	Calaanan	- (-)		Standby for Rehab
PW No. 14	Balulang	66 (1,040)	125 hp	219 kva Genset
PW No. 15	Calaanan	- (-)	60	132 kva Genset
PW No. 16	Tomas Saco	69 (1,100)	60 hp	175 kva Genset
PW No. 17	Balulang	28 (439)	60 hp	167 kva Genset
PW No. 18	Pueblo	17 (273)	60 hp	219 kva Mobile
PW No. 19	Balulang	77 (1,223)	100 hp	165 kva Genset
PW No. 20	Bugo	42 (672)	20 hp	500kva Genset
PW No. 21	Bugo	79 (1,248)	50 hp	156 kva Genset
PW No. 22	Bugo	66 (1,040)	50 hp	156 kva Genset
PW No. 23	Agusan	84 (1,329)	150 hp	313 kva Genset
PW No. 24	Balulang	32 (515)	25 hp	None
PW No. 25	Balulang	74 (1,176)	75 hp	165 kva Genset
PW No. 26	Balulang	24 (360)	60 hp	165 kva Genset
PW No. 27	Balulang	41 (654)	60 hp	132 kva Genset
PW No. 28	Tablon	66 (1,042)	125 hp	250 kva Genset
PW No. 29	Tablon	59 (937)	125 hp	250 kva Genset
B. Spring Source				
Malasag Spring	Cugman	2 (30)		
TOTAL		1,462 (23,165)		
C. Booster Pumps				
BP No. 1	Macasandig	0 (0)	100 hp	437.5 kva Genset (G1)
BP No. 2	Macasandig	100 (1,585)	100 hp	
BP No. 3	Macasandig	139 (2,200)	200 hp	
BP No. 4	Macasandig	0 (0)	100 hp	600 kva Genset (G3)
BP No. 5	Macasandig	105 (1,663)	125 hp	
BP No. 6	Macasandig	0 (0)	200 hp	688 kva Genset
BP No. 5	Macasandig	0 (0)	150 hp	500 kva Genset
BP No. 1	Bugo	0 (0)	125 hp	
BP No. 2	Bugo	106 (1,685)	125 hp	
BP No. 3	Bugo	0 (0)	125 hp	688 kva Genset
BP No. 1	Balulang	0 (0)	100 hp	
BP No. 2	Balulang	105 (1,658)	100 hp	
BP No. 3	Balulang	0 (0)	100 hp	313 kva Genset
BP No. 4	Balulang	0 (0)	200 hp	
BP No. 5	Balulang	105 (1,658)	200 hp	
BP No. 6	Balulang	0 (0)	200 hp	
Sub-Total	Macasandig	344 (5,448)		
Sub-Total	Balulang	209 (3,316)		
Sub-Total	Bugo	106 (1,685)		
TOTAL		659 (10,449)		
D. BWSP (Dec 1 - 31, 2013)		1,255,410 cubic meters		

CAGAYAN DE ORO CITY WATER DISTRICT

Corrales Avenue, Cagayan de Oro City

SERVICE CONNECTION GROWTH

For the Year Ended December 31, 2013

MONTH	NEW N	DISCONNECTION	RECONNECTION	NET INCREASE/ (DECREASE) (ACTIVE)	TOTAL ACTIVE CONNECTION	TOTAL INACTIVE CONNECTION	NET INCREASE/ (DECREASE) (INACTIVE)
December 2012	3,932	5,566	3,531	1,897	80,619	31,754	2,035
January	285	674	273	-116	80,503	32,155	401
February	246	559	329	16	80,519	32,385	230
March	265	420	335	180	80,699	32,470	85
April	337	508	318	147	80,846	32,660	190
May	308	449	366	225	81,071	32,743	83
June	139	391	313	61	81,132	32,821	78
July	692	497	400	595	81,727	32,921	100
August	363	272	267	358	82,085	32,234	687
September	363	456	314	221	82,306	33,065	831
October	339	405	351	285	82,591	33,119	54
November	249	344	267	172	82,763	33,196	77
December	229	297	321	253	83,016	33,172	24
TOTAL	3,815	5,272	3,854	2,397			1,418
MO. AVERAGE	318	439	321	200			118

Source: 2013 Monthly Operation Report (Commercial Dept.)

CAGAYAN DE ORO CITY WATER DISTRICT
Corrales Avenue, Cagayan de Oro City

LIST OF MAJOR ASSETS AND EQUIPMENTS
AS OF DECEMBER 31, 2013
(With Comparative Figures for 2012)

	ASSETS AND EQUIPMENTS (With Initial Cost of P5,000 & Above)	2013	2012	%INCREASE (DECREASE) OVER LAST YEAR
1.	COMMUNICATION EQUIPMENT	P 3,664,048.66	P 3,108,348.50	17.88
2.	LABORATORY EQUIPMENT	4,807,020.62	1,431,211.00	235.87
3.	LAND AND LAND RIGHTS	36,720,154.95	36,716,654.95	0.01
4.	OFFICE FURNITURE AND EQUIPMENT	24,064,248.05	20,625,650.01	16.67
5.	POWER OPERATED EQUIPMENT	22,990,828.13	23,906,765.55	(4.23)
6.	POWER PRODUCTION EQUIPMENT	34,993,122.65	23,906,765.55	46.37
7.	PUMPING EQUIPMENT	132,467,437.79	97,211,471.14	36.27
8.	TOOLS, SHOP, AND GARAGE EQUIPMENT	14,777,355.44	14,006,938.89	5.50
9.	TRANSPORTATION EQUIPMENT	32,158,945.62	25,358,937.78	26.82
10.	WATER TREATMENT EQUIPMENT	6,305,804.35	5,195,806.36	21.36
	TOTAL	P 312,948,966.26	P 251,468,549.73	24.45

Source: 2013 List of Major Assets and Equipments (Accounting Division)

CAGAYAN DE ORO CITY WATER DISTRICT
Cagayan de Oro City

SUMMARY OF PIPELINES
In Linear Meters
2013

PIPELINE		OLD PIPELINES STILL IN SERVICE	PHASE I IMPROVEMENT	PHASE II IMPROVEMENT	PHASE III IMPROVEMENT	SUBDIVISION		COWD EXTENSION		TOTAL		PIPELINE		
SIZE	MAKE					TURNED-OVER	NOT TURNED-OVER	1979 - 2012	2013	MAINTAINED	SERVED	SIZE	MAKE	
50 mm (2")	0	uPVC				8,863		4,296		13,159	13,159	50 mm (2")	0	uPVC
50 mm (2")	0	G.I.				344		155		499	499	50 mm (2")	0	G.I.
50 mm (2")	0	B.I.				179		226		405	405	50 mm (2")	0	B.I.
50 mm (2")	0	PE				7,806		50,378	7,438	65,622	65,622	50 mm (2")	0	PE
63 mm (2.5")	0	PE				3,056				3,056	3,056	63 mm (2.5")		PE
		G.I.						660		660	660			G.I.
75 mm (3")	0	uPVC		2,775		48,180		6,345	888	58,188	58,188	75 mm (3")	0	uPVC
		ACP				5,422				5,422	5,422			ACP
		G.I.				96				96	96			G.I.
		CI						120		120	120			CI
100 mm (4")	0	uPVC	15,745	2,433		34,983	9,553	54,658	458	108,273	117,826	100 mm (4")	0	uPVC
		STEEL	4,877	14				181		5,072	5,072			STEEL
		ACP	1,460			4,348	3,160	240		6,048	6,048			ACP
		CCI	92					228		320	320			CCI
		G.I.				75				75	75			G.I.
		CI/BI				48		313	2	363	363			CI/BI
150 mm (6")	0	uPVC	14	9,494	3,097	24,994	3,830	42,122	1,518	81,239	85,169	150 mm (6")	0	uPVC
		STEEL		27,754		58	28	691		28,503	28,529			STEEL
		ACP	146			1,903	1,120	231		2,260	3,400			ACP
		CCI	515					483		998	998			CCI
		CI/BI						174	24	198	198			CI/BI
200 mm (8")	0	uPVC		1,586	3,987	908	450	11,743		23,224	23,674	200 mm (8")	0	uPVC
		STEEL		4,027				733		4,760	4,760			STEEL
		CCI	2,148					174		2,322	2,322			CCI
		BI				1		19		20	20			BI
250 mm (10")	0	STEEL		4,488	6,354					10,842	10,842	250 mm (10")	0	STEEL
		uPVC				547		3,200		3,747	3,747			uPVC
300 mm (12")	0	STEEL	16,960	17,996	20,336			7,614		62,906	62,906	300 mm (12")	0	STEEL
350 mm (14")	0	STEEL						2,531		2,531	2,531	350 mm (14")	0	STEEL
400 mm (16")	0	STEEL	5,660	569	17,081			6,278		29,588	29,588	400 mm (16")	0	STEEL
500 mm (20")	0	STEEL	1,176	445	3,691			375		5,687	5,687	500 mm (20")	0	STEEL
600 mm (24")	0	STEEL	186		14,774					14,960	14,960	600 mm (24")	0	STEEL
800 mm (30")	0	STEEL			2,638					2,638	2,638	800 mm (30")	0	STEEL
			9,238	71,536	39,786	76,957	141,510	18,239	194,164	10,326	543,817	562,056		

CAGAYAN DE ORO CITY WATER DISTRICT
Corrales Avenue, Cagayan de Oro City

SUMMARY OF BACTERIOLOGICAL ANALYSIS

For the Year Ended December 31, 2013

MONTH	COLIFORM TEST (Standard Sample 100 mL)				Residual Chlorine (RPM)
	Total Sample	Total Sample Positive	Membrane Filter Rapid Testing (24 hrs.)		
			Coliform Test	Fecal Test (E. Coli)	
January	99	0	0	0	0.00 to 26.00
February	96	0	0	0	0.00 to 0.80
March	95	0	0	0	0.00 to 0.90
April	106	1	1	0	0.00 to 0.90
May	98	1	1	0	0.00 to 0.80
June	100	3	3	0	0.00 to 1.00
July	120	0	0	0	0.00 to 0.76
August	100	4	4	3	0.00 to 0.90
September	112	5	5	1	0.00 to 0.80
October	114	0	0	0	0.00 to 0.80
November	102	5	4	1	0.00 to 0.80
December	100	5	4	1	0.00 to 0.80
TOTAL	1,242	24	22	6	

Source: Summary and Evaluation of Bacteriological Analysis of COWD (Production Dept.)

6.2 水道メータ不感調査表

水道メータ不感水量試験表(50検体の内1~10のデータ)

Customer ID	101	102	103	104	105	106	107	108	109	110		
Installed Date	2014/03	2013/11	2007/01	2007/01	2007/02	2012/03	2006/01	2006/01	2005/01	2008/01		
Passage Year	0.3	0.7	7.6	7.5	7.4	2.3	8.6	8.5	9.5	6.5		
Meter DN (mm)	13	13	13	13	13	13	13	13	13	13		
Meter Number	1321389	1317576	235995	236246	236290	236105	867505	1071005	471040644	842805		
Meter Company	Arad	Arad	Actaris	Actaris	Actaris	Actaris	Asahi	Asahi	Asahi	Asahi		
Installed Area	Tablon	Iponan	Macabalan	Nazareth	Bonbon	Lapasan	Nazareth	Bonbon	Puntod	Macabalan		
1. Meter Count (800-120-60-30)	L/h	L	L	L	L	L	L	L	L	L		
	30	10	670.5	361.4	865.1	1011.0	990.9	186.3	526.7	340.8	1153.6	1053.9
	60	20	660.6	351.7	858.7	1011.0	981.0	176.5	518.1	330.3	1145.3	1044.7
	120	40	640.6	331.8	840.3	1011.0	960.8	156.3	499.9	310.5	1125.8	1024.7
	800	100	600.6	291.8	800.9	973.4	920.4	115.8	459.0	271.8	1084.9	983.9
Initial		500.6	192.1	701.0	867.3	819.9	15.4	359.1	171.6	983.4	883.4	
2. Meter Error	L/h	L	%	%	%	%	%	%	%	%	%	
	30	-16.9	-1.0	-3.0	-36.0	-100.0	-1.0	-2.0	-14.0	5.0	-17.0	-8.0
	60	-10.2	0.0	-0.5	-8.0	-100.0	1.0	1.0	-9.0	-1.0	-2.5	0.0
	120	-4.3	0.0	0.0	-1.5	-6.0	1.0	1.3	2.2	-3.3	2.2	2.0
	800	-3.9	0.0	-0.3	-0.1	6.1	0.5	0.4	-0.1	0.2	1.5	0.5
3. Range Count (Japan experience)	L/h	%	%	%	%	%	%	%	%	%	%	
	V<42	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	
	42<V<85	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	
	85<V<310	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	
	310<V	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
4. Consumption (Field meter test)	L/h	L	L	L	L	L	L	L	L	L	L	
	V<42	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	
	42<V<85	154.5	154.5	154.5	154.5	154.5	154.5	154.5	154.5	154.5	154.5	
	85<V<310	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	
	310<V	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	
	Total	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	
5. Consumption Ratio	L/h	%	%	%	%	%	%	%	%	%	%	
	V<42	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
	42<V<85	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	
	85<V<310	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	
	310<V	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
6. Error Ratio	L/h	%	%	%	%	%	%	%	%	%	%	
	V<42	-0.01	-0.03	-0.38	-1.05	-0.01	-0.02	-0.15	0.05	-0.18	-0.08	
	42<V<85	0.00	-0.02	-0.25	-3.09	0.03	0.03	-0.28	-0.03	-0.08	0.00	
	85<V<310	0.00	0.00	-0.45	-1.78	0.30	0.37	0.67	-0.97	0.67	0.59	
	310<V	0.00	-0.20	-0.07	4.03	0.33	0.26	-0.07	0.13	0.99	0.33	
	Total	-0.01	-0.25	-1.14	-1.89	0.65	0.65	0.18	-0.81	1.40	0.84	

水道メータ不感水量試験表(50検体の内11~20のデータ)

Customer ID	111	112	113	114	115	116	117	118	119	120		
Installed Date	2005/01	2009/01	2009/01	2011/01	2011/01	2013/01	2011/01	2012/02	2010/01	2013/01		
Passage Year	9.5	5.5	5.5	3.5	3.5	1.6	3.5	2.4	4.5	1.5		
Meter DN (mm)	13	13	13	13	13	13	13	13	13	13		
Meter Number	471040821	801012392	1322241	10874138	10874090	k09001092M	k09006233M	k09001263M	90800051	k09002681		
Meter Company	Asahi	Ejet	Arad	Arad	Arad	Keumsung	Keumsung	Keumsung	Asiam	Keumsung		
Installed Area	Macabalan	Macasandig	Canitoan	Iponan	Bellevue	Carmen	Carmen	Iponan	Patag	Iponan		
1. Meter Count (800-120-60-30)	L/h	L	L	L	L	L	L	L	L	L	L	
	30	10	750.6	703.3	673.2	250.4	1026.7	831.8	764.5	350.8	1018.8	681.5
	60	20	750.6	694.1	663.0	241.1	1016.3	822.2	755.1	341.6	1008.1	671.3
	120	40	733.7	674.3	643.6	221.5	996.4	802.4	735.7	322.0	988.1	651.6
	800	100	695.0	633.9	603.1	181.6	955.8	762.2	696.4	282.9	947.2	611.9
	Initial	596.8	533.8	501.8	81.2	853.5	662.0	600.8	184.2	846.8	511.3	
2. Meter Error	L/h	L	%	%	%	%	%	%	%	%	%	
	30	-16.9	-100.0	-8.0	2.0	-7.0	4.0	-4.0	-6.0	-8.0	7.0	2.0
	60	-10.2	-15.5	-1.0	-3.0	-2.0	-0.5	-1.0	-3.0	-2.0	0.0	-1.5
	120	-4.3	-3.2	1.0	1.3	-0.2	1.5	0.5	-1.7	-2.2	2.2	-0.7
	800	-3.9	-1.8	0.1	1.3	0.4	2.3	0.2	-4.4	-1.3	0.4	0.6
3. Range Count (Japan experience)	L/h	%	%	%	%	%	%	%	%	%	%	
	V<42	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	
	42<V<85	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	
	85<V<310	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	
	310<V	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
4. Consumption (Field meter test)	L/h	L	L	L	L	L	L	L	L	L	L	
	V<42	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	
	42<V<85	154.5	154.5	154.5	154.5	154.5	154.5	154.5	154.5	154.5	154.5	
	85<V<310	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	
	310<V	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	
	Total	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	
5. Consumption Ratio	L/h	%	%	%	%	%	%	%	%	%	%	
	V<42	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
	42<V<85	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	
	85<V<310	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	
	310<V	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
6. Error Ratio	L/h	%	%	%	%	%	%	%	%	%	%	
	V<42	-1.05	-0.08	0.02	-0.07	0.04	-0.04	-0.06	-0.08	0.07	0.02	
	42<V<85	-0.48	-0.03	-0.09	-0.06	-0.02	-0.03	-0.09	-0.06	0.00	-0.05	
	85<V<310	-0.97	0.30	0.37	-0.07	0.45	0.15	-0.52	-0.67	0.67	-0.22	
	310<V	-1.19	0.07	0.86	0.26	1.52	0.13	-2.91	-0.86	0.26	0.40	
	Total	-3.69	0.25	1.16	0.05	1.99	0.21	-3.59	-1.67	1.01	0.15	

水道メータ不感水量試験表(50検体の内21~30のデータ)

Customer ID	121	122	123	124	125	126	127	128	129	130		
Installed Date	2009/01	2010/01	2004/01	2011/01	2012/01	2004/01	2005/01	2012/03	2009/01	2012/02		
Passage Year	5.5	4.5	10.6	3.5	2.5	10.6	9.6	2.3	5.5	2.4		
Meter DN (mm)	13	13	13	13	13	13	13	13	13	13		
Meter Number	8091284	90800514	349484	523106	1320471	1321571	1321250	1322140	8092443	k09001308M		
Meter Company	Evjet	Asiam	Asahi	Asahi	Arad	Arad	Arad	Arad	Evjet	Keumsung		
Installed Area	Iponan	Bellevue	Corrales	Nazareth	Tablon	Macasandig	Opol	Bulua	Cugman	Carmen		
1. Meter Count (800-120-60-30)	L/h	L	L	L	L	L	L	L	L	L		
	30	10	820.1	568.2	411.0	777.5	176.0	737.1	182.6	1063.0	609.3	931.7
	60	20	810.5	557.6	403.0	768.8	166.8	726.0	173.9	1055.3	598.8	921.7
	120	40	790.5	536.8	382.0	750.8	146.5	706.9	153.0	1036.7	578.4	901.3
	800	100	750.1	494.8	338.0	711.8	105.2	666.8	112.8	997.2	537.2	860.3
	Initial	657.9	388.8	227.0	612.6	5.5	565.3	13.9	896.3	433.5	757.3	
2. Meter Error	L/h	L	%	%	%	%	%	%	%	%	%	
	30	-16.9	-4.0	6.0	-20.0	-13.0	-8.0	11.0	-13.0	-23.0	5.0	0.0
	60	-10.2	0.0	4.0	5.0	-10.0	1.5	-4.5	4.5	-7.0	2.0	2.0
	120	-4.3	1.0	5.0	10.0	-2.5	3.3	0.3	0.5	-1.3	3.0	2.5
	800	-3.9	-7.8	6.0	11.0	-0.8	-0.3	1.5	-1.1	0.9	3.7	3.0
3. Range Count (Japan experience)	L/h	%	%	%	%	%	%	%	%	%	%	
	V<42	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	
	42<V<85	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	
	85<V<310	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	
	310<V	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
4. Consumption (Field meter test)	L/h	L	L	L	L	L	L	L	L	L	L	
	V<42	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	
	42<V<85	154.5	154.5	154.5	154.5	154.5	154.5	154.5	154.5	154.5	154.5	
	85<V<310	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	
	310<V	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	
	Total	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	
5. Consumption Ratio	L/h	%	%	%	%	%	%	%	%	%	%	
	V<42	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
	42<V<85	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	
	85<V<310	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	
	310<V	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
6. Error Ratio	L/h	%	%	%	%	%	%	%	%	%	%	
	V<42	-0.04	0.06	-0.21	-0.14	-0.08	0.12	-0.14	-0.24	0.05	0.00	
	42<V<85	0.00	0.12	0.15	-0.31	0.05	-0.14	0.14	-0.22	0.06	0.06	
	85<V<310	0.30	1.49	2.97	-0.74	0.97	0.07	0.15	-0.37	0.89	0.74	
	310<V	-5.16	3.97	7.28	-0.53	-0.20	0.99	-0.73	0.60	2.45	1.98	
	Total	-4.90	5.64	10.19	-1.72	0.73	1.04	-0.58	-0.23	3.45	2.79	

水道メータ不感水量試験表(50検体の内31~40のデータ)

Customer ID	131	132	133	134	135	136	137	138	139	140		
Installed Date	2008/01	2005/01	2006/01	2004/01	2008/01	2004/01	2010/09	2010/09	2011/07	2011/04		
Passage Year	6.6	9.5	8.5	10.6	6.5	10.6	3.8	3.8	3.0	3.3		
Meter DN (mm)	13	13	13	13	13	13	13	13	13	13		
Meter Number	70705440	7076404	8090747	471040926	70804772	356017	10848921	10849736	10871555	10867762		
Meter Company	Asiam	Asiam	Evjet	Asahi	Asiam	Asahi	Arad	Arad	Arad	Arad		
Installed Area	A.Luna	Macasandig	Puntod	Bayabas	Cugman	Consolacion	Balulang	Nazareth	Gusa	Carmen		
1. Meter Count (800-120-60-30)	L/h	L	L	L	L	L	L	L	L	L		
	30	10	883.1	1077.1	853.5	1055.1	339.8	884.0	530.5	571.0	925.2	1029.9
	60	20	873.7	1067.0	847.0	1046.6	339.8	884.0	520.6	561.5	915.3	1019.8
	120	40	853.7	1048.3	829.1	1026.7	339.8	884.0	500.6	541.5	895.5	999.7
	800	100	813.3	1008.1	787.1	987.0	330.9	884.0	459.7	501.1	855.3	959.6
	Initial	712.7	905.4	687.0	885.9	330.8	850.0	357.8	400.8	755.7	858.7	
2. Meter Error	L/h	L	%	%	%	%	%	%	%	%	%	
	30	-16.9	-6.0	1.0	-35.0	-15.0	-100.0	-100.0	-1.0	-5.0	-1.0	1.0
	60	-10.2	0.0	-6.5	-10.5	-0.5	-100.0	-100.0	0.0	0.0	-1.0	0.5
	120	-4.3	1.0	0.5	5.0	-0.7	-77.7	-100.0	2.3	1.0	0.5	0.3
	800	-3.9	0.6	2.7	0.1	1.1	-99.9	-66.0	1.9	0.3	-0.4	0.9
3. Range Count (Japan experience)	L/h	%	%	%	%	%	%	%	%	%	%	
	V<42	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	
	42<V<85	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	
	85<V<310	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	
	310<V	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
4. Consumption (Field meter test)	L/h	L	L	L	L	L	L	L	L	L		
	V<42	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	
	42<V<85	154.5	154.5	154.5	154.5	154.5	154.5	154.5	154.5	154.5	154.5	
	85<V<310	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	
	310<V	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	
	Total	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	
5. Consumption Ratio	L/h	%	%	%	%	%	%	%	%	%	%	
	V<42	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
	42<V<85	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	
	85<V<310	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	
	310<V	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
6. Error Ratio	L/h	%	%	%	%	%	%	%	%	%	%	
	V<42	-0.06	0.01	-0.37	-0.16	-1.05	-1.05	-0.01	-0.05	-0.01	0.01	
	42<V<85	0.00	-0.20	-0.32	-0.02	-3.09	-3.09	0.00	0.00	-0.03	0.02	
	85<V<310	0.30	0.15	1.49	-0.22	-23.11	-29.72	0.67	0.30	0.15	0.07	
	310<V	0.40	1.79	0.07	0.73	-66.07	-43.65	1.26	0.20	-0.26	0.60	
	Total	0.63	1.74	0.86	0.33	-93.32	-77.51	1.91	0.44	-0.16	0.70	

水道メータ不感水量試験表(50検体の内41～50のデータ)

Customer ID	141	142	143	144	145	146	147	148	149	150		
Installed Date	2007/01	2009/06	2004/07	2010/03	2008/04	2013/02	2013/07	2008/04	2009/07	2013/09		
Passage Year	7.5	5.2	10.0	4.3	6.3	1.5	1.0	6.3	5.0	0.8		
Meter DN (mm)	13	13	13	13	13	13	13	13	13	13		
Meter Number	236316	8121261	4017016	8092110	70803116	609604	3033750	70706193	8092087	K09005486M		
Meter Company	Actaris	Evjet	TD88	Evjet	Asiam	Asahi	Toyokeiki	Asiam	Evjet	Keumsung		
Installed Area	Calaanan	Carmen	Agusan	Calaanan	Lumbia	Gusa	Canitoan	Canitoan	Iponan	Iponan		
1. Meter Count (800-120-60-30)	L/h	L	L	L	L	L	L	L	L	L		
	30	10	830.9	952.9	265.1	898.9	698.3	546.5	578.0	227.5	1082.9	503.8
	60	20	820.4	942.8	255.3	888.2	688.4	536.3	568.0	217.1	1081.3	502.3
	120	40	810.0	922.7	235.2	866.2	668.1	516.4	547.0	214.8	1078.9	500.1
	800	100	767.6	882.2	194.6	822.5	627.3	476.2	507.0	210.6	1074.6	495.8
	Initial	662.7	780.4	93.7	722.3	526.9	377.0	406.0	110.2	973.5	394.1	
2. Meter Error	L/h	L	%	%	%	%	%	%	%	%	%	
	30	-16.9	5.0	1.0	-2.0	7.0	-1.0	2.0	0.0	4.0	-84.0	-85.0
	60	-10.2	-48.0	0.5	0.5	10.0	1.5	-0.5	5.0	-88.5	-88.0	-89.0
	120	-4.3	6.0	1.3	1.5	9.3	2.0	0.5	0.0	-89.5	-89.2	-89.3
	800	-3.9	4.9	1.8	0.9	0.2	0.4	-0.8	1.0	0.4	1.1	1.7
3. Range Count (Japan experience)	L/h	%	%	%	%	%	%	%	%	%	%	
	V<42	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	
	42<V<85	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	
	85<V<310	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	31.0	
	310<V	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
4. Consumption (Field meter test)	L/h	L	L	L	L	L	L	L	L	L	L	
	V<42	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	52.6	
	42<V<85	154.5	154.5	154.5	154.5	154.5	154.5	154.5	154.5	154.5	154.5	
	85<V<310	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	1486.0	
	310<V	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	3306.9	
	Total	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	
5. Consumption Ratio	L/h	%	%	%	%	%	%	%	%	%	%	
	V<42	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
	42<V<85	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	
	85<V<310	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	
	310<V	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	66.1	
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
6. Error Ratio	L/h	%	%	%	%	%	%	%	%	%	%	
	V<42	0.05	0.01	-0.02	0.07	-0.01	0.02	0.00	0.04	-0.88	-0.89	
	42<V<85	-1.48	0.02	0.02	0.31	0.05	-0.02	0.15	-2.73	-2.72	-2.75	
	85<V<310	1.78	0.37	0.45	2.75	0.59	0.15	0.00	-26.60	-26.53	-26.53	
	310<V	3.24	1.19	0.60	0.13	0.26	-0.53	0.66	0.26	0.73	1.12	
	Total	3.59	1.59	1.04	3.26	0.89	-0.37	0.82	-29.03	-29.40	-29.05	

6.3 現地業務日程表

6.3.1 第1次現地業務 2014年4月29日(火)～6月3日(火)まで (36日間)

Day	Date	Activities	Stay
1	Apr.29 Tue.	Transfer from Tokyo to Manila PR431 / NRT 09:30(JT) - MNL 13:10 Team Meeting	Manila
2	Apr.30 Wed.	Kick Off Meeting with JICA Philippines from 10:00 @ JICA Philippines Kick Off Meeting with LWUA from 14:00 @ LWUA	Manila
3	May 1 Thu.	May-Day (National Holiday) Team Meeting Transfer from Manila to Cagayan de Oro PR2525 / MNL 14:25 - CGY 16:00	CDO
4	May 2 Fri.	Kick Off Meeting and Explanation of project with COWD and JICA Philippines from 10:00 @ COWD HQ Site visit to Pumping station, Distribution Reservoir, Stub-Outs @ In the city	CDO
5	May 3 Sat.	Team Meeting, Preparation of Report	CDO
6	May 4 Sun.	Team Meeting, Preparation of Report	CDO
7	May 5 Mon.	Discussion using Questionnaire that sent to COWD before leaving Japan @ COWD HQ	CDO
8	May 6 Tue.	Explanation to COWD Leakage Survey Team how to use leakage machines and discussion about leakage survey plan @ COWD Macasandig OJT of leakage detection using AQUASCAN @ Near COWD Macasandig	CDO
9	May 7 Wed.	OJT of leakage detection using AQUASCAN from COWD Macasandig to Camaman-an Distribution Reservoir @ In the city	CDO
10	May 8 Thu.	OJT of leakage detection using AQUASCAN on Transmission Pipeline @ In the city	CDO
11	May 9 Fri.	OJT of leakage detection using AQUASCAN on Transmission Pipeline (Completion of leakage survey 10km) @ In the city	CDO
12	May 10 Sat.	Team Meeting, Preparation of Report	CDO
13	May 11 Sun.	Team Meeting, Preparation of Report	CDO
14	May 12 Mon.	Discussion with Financial Department @ COWD HQ Site visit at DMA San Lazaro from @ In the city	CDO
15	May 13 Tue.	Discussion with GM and Executives about NRW reduction countermeasure of COWD @ COWD HQ Site visit to Macabalan Pilot Area, DMA San Lazaro and RER Sub Division P.1 @ In the city	CDO
16	May 14 Wed.	Explanation about D305 and AQUASCAN's Hydro Phone / Explanation about ZONESCAN and OJT at DMA RER Sub Division P.1 @ COWD Macasandig / In the city Discussion about DMA @ COWD HQ Discussion and hearing with Financial Department @ COWD HQ	CDO
17	May 15 Thu.	Analysis of previous day's leakage survey @ COWD Macasandig OJT at DMA RER Sub Division P.1 @ In the city Discussion about Hydraulic calculation @ COWD HQ Discussion and hearing with Financial Department @ COWD HQ	CDO
18	May 16 Fri.	OJT at DMA RER Sub Division P.1 by ZONESCAN, AQUASCAN and D305 @ In the city Discussion about Hydraulic calculation @ COWD HQ Discussion and hearing with Financial Department @ COWD HQ	CDO
19	May 17 Sat.	Team Meeting, Preparation of Report	CDO
20	May 18 Sun.	Team Meeting, Preparation of Report	CDO

Day	Date	Activities	Stay
21	May 19 Mon.	Discussion about leakage survey system @ COWD Macasandig Minimum Night Flow Measurement of RER Sub Division P.1 @ In the city	CDO
22	May 20 Tue.	Discussion about leakage survey system and delivered document material @ COWD Macasandig Discussion about Hydraulic calculation and construction of DMA @ COWD HQ Discussion and hearing with Financial Department @ COWD HQ	CDO
23	May 21 Wed.	Visit Kauswagan Water Meter Laboratory and discussion about Meter Error Test @ COWD Kauswagan Confirmation of delivered document material from COWD @ COWD Macasandig	CDO
24	May 22 Thu.	Discussion about leakage repairing system and excavation application processes Discussion about Hydraulic calculation and construction of DMA @ COWD HQ Discussion and hearing with Financial Department @ COWD HQ	CDO
25	May 23 Fri.	Visit Water Treatment Plant of RVWC @ RVWC Visit DMA San Lazaro and analysis of collected flow data @ In the city Discussion about Hydraulic calculation and construction of DMA @ COWD HQ Discussion and hearing with Financial Department @ COWD HQ	CDO
26	May 24 Sat.	Team Meeting, Preparation of Report	CDO
27	May 25 Sun.	Team Meeting, Preparation of Report	CDO
28	May 26 Mon.	Site visit to DMA Limketkai @ In the city / Establishment of Leakage survey plan @ COWD Macasandig Discussion about Hydraulic calculation @ COWD HQ Discussion and hearing with Financial Department @ COWD HQ	CDO
29	May 27 Tue.	Establishment of Leakage survey plan and Pipeline Mesh Drawing @ COWD Macasandig Minimum Night Flow Measurement @ DMA San Lazaro Lecture of Water Safety Plan to COWD Executives @ COWD HQ	CDO
30	May 28 Wed.	Team Meeting, Preparation of Report @ COWD HQ	CDO
31	May 29 Thu.	Establishment of Leakage survey plan @ COWD Macasandig Discussion about Hydraulic calculation @ COWD HQ Discussion and hearing with Financial Department @ COWD HQ	CDO
32	May 30 Fri.	Project Report Meeting with COWD @ COWD HQ Meeting about each assignment with COWD @ COWD Macasandig	CDO
33	May 31 Sat.	Transfer from Cagayan de Oro to Manila PR2522 / CGY 11:00 - MNL 12:30 Team Meeting	Manila
34	Jun.1 Sun.	Team Meeting, Preparation of Report	Manila
35	Jun.2 Mon.	Project Report Meeting with JICA Philippines from 10:00 @ JICA Philippines Project Report Meeting with Japan Embassy from 14:00 @ Japan Embassy	Manila
36	Jun.3 Tue.	Team Meeting Transfer from Manila to Tokyo PR432 / MNL 14:45 - NRT 20:10(JT)	---

6.3.2 第2次現地業務 2014年7月31日(木)～8月20日(水) (21日間)

Day	Date	Activities	Stay
1	Jul.31 Thu.	Transfer from Tokyo to Manila PR431 / NRT 09:30(JT) - MNL 13:30 Team Meeting	Manila
2	Aug.1 Fri.	Kick Off Meeting with JICA Philippines from 10:00 @ JICA Philippines Team Meeting, Preparation of Report	Manila

Day	Date	Activities	Stay
3	Aug.2 Sat.	Team Meeting Transfer from Manila to Cagayan de Oro PR2525 / MNL 14:25 - CGY 16:00	CDO
4	Aug.3 Sun.	Team Meeting, Preparation of Report	CDO
5	Aug.4 Mon.	Kick Off Meeting and Explanation of project with COWD from 9:00 @ COWD HQ Discussion and hearing with Financial Department @ COWD HQ Discussion about COWD's assignment @ COWD Macasandig	CDO
6	Aug.5 Tue.	Discussion about DMA and hydraulic calculation @ COWD HQ Discussion and hearing with Commercial Department @ COWD HQ Measurement of flow volume at Macasandig and Balulang Booster Pumping Station @ In the city	CDO
7	Aug.6 Wed.	Accompanying Meter Reader @ In the city Accuracy test of Balulang Booster Pump @ In the city Water meter accuracy test in the water meter laboratory @ COWD Kauswagan	CDO
8	Aug.7 Thu.	Accompanying Disconnection operation @ In the city Discussion and hearing with Commercial Department @ COWD HQ Accuracy confirmation at Bugo Booster Pumping Station and Deep Wells (PW11, PW23) @ In the City	CDO
9	Aug.8 Fri.	Accompanying Reconnection operation @ In the city Analysis of measured flow volume @ COWD Macasandig Discussion and hearing with Financial Department @ COWD HQ	CDO
10	Aug.9 Sat.	Participation to New Connection Customer's Seminar @ COWD HQ Team Meeting, Preparation of Report	CDO
11	Aug.10 Sun.	Team Meeting, Preparation of Report	CDO
12	Aug.11 Mon.	Visit to water meter chamber at new DMA Macabalan @ In the city Leak survey by ZONESCAN at Golden Village Sub-Division @ In the city Discussion and hearing with Financial Department @ COWD HQ	CDO
13	Aug.12 Tue.	Visit to RVWC Bulk Water Meter and confirm flow volume by Ultrasonic flow meter @ In the city Discussion about project cost and maintenance cost with Engineering Department @ COWD HQ	CDO
14	Aug.13 Wed.	Visit to RVWC Bulk Water Meter and confirm flow volume by Ultrasonic flow meter @ In the city Discussion and hearing with Financial Department @ COWD HQ	CDO
15	Aug.14 Thu.	Leak survey by AQUASCAN at Canito-an area @ In the city Discussion and hearing with Financial Department @ COWD HQ Discussion about New DBP Project (458M.PHP) and COWD future plan @ COWD HQ	CDO
16	Aug.15 Fri.	Discussion and hearing with Financial Department @ COWD HQ Discussion about New DBP Project (250M.PHP) and Bulk water @ COWD HQ Discussion about leak survey plan @ COWD Macasandig	CDO
17	Aug.16 Sat.	Team Meeting, Preparation of Report	CDO
18	Aug.17 Sun.	Team Meeting, Preparation of Report	CDO
19	Aug.18 Mon.	Project Report Meeting with COWD @ COWD HQ Transfer from Cagayan de Oro to Manila PR2526 / CGY 16:15 - MNL 17:45	Manila
20	Aug.19 Tue.	Team Meeting Project Report Meeting with JICA Philippines from 16:00 @ JICA Philippines	Manila
21	Aug.20 Wed.	Team Meeting Transfer from Manila to Tokyo PR430 / MNL 10:00 - NRT 15:25(JT)	---

6.3.3 第3次現地業務 2014年10月12日(日)～10月23日(木) (12日間)

Day	Date	Activities	Stay
1	Oct.12 Sun.	Team Meeting Transfer from Tokyo to Manila PR421 / HRD 15:20(JT) - MNL 18:40	Manila
2	Oct.13 Mon.	Kick Off Meeting with JICA Philippines from 10:00 @ JICA Philippines Transfer from Manila to Cagayan de Oro PR2525 / MNL 14:25 - CGY 16:00	CDO
3	Oct.14 Tue.	Kick Off Meeting and Explanation of project with COWD from 9:00 @ COWD HQ Kick Off Meeting about each assignment with COWD leak survey team @ COWD HQ	CDO
4	Oct.15 Wed.	Discussion and hearing with Financial Department @ COWD HQ Discussion about DMA Macabaran monitoring with COWD leak survey team @ COWD Macasandig	CDO
5	Oct.16 Thu.	Visit to DMA San Lazaro and start to measure minimum night flow @ In the city Discussion about exposed pipe / illegal connection location @ COWD HQ Discussion and hearing with Commercial Department @ COWD HQ	CDO
6	Oct.17 Fri.	Discussion about Financial analysis and COWD Mid&Long term management plan with GM @ COWD HQ Discussion about exposed pipe location @ COWD HQ	CDO
7	Oct.18 Sat.	Team Meeting, Preparation of Report	CDO
8	Oct.19 Sun.	Team Meeting, Preparation of Report	CDO
9	Oct.20 Mon.	Final discussion about this project with GM @ COWD HQ Preparation of Report	CDO
10	Oct.21 Tue.	Project Report Meeting with COWD from 9:00 @ COWD HQ Transfer from Cagayan de Oro to Manila PR2526 / CGY 16:15 - MNL 17:45	Manila
11	Oct.22 Wed.	Project Report Meeting with JICA Philippines from 9:30 @ JICA Philippines Project Report Meeting with LWUA from 14:30 @ LWUA	Manila
12	Oct.23 Thu.	Team Meeting Transfer from Manila to Tokyo PR432 / MNL 14:45-NRT 20:10(JT)	---

6.3.4 団員構成

- | | | |
|-------------------|--------|-------------|
| (1) 総括/都市給水 | 永井 康敏 | 横浜ウォーター株式会社 |
| (2) 無収水対策 | 横山 健 | 横浜ウォーター株式会社 |
| (3) 漏水管理 | 瀬川 進太 | 横浜ウォーター株式会社 |
| (4) 財務分析/水道サービス改善 | 山下 みや美 | 横浜市水道局(補強) |

6.4 現地業務キックオフ・ミーティング資料

6.4.1 第1次現地業務 2014年4月30日(水)@JICA 2014年5月2日(金)@COWD



Background [2]

- # Dec. 2011, tropical storm "Sendong" hit the Northern Mindanao region.
- # May 2012, COWD requested assistance to JICA.
- # From Aug. 2012 to Nov. 2013, COWD, LWUA and JICA rehabilitated COWD water supply system as the disaster recovery support project.
- # End of 2013, NRW rate of COWD was still 54%.
- # COWD requested assistance to JICA regarding development of comprehensive NRW reduction program.
- # JICA Study Team investigates current COWD's activities and organization about NRW reduction and proposes their improvement plans, and conducts leakage survey training.

Yokohama Water

Current COWD condition [3]

1. Served population: 520,000 persons
2. Service cover rate: 84%
3. Designed daily supply: 145,000m³/d
4. Non-revenue water rate: 54%
5. Distribution pipe length: 510km
6. Resin pipe usage rate: 64%
7. Dis.Tank: 7 / P.Well.: 26 / B.P.Sta.: 3

Yokohama Water

Current YWWB condition [4]

1. Start to service: Oct. 17, 1887 (127ys ago)
2. Served population: 3,693,733
3. Service connection: 1,776,546
4. Service rate: 100.00% (Since 1988)
5. Pipelines length: 9,147km (Iron pipe: 92%)
6. Revenue rate: 91.4% (Since 1995, over 90%)
7. Leakage rate: 5.4% (15 consecutive years)
8. Daily supply: 1,165,152m³ (Max.: 1.27Milm³)
9. Dist. management: 23 DR, 26 Blk, 250 DMA

Yokohama Water Data in March, 2013

Objectives/Targets of Project [5]

1. Confirmation of current state of NRW
2. Investigation of technical aspect, institutional organization, and financial situation of current NRW reduction activities
3. Understanding of problems and tasks of current activities
4. Recommendation for improvement measures for each issue

Yokohama Water

Implementation Policy (1) [6]

1. Introduction of investigation and proposal
2. Understanding of current status of NRW reduction activities, and its proposal
3. Proposal for monitoring plan of NRW reduction measures
 - # Management of pipeline mapping system
 - # Management of customer information
4. Proposal and improvement for leakage survey method
 - # Study of appropriate water pressure by pipe network analysis
 - # Calculation of leakage volume by the Night Minimum Flow Method

continue ...

Yokohama Water

Implementation Policy (2) [7]

4. Proposal and improvement for leakage survey method
 - # Measures of illegal connection (stolen water)
 - # Water meter insensitive volume
 - # Distribution water volume analysis
 - # Pipeline ledger and Mesh management
 - # Preparation of leakage detection equipment

... Next page...

6. Proposal related to pipe network plan and DMA setting
7. Proposal considering cost-effectiveness
8. Proposal or the implementation plan from a financial standpoint

Yokohama Water

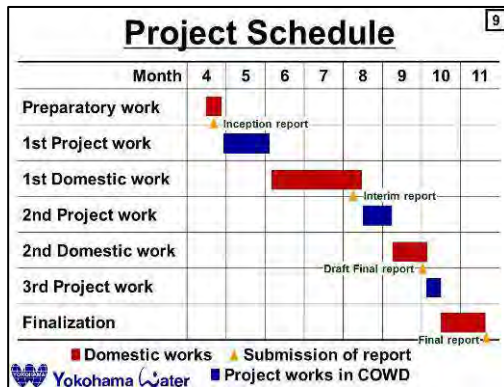
Implementation Policy (3) [8]

5. Carrying machinery and material
 - (1) Leak detector for resin pipes x 2
 - (2) Leak detector (general type) x 2
 - (3) Long range leak correlator with amplifier x 1
 - (4) Correlating radio loggers (10 loggers) x 1
 - (5) Portable ultrasonic flow meter x 1

(1) D305 (3) Aqua Scan 610 (5) UF 801-P

(2) Pocket Phone (4) Zone Scan 820

Yokohama Water



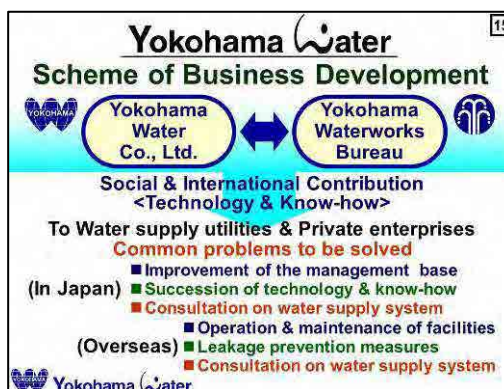
- ### Implementation work (1) 10
1. Preparatory work
 2. Procurement of rental equipment
 3. First Project work in COWD
 - 1) Explanation of Project work ← Now, here!
 - 2) Grasp of COWD activities of NRW reduction
 - 3) Proposals for various activities related to NRW reduction measures and finance
 - 4) Current status confirmation of the pipe network calculation and DMA installation
 - 5) Current condition survey of NRW, and proposal for strategy of NRW reduction measures and implementation plan and finance
- continue ...
-

- ### Implementation work (2) 11
3. First Project work in COWD
 - 6) Making of water leakage survey plan, and OJT by water leakage survey equipment
 4. First Project work in domestic
 - 1) J&C assign homework for each.
 - 2) J&C keep in touch about assignment of both.
 5. Second Project work in COWD
 - 1) Discussion and explanation of Interim Report
 - 2) Status survey of NRW, and Proposal on strategy of NRW reduction measures and execution plan
 - # Short term measures
 - # Middle-long term measures
- continue ...
-

- ### Implementation work (3) 12
5. Second Project work in COWD
 - 3) Financial analysis that takes into account LCC (Life Cycle Costs) in NRW reduction measures, and Proposals on initiatives aimed at improving the water services
 6. Second Project work in domestic
 - 1) J&C assign homework for each
 - 2) J&C keep in touch about assignment of both
 7. Third Project work in COWD
 - 1) Discussion and explanation of Draft Final Report
- continue ...
-

- ### Implementation work (4) 13
7. Third Project work in COWD
 - 2) Review of involvement to the NRW reduction measures in COWD organization
 - 3) Review of the applicability and usage condition of water leakage survey equipment
 - 4) Return of water leakage survey equipment
 8. Finalizing
 - 1) JST completes the Final Report
 - 2) JST delivers to JICA as Deliverable of the Final Report
 - 3) Number of the Final Report which is bound
JICA:15, COWD:25, LWUA:5 and CD-ROM
-

- ### Responsibilities of COWD 14
1. COWD Counterpart (C/P)
 - # Chief coordinator: 1
 - # Civil engineer (water distribution): 1 or more
 - # Electrical/Mechanical engineer: 1
 - # Financial officer: 1 or 2
 - # Researcher (leakage survey): Several persons
 2. Provision of information, available data
 3. Provision of office space for JST
 4. Manufacturing Acoustic Rods
 5. Provision of removed water meter
 6. Provision of ID card for JST
-



6.4.2 第2次現地業務 2014年8月1日(金)@JICA 2014年8月4日(月)@COWD



Objectives / Project Targets ²

1. Confirmation of current state of NRW
2. Investigation of technical aspect, institutional organization, and financial situation of current NRW reduction activities
3. Understanding of problems and tasks of current activities
4. Recommendation for improvement measures for each issue

Yokohama Water

Implementation Policy (1) ³

1. Introduction of investigation and proposal
2. Understanding of current status of NRW reduction activities, and its proposal
3. Proposal for monitoring plan of NRW reduction measures
 - # Management of pipeline mapping system
 - # Management of customer information
4. Proposal and improvement for leakage survey method
 - # Study of appropriate water pressure by pipe network analysis
 - # Calculation of leakage volume by the Night Minimum Flow Method

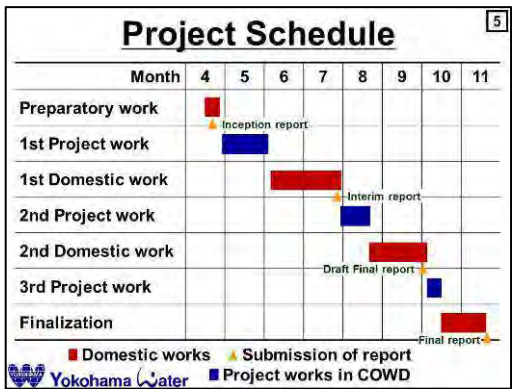
continue ...

Yokohama Water

Implementation Policy (2) ⁴

4. Proposal and improvement for leakage survey method
 - # Measures of illegal connection
 - # Water meter insensitive volume
 - # Distribution water volume analysis
 - # Pipeline ledger and Mesh management
 - # Preparation of leakage detection equipment
5. Carrying machinery and material
6. Proposal related to pipe network plan and DMA setting
7. Proposal considering cost-effectiveness
8. Proposal or the implementation plan from a financial standpoint

Yokohama Water



Implementation Work (1) ⁶

1. Status survey of NRW, and Proposal on strategy of NRW reduction measures and execution plan
 - 1) Short term measures
 - Improvement of short term NRW measures except water leakage
 - # Removal water meter error
 - # Illegal connection place
 - # Non-payment measures
 - # Accompany to the meter reading
 - # Input data of meter reading slip
 - # Training for meter reading staff
 - # Outsourcing of meter reading

Yokohama Water

Implementation Work (2) ⁷

Second Project work in COWD

- Short term improvements to reduce the water loss
- 2) Medium term measures
 - Proposals regarding grasp of the exact amount of water distribution and DMA setting for water consumption, installation of main pipeline flow meter, and SCADA introduction
 - Proposal for operation of accurate Revenue Management System (RMS)

Yokohama Water

Implementation Work (3) ⁸

Second Project work in COWD


- Proposal for water supply equipment maintenance (Placement of Stub-out with optimal water faucet number, appropriate water supply connection)
 - # Skill and knowhow of plumber of the water supply works company and their training content
 - # Forecast of revenue water increasing by placement of appropriate Stub-out

Yokohama Water

Implementation Work (4) 9

Second Project work in COWD


- Proposals regarding the adjustment of distribution water pressure (Distribution water pressure management, Optimization of water pressure at night)
- # The minimum night flow measurement in existing Pilot Area (In the first project work in COWD, JST conducted confirmation of gate valve and water inlet point.)



Implementation Work (5) 10

Second Project work in COWD

- Water distribution facility development (Aged pipe replacement plan, Development of mapping system, Appropriate construction management)
- Regarding NRW Reduction Measures based on the core vision / mission of COWD and the basic concept of medium-long term policy




Implementation Work (6) 11

Second Project work in COWD

2. Financial analysis that takes into account the Life Cycle Costs in the NRW Reduction Measures, and Proposals on initiatives aimed at improving the water services


- Study of analysis of financial condition and desirable situation of water charge
- # Water rate revision simulation



Implementation Work (7) 12

Second Project work in COWD


- Understanding of water consumption of the customer, Confirmation of the current situation in the billing method, and proposals for these improvements
- # Understanding of usage volume and billing method of other companies
- Selection of pipe life or pipe replacement, Judgment of leakage point, Comparison of cost-effectiveness of measures to reduce NRW



Implementation Work (8) 13


Second Project work in COWD

- Study of incentive mechanism for promoting the NRW measures
- # Conducted content in COWD and other companies
- Study of outsourcing in business in the NRW measures
- Information transmission to customers, and Study of Customer Satisfaction survey
- # Questionnaire items in the Customer Satisfaction survey




Assignment of COWD 14

- # Leakage survey based on survey plan
 - 46.8km (6.7km/week/team) done
- # Water usage volume data collection (Hourly, Daily)
 - Being carried out at 1 DMA
- # PW, BPS, BW meter accuracy check by USFM
 - Being carried out at Macasandig BPS
- # 50 (5 X 10 years) water meters flow test
 - Finished selection, but not collection
- # Illegal connection survey
 - Start to survey by Leakage Team
- # Meter chamber construction at Pilot area
 - Complete soon
- # Pipe location of ACP and Phase 1 ~ 3
 - ACP and Phase 1 finished




Assignment of COWD 15


Activity Situation of COWD



(1)




(2)



(3)

(1) Leak found (SP150) & repair work near PW2 in Macasandig on June 3
 (2) Leak repair work (PE100) in Igpit Opol on July 18
 (3) Leak survey by AQUASCAN on July 25





info@yokohamawater.co.jp



Yokohama Water Co., Ltd.

6.4.3 第3次現地業務 2014年10月13日(月)@JICA 2014年10月14日(火)@COWD



Objectives / Project Targets ^[2]

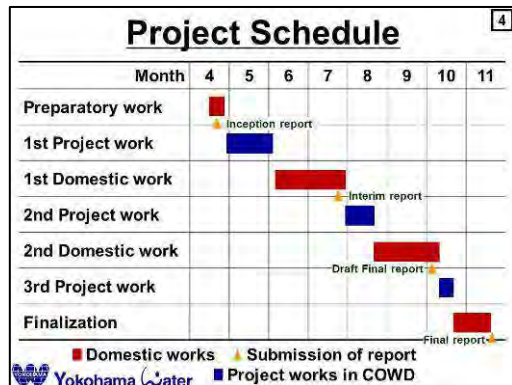
1. Confirmation of current state of NRW
2. Investigation of technical aspect, institutional organization, and financial situation of current NRW reduction activities
3. Understanding of problems and tasks of current activities
4. Recommendation for improvement measures for each issue

Yokohama Water

Contents of Final Report ^[3]

0. Summary of Final Report
1. Outline of Project
2. Study Area / COWD Business Status
3. Content of Project Implementation
4. Towards Medium-Long Term Plan
5. Impression at the End of Project
6. Reference Data / Material

Yokohama Water



Proposal for Improvement ^[5]

1. Distribution water volume analysis
→ Have/Calculated or Not

(1) Distributed Water Volume	(2) Revenue Water	(4) Water Charge	Have	Not
		(5) Other	X	
(3) Non-Revenue Water	(6) Leakage	(7) Illegal Connection		X
		(8) Water Meter Error		X
		(9) Uncollectable	X	
		(10) Used by WD	X	
Accuracy OK or Not	(11) Other	X		

Yokohama Water

Proposal for Improvement ^[6]

(1-3) Distributed Water/Revenue/NRW Volume
Is Mother Meter Accuracy OK or Not?
If meter accuracy is not good, WD cannot calculate a correct NRW rate.

$$\text{NRW rate} = \frac{\text{Distributed volume} - \text{Revenue volume}}{\text{Distributed volume}} \times 100$$

$$\text{NRW rate} = \frac{100 - 60}{100} = 40\% \rightarrow \text{NRW rate} = \frac{90 - 60}{90} = 33\%$$

Check Item	If not, do below.
Conduct a periodic maintenance?	# Ask the inspection company about accuracy flow test. # Comparison with accurate portable ultrasonic flow meter.

Yokohama Water

Proposal for Improvement ^[7]

(4-5) Water Charge and Other
Consists of "Collection of water charge", "Delinquent charge", "New/Re-connection fee", and other.

$$\text{Revenue rate} = \frac{\text{Revenue volume}}{\text{Distributed volume}} \times 100 (\%)$$

Above data is easy to collect every month. This is the most important data for WDs.

In New Customer's Seminar, WD shall show that water charge is so important for WD to continue their Sound Management.

Diagram: Revenues increase & Operational costs decrease → Expenditure is increased to include operational improvements → Investments are made in further NRW reduction programs → NRW decreases → back to Revenues increase & Operational costs decrease.

Yokohama Water

Proposal for Improvement ^[8]

(6) Leakage

Item	If not, do below.
Leak Survey	Establish survey team / Prepare suitable leak detecting equipment / Design a leak survey plan / Make pipeline map book and coloring in the mesh / Review and evaluate current plan
Leakage Repair	Establish repair team / Build quick contact and repair system after finding the leakage
Minimum Night Flow Measurement	Create DMAs and install mother meters / If cannot install them, use ultrasonic flowmeter

Yokohama Water

Proposal for Improvement 9

(6) Leak Detector [Long Range Correlator]

High effective survey is possible in short time. Reputation of COWD is very high.

[Zone Correlator]
High efficient and effective survey is possible. Reputation of COWD is so high.

[Resin Pipe Leak Detector]
Many service pipes that run parallel to distribution pipe will interfere with survey.

Yokohama Water

Proposal for Improvement 10

(7) Illegal Connection

I am poor, I can't afford to pay water charges. Oh, here is an exposed PVC pipeline near my house. Nobody watches. I have just implements to make my branch pipe.

If there is no exposed pipe, nobody thinks so that.

- # Find where exposed pipes are.
- # Make the "Exposed Pipe Map".
- # Make a plan to bury the exposed pipe.
- # When construction, can find (lots of) illegal connections.
- # Change Violator to New Customer.

Yokohama Water

Proposal for Improvement 11

(8) Water Meter Insensitiveness/Error

Where WD's water disappeared?

Water Consumption = 10m³

Water meter error = $\frac{9.8 - 10.0}{10.0} = -2.0\%$ NRW

Yokohama Water

Proposal for Improvement 12

(8) Water Meter Insensitiveness/Error

If WD does not have an equipment, create like this.

← COWD Meter Test Laboratory

NRW rate 0.7% ↑ +5.3pts
-4.6%

Yokohama Water

Proposal for Improvement 13

(9) Uncollectable Account

Reminder of the payment by the dunning letter.
Inform about damage of dis-connection.
Which is an economical, "Continue to pay" or "Unpaid + Buy water from vender/neighbor + Re-connection fee"?

Continue	Unpaid & Disconnect
350P (Pay in Apr.)	0P (No pay in Apr.)
COWD water rate 30.55P/m ³ (Excess 11-20m ³)	Dis-connection work
	Buy water from neighbor 250P/1000L (5P/20L)
	Pay a charge of Apr. in May 385P (350P+35P:Fine10%)
	Re-connection in May 300P/DN13mm
350P (Pay in May)	350P (Pay in May)

Dis-connection work

Yokohama Water

Proposal for Improvement 14

(10) Used for WD's Operation

After pipeline construction work, long water suspension, WD needs to wash inside of pipeline. WD needs to calculate how much water WD used.

(11) Other (in NRW)

No need this item in this table.
All water volume is classified into each item.
Amount of the other represents the leakage generally.

Distributed Water	Revenue Water		Non-Revenue Water	
	44.4%	44.4%	55.6%	
	Water Charge	44.4%	Water Meter Error	N/D
	Other	0.0%	Illegal Water	N/D
			Uncollectable Account	N/D
			Leakage	N/D
			Use by COWD	1.5%
			Unknown Water	N/D
			Other	54.1%

← THIS

Yokohama Water

Proposal for Improvement 15

Hydraulic Calculation and DMA Building

Do not make branch small service pipe from large transmission pipeline. Make a difficult of hydraulic calculation.

Current number of DMA in COWD: 2 (East&West)

- Able to divide into more than 50 DMAs
- Need installation of mother meter
- Need installation of valves to delimit boundary

- Existing DMA (3+1)
- Can be set DMA (Current 18)
- Number of DMA would be more than 50.

Yokohama Water

Proposal for Improvement 16

New DBP Project

Sub-Project Name	Cost
1) Replacement from ACPs to DIPs	55,000,000PHP
2) Improvement of Stub-Outs	22,000,000PHP
3) Burying exposed pipes on roads	45,000,000PHP
4) Renovating the pipes installed in PH1	336,000,000PHP
Total	458,000,000PHP

By carrying out this New DBP Project, NRW rate of COWD will decrease 3-4% per year. COWD can postpone receiving new bulk water.

Yokohama Water

Proposal for Improvement 17

New DBP Project

2) Improvement of Stub-Outs

82 water meters
COWD's Criteria: 20 pcs

By hydraulic calculation, maximum service lines are 20 (DN13mm), based on below condition.
 # Water pressure: At least 10PSI
 # Service pipe length: Less than 20m

20 connection: Enough (0.85m³/day)
 62 connection: Not enough (0.33m³/day)

82 water meters
 +32.2m³/day
 +983.7P/day
 (+359,000P/yr)

Up to 16 water meters
 82 connection: Enough (0.85m³/day)

Disperse In 6 Stub-Outs
 About 20m

Yokohama Water

Proposal for Improvement 18

New DBP Project

2) Improvement of Stub-Outs

Number of water meter on Stub-Out	Standard	Without Standard					Total
	~20	21~32	33~48	49~64	65~80	81~96	
Number of Stub-Out	1,071	140	61	12	2	3	1,289
Number of Division		2	3	4	5	6	
Number of New S-O		140	122	36	8	15	321

→ Divided new Stub-Out: Up to 16 water meters / Stub-Out

Construction cost of New Stub-Out: 35,000PHP
 Total cost: 35,000PHP X 321pcs = 11.23 millionPHP

2,677 connections will improve and consume +1,387m³/day as same as 2% of revenue water.
 2% of COWD's revenue: about 14 millionPHP

Once Do
 Every Year
 Gain Revenue

The Third Field Operation 19

- Kick-Off Meeting
- Collation by reading out Draft Final Report
- Discuss how transfer these proposal to COWD
- Simulation of water tariff revision after New DBP Project
- Interview of user review about leakage detection equipment
- Create the illegal connection location Map
- Create the residual chlorine and turbidity Map
- Report to LWUA and discuss how distribute these recommendations to other WD

Yokohama Water

info@yokohamawater.co.jp

Yokohama Water Co., Ltd.

6.5 現地業務レポート資料

6.5.1 第1次現地業務 2014年5月30日(金)@COWD 2014年6月2日(月)@JICA



Objectives / Project Targets ^[2]

1. Confirmation of current state of NRW
2. Investigation of technical aspect, institutional organization, and financial situation of current NRW reduction activities
3. Understanding of problems and tasks of current activities
4. Recommendation for improvement measures for each issue

Yokohama Water

Implementation work ^[3]

1. Understanding of COWD NRW reduction activities
2. Current status confirmation of the pipe network calculation and DMA installation
3. Proposal for strategy of NRW reduction measures and implementation plan, finance and water supply service
4. Making of leakage survey plan, and OJT by leakage survey equipment

Yokohama Water

1. NRW Reduction ^[4]

1) NRW rate of East & West
 # NRW rate of COWD is 54%.
 # NRW team calculated NRW rate in 2013 to be divided into East & West.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ave
East	57%	54%	55%	58%	58%	47%	62%	56%	56%	57%	57%	62%	56.5%
West	55%	50%	46%	52%	50%	55%	54%	52%	50%	54%	52%	55%	52.1%
Total	54%	51%	54%	54%	53%	54%	57%	53%	52%	54%	53%	58%	54.0%

- NRW rate of East is larger than West.
- ✓ Calculate NRW rate to be divided into East & West each month continuously.
- ✓ Divide more water supply area in the future.

Yokohama Water

1. NRW Reduction ^[5]

2) NRW Data analyzing in DMAs
 # NRW team measured minimum night flow (MNF) in DMAs in 2012 and 2014.
 → A large amount of leakage were confirmed.
 → Mother meters were broken in 2 DMAs

- ✓ Set isolated supply area as a DMA & install mother meter.
- ✓ Analyze NRW amount in DMAs every month.
- ✓ Expand the NRW analyzable water supply area by Adding DMAs.

Area	Mother meter	MNF 2012	MNF 2014
SAN LAZARO	Need to replace	12.0m ³ /h	---
RER SUBD.P1	DONE	7.2m ³ /h	15.6m ³ /h
LIMKETKAI	Need to replace	6.5m ³ /h	---
MACABALAN	Need to install	---	---

Yokohama Water

1. NRW Reduction ^[6]

DMAs, pilot area & candidate sites

Yokohama Water

1. NRW Reduction ^[7]

3) Flow Meter Accuracy
 → Water distribution amount is important as the denominator of NRW rate and the accuracy of the flow meter (e.g. PW & BPS) may have a significant impact on NRW rate.
 → Water amount from the bulk water accounts for 26% of the water distribution amount.

- ✓ Check the accuracy of the flow meters regularly.
- ✓ Share the data of accuracy of contract meter with bulk water.

Trying to confirm the accuracy of flow meter in Macasandig BPS

Yokohama Water

1. NRW Reduction ^[8]

4) Water Meter Error / Accuracy
 # COWD is collecting water meters to represent the COWD (By five each year & including different brands).
 → In some countries, the accuracy of the water meter may have a significant impact on NRW rate.

- ✓ Confirm the accuracy of 50 water meters in the meter test laboratory.
- ✓ Collect water meters and test accuracy continuously.

Meter test labo. in Kauswagan

Yokohama Water

9


1. NRW Reduction


5) Illegal Connection

Investigation of illegal connection status

- Illegal connections are Fixed-cut when they are found.
- Number of Fixed-cut connection (2013) : 166
- In consideration of NRW volume and the field situation, the actual number of illegal connection is assumed to be greater than Fixed-cut number.

✓ Enhance the system to discover and prevent the illegal connection for reducing non-revenue water and ensure equity.





10

1. NRW Reduction


6) Non-payment

Investigation of payment status (2013)

- Payment until due date : 75%
- In Yokohama case
 - Payment before Disconnect Notice deliverable : 97%(Bank transfer 99%, Others 87%)
- Payment Place : 4 COWD Office and 13 Bank (4 large commercial malls : Negotiating)
- Payment : Cash, Check, Other (Bank transfer, Credit card, Online : Examining)

✓ Promote improvement of convenience of payment

	Num.	%	YWWB
Disconnection	5,272	6.3	0.4
Fixed-cut	321	0.4	-
Reconnection	3,864	4.6	-



11


1. NRW Reduction

7) Meter Reading

Investigation of meter reading and billing

- 24 zone, each 7-8 district
- meter reading → (next day) data input → (next day) bill delivery to customer
- Visiting twice in the same place every month.
- There is no meter reading map, so they use their sketch when takeover.
- For meter reading areas and distribution areas does not match, it is difficult to calculate the revenue water rate of each distribution area.

✓ Invent the meter reading and billing methods.
✓ Improve the data system to calculate the revenue water volume of each distribution area.



12

1. NRW Reduction


8) Customer Satisfaction

Verification of "COWD Feedback Survey"

- The random survey of 300 Customer (every year)
- No attribution
- More than 20% customer pointed out about non-24-hour water service and low water pressure.

Number of replying "YES" (Total 300)	2010	2011	2012
Are you satisfied with the water service ?	269	215	182
Do you receive 24-hours water service ?	259	238	163
Is your water pressure usually adequate ?	254	230	224
Does your water taste good ?	272	226	211
Do you have confidence that the water is safe ?	266	135	174

✓ Customer require appropriate water supply.
✓ Measures can be more effective by adding to investigate the attribute.



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2. Leakage survey & repair

1) Initial Water Leakage survey

NRW team conduct Initial water leakage survey.

May 14, 16 total 4 hours
RER SUBD.P1
ND100-200mm, PVC, 2,397m
ZONESCAN, D305
IDENTIFY LEAK POINT

May 7-9 total 9 hours
Cugman Highway
ND600mm, Steel, 4,802m
ND50mm, PVC, 261m
AQUASCAN, D305
NO LEAKAGE

May 15 total 3 hours
in front of PW # 2
ND150mm, PVC
D305
IDENTIFY LEAK POINT

May 6-7 total 4 hours
Macasandig BPS ~ Camaman-an DR
ND400mm, Steel, 2,111m
AQUASCAN
NO LEAKAGE

Total 20 hours;
9,571m, identify 2 leak points





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2. Leakage survey & repair

2) Faster Water Leakage survey


NRW team surveyed transmission pipes.

- Many valves, FHs and Stub-Outs described in the drawings might not exist on site.
- Even if available valves, they cannot be accessed quickly because of dirt.
- Many service pipes (ND50mm) are connected.

✓ Check the site & drawing.
✓ Clean & maintain the facilities at all time.
✓ Prohibit of water service from transmission pipe



Lots of sludge in the valve chamber & need to wait for the cleaning each time.




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2. Leakage survey & repair

3) Faster Water Leakage repair


NRW team identify the leakage point.

- Leak detection team can not identify the leakage point from 4 month ago.
- They are evaluated in "Accuracy from Marking".



Surface water leakage in front of PW #2 in Macasandig

✓ Excavate & repair immediately because surface water leakage is emergency



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2. Leakage survey & repair

4) Leakage Survey in whole supply area

NRW team made Leak Survey Plan.

- The major cause of 54% of NRW rate is water leakage.
- COWD can not conduct water leakage survey effectively and efficiently by elite few staffs without Leak Survey Plan.

✓ Conduct the leakage survey 510km of pipeline of COWD until mid October.
✓ Understand where water leakage comes from.




3. Drawing Management ¹⁷

1) Mesh management on pipeline map

NRW team created standard mesh and sub-mesh on the distribution pipeline map.

- ✓ Introduce mesh management in daily O/M.
- ✓ Manage Stub-Out, water meter ID, Leakage repair point in mesh
- ✓ Describe water pressure & residual chlorine in mesh map.





4. Effort to next year ¹⁸

1) Stub-out Improvement

In COWD Stub-Out criteria, the water meters can be installed up to 20 at 10psi.

- There are many Stub-Out installed more than 20 meters. (maximum 96 meters!!)
- In most area, water pressure is less than 10psi.
- Most complain is "No Water" due to low pressure.
- ✓ According to the Stub-Out criteria.
- ✓ If water pressure is low, consider the appropriate number of water meters.

4. Effort to next year ¹⁹

2) Mid-term Plan (for 3-5 years)

COWD has the goal (e.g. 2% reduction of NRW rate every year).

- There are no plans on specific projects in order to achieve the goals.
- ✓ Make a plan for a projects based on financial plan in order to solve the mid-term and long-term problems.



4. Effort to next year ²⁰

3) Strategy for sweep away puddle

There are many puddle in CDO city.



- Poor Landscape, Traffic Jam, Inconvenience of pedestrian
- Cause of puddle might be water leakage.
- ✓ Clarify the cause with city government.
- ✓ Sweep away all puddle in CDO.




4. Effort to next year ²¹

4) In-house or Outsourcing?

It takes time to repair a lot of water leakages.

- In the case of in-house, COWD will not be able to respond quickly because of the lack of manpower.
- ✓ One solution, consider the outsourcing of excavation, repair and pavement restoration.




5. Organization and Financial ²²

1) Leak Detection Team is not Section.

Authority and position as an organization is unclear

- Non-Revenue Water Team does not exist in the duties of division.
- For authority and chain of command is not clear, sometimes, it is difficult to promote coordination across the division.
- ✓ At the next time of the organizational reform, it is important to position NRW team in the organization (above the unit).
- ✓ It is necessary to grant the adjustment authority across the division.




5. Organization and Financial ²³

2) Production cost / Unit sales price

Analysis of production cost / unit sales price

- Important PI to determine COWD business
- Production cost (Case of YWWB)
 - = Ordinary expenses / Revenue water volume
 - Unit sales price
 - = Water Sales / Revenue water volume
- COWD adopts the indicator of "Production and Distribution cost per cubic meter produced"
- ✓ Clarify the influence of revenue water on production cost

Indicator (2012)	Provisional calculation
Production cost	26.4 PHP/m ³
Unit sales price	26.6 PHP/m ³
c.f. Pro. and Dis. cost/m ³ Produced	5.9 PHP/m ³



5. Organization and Financial ²⁴

3) Financial Overview (2012)

INCOME	COWD		YWWB	
Operating Revenue	672,760	99.6%	34,057,787	95.4%
Water Sales	640,300	94.8%	30,202,822	84.6%
Others	32,459	4.8%	3,854,965	10.8%
Penalty Charges	25,014	3.7%	-	-
Other account transferred	-	-	2,468,654	6.9%
Others	7,445	1.1%	1,386,311	3.9%
Other Income	2,992	0.4%	1,628,617	4.6%
Connection charge	-	-	1,281,407	3.6%
General account subsidy	-	-	94,163	0.3%
Others	2,992	0.4%	253,047	0.7%
TOTAL INCOME	675,752	100%	35,686,403	100%

(Thousand PHP)

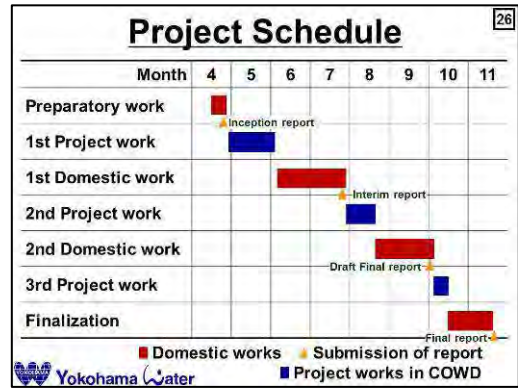



5. Organization and Financial ²⁵

3) Financial Overview (2012)

EXPENSES	COWD		YWWB	
Operating Expenses	535,415	84.0%	31,276,810	94.5%
Operation	421,745	66.2%	-	-
Operation, management etc.	-	-	5,020,452	15.2%
Maintenance	47,077	7.4%	-	-
Treatment, Distribution etc.	-	-	17,049,008	51.5%
Depreciation	66,593	10.5%	7,787,130	23.5%
Fixed assets retirement cost	-	-	1,420,220	4.3%
Other Expenses	101,812	16.0%	1,826,305	5.5%
Interest on long-term debts	101,812	16.0%	-	-
Interest expenses etc.	-	-	1,760,744	5.3%
Others	-	-	65,561	0.2%
TOTAL EXPENSES	637,227	100%	33,103,115	100%
NET PROFIT	38,525		2,684,415	

(Thousand PHP)

- ### Assignment / Homework ²⁷
- #### Project work in Domestic COWD
- # Leakage survey based on "Leak Survey Plan"
 - # Hourly, Daily and monthly data collection
 - # Accuracy check of flow meters (PW, BPS, BW)
 - # 50 water meters accuracy test
 - # Illegal connection survey
 - # Meter chamber construction of pilot area
 - # Making map of ACP and phase I, II, III
 - # Full fill the questionnaire
- #### JICA Study Team
- # Hydraulic analysis of COWD
 - # Financial analysis of COWD
 - # Analysis of the data collected
- 



6.5.2 第2次現地業務 2014年8月18日(月)@COWD

2014年8月19日(火)@JICA



1. NRW Reduction

1) NRW of COWD in 2013

COWD does not make the breakdown of NRW rate.

Total Distribution Volume 100%	Revenue	Water Charged	44.4%
	44.4%	Others	0.0%
Non-Revenue 55.6%	Leakage	N/D	
	Illegal Connection	N/D	
	Water Meter Error	N/D	
	Unpaid	N/D	
	Usage by COWD	1.5%	
		Others	54.1%

157,000m³/d

Yokohama Water

1. NRW Reduction

2) Flow Meter Accuracy

NRW team checked Flow Meter Accuracy in 3 BPSs (Macasandig, Balulang and Bugo), 3 PWs (No.11, 23 and 29), and Bulk Water

Accuracy (%)

Totalizer (m³/h)

Yokohama Water

1. NRW Reduction

3) NRW of COWD in 2013 (Revised)

From Ultra-Sonic Flow Meter measurement, NRW of COWD will be as follows.

Total Distribution Volume 100%	Revenue	Water Charged	50.5%
	50.5%	Others	0.0%
Non-Revenue 49.5%	Leakage	N/D	
	Illegal Connection	N/D	
	Water Meter Error	N/D	
	Unpaid	N/D	
	Usage by COWD	1.7%	
		Others	47.8%

138,000m³/d

Accuracy of flow meter is very important.
COWD needs inspection & calibration of flow meters.

Yokohama Water

1. NRW Reduction

4) Leakage

NRW team measured the Minimum Night Flow. (Survey results of the DMA in 2012)

	Average flow (m ³ /h)	Minimum flow (m ³ /h)	Maximum flow (m ³ /h)	Leakage rate (%)
REK Sub Division P1 Area	16.84	7.20	25.20	42.8
San Lazaro Area	33.39	12.00	49.20	35.9
Limbekkal Area	10.44	5.64	14.52	54.0

(Survey results of the DMA in 2014)

	Average flow (m ³ /h)	Minimum flow (m ³ /h)	Maximum flow (m ³ /h)	Leakage rate (%)
REK Sub Division P1 Area	24.12	15.60	36.00	64.7

A large amount of leakage was confirmed.
Leakage is the biggest cause of NRW.

Yokohama Water

1. NRW Reduction

5) Leak Survey

NRW team continues leak survey based on COWD leak survey plan.

Data on until August 9

97.3km (8.8km/week/team): Survey length
18 leak points repaired

Yokohama Water

1. NRW Reduction

6) Illegal Connection

It is easy to connect illegally to the exposed pipe.
COWD extracts the location of the exposed pipe & investigates.

In order to prevent illegal connection, exposed pipe is replaced in the ground.
Meter readers survey the length and size of exposed pipe until mid-September.

Yokohama Water

1. NRW Reduction

7) Water Meter Movement

Characteristic of water meter for domestic
→ Difficult correct measurement of small water flow volume less than 30L/hour
Large diameter water meter over DN40mm
→ Almost good accurate measurement

Meter Error (%)

Flow volume (L/h)

Meter Error (%)

Passage year (Year)

Yokohama Water

1. NRW Reduction

8) Water Meter Error Rate

Error test of removed 50 water meters
 → 4 flow volume rate: 30, 60, 120, 800L/hour
 → Average water consumption volume (YWWB case) X above error percentage

Meter Error Trend

Find defective water meters soon
Error meter rate: 8 / 50 = 16%

Meter Error Trend

NRW rate
0.7%
+5.3%
-4.6%

Yokohama Water

1. NRW Reduction

9) Stub-Out Improvement (e.g. 82 meters)

When water pressure is 10psi or more and length of service pipe is 20m or less, COWD can supply water to 20 households.

[CASE STUDY]

Only 20 households can use water!

1 Stub-Out (82 water meters)
 0.85m³/day x 20 + 0.33m³/day x 62 = 38m³/day

- 0.85m³/day is average water consumption
- 0.33m³/day is minimum water consumption

6 Stub-Outs (13-14 water meters)
 0.85m³/day x 82 = 70m³/day

+32m³/day
 30.55PHP x 32m³/day = 983 PHP/day
 +360,000PHP/year

Yokohama Water

1. NRW Reduction

10) Stub-Out Improvement (All Stub-Out)

No. of Water Meter	No. of Stub-Out	
1 - 20	1,071	→ OK
21 - 32	140	→ 2 Stub-Outs
33 - 48	61	→ 3 Stub-Outs
49 - 64	12	→ 4 Stub-Outs
65 - 80	2	→ 5 Stub-Outs
81 - 96	3	→ 6 Stub-Outs

Water pressure is 10 psi or more.
 # 20 or less, no need for improvement.
 # 21 or more, be split 16 or less, in order to make room.
 # Service pipe length should be 20 m or less.

- ✓ 218 Stub-Outs need improvement.
- ✓ Additional 328 Stub-Outs are needed.
- ✓ 35,000 PHP x 328 pieces = 13.5 mil. PHP
- ✓ 2,677 users can use more 1,387 m³/day water.
- ✓ Revenue Water rate will go up 1~2%.

Yokohama Water

1. NRW Reduction

11) Estimation of NRW of COWD in 2013

JICA Study Team estimated the NRW of COWD in 2013.

Total Distribution Volume 100%	Revenue 50.5%	Water Charged 50.5%	
	Non-Revenue 49.5%		Others +0.0%
Leakage 42.1%			+1%
Illegal Connection 5.3%			-0.5%
Unpaid* 0.4%			
Usage by COWD 1.7%			
Others ---			

* 2.9 mil. PHP (Uncollectible Account) / 669 mil. PHP (Water Sale)

Yokohama Water

2. Problems in DMAs

(1) Pilot Area (Macabalan)

COWD can not complete the mother meter installation, although 3 months passed.

- ✓ Outsourcing of excavation

(2) Other DMAs

COWD dose not monitor the mother meters of DMA.
 # COWD dose not analyze the NRW in DMAs.
 # COWD dose not replace the broken mother meters.

- ✓ COWD has to establish the rule about DMAs.

Yokohama Water

3. DBP project

Contents of project

- (1) ACP replacement (13km): 50 mil. PHP
 Replacement of ACP to DIP
- (2) Exposed pipe replacement: 50 mil. PHP
 Exposed pipe in the ground
- (3) Stub-Out improvement: 20 mil. PHP
 16 water meters per 1 Stub-Out
- (4) Phase I pipe replacement: 330 mil. PHP
 Replacement of old pipes to new (DIP)

Yokohama Water

4. Financial Analysis

1) Scenario of Financial Analysis

Financial Analysis is based on the scenario as below.

FY	'12	'13	'14	'15	'16	'17	'18	'19	'20	'21	'22	'25	'32
NRW rate	55	53	51	49	47	45	(43)	(37)	(33)	(29)	(28)	(25)	(25)
(actual)	(56)												
					Design 22 mil. PHP		Construction 436 mil. PHP						
	New DBP Interest											New DBP Principle	
NRW rate (%)													

Yokohama Water

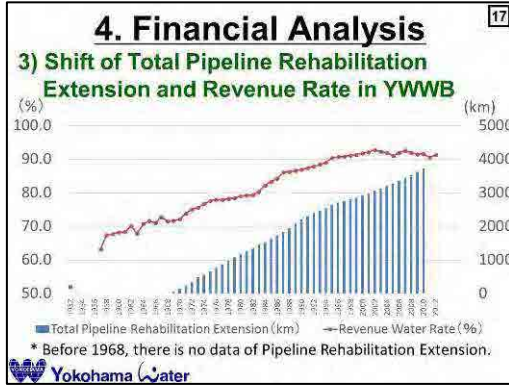
4. Financial Analysis

2) Conditions of Financial Analysis

- (1) Population growth: +2% per year.
 → Revenue and Expenses will go up 2% per year except interest of long-term debts.
- (2) Water tariff revising (10%) in 2016 and 18.
- (3) By Stub-Out improvement, revenue water volume will go up 1.0% between 2016 to 17.
- (4) Inflation rate: 4% in 2014, 3.5% since 2015
- (5) As a result of new DBP project, NRW rate will go up 1-2% per year.

→ Until 2022, COWD needs water tariff revising.

Yokohama Water



- ### Assignment of COWD
- #### Project work in Domestic
- # Continuously leak survey
 - # Illegal connection survey
 - # Extracting of exposed pipe until mid-September (location, pipe size and pipe length) and cost estimation of replacement
 - # Mother meter installation and measurement MNF in Macabalan
 - # Establishment of procurement and inventory management plan of chlorine and mother meters
 - # Establishment of rule of DMA monitoring and analyzing
- Yokohama Water

Project Schedule

	Month	4	5	6	7	8	9	10	11
Preparatory work		■							
1st Project work			■ (4/29-6/3)						
1st Domestic work				■					
2nd Project work						■ (7/31-8/20)			
2nd Domestic work							■		
3rd Project work								■	
Finalization									■

■ Domestic works ▲ Submission of report
■ Project works in COWD ▲ Final report

Yokohama Water



6.5.3 第3次現地業務 2014年10月21日(火)@COWD 2014年10月22日(水)@JICA

Special Assistance for Project Sustainability (for COWD) for Provincial Cities Water Supply Project Phase III

Project Report

Japan International Cooperation Agency (JICA)
Yokohama Water Co., Ltd. (YWC)

Analyzing of NRW in DMAs

COWD analyzes the NRW in DMAs.

(1) Distributed Water Volume	(2) Revenue Water	(3) Non-Revenue Water	(4) Leakage	(5) Others
------------------------------	-------------------	-----------------------	-------------	------------

If NRW in one DMA is higher than 25%, COWD concentrates to reduce NRW in that DMA. While it is lower, COWD continues to monitoring that DMA and concentrates other DMAs

If leakage rate is still high, COWD should find leakage and repair. While it is low, COWD should consider other cause such as illegal connection, meter error ...

(1)=Q
Q [m³/h]
Mother Meter
M
q₁ [m³/h]
M
q₂ [m³/h]
M
q_n [m³/h]
(2)=Σq_n
(3)=(1)-(2)
(4):MNF Measurement

Yokohama Water

Result of Leak Survey

From mid-May to mid-October, COWD surveyed about 200km.

COWD can understand where is lot of leakage, and COWD can analyze the reason of leakage and shall take measures against leakages.

The mesh where there are lot of leakage, COWD should conduct leak survey next year.

Yokohama Water

Evaluation of Equipment

NRW team evaluated the leak survey equipment.

	Accuracy	Performance	Reliability
D305	3	4	3
Pocket Phone	5	5	5
AQUQSCAN	3	4	3
ZONESCAN	5	5	5
Acoustic Rod	4	4	4
ULTRA FLUX	5	5	5

5-Excellent, 4-Very good, 3-Good, 2-Average, 1-Poor

Yokohama Water

Evaluation of Equipment

NRW team evaluated the leak survey equipment.

	User Review of NRW team
D305	- Moderately use to locate main pipe. - Sometimes it well detect high signal on the drainage or service pipeline etc. - Recommend this equipment 1 set for NRW group. Total 1
Pocket Phone	- The best equipment to pinpoint leakage in the ground and expose pipeline. - Recommend this equipment 2 set per team. Total 2 x 2 = 4
AQUQSCAN	- The good equipment to use locate leakage in terms of fast process and gives result. - Recommend this equipment 1 set per team. Total 2
ZONESCAN	- The best equipment to locate leakage because it will identify the leak segments w/ or w/o leakage - Recommend this equipment 3 set for NRW group. Total 3
ULTRA FLUX	- The best equipment to counter check the flow and capacity of all mother meters. - Recommend this equipment 1 set per team. Total 2

Yokohama Water

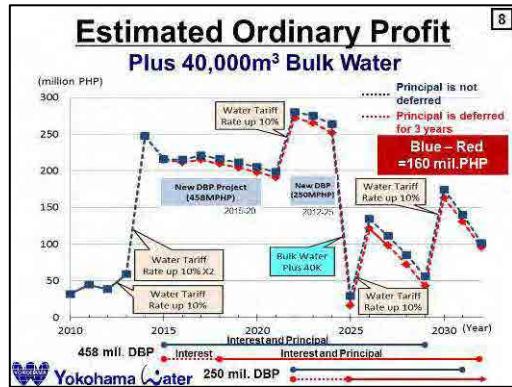
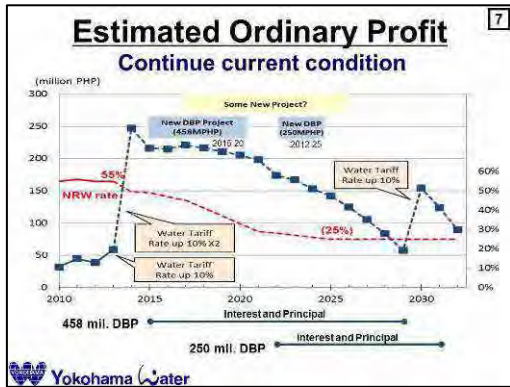
Proposal for Improvement

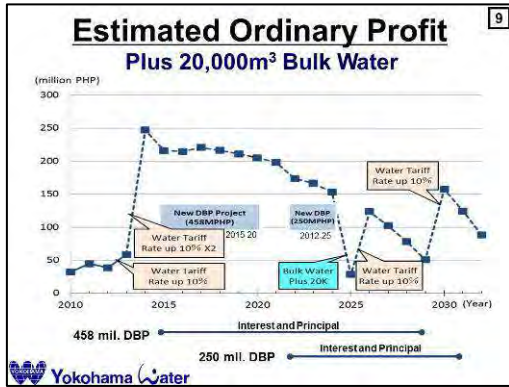
New DBP Project

Sub-Project Name	Cost (JICA)	Cost (COWD)
1) Replacement from ACPs to DIPs	55 mil.PHP	mil.PHP
2) Improvement of Stub-Outs	22 mil.PHP	mil.PHP
3) Burying exposed pipes on roads	45 mil.PHP	mil.PHP
4) Renovating the pipes installed in PH1	311 mil.PHP	mil.PHP
5) Vehicle and Equipment	25 mil.PHP	mil.PHP
Total	458 mil.PHP	458 mil.PHP

1) COWD estimated the cost of ACPs to uPVCs but COWD should estimate the cost of ACPs to DIPs.
3) COWD should make the map of exposed pipeline and estimate the cost of burying under ground.
4) COWD should make the map of Phase 1 PJ and estimate the cost of renovation of Phase 1.

Yokohama Water





- ### Assignment of COWD
- #### For NRW Reduction
- # Continuously leak survey
 - # Mother meter installation in San Lazaro, Limketka and others
 - # DMA Monitoring and NRW analyzing in DMAs
- #### For New DBP Project
- # Cost estimation of replacement ACPs to DIPs
 - # Extracting of exposed pipe (location, pipe size and pipe length) and cost estimation of replacement
 - # Extracting of the pipes installed in Phase 1 and cost estimation of replacement
- Yokohama Water

