REPUBLIC OF THE PHILIPPINES

CAGAYAN DE ORO CITY WATER DISTRICT

Corrales Avenue, Cagayan de Oro City

May 31, 2017

MR. JECI A. LAPUS
Acting Administrator
Local Water Utilities Administration
Katipunan Avenue, Balara
Quezon City

Sir:

Greetings!

This is to submit Cagayan de Oro City Water District's (COWD) updated ***5-year Business Plan*** for calendar year 2018 – 2022. This is in compliance to LWUA Memorandum Circular No. 006-17 dated April 11, 2017 and pursuant to LWUA's mandate for the promotion, development and financing of local water utilities.

Hoping that the plan shall serve as basis for assessment and be considered as priority in the investment and development programs of LWUA.

Thank you.

Very truly yours,

RACHEL M. BEJA
General Manager

Encl : as stated

Cc : Area 7 WDDD-Mindanao
Finance
OGM
MSD

BUSINESS PLAN
2018-2022

CAGAYAN DE ORO CITY WATER DISTRICT

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RACHEL M. BEJA

General Manager

COWD BUSINESS PLAN

(2018 – 2022)

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1. EXECUTIVE SUMMARY

This Business Plan reflects the goals, targets, initiatives, activities, projects and programs that will contribute to the significant realization COWD's Vision and living up to its Mission. The Plan is anchored on the principles of the Balanced Scorecard and gets reviewed and updated every year. The strategic goals are initiated at the topmost level of the organization's hierarchy, the Board of Directors. The 5-year targets for the respective goals are being determined by the Management (executive group) and are duly approved by the Board of Directors in a Board Resolution. As such, this 5-Year COWD Business Plan (2018 – 2022) has been approved per Board Resolution No. 051-S-17 dated May 8, 2017. Consequently, the Management commits annual initiatives for every goal – target. It is also important to note that this Business Plan is cascaded to the lowest level of the organization and to the individual targets of every employee. Furthermore, while this document presents the COWD Plan for 2018 to 2022 as reviewed from COWD Plan 2015 - 2020, specific initiatives and targets for the year 2017 as well as the corresponding budget for the year is also presented and included in this 5 – Year COWD Plan as the base year.

One important consideration of this Business Plan is the attention given to initiatives that address climate change resiliency and water security goals of the Water District being the water service provider of the City. Climate change resiliency is given utmost importance as this has posed huge threats to the provision of a basic need, which is water. Water security, on the other hand, is closely related to climate change resiliency such that the former could not be assured with threat from climate change left unresolved. Thus, the result of the vulnerability assessment conducted plays an important role in framing the goals and the corresponding initiatives and action plans that comprise this Business Plan. There are other threats that are not necessarily climate-related but contribute significantly to the vulnerability of the water supply system of COWD. One of these is the high NRW level, which poses threats to inadequacy of supply at the distribution level and inefficiency in the delivery of water services. This is not climate-related, but can be aggravated by climate change effects and adversely impacts water services and security, in general. Both climate and non – climate factors contributing to the vulnerability of the system in general are addressed in the COWD Business Plan.

2. COWD BACKGROUND INFORMATION

In August 1, 1973, ***Cagayan de Oro City Water District (COWD)*** was formed as the first water district in the Philippines. It was issued with the Conditional Certificate of Conformance (CCC) No. 001 on January 4, 1974 by the Local Water Utilities Administration (LWUA). COWD was born as a self reliant quasi-public entity with the implementation of the Provincial Water Utilities Act of 1973 otherwise known as Presidential Decree No. 198, which created the Water Districts nationwide. However, through Supreme Court decision, all Water Districts in the country have been categorized as Government-Owned and Controlled Corporation (GOCC) since March 1992.

COWD started with 3,500 service connections when it took over the management of the defunct NAWASA or the City Waterworks System in 1973. This represented about 21% of the total City population of 117,895 during that year then. The average water production was 12,200 cubic meters per day (12 MLD) distributed to consumers through transmission and distribution lines, thirty-nine kilometers (39 km) long.

As of December 2016, the District currently serves 91,671 service connections spread over its service area. COWD now possess an average water production capacity of more than 160 million liters per day (MLD). This reflects that in four decades, COWD has grown around twenty-six (26) times in service connections, and thirteen (13) times in water production capacity. The potable water that the District serves to the public comes from twenty-seven (27) wells distributed in six (6) well fields situated at Macasandig, Balulang, Calaanan, Bugo, Tablon and Agusan. There is one spring source located at Malasag. Since 2007, about forty million liters per day (40 MLD) of the District's total water production capacity has been supplied by a bulk water contractor.

The water supply reaches the consumers household through production facilities which include three (3) major Booster Pumping Stations and eight (8) Reservoirs while Transmission and Distribution Lines extend up to 565.5 kilometers ranging from 50mm to 800mm diameter in size. Figure-1 shows the location of the water sources of COWD within its service area.

At the moment, COWD has extended services to seven (7) barangays in the Municipality of Opol, which is adjacent to Cagayan de Oro City in the west and one (1) barangay in Tagoloan, the municipality next to the City in the east. The total seventy-two (72) barangays covered by COWD services represent 76% of the barangays in the service area. As of December 2016, the total population served has increased to 641,697 representing about 85% of the total estimated population of the District's service area of 754,502 based on Philippine Statistics Authority (formerly NSO) 2015 data.

Figure 1 - Map of Location of COWD Water Sources

Cagayan de Oro City Water District (COWD) foresees the continued growth and progress of Metro Cagayan, which extends to Jasaan in the east and Laguindingan in the west. Infrastructure and the foundations to support such development must be implemented in order to provide the proper environment for growth. Most of the immediately required infrastructures are on retrofitting of existing complex areas. Part of the growth is due to expansion and economic development of the City and the neighboring municipalities. Therefore, expansion in facilities and pipeline systems will also be a part of the infrastructure requirements in the future. There is a great need to remedy present problems and prepare for the future demands of a growing metropolis. COWD recognizes

the importance of water to the daily needs of a growing population and its role in the economic development of Metro Cagayan.

3. STATEMENT OF VISION - MISSION AND CORE VALUES

Major decisions and day-to-day operations of Cagayan de Oro City Water District (COWD) are anchored on its Vision, Mission and the Core Values that the organization embrace. Specifically, the following are stated accordingly:

VISION: ***We provide excellent water service to the community we serve.***

MISSION: ***To be an outstanding water district in the country.***

CORE VALUES:

We demand accountability in all our decisions.
We are result-driven.
We work as a team at all times.
We have faith in One Almighty.

4. SCOPE AND LIMITATION OF THE BUSINESS PLAN

This Business Plan aims to achieve the following objectives:

1. To operationalize the Strategic Goals of the District, which are anchored on the Balanced Scorecard framework considering the four (4) Perspectives on Customers, Finance, Internal Processes and Learning and Growth of Human Resources
2. To prioritize strategic initiatives relative to the attainment of the Strategic Goals
3. To identify strategic goals and the corresponding major investments necessary in the next five years
4. To identify the financial requirements to attain Strategic Goals for the base year and next five years based on the identified investments required

The strategic goals that are included in this Plan are those that are seen implementable, most relevant and the most necessary within the period of 5 years, from 2018 to 2022. However, the strategic goals and initiatives for 2017 are also presented to serve as baseline for the next 5-year period.

5. EXTERNAL CONDITIONS

Hazards and Risks

The following hazards and risks are of important considerations in framing the initiatives and prioritizing the same given the limited resources of the District. Based on the Vulnerability Assessment was conducted, the COWD has identified fourteen (14) major hazards.

Table 1

Identified Hazards and Risks for COWD

No.	Threat	VULNERABILITY		System – Subsystem
		Score	RANK	
1	Inadequate water supply due to high Non Revenue Water (NRW)	*13.50*	*1*	*water supply - distribution system*
2	Inadequate revenue generation due to high Non Revenue Water (NRW)	*9.75*	*2*	*finance - revenue generation*
3	Intrusion of contaminants due to flooding for PW Nos. 1, 4, 7, 9, 14, 16, 19, 24 & 25	*8.25*	*3*	*water source - production wells*
4	Intrusion of domestic wastes due to increasing population density around PW Nos. 8, 25 & 27	*8.25*	*3*	*water source - production wells*
5	Vandalism of PW Nos. 8, 21 & 22 due to absence of fence	*8.25*	*3*	*water source - production wells*
6	Salt Water Intrusion	*8.25*	*3*	*water source - production wells*
7	3 PWs affected by river control project of Government	*8.25*	*3*	*water source - production wells*
8	Intrusion of contaminants thru open utility manhole and vents due to vandalism, sabotage or other possible means of entry	*8.25*	*3*	*water supply - reservoir & storage*
9	Intrusion of contaminants during low pressure due to deteriorated pipes submerged in canals & drainages	*7.00*	*4*	*water supply - distribution system*
10	Water quality issue due to tapping of service connection lines at raw water line	*7.00*	*4*	*water source - production wells*

No.	Threat	VULNERABILITY		System – Subsystem
		Score	RANK	
11	Facility damage upon underground movement due to landslide, flood and/or earthquake	7.00	4	water supply - reservoir & storage
12	Intrusion of contaminants by vandalism thru openings in the ff PWs: 2, 3, 5, 8, 10, 11, 15, 17, 18, 20, 21, 22, 23, 26, 27, 28, 29	5.25	5	water source - production wells
13	Water quality issue due to inadequate disinfection for PW Nos. 18 & 19, no chlorinating unit	1.75	6	water source - production wells
14	Contamination due to intrusion of contaminants during conduct of repair of motors, pumps & other appurtenances.	1.75	6	water supply - distribution system

As shown in the table that precedes, the first 2 identified risks, while non-climate related, impacts on the water supply system can be greatly aggravated by climate change effects. For instance, given the projected increases in temperature, reduction in precipitation rates and recently becoming stronger and more frequent typhoons, inadequacy in water supply at the distribution system due to high Non – Revenue Water (NRW) can become even worst. The water supply system of the District is also vulnerable to floods, exposing water sources to risk of contamination. Other human malpractices endanger the water facilities, which include vulnerability to vandalism and contamination of sources from domestic wastes.

Financing Availability

Like all other Water Districts in the country, the COWD prepares and implements budgets on an annual basis and is dependent on the revenues projected to be generated for the year. The primary source of these revenues come from the water sales and such is used to fund the requirements of the District for the year. These requirements include the operating and maintenance expenses, debt service, capital expenditures, the reserve and contingency appropriations. Huge investments are usually amortized after contracting loans from either the Local Water Utilities Administration (LWUA) or the development banks of the Government like Development Bank of the Philippines (DBP) and Land Bank of the Philippines (LBP).

At present, the COWD has a total of Php60,385,082 borrowings from the LWUA. This amount was loaned in separate times to fund expansion projects in the past. All these

projects have long been completed and operational. On the other hand, the District has an existing Php590,023,324 loan with the DBP. The whole amount was the total of the 2 refinancing schemes for COWD's loan from LWUA. Recently, DBP approved another loan of Php458M for the NRW Reduction Program of COWD. This is on top of the US$800,000 technical assistance grant from the USAID BeSecure Project and the Coca-Cola Foundation. The implementation of the NRW Reduction Program, through the technical assistance of the USAID BeSecure Projected took off last November 2015 and the first phase shall end about June 2017. The next three years after 2017 will be focused on the infrastructure component of the Program. At the same time, additional loan is projected to fund the rehabilitation of the rest of the pipeline system and service connection lines and complete the NRW Reduction Program in the next 3 to 5 years.

In addition, the District is now negotiating with the Vitens Evides International (VEI), a Dutch organization, for a Water Operator's Partnership (WOP) Program with funding from the Asian Development Bank (ADB). The said WOP shall focus on the capability building on well monitoring, sanitation and NRW management. Recently, the USAID BeSecure Project has approved the grant of the conduct of a feasibility study for a development of an alternative water source. In consequence, the COWD shall have to integrate the need for funding the implementation of the output of this feasibility study.

Water Demand Management Analysis and Sales Forecast

The consumption pattern per connection over the years show a declining trend. At the outset and from the point of view of climate change, this can be favorable. However, if we look at the trend at which the NRW also follows, it says that the declining consumption pattern may not necessarily be due to conservation efforts. Rather, such is caused by inefficient and intermittent water supply at the distribution level because of the increasing NRW. Therefore, it is possible that with improved level of service upon reduction of the NRW, the water consumption pattern per connection may also increase. This shall result to increase in water demand. The sales forecast of the COWD for the next ten years still shows a constantly increasing trend despite high NRW and decreasing consumption per connection. However, the amounts of increases could be increased if NRW were brought down much lower and as such, more funds will be available for system improvement and expansion.

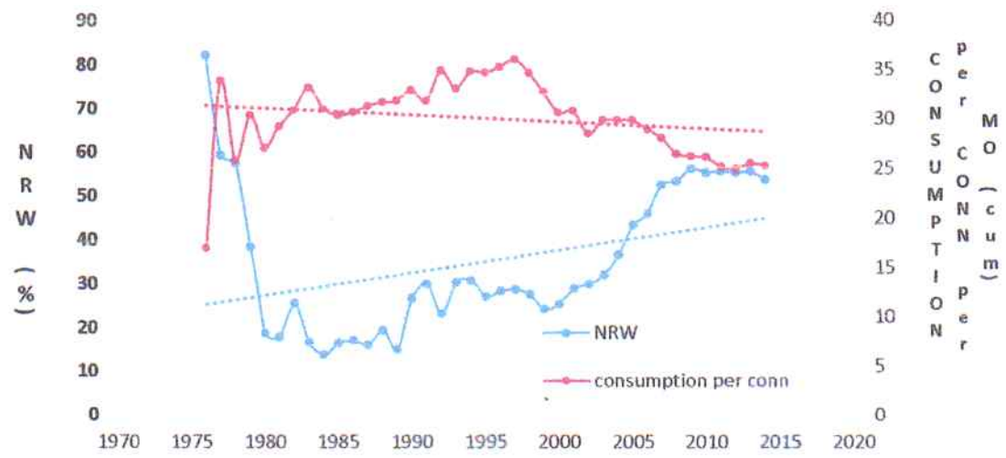

Figure 2 – NRW and Average Consumption per Connection

Table 2

Sales Forecast in 5 Years

YEAR	TOTAL SALES *(Php)*	YEAR	TOTAL SALES *(Php)*
2017	1,083,898	2024	2,093,560
2018	1,242,061	2025	2,174,859
2019	1,422,496	2026	2,258,611
2020	1,628,523	2027	2,344,870
2021	1,863,592	2028	2,433,747
2022	1,937,982	2029	2,525,244
2023	2,014,600	2030	2,619,527

6. INTERNAL CONDITIONS

Organizational Structure and Staffing

The COWD has a total workforce complement of 676 as shown in the table (Table 3) below. Of these, 34% are contractual on job order basis while another 24% are casual employees and some 41% are regular employees. However, the total number of positions is 492, which is less than the present total workforce including casuals and job order contractual. Moreover, the District is now on the process of finalizing the proposed organizational structure and staffing pattern as a move to reorganization in order to address major issues like NRW and climate change as they impact on the utility. This is

also pursuant to the re-categorization of all Water Districts where the COWD has been re-categorized under Category A of the 4 categories (A, B, C, D where A as the highest).

Table 3

COWD Workforce Complement

Level of Position	Number of Positions	Existing Number of Staff	Percentage to TOTAL
GM, AGM & Dept. Managers	10	8	1%
Division Managers	18	14	2%
Supervisors	41	21	3%
Rank & File	423	237	35%
Casuals		165	24%
Contractors per Job Order		231	34%
TOTAL	**492**	**676**	**100%**

The figure that follows is the proposed organizational structure of the COWD, which is for approval by the Department of Budget and Management. The Department for Maintenance & NRW Management used to be Maintenance Department only. Under the new structure, this Department has created divisions and sections that will address major issues of NRW. On the other hand, units are created under the Engineering Department to address concerns of the environment, including that of climate change and sanitation.

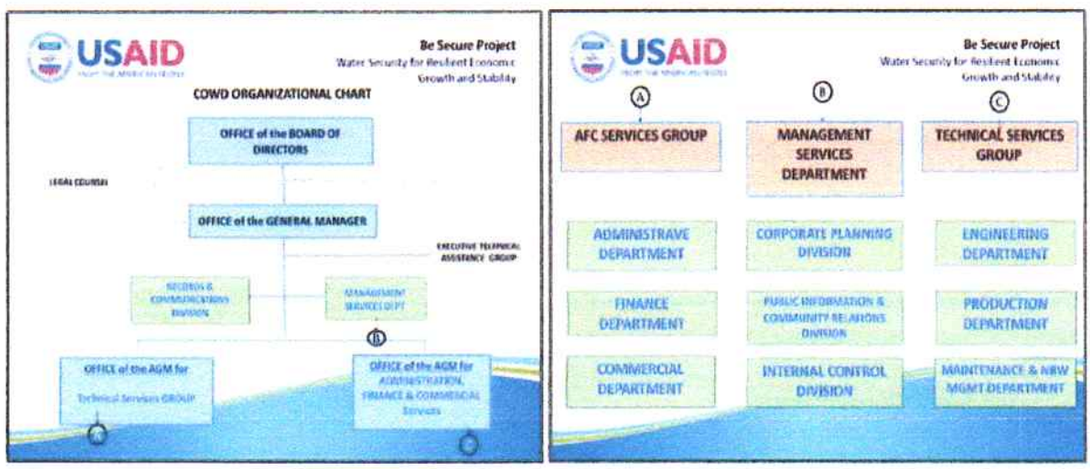

Figure 3 – Proposed Organizational Structure

Challenges

Operating a public utility that is solely dependent on the water sales to fund operations and capital expenditures results in a huge financial challenge. The COWD, like all the water districts in the country, does not receive any subsidy of any form from either the National or the Local Government. Thus, the tariff policy remains a significant concern to be able to fund major investments that are necessary to improve and expand services, for instance. Other significant challenges that the COWD faces include political, legal and institutional concerns. The Board of Directors, for example, are appointed by the Local Chief Executive who is a political figure. In a number of instances, collection of payment for water consumed and interference in the implementation of water rates adjustments and in some aspects of the operations have become a concern with political figures. Other challenges are on scarcity of skilled workers and able engineers joining the workforce and the regulations on attendance to quality training and seminars to capacitate human resources. Yet another challenge is the limitation to create positions and determine attractive salaries, which are governed and regulated by fixed rules. The table (Table 4) that follows summarizes these challenges that behove the District.

Table 4

Challenges of COWD

Challenges	Description
Staffing Capacity	Limited number of candidate engineers
Organizational	Creation of position & salaries are determined by some fixed rules
Financial	Difficulty in implementation of water rates adjustment; collection issues
Political	Can interfere in implementation of water rates adjustments; difficulty to collect from local government
Technical	Limited technical training. If any, price may not be allowed by government audit rules
Legal and Institutional	Present legal battle regarding bulk water supply contract

7. STRATEGIC GOALS AND STRATEGIES

The District has been doing strategic planning since 2011. The strategic goals are jointly agreed by both the Policy Making – body (Board of Directors) and the Executive body (Management). The COWD strategic plan has a window of five (5) years but gets reviewed after three (3) years or even earlier, if deemed necessary. For instance, the 2012 Plan had a timeframe up to 2017 but it got reviewed in 2015, thus, the new Plan is framed for the period 2015 until 2020. Similarly, the 2015 – 2020 COWD Plan was reviewed in March 2017 in order to address the urgency to include septage and other major issues confronting water utilities in the country, in general, and the COWD, in particular. The District's Plan follows the Balanced Scorecard framework, where four (4) perspectives serve as guide in formulating the goals. The COWD's strategic plan contains 12 strategic goals, number 8 of which is on water safety and climate change resiliency while number 6 is to reduce NRW. The list below enumerates all 12 strategic goals under the four (4) different perspectives:

P1. CUSTOMERS PERSPECTIVE

STRATEGIC GOAL 1: PROVIDE EXCELLENT CUSTOMER SERVICE[C1.1]

STRATEGIC GOAL 2: DELIVER RELIABLE 24-HOUR WATER SUPPLY[C2]

P2. FINANCIAL PERSPECTIVE

STRATEGIC GOAL 3: INCREASE COLLECTION EFFICIENCY FROM ACTIVE ACCOUNTS[F1.1]

STRATEGIC GOAL 4: REDUCE PERCENTAGE OF INACTIVE ACCOUNTS *AGAINST* TOTAL A/R[F2.1]

STRATEGIC GOAL 5: IMPROVED ASSET/ INVENTORY UTILIZATION[F3.1]

STRATEGIC GOAL 6: REDUCE NON-REVENUE WATER (NRW)[F4.1]

P3. INTERNAL PROCESSES PERSPECTIVE

STRATEGIC GOAL 7: STRIVE FOR OPERATIONAL EXCELLENCE[I1]

STRATEGIC GOAL 8: ENSURE WATER SAFETY & CLIMATE CHANGE RESILIENCY[I2]

STRATEGIC GOAL 9: CREATE VALUE ADDED PARTNERSHIPS[I3]

P4. LEARNING & GROWTH PERSPECTIVE

STRATEGIC GOAL 10: ENSURE STRATEGIC COMPETENCIES[L1]

STRATEGIC GOAL 11: LINK PERFORMANCE & INCENTIVES[L2]

STRATEGIC GOAL 12: ACCESS APPROPRIATE TECHNOLOGY & INFORMATION[L3]

Success of each strategic goal is indicated and measured by specific quantitative targets. To ensure attainment of these targets, the Strategic Goals are then cascaded to the various Departments for operational planning and down to the Divisions and Sections for tactical planning in an annual basis. The full matrix of the strategic goals vis – a – vis strategies or initiatives is attached as Annex 1 with reference to 2017, which is actually covered under the 2015 – 2020 COWD Plan. The initiatives for 2018, which form part of the 2018 – 2022 COWD Plan will be drafted and deliberated beginning June 2017, June being the annual planning month for initiative setting for every succeeding year.

In 2017, Strategic Goals 1 and 2 top the list of goals of the District. These are aimed at satisfying the public who are the customers of the COWD. This being a public utility mandated to provide a basic need of the society, potable water services. Goal #1, which has nine (9) major initiatives, sets a target of an excellent customer satisfaction rating beginning 2017. These initiatives are to be implemented by various departments, units and offices within the organization. The action plans include implementation of customer service standards by all employees of the District; for Management Services Department to manage a customer service hotline; implementation of good housekeeping services by the Administrative Department; for Finance Department to come up with a proposal on payment and discount scheme for service connection installation fees and prompt payment discount scheme; for the Engineering Department to develop a plan for new office buildings in two (2) sites.

Strategic Goal 2, which is still framed under the Customer's Perspective of the Balanced Scorecard is about provision of a 24–hour water supply. The target is to eventually provide 24-hour water supply in all parts of the service area. This is given the fact that as of 2014, the average supply availability in the five (5) identified critical areas at the west side was only 17 hours and 15 hours for the other five (5) identified critical locations in the east side of the service area. For 2017, the target is set at 24 hour and 22 hour – availability in west and east, respectively. There are twelve (12) initiatives committed by the various departments in order to achieve the target for this goal. One is the implementation of water supply improvement program on priority areas like Cugman, Camaman-an and Lapasan. Along with augmenting supply is the District's initiative to

rehabilitate service lines and stubouts in order to free up more water pressure in congested connections.

Other initiative to help attain the goal of 24-hour water availability is on improving pressure management at the distribution level like restoration and/or installation of isolation valves. This initiative also helps reduce downtime and minimize affected areas during pipeline repairs in the system. With the objective of bringing water to every household, water delivery services shall be worked on for improvement.

The Financial Perspective has 4 strategic goals, one of which is the Reduction of the Non-Revenue Water (NRW) to 50% from some 50.40% in 2016. The level of NRW at present is so high and is adversely impacting the customer service efficiency. Thus, the District considers this as a priority goal until it shall go down to at least 35% in the next 12 years. Practically, in terms of percentage, there will be not much reduction in NRW because major infrastructure interventions to rehabilitate the system are expected to be completed partly towards the end of 2017 already. Other initiatives are focused on managing the customer accounts and the accounts receivables, in general.

Under the Internal Processes Perspective, the Strategic Plan frames three (3) goals: one is to strive for operational excellence, the second is focused to ensure water safety and climate change resiliency, and the third is to create value added partnerships. The success indicator for the first goal is improvement on response time to crucial customer services. On the other hand, second goal is measured in terms of the District's percentage of compliance to the Philippine National Standards for Drinking Water (PNSDW) and percentage of water surplus. The third goal is measured also in terms of the number of partnership activities with existing partners and target partners from the government, local organizations, academe, media and indigenous people. In this Business Plan, the initiatives to help attain the targets of 100% compliance to PNSDW and excess supply from water demand include 13 priority actions. These initiatives have also been identified as relevant adaptation measures to address COWD's vulnerability against climate change.

The fourth and the most fundamental perspective is the Learning and Growth, which focuses on the training needs, capacity building and the general development of the entire workforce. Also part of this perspective is the attention given to appropriate

technology and information. There are three (3) goals framed in this perspective with seven (7) initiatives for the goal on human resource development program; four (4) for goal on linking performance and incentive; and thirteen (13) initiatives to address access to appropriate technology and information.

It is important to note that this Business Plan, to a great extent, has given focus on addressing the vulnerabilities of the District as a result of the recently conducted Vulnerability Assessment. In consequence, all adaptation options addressing every threat are made part of the strategies corresponding strategic goals. The table (Table 5) below summarizes the vulnerability assessment on COWD facilities with corresponding identified adaptation measures.

Table 5

COWD Vulnerability Assessment Matrix

No.	Threat	System-Sub-System	Adaptation Option	Strategic Goals
1	Inadequate water supply due to high Non Revenue Water (NRW)	*water supply - distribution system*	• *Reduce NRW% @ Macabalan DMA* • *Manage the Twenty One (21) DMAs* • *Establish GIS*	• *Reduce Non-Revenue Water (NRW)* • *Access Appropriate Technology & Information*
2	Inadequate revenue generation due to high Non Revenue Water (NRW)	*finance - revenue generation*	• *Program on Replacement of 1/2"Ø Water Meter (40,000)* • *Implement Program on Replacement of Water Meter (big meters)* • *Conduct survey and implement applicable fix cutting of service connections (based on CY 2013-2015 Inactive Accounts)* • *Post Inspection of Disconnection, Reconnection & New Connection*	• *Reduce Non-Revenue Water (NRW)*
3	Intrusion of contaminants due to flooding for PW Nos. 1,4,7,9,14,16,19,24,25	*water source - production wells*	• *Sealing of all openings* • *Conduct bacteriological test*	• *Ensure Water Safety & Climate Change Resiliency*
4	Intrusion of domestic wastes due to increasing population density around PWs 8, 25, 27	*water source - production wells*	• *Septage Management (deslodging)* • *Installation of Portalet*	• *Ensure Water Safety & Climate Change Resiliency*
5	Vandalism of PW #8, #21 & #22 due to absence of fence	*water source - production wells*	• *Secure Production Wells with perimeter fence*	• *Ensure Water Safety & Climate Change Resiliency*
6	Salt Water Intrusion	*water source - production wells*	• *Implement the Climate Change Adaptation Program (Focus on monitoring of water level and danger of saltwater intrusion to PWs)*	• *Ensure Water Safety & Climate Change Resiliency*
7	3 PWs affected by river control project of Government	*water source - production wells*	• *Relocate three (3) wells* • *Develop alternative water source*	• *Deliver Reliable 24-Hour Water Supply*

No.	Threat	System-Sub-System	Adaptation Option	Strategic Goals
8	Intrusion of contaminants thru open utility manhole and vents due to vandalism, sabotage or other possible mean of entry	*water supply - reservoir & storage*	• *Secure all manholes & vents of all storage facilities* • *Assessment of all storage facilities as to security concerns (for installation of perimeter fence and or assignment of security personnel/guards)*	• *Ensure Water Safety & Climate Change Resiliency*
9	Intrusion of contaminants during low pressure due to deteriorated pipes submerged in canals & drainages	*water supply - distribution system*	• *Selective mainline rehabilitation/replacement . Maintain pressure in the system* • *Conduct Bacteriological test on all Production Wells* • *Maintain 0.30 PPM Chlorine Residual @ Macasandig Booster Pumping Station* • *Regular Information Drive on Intrusion of contaminants* • *Implement Rehabilitation of " After the Meter" existing service connections at Tabako, Puntod/Lapasan with possible intrusion of contaminants*	• *Reduce Non-Revenue Water (NRW)* • *Ensure Water Safety & Climate Change Resiliency*
10	Water quality issue due to tapping of service connection lines at raw water line	*water source - production wells*	• *Transfer all the tapped service connections*	• *Ensure Water Safety & Climate Change Resiliency*
11	Facility damage upon underground movement due to landslide, flood and/or earthquake	*water supply - reservoir & storage*	• *Implement rehabilitation plan on all storage facilities as to safety against calamity* • *Hardening of existing structure (control panels, roofing, windows, doors, Macasandig BS & PW#1*	• *Ensure Water Safety & Climate Change Resiliency*
12	Intrusion of contaminants by vandalism thru openings in the ff PWs: 2,3,5,8,10,11,15,17,18,20,21 ,22,23,26,27,28,29	*water source - production wells*	• *Sealing of all openings*	• *Ensure Water Safety & Climate Change Resiliency*
13	Water quality issue due to inadequate disinfection for PW #18,19, no chlorinating unit	*water source - production wells*	• *Install Chlorinating Unit*	• *Ensure Water Safety & Climate Change Resiliency*
14	Contamination due to intrusion of contaminants during conduct of repair of motors, pumps & other appurtenances.	*water supply - distribution system*	• *Conduct flushing every after repair* • *SOP on repair & maintenance*	• *Ensure Water Safety & Climate Change Resiliency*

Specifically, the following areas of the system are given substantial attention in this Plan: water sources and the transmission and distribution system. These two aspects of the operations and the system, in general, are keys to water security and operations efficiency, which are essential to claiming and living up to the District's Mission and Vision.

Water Sources

In the Vulnerability Assessment, ranking number 3 is the water source, which covers, at least nine (9) wells due to threat in intrusion of contaminants caused by flooding. About 70% of the District's supply capacity is coming from deep well sources and the other 30% is coming from a river upstream of Cagayan de Oro and is provided by a private partner. One of the major recommendations in the recent hydrological vulnerability assessment conducted by the USAID BeSecure Project for Cagayan de Oro is the diversification of water sources. This supports the vulnerability assessment that the COWD has done on the system. The following initiatives were, are and/or will be implemented: (a) conversion from turbine pump to submersible pump; and (b) sealing of all well openings. The conversion from use of turbine to submersible pump reduces the chances of contaminating the borehole during flooding at the same time reduces the risk of exposing the pump to damage, and therefore, interruption in supply during floods shall be significantly minimized. In 2013, six (6) wells were immediately converted with the aid of JICA. Per COWD's program, conversion is at a rate of 2 wells per year. At present, there are only 5 wells that are still using turbine pumps, which are also scheduled for replacement this year until about 2 years more. However, all those wells within the flood zones have been replaced with submersible pumps already.

Another threat in the water sources of the COWD is the possibility of salt water intrusion. Accordingly, the District implements a close monitoring of the conductivity property and water level in wells. Unfortunately, no past records can show the conductivity measures or any indicator for salt water intrusion in these wells. There are also, at least three (3) wells that are seen to be disturbed by the river control project of the Government. One of the major considerations of the District to address disruption in services due to dislocated, damaged and/or contaminated sources is the development of an alternative water source. In 2016, COWD shall conduct a feasibility study on an alternative water source through a grant from the USAID. In addition, the District is now working on a partnership with the Vitens Evides International (VEI and the ADB primarily focused on capacity building on well monitoring and evaluation of groundwater sources as to potential and capacity to sustain supply.

Transmission & Distribution System

The District is most vulnerable at the transmission and distribution system of the pipeline network due to very high Non-Revenue Water (NRW). This has exposed the utility to inadequate water supply at the distribution level, and therefore, inefficient services to the public. The high NRW has also negatively impacted the financial health of the District. Revenue generation could be optimized with controlled NRW. To address, COWD launched the NRW Reduction Program with a grant component from the USAID-BeSecure Project and the Coca-cola Foundation on top of the District's loan with the Development Bank of the Philippines (DBP).

The distribution system is also threatened by possible intrusion of contaminants, especially during low pressure due to deteriorated physical conditions of pipes and many are submerged in canals and drainages. One of the adaptation measures is the implementation of selective mainline replacement and rehabilitation of service connections; another is the strict adherence to the Philippine National Standard for Drinking Water, and this is keeping the residual chlorine at 0.30 ppm at the distribution system

8. CURRENT YEAR & FIVE-YEAR FINANCIAL FORECAST

2017 COWD Budget

The COWD Budget for 2017 fully supports the COWD 2017 Plan. All initiatives committed by every unit/office/department is appropriated a corresponding budget to ensure implementation. Similarly, all other necessary expenditures for the year are duly accorded with adequate appropriations in consonance with the projected revenue generation for the year. It is important to note that the revenue projections for 2017 include the implementation, beginning July of 2017, of the second tranche of the 3-tranche water rates adjustment submitted to LWUA for approval in 2010. This translates to a 10% increase in the water tariff, which was from the 2010 proposal to LWUA, would have been in effect last 2014 yet. Thus, projected revenues for 2017 amount to Php1,148,322,804. The total utility expenditure for 2017 is budgeted at Php1,514,014,332, of which about Php365M will be funded from loans, 2016 funds and existing accounts. Table 6 presents the details of the COWD approved budget for 2017.

Table 6

COWD 2017 Approved Budget

PARTICULAR	2017 BUDGET	2016 BUDGET	Increase (Decrease)	
			AMOUNT	PERCENT
TOTAL OPER & Maintenance Expenses	**651,446,275**	**651,252,636**	**193,639**	**0.03%**
Operation Expenses	634,778,515	634,733,666	44,849	0.01%
Maintenance Expenses	16,667,760	16,518,970	148,790	0.90%
TOTAL DEBT SERVICE	**162,328,692**	**130,648,000**	**31,680,692**	**24%**
LWUA	13,146,276	14,048,000	(901,724)	-6%
DBP	106,618,632	108,600,000	(1,981,368)	-2%
PROPOSED	42,563,784	8,000,000	34,563,784	432%
TOTAL CAPEX	**515,988,050**	**215,064,996**	**300,923,054**	**140%**
Source of Fund-Revenue	190,309,168	186,246,748	4,062,420	2%
Source of Fund-Loan	325,678,882	28,818,248	296,860,634	1030%
TOTAL RESERVE	27,310,827	21,694,478	5,616,349	26%
LWUA (from existing account)	7,472,480	-	7,472,480	
EXPANSION (from 2017 revenues)	19,838,347	19,838,346	1	0%
GSIS MOA		1,856,132	(1,856,132)	-100%
TOTAL CONTINGENCY	**156,940,488**	**53,264,419**	**103,676,069**	**195%**
Disaster Risk & Reduction Management Exp (from 2016 appropriation - existing account)	24,191,454	24,191,454	-	0%
Others	132,749,034	29,072,965	103,676,069	357%
TOTAL UTILITY EXPENSES (TO BE FUNDED FROM 2017 REVENUES)	**1,148,322,804**	**1,018,914,827**	**129,407,977**	**13%**
TOTAL UTILITY EXPENSES (TO BE FUNDED FROM 2016 BUDGET - EXISTING ACCOUNT)	**24,191,454**	**24,191,454**	**-**	**0%**
TOTAL UTILITY EXPENSES (TO BE FUNDED FROM EXISTING ACCOUNT)	**7,472,480**	**-**	**7,472,480**	
TOTAL UTILITY EXPENSES (TO BE FUNDED FROM LOANS)	**334,027,594**	**28,818,248**	**305,209,346**	**1059%**
OVERALL TOTAL UTILITY EXPENSES	**1,514,014,332**	**1,071,924,529**	**442,089,803**	**41%**
TOTAL PROJECTED REVENUES	**1,148,322,804**	**1,018,914,827**	**129,407,977**	**13%**

Investment Plan

During the year (2017), both the Policy Making & Executive bodies deliberated on the COWD Investment Plan for 2018 to 2022 giving emphasis to the following initiatives as its components; NRW Reduction Program, new building, septage management program, and Vitens Evides International partnership. The projections for alternative water

sources reveal that the need for additional supply will be imperative by 2030 given on-going and future efforts on NRW reduction. The table (Table 7) below presented the estimated cost requirement for each components while Annex 3 demonstrates the Plan's schedule and other details.

A Pre – Feasibility Study has been completed by the USAID BeSecure Project and thus, the COWD intends to implement this Program through a Joint Venture following the 2013 NEDA Guidelines for Solicited Proposal. The District shall make use of the results of the Pre-FS in drafting the Terms of Reference for this immediate future Project. On the other hand, NRW Reduction Program and New Building will be funded from loans.

COWD envision to invest in expanding office buildings, both in Kauswagan and the Corrales area to accommodate the growing number of customers and the organization as a whole. On one hand, there is seen to be a need to implement another NRW Reduction Program immediately after the first loan for same purpose shall have been fully implemented by 2020. The first phase NRW Reduction Program, whose implementation is currently undertaken, addresses about 25,000 connections only. As of 2016, COWD has a total of 91,671 and counting. This investment is important to expand rehabilitation of the water supply system thereby, arresting NRW and improving service level in the entire service area.

Table 7

COWD Major Investment Plan

Project Particulars	Unit Cost	Quantity	Total Cost, *Php*	Estimated Cost @4% per year
NRW Reduction Program			450,000,000	506,188,800
New Building			360,000,000	404,951,040
- Kauswagan Site	30,000	8,000 sq.m	240,000,000	269,967,360
- Corrales Site	30,000	4,000 sq.m	120,000,000	134,983,680
Septage Management Program with Treatment Facility	thru a Joint Venture		215,600,000	257,400,000
- Phase 1			127,800,000	135,700,000
- Phase 2			33,300,000	41,000,000
- Phase 3			41,200,000	58,700,000
- Phase 4			13,300,000	22,000,000

Cash Flow Projections

Annex 2 shows the 5-year Cash Flow Projections of the District. This includes CapEx, operating costs, debt service, tariff and revenue projections. The major investments needed to implement adaptation measures identified in the vulnerability assessment shall be funded through loans and revenue generated for each year. Also given considerations in the cash flow projections are the major investments deemed necessary to achieve the strategic goals for the next five (5) years. As COWD recognizes the great value that partnerships bring into the organization, especially in the aspects of human resource development and capacity building, the District will continue to search for partners for possible technical assistance to implement and continue implementation of proposed and already started programs that address these goals. Funding projections disclosed in the District's cash flow forecast are based on some set of assumptions. In this case, the major assumptions in the cash flow projections include service connection growth rate, water production from wells, bulk water supply and from new developed sources, tariff adjustments, capital investments and other disbursements for operations.

Projections in service connection growth is based on conservative circumstances like the historical trend for the past years. A significant increase in the number of connections is projected in 2018 and 2019 when initial results of NRW reduction program will be first felt. The NRW, on the other hand, is projected to reduce by 2% per annum and along with it is an improvement in the service level within the existing service area. Moreover, the CapEx includes investments that will be needed to fund all initiatives that will support the attainment of the District's strategic goals and has been projected to increase by 31% beginning 2020.

Putting all together the needed investments in the next five (5) years, the cash flow map reveals that debt service will be more than doubled beginning 2020. Consequently, water rates will implement increases by 10% annually beginning 2018 until 2021. The cash flow data also includes the restricted funds as either are hold out for loans, in joint savings account with LWUA, guaranty deposits or even BIR – garnished accounts, which until now has not been resolved yet. In general, the financial condition of the COWD appears healthy and capable to sustain the cash requirements in the next five years. The

cash end balances suggest that additional cash requirements can still be accommodated when necessary given all assumptions prevail.

9. BUSINESS PLAN UPDATE PROCESS

The Business Plan must be reviewed and updated on a yearly basis in order to keep track of the unforeseen scenarios in the operations. The review and updating must involve both the policy-making body and the executive branch of the organization. The Management then has to cascade the Business Plan to every personnel of the District in order to have unity and coordination in the performance of responsibilities and duties towards the attainment of the organization's strategic goals. Currently, the District is availing of the assistance from the USAID BeSecure in developing the Emergency Response Plan in order to mitigate damages and risks that may be brought about by calamities, disasters and other emergency circumstances. Consequently, this Business Plan shall include the Emergency Response Plan of the District and all costs and activities that shall be associated with it.

ANNEX 1

CAGAYAN DE ORO CITY WATER DISTRICT

BALANCED SCORECARD 2017

MISSION.

We provide excellent water service to the community we serve.

VISION.

To be an Outstanding Water District in the country.

CORE VALUES.

- We demand ACCOUNTABILITY in all our decisions.
- We are RESULT-DRIVEN.
- We work as a TEAM at all times.
- We have FAITH in THE

2017 DEPARTMENT INITIATIVES or STRATEGIES	TARGET	RESPONSIBLE DEPARTMENT	MAJOR OUTPUT
P1. CUSTOMERS PERSPECTIVE			
STRATEGIC GOAL 1 : PROVIDE EXCELLENT CUSTOMER SERVICE[C1.1]			
MEASURE : Customer Satisfaction Rating[C1.1]			
1. Implement CUSTOMER SERVICE STANDARDS (CSS).		ALL DEPARTMENTS	
1.a Customer SATISFACTION RATING.	EXCELLENT	ALL DEPARTMENTS	Rating
1.b Conduct of POCKET MEETINGS.		ALL DEPARTMENTS	Pocket Meeting (PM)
2. Implement AUTOMATED SURVEY on Customer Service Satisfaction SURVEY.	100% per Plan	MANAGEMENT SERVICES (MSD) / CSDS	Automated Survey
3. Implement CUSTOMER SERVICE ENHANCEMENT STRATEGY(CSES).			
3.a Evaluation on the EFFECTIVENESS of the CSES.	100% Effective	FINANCE	Evaluation on Effectiveness
3.b. Implement CSES at SUB-OFFICES.	100% per Plan	FINANCE	CSES Implemented
4. Establish and implement OFFICER-OF-THE-DAY structure among Supervisors to Top Management. *(December 2016: ADMIN: Submission of Plan & Conduct of Orientation)*	100% per Schedule	ADMINISTRATIVE / ALL DEPT	Officer-of-the-Day
5. Manage the CUSTOMER SERVICE HOTLINE.	100% per Plan	MANAGEMENT SERVICES	Customer Service Hotline Operational
6. Evaluation on the EFFECTIVENESS of the DISCOUNT SCHEME implementation.	100% Effective	FINANCE	Evaluation on Effectiveness
7. Implement HOUSEKEEPING SERVICES.	Excellent		
7.a Evaluation on the EFFECTIVENESS of the HOUSEKEEPING SERVICES implementation @ Admin. Bldg.	100% Effective	ADMINISTRATIVE	Evaluation on Effectiveness
7.b Implement HOUSEKEEPING SERVICES. *(Note: JANITORIAL SERVICES @ SUB-OFFICES)*	Excellent	ADMINISTRATIVE	Housekeeping Rating
8. Implement POLICY on ACU SPARE & MAINTENANCE for Admin & Sub-Offices Customer Lounge	1 CD Breakdown	ADMINISTRATIVE	Policy Implementation

2017 DEPARTMENT INITIATIVES or STRATEGIES	TARGET	RESPONSIBLE DEPARTMENT	MAJOR OUTPUT
9. Construct the following:			
9.a NEW BUILDING at TIN-AO (Ground Floor Level). 9.b NEW BUILDING at NEW SITE.		ENGINEERING ENGINEERING	Construction of Tin-ao Building Groundfloor (Green Technology) Concept (to include Green Technology) Plan & Cost Estimate
STRATEGIC GOAL 2 : DELIVER RELIABLE 24-HOUR WATER SUPPLY[C2]			
MEASURE : No. of hours of Water availability @ a level of pressure[C2.1]			
-WEST SERVICE AREA	24 HOURS		
-EAST SERVICE AREA	22 HOURS		
-WATER SUPPLY IMPROVEMENT (WSI) PLAN-		TECHNICAL GROUP	
10. Construction of Additional PRODUCTION WELLS.	100% per Schedule	ENGINEERING	7,000 CMD Additional Supply
11. FOUR (4) NEW SITES for WELL DRILLING.	2 sites @West & 2 sites @ East	ENGINEERING	Identified 4 LOTS
12. Re-design OPOL, GALAXY GUSA & KAUSWAGAN Water Distribution System.	(a) System Design & Recommendation (b) MSO implementation (c) Pipeline implementation	ENGINEERING/ NRW Management	Accomplishment Report
13. Utilize PUERTO RESERVOIR in a FILL-AND-DRAW operation.	Evaluation Report	ENGINEERING	Construction of Valve Chamber @ Puerto Reservoir & Procurement of Valve
14. Implement WELL REHABILITATION & DEVELOPMENT PROGRAM.	Accomplishment Report	ENGINEERING	Camera of 10 Wells; Procurement of Well Camera & Rehab Program
15. Change operation of PW No. 28 & 29 to FILL-AND-DRAW utilizing TABLON RESERVOIR.	Evaluation Report	ENGINEERING	Evaluation of Fill-and-Draw Operation @ Tablon Reservoir
16. Interconnect DISCHARGE LINES of MACASANDIG NEW BOOSTER STATION to OLD BOOSTER STATION.	Accomplishment Report	ENGINEERING	Program of Works (POW)
17. Implement WATER SUPPLY IMPROVEMENT (WSI) on priority areas: CUGMAN, CAMAMAN-AN & LAPASAN	100% per Plan	ENGINEERING	Improved Water Supply @ Priority Areas
18. Implement REHABILITATION PLAN on pipeline system (transfer old SC to MSO) at BUGO-REYES VILLAGE. *(Out-source pipe laying)*		ENGINEERING / MAINTENANCE	SC transferred to MSO
19. REHABILITATE at least 5 UNITS METER STUB-OUT according to standard.	100% per Plan	MAINTENANCE	5 MSO Rehabilitated
20. Restore and/or Install ISOLATION VALVES.	100% per Plan	MAINTENANCE	Restored and/or Installed Isolation Valves
21. Implement improved WATER DELIVERY SERVICES.	100% per Plan	ADMINISTRATIVE	Improved Delivery of Water Frequency
P2. FINANCIAL PERSPECTIVE			
STRATEGIC GOAL 1 : INCREASE COLLECTION EFFICIENCY FROM ACTIVE ACCOUNTS[F1.1]			
MEASURE : Percentage of PROMPT-PAYING ACCOUNTS (88%); *(Number of Active Accounts 8 months to Total Number ACTIVE A/R)[F1.1]			

2017 DEPARTMENT INITIATIVES or STRATEGIES	TARGET	RESPONSIBLE DEPARTMENT	MAJOR OUTPUT
22. Produce IEC materials on PAYMENT PROCEDURE at PAYMENT CENTERS & COLLECTING BANKS. *(Finance Dept. SUBMITTED Flow of Payments end of Aug. 2016)*	100% of Target	MANAGEMENT SERVICES	IEC Materials on Payment Procedure
23. Implement DISCONNECTION PROGRAM to:			
23.a Accounts delinquent 5 MONTHS & ABOVE.	5,708 Delinquent Accounts	COMMERCIAL	100% of Plan
23.b Accounts delinquent BELOW 5 MONTHS.	400 Delinquent Accounts per Month	COMMERCIAL	Attended at least 800 Delinquent Accounts per Month
STRATEGIC GOAL 2 : REDUCE PERCENTAGE OF INACTIVE ACCOUNTS *AGAINST* TOTAL A/R[F2.1]			
MEASURE : Percentage OF INACTIVE ACCOUNTS *(AMOUNT INACTIVE to TOTAL AMOUNT of A/R)[F2.1] (40%)			
24. Write-Off and Settle INACTIVE ACCOUNTS with AGE of AT LEAST 10 YEARS as of December 2014.	9,000 Inactive Accounts	COMMERCIAL	Recommendation to Write-Off Inactive Accounts
25. Settle Inactive Accounts with AGE of LESS THAN 10 YEARS as of December 2016 - DEMAND LETTERS.	100% of the remaining 6 months of 2015 + first 6 months of 2016	COMMERCIAL	Demand Letters for Inactive Accounts
26. OUT-SOURCE COLLECTION of Inactive Accounts.	100% per Plan	FINANCE	Out-Sourced Collection
27. Review and/or formulate COMMERCIAL POLICIES (Reconnection, Disconnection, Change of Name& others).	Approved Commercial Policies	COMMERCIAL	Commercial Policies
28. Conduct SURVEY and implement applicable FIX-CUTTING of Service Connections *(based on CY 2013-2015 Inactive Accounts)* **.**		MAINTENANCE	Report of Fixed-Cut Lines
STRATEGIC GOAL 3: IMPROVED ASSET/ INVENTORY UTILIZATION[F3.1]			
MEASURE : Asset/ Inventory Utilization Rate[F3.1]			
29. Implement the ANNUAL PROCUREMENT PLAN (APP). *Note: Submission of PPMP & Budget on November 2016*	100% per Plan	ALL DEPT. / BAC SECRETARIAT	Annual Procurement Plan
30. Implement INVENTORY PLAN thru NOTIFICATION of Stock-Level of Critical Items.	100% per Plan	FINANCE	Notifications for Critical Item's Stock-Level
31. Conduct periodic PHYSICAL INVENTORY & RECONCILIATION of items.	100% Items Inventoried & Reconciled	FINANCE	Items Inventoried & Reconciled
32. Implement CONTROL MEASURES on USAGE of supplies & materials.	100% per Plan	MANAGEMENT SERVICES	Plan
33. Implement DISPOSAL PROGRAM on WASTE and UNUSED materials & supplies. (include warehousing & storage in one area)	100% per Plan	FINANCE	Request To Dispose submitted to COA
34. Utilize at least one VACANT LOT as STOCK YARD for filling & waste materials.	Vacant Lot Utilize as Stock Yard	ENGINEERING	Evaluation & Recommendation
STRATEGIC GOAL 4: REDUCE NON-REVENUE WATER (NRW)[F4.1]			
MEASURE : Percentage of NRW Reduction[F4.1] (48%)			

2017 DEPARTMENT INITIATIVES or STRATEGIES	TARGET	RESPONSIBLE DEPARTMENT	MAJOR OUTPUT
35. Implement DATABASE SEGREGATION & SURVEY **of Inactive Accounts.**	CY 2017 Disconnections	COMMERCIAL / MAINTENANCE	Inactive Accounts Surveyed
36. Conduct monthly MONITORING **of** DISCONNECTED ACCOUNTS.	100% of Disconnected Accounts	COMMERCIAL	Disconnected Accounts Monitored
37. Mapping of CUSTOMER's LOCATION & WATER METER SITE **at Balulang, Kauswagan, Camaman-an, Gusa, Macasandig & Nazareth.**	100% of Target	MAINTENANCE	Mapped Customer Location & Meter Site
38. Program on REPLACEMENT **of** BIG WATER METERS.			
38.a Implement Program on REPLACEMENT of BIG WATER METERS (3/4 to 1-1/2"∅) **installed in Commercial connections.**	100% per Plan	MAINTENANCE	Implemented Program
38.b Implement Program on REPLACEMENT **of** BIG WATER METERS (2"∅ & up) **installed in Commercial connections.**	100% per Plan	ENGINEERING	Implemented Program
39. Implement TRANSFER **of connections** INSIDE TO OUTSIDE PROPERTY.	100% per Plan	MAINTENANCE	Connections Transferred Outside Property Line
40. Implement FIX-CUTTING **of Service Connections.**	100% of Request for Fix-Cutting	MAINTENANCE	Disconnected Accounts Fixed-Cut 1 Month After Receipt of Request
41. Implement FIND & FIX LEAKS PROGRAM.	100% per Plan	MAINTENANCE	Repaired 100% of Leaks Found
42. Implement BeSECURE PROJECTS.	100% per Plan	MAINTENANCE	Projects Implemented
43. Implement FIRE HYDRANT PROTECTION PROGRAM. *(CY 2016: Designing & Procurement)*	100% of Target	MAINTENANCE	FH Protected & Monitored
44. Develop documentary on SAN LAZARO NRW REDUCTION SUCCESS STORY.	NRW Reduction Documentary	MANAGEMENT SERVICES	San Lazaro Success Story
P3. INTERNAL PROCESSES PERSPECTIVE			
STRATEGIC GOAL 1 : STRIVE FOR OPERATIONAL EXCELLENCE[II]			
MEASURE : Level of Quality of Customer Service.[II.1] : EXCELLENT			
45. Implement Improved RESPONSE **on** COMPLAINTS:			
45.a Complaints on WATER QUALITY **(BACTERIOLOGICAL & TURBIDITY TEST, REQUEST & FLUSHING). -** 1 CD	1 CD	PRODUCTION	Response Time Documentation
45.b Repair of MAINLINE LEAKAGES **(Without LEAK DETECTION). -** 24 HRS	24 HOURS	MAINTENANCE	Response Time Documentation
45.c Repair of MAINLINE / SERVICE CONNECTION LEAKAGES **(With LEAK DETECTION). -** 7 CD	7 CD	MAINTENANCE	Response Time Documentation
45.d Repair of SERVICE CONNECTION LEAKAGES **(Without LEAK DETECTION). -** 2 CD	2 CD	MAINTENANCE	Response Time Documentation
45.e NO WATER. **-** 4 CD	4 CD	MAINTENANCE	Response Time Documentation
45.f TRANSMITTAL**-filed complaints. -** 1 CD	1 CD	COMMERCIAL	Response Time Documentation
45.g INSPECTION**-High Consumption. -** 2 CD	2 CD	COMMERCIAL	Response Time Documentation

2017 DEPARTMENT INITIATIVES or STRATEGIES	TARGET	RESPONSIBLE DEPARTMENT	MAJOR OUTPUT
46. Implement Improved RESPONSE on SERVICES:			
46.a Request for STUB-OUT/PIPELINE EXTENSION. - 120 CD	120 CD	ENGINEERING	Response Time Documentation
46.b TRANSFER / ELEVATE METER (concessionnaire's request). - 4 CD	4 CD	MAINTENANCE	Response Time Documentation
46.c TRANSFER / REHABILITATION of Service Connection / Meter Stub-Out. - 30 CD	30 CD	MAINTENANCE	Response Time Documentation
46.d Request for METER TEST (High Consumption). - 3 CD	3 CD	MAINTENANCE	Response Time Documentation
46.e CHANGE METER. - 4 CD	4 CD	MAINTENANCE	Response Time Documentation
46.f Request for DISCONNECTION. - 7 CD	7 CD	COMMERCIAL	Response Time Documentation
46.g Request for RECONNECTION. - 3 CD	3 CD	COMMERCIAL	Response Time Documentation
46.h Request for INSTALLATION OF NEW SERVICE CONNECTION (PAYMENT TO JOB ORDER). - 3 CD	3 CD	COMMERCIAL	Response Time Documentation
46.i Request for INSTALLATION OF NEW SERVICE CONNECTION (JOB ORDER TO INSTALLATION). - 8 CD	8 CD	ENGINEERING	Response Time Documentation
46.j MARKET SURVEY. - 30 CD	30 CD	MANAGEMENT SERVICES	Response Time Documentation
46.k Downtime on PUMP REPAIR:			
46.k.1 Downtime for SUBMERSIBLE PUMP - 3 CD	3 CD	PRODUCTION	Response Time Documentation
46.k.2 Downtime for VERTICAL TURBINE PUMP - 7 CD	7 CD	PRODUCTION	Response Time Documentation
46.k.3 Downtime for NON-FLEXIBLE - 5 CD	5 CD	PRODUCTION	Response Time Documentation
47. Implement improved RESPONSE on INTERNAL REQUEST:			
47.a END-USER'S ACCEPTANCE on Delivered Items - 3 CD	3 CD	ALL DEPT.	Response Time Documentation
47.b PURCHASE & DELIVER ITEMS for Petty Cash Items - 3 CD	3 CD	ADMINISTRATIVE	Response Time Documentation
47.c Process Petty Cash REFUND - 3 CD	3 CD	ADMINISTRATIVE	Response Time Documentation
47.d LIQUIDATION of Process Petty Cash - 3 CD	3 CD	ADMINISTRATIVE	Response Time Documentation
47.e PURCHASE REQUEST (PR) Preparation - 3 CD	3 CD	ALL DEPT.	Response Time Documentation
47.f Update DETAILED STATUS OF ACCOUNTS - 10th DAY	10th Day of the Month	OAGM (CSDS)	Response Time Documentation
48. Implement INTERNAL CONTROL to improved SERVICE QUALITY & WASTE MINIMIZATION:			
48.a. FLUSHING PROGRAM on all facilities.	100% per Plan	PRODUCTION	Flushing Program Implemented
48.b NEW SERVICE CONNECTION	100% per Plan	MANAGEMENT SERVICES	Complied With Standards
48.c RECONNECTION	100% per Plan	MANAGEMENT SERVICES	Complied With Standards

2017 DEPARTMENT INITIATIVES or STRATEGIES	TARGET	RESPONSIBLE DEPARTMENT	MAJOR OUTPUT
48.d DISCONNECTION	100% per Plan	MANAGEMENT SERVICES	Complied With Standards
48.e METER READING	100% per Plan	MANAGEMENT SERVICES	Improved Reading Accuracy
48.f CHANGE METER	100% per Plan	MANAGEMENT SERVICES	Complied With Standards
48.g SUPPLY & MATERIALS Usage	100% per Plan	MANAGEMENT SERVICES	Improved Usage
48.h FUEL Consumption	100% per Plan	MANAGEMENT SERVICES	Improved Usage
48.i Implement FLEETING PROGRAM.	100% per Plan	ADMINISTRATIVE	Fleeting Program Implemented
48.j VEHICLE Utilization	100% per Plan	MANAGEMENT SERVICES	Improved Vehicle Utilization
49. Establish & submit DOCUMENTATION SYSTEM on monitoring all applicable initiatives.	100% of Dept. Initiatives	ALL DEPT.	Documentation System
50. Expand BENCH-TEST CAPACITY to 2Ø" Water Meter.	2Ø" Capacity Bench-Testing Machine	MAINTENANCE	Operational 2"Ø Bench-Testing Machine
51. Implement QUALITY MANAGEMENT SYSTEM (QMS).	ISO Certification	MANAGEMENT SERVICES	QMS
52. Implement the COWD OCCUPATIONAL SAFETY & HEALTH PLAN:			
52.a Implement usage of PERSONAL PROTECTION EQUIPMENTS (PPE).	100% Adherence to PPE Usage	ADMINISTRATIVE / ALL DEPT.	Adherence to PPE Usage
52.b Install SAFETY SIGNAGES.	100% per Plan	ADMINISTRATIVE	Safety Signages Installed
STRATEGIC GOAL 2 : ENSURE WATER SAFETY & CLIMATE CHANGE RESILIENCY[12]			
MEASURE : Percentage compliance to PNSDW and Percentage of Surplus.[12.1] : 100% compliance + 60% surplus			
53. Implement WATER SAFETY PLAN (WSP). *Note: All Dept. shall identify participation in the implementation based on submitted Plan*	100% per Plan	ALL CONCERN DEPTS.	Implemented WSP
54. Implement EMERGENCY RESPONSE PLAN (ERP).	100% per Plan	OAGM	Implemented ERP
55. Implement VULNERABILITY ASSESSMENT (VA).	100% per Plan	ENGINEERING / ALL CONCERN DEPTS.	Implemented VA
56. Implement SEPTAGE MANAGEMENT.	100% per Plan	ENGINEERING / ALL CONCERN DEPTS.	Implemented Septage Management
57. Implement DESLUDGING PROGRAM for Production Wells near congested areas.	100% of Target	ENGINEERING	Desludged 2 PW per Quarter
58. Provide RAIN-WATER HARVESTING facility.	1 Structure Facility	ENGINEERING	Rain-Water Harvesting Provisions Installed
59. Implement SOLAR POWER UTILIZATION.	1 Site Solar Powered	PRODUCTION	Feasibility Study
60. Upgrade existing CHLORINATING SYSTEM - REDUNDANCY for Bugo & Macasandig	100% Application of Water Treatment	PRODUCTION	100% Recording per day
61. Implement FLOOD PROTECTION SYSTEM for PW Nos. 7, 9 & 30.	100% Implementation	ENGINEERING	Program of Works (POW) & Terms of Reference (TOR)
62. Secure STAND-BY POWER EQUIPMENT:			
62.a Transfer Balulang & Bugo GENERATOR SETS to GROUND LEVEL.	100% per Plan	ENGINEERING	Generator Sets @ Ground Level
62. b Reinforce MOBILE CART for Generator Sets.	100% per Plan	ENGINEERING	Generator Sets Reinforced

2017 DEPARTMENT INITIATIVES or STRATEGIES	TARGET	RESPONSIBLE DEPARTMENT	MAJOR OUTPUT
63. Secure MACASANDIG BOOSTER STATION:			
63.a Install SECURITY FENCE.	100% per Plan	ENGINEERING	Security Fence Installed
63.b Implement SECURITY PLAN.	100% per Plan	ADMINISTRATIVE	Security Plan
STRATEGIC GOAL 3 : **CREATE VALUE ADDED PARTNERSHIPS**[I3]			
MEASURE : **Number of Assistance and/or Joint Projects and/or Capacity Building Activities**[I3.1] (16)			
64. Forge Partnership with GOVERNMENT AGENCIES:			
64.a DEPT. OF PUBLIC WORKS & HIGHWAYS **(DPWH) &** CITY ENGINEER'S OFFICE **(CEO).**	100% per Plan	MANAGEMENT SERVICES	Quaterly Meeting
64.b. PHIL. NATIONAL POLICE **(PNP)**	100% per Plan	MANAGEMENT SERVICES	Semi-Annual Meeting
64.c BUREAU OF FIRE PROTECTION **(BFP)**	100% per Plan	MANAGEMENT SERVICES	Semi-Annual Meeting
65. Establish and strengthen linkage with LOCAL ORGANIZATIONS / ACADEME.	16 Partners	MANAGEMENT SERVICES	Partnership Activity
66. Forge Partnership with MEDIA **through the following activities:**			
66.a KAPEHAN **and** FELLOWSHIP	100% per Media Plan	MANAGEMENT SERVICES	Activity with Media
66.b UPDATES **on COWD Accomplishments**	100% per Media Plan	MANAGEMENT SERVICES	Accomplishment Updates Released
67. Forge Partnership with SK FEDERATION.	Partnership	MANAGEMENT SERVICES	MOA
68. Forge Partnership with CDO RIVER BASIN MANAGEMENT COUNCIL **(CDORBMC) on** ADOPT-A-WATERSHED PROJECT.	Watershed Area	ENGINEERING	Watershed Stewardship
69. Forge Partnership with ORGANIZATIONS **with** ENVIRONMENTAL ADVOCACY.	Partnership	ENGINEERING	Source Explored
70. Forge Partnership with group of INDIGENOUS PEOPLE **(IP) in Dansolihon to develop water source.**	Partnership	ENGINEERING	Source Explored
71. Forge Partnership with SAFER RIVER LIFE SAVER **(SRLS) for** COWD RIVER PROTECTION PROGRAM.	Partnership	MANAGEMENT SERVICES	MOA
72. Establish & implement ON-JOB TRAINING **(OJT)** PROGRAM.	100% per Plan	ADMINISTRATIVE	OJT Program Implemented
73. Establish SCHOLARSHIP PROGRAM.	Scholarship Program	MANAGEMENT SERVICES	Program
P4. LEARNING & GROWTH PERSPECTIVE			
STRATEGIC GOAL 1 : **ENSURE STRATEGIC COMPETENCIES**[L1]			
MEASURE : **Percentage of workforce with enhanced competencies**[L1.1]			
*(**IMPLEMENTATION RATE** of Institutionalized Human Resource Development Program): Enhanced competencies @ 100% of Division Managers & up			
74. Conduct JOB ANALYSIS **and** TRAINING NEEDS ASSESSMENT **(TNA).**	Job Analysis & TNA	ADMINISTRATIVE	Proposal
75. Implement OPERATORS CERTIFICATION PROGRAM **(OCP).**	OCP	ADMINISTRATIVE	Proposal
76. Implement DEVELOPMENTAL TRAINING **for Leadmen.**	100% of Leadmen per Plan	ADMINISTRATIVE	Developmental Training conducted
77. Implement HUMAN RESOURCE DEVELOPMENT PROGRAM:			

2017 DEPARTMENT INITIATIVES or STRATEGIES	TARGET	RESPONSIBLE DEPARTMENT	MAJOR OUTPUT
77.a MENTORING PROGRAM **for Division Managers.**	100% of Division Managers per Plan	ADMINISTRATIVE	Program Outline & Schedule
77.b Training PROGRAM for PROMOTION **to Supervisory Level.**	100% of Supervisors per Plan	ADMINISTRATIVE	Training Program Guidelines
77.c TECHNICAL SKILL TRAINING **on** PLUMBING.	100% per Plan	ADMINISTRATIVE	Training conducted
78. Implement EXISTING IN-HOUSE RECRUITMENT PROCEDURES.	100% of Applications Processed per Revised Recruitment	ADMINISTRATIVE	100% Adherence to Revised Recruitment Procedures
79. Implement INTER-DEPARTMENTAL TEAM-BUILDING EXERCISES. ***Group 1: All Technical Dept.*** ***Group 2: 2 Non-Technical Dept.*** ***Group 3: 2 Non-Technical Dept.***	100% Implementation per schedule & plan	ADMINISTRATIVE	Team-Building conducted
80. Promote AWARENESS **on Civil Service Commission Program on** COMPLETION OF DEGREE & others.	100% per Plan	ADMINISTRATIVE	Awareness Campaign conducted
STRATEGIC GOAL 2 : **LINK PERFORMANCE & INCENTIVES**[L2]			
MEASURE : **SPMS & PRAISE Implementation Rate**[L2.1]			
81. Implement STRATEGIC PERFORMANCE MANAGEMENT SYSTEM **(SPMS).**		ALL DEPT.	SPMS Implemented & PRAISE Internal Award Granted
82. Establish & Implement Internal AWARD **based on** ATTENDANCE.	Award on Attendance	ADMINISTRATIVE / MANAGEMENT SERVICES	Award System
83. Establish & Implement INCENTIVE MECHANISM **based** NRW REDUCTION.	Incentive on NRW Reduction	MANAGEMENT SERVICES / **PRAISE COMMITTEE**	Incentive Mechanism
84. Establish & Implement ACHIEVER'S AWARD.	Achiever's Award	MANAGEMENT SERVICES	Proposal
STRATEGIC GOAL 3: **ACCESS APPROPRIATE TECHNOLOGY & INFORMATION**[L3]			
MEASURE : **Access Rate to Technology & Information**[L3.3 (74%)]			
85. Establish and Implement access to SYSTEM INFORMATION & CUSTOMER DATABASE **(including segregation of collection data, aging of accounts) thru GIS and/or other system.**	100% Accessibility	OAGM (CSDS)	100% access to information per Plan
86. Implement access to PROCUREMENT PROCEDURES.	100% Accessibility	OAGM (CSDS)	100% access per Plan
87. Implement access to BUDGET INFORMATION.	100% Accessibility	FINANCE	100% access per Plan
88. Establish and Implement access to INVENTORY INFORMATION.	100% Accessibility	OAGM (CSDS)	100% access per Plan
89. Establish and Implement automated PAYROLL SYSTEM.	100% Automated System	ADMINISTRATIVE	100% automation per Plan
90. BILL-ON-SITE			
90.a Implement BILL-ON-SITE.	On-Site Billing	OAGM (CSDS)	100% billed-on-site per Plan
90.b Update CUSTOMER DATA **on installed** WATER METER.	100% of target	COMMERCIAL	Updated Customer Data
91. Establish and Implement COLLECTION SYSTEM **for other charges.**	Collection System	OAGM (CSDS)	100% per Plan

2017 DEPARTMENT INITIATIVES or STRATEGIES	TARGET	RESPONSIBLE DEPARTMENT	MAJOR OUTPUT
92. Establish and implement access to INDIVIDUAL 201 FILES.	100% Accessibility	ADMINISTRATIVE	100% access per Plan
93. Implement DOCUMENT MANAGEMENT SYSTEM **(DMS).**	Data Management System	ALL DEPT.	100% documentation per Plan
94. Establish and Implement an improved RADIO COMMUNICATION SYSTEM.	No Frequency Breakdown & Un-answered Radio Calls	ADMINISTRATIVE	100% improved radio communication system
95. Implement COMPUTER HARDWARE MANAGEMENT SYSTEM.	Computer Hardware Management	OAGM (CSDS)	Documented System
96. Implement CUSTOMER ACCOUNT QUERY SYSTEM **at Main Office.**	Customer Account Query System	OAGM (CSDS)	100% access per Plan
97. Implement IP TELEPHONY SYSTEM HARDWARE.	100% per Plan	OAGM (CSDS)	Operational Telephony System

ANNEX 2

CAGAYAN DE ORO CITY WATER DISTRICT
5 - YEAR CASH FLOW PROJECTIONS
In '000 Pesos (as of Month/Year)

GENERAL DATA		Projections					
	CY-1	(CY)	CY+1	CY+2	CY+3	CY+4	CY+5
	2016	2017	2018	2019	2020	2021	2022
Year-End Connections	91,671	95,511	99,466	103,540	107,736	112,058	116,510
Mid-Year Connections	89,874	93,591	97,489	101,503	105,638	109,897	114,284
Market Growth/Year	3,595	3,840	3,955	4,074	4,196	4,322	4,452
Service Area Population	754,501	771,040	789,000	808,001	826,700	845,220	865,520
% Served Population	61%	87%	88%	90%	91%	93%	94%
Ave.Cons./Conn./Mo.(cu.m.)	25.36	25.36	25.36	25.36	25.36	25.36	25.36
Billed Water ('000cu.m.)	27,350	28,482	29,668	30,889	32,148	33,444	34,779
% Non-Revenue Water	52%	50%	50%	48%	46%	44%	42%
Production (000 cu.m.)-Total	59,263	56,964	59,336	59,402	59,533	59,721	59,964
Production (000 cu.m.) from W	42,903	38,714	30,136	30,202	30,333	23,221	23,464
Production (000 cu.m.) from BI	16,360	7,300					
Production (000 cu.m.) from JVC		10,950	29,200	29,200	29,200	36,500	36,500
Effective Water Rate/Cu.M.	34.34	36.06	39.67	43.64	48.00	52.80	52.80
% Rate Increase		10%	10%	10%	10%	10%	
Collection Efficiency	100%	99%	99%	99%	99%	99%	99%
CASH RECEIPTS:							
Current Water Sales	939,199	1,016,790	1,165,160	1,334,424	1,527,695	1,748,210	1,817,994
Collection of Prev. Years Arrear	33,811	36,604	41,946	48,039	54,997	62,936	65,448
Other Receipts	28,176	30,504	34,955	40,033	45,831	52,446	54,540
Loan Proceeds-P 200M		200,000					
Loan Proceeds-P 458.159M		414,855	43,304				
Loan Proceeds-P 60,588M		60,588					
Loan Proceeds-P 912M					304,000	304,000	304,000
TOTAL CASH RECEIPTS	**1,001,186**	**1,759,341**	**1,285,365**	**1,422,496**	**1,932,523**	**2,167,592**	**2,241,982**
CASH DISBURSEMENT							
Operation & Maintenance (O & M)							
Salaries	108,216	154,711	163,375	172,524	182,185	192,388	203,162
Power/Fuel for Pumping	116,532	100,979	83,006	87,846	93,169	75,319	80,367
Chemicals	1,743	2,453	2,016	2,134	2,263	1,830	1,952
Purchased Water- Rio Verde	170,962	76,285					
Purchased Water-JVC		175,200	467,200	484,720	484,720	605,900	678,608
Fixed Other O&M	111,840	131,666	139,039	146,825	155,047	163,730	172,899
Variable Other O&M	19,243	23,796	26,175	28,779	31,628	34,746	38,156
TOTAL O&M	**528,536**	**665,090**	**880,811**	**922,828**	**949,012**	**1,073,913**	**1,175,144**
Debt Service							
Loan-Existing	121,575	119,765	117,863	115,961	114,103	112,509	110,978
Proposed DBP Loan- P 60.588M			14,319	13,834	13,350	12,865	12,380
200M Back to Back Loan		205,115					
Proposed DBP Loan- P 458.159M		-	56,287	54,566	52,845	51,124	49,403
Docs Stamps-proposed loan		2,594	217		1,823	1,823	1,823
Proposed LWUA Loan- P 912M					44,282	86,926	127,933
Capital Expenditures		**515,988**	**434,356**	**244,356**	**674,606**	**700,250**	**640,250**
Reserves		**31,419**	**36,003**	**41,234**	**47,206**	**54,020**	**56,176**
Franchise Tax		**21,068**	**24,142**	**27,649**	**31,654**	**36,223**	**37,669**
TOTAL DISBURSEMENTS		**1,561,039**	**1,563,998**	**1,420,428**	**1,928,881**	**2,129,653**	**2,211,756**
CASH INFLOW/ DEFICIT		198,302	(278,633)	2,068	3,642	37,939	30,226
BEGINNING CASH BALANCE		291,253	489,555	210,922	212,990	216,632	254,571
ENDING CASH BALANCE		489,555	210,922	212,990	216,632	254,571	284,797
3 MOS O&M		166,273	220,203	230,707	237,253	268,478	293,786
OVER(UNDER) ALLOWABLE ENDING CASH BALANCE		323,283	(9,281)	(17,717)	(20,621)	(13,907)	(8,989)

WATER RATES							
		Jul-17					
Minimum Charge	218.4	240.24	264.26	290.69	319.76	351.74	351.74
11-20 cum.	30.55	33.61	36.97	40.66	44.73	49.20	49.20
21-30 cum.	31.85	35.04	38.54	42.39	46.63	51.29	51.29
31-40 cum.	33.65	37.02	40.72	44.79	49.27	54.19	54.19
Over 40 cum.	36	39.60	43.56	47.92	52.71	57.98	57.98

ASSUMPTIONS:

1. Increase of 320/month in service connection is based on Approved 2017 budget while growth rate of 3% for the succeeding years is based on average
2. Additional Increase of water rates: July 2017 & Jan.2018
3. Reflects Additional Loan of P60.588M (Dec.2017) & Receipt of the remaining 10% of P 433M loan proceeds
4. P912 M loan projected to be received on 3 installment.
5. 1251 employees (regular, casual & jo) based on approved budget.
6. Used Dec. 2016 Cash on Hand & Cash in Bank as 2017 Cash Beginning Balance

OTHER INFORMATION and

CAPEX FUNDING	2017	2018	2019	2020	2021	2022
REVENUE	190,309.00	90,000.00	40,000.00	190,000.00	190,000.00	190,000.00
CASH FROM PREVIOUS YRS		280,000.00	140,000.00	150,000.00	240,000.00	180,000.00
LOAN-458M	265,091.00	64,356.00	64,356.00	64,356.00		
LOAN-60M	60,588.00					
LOAN-912M	-			270,250.00	270,250.00	270,250.00
	515,988.00	434,356.00	244,356.00	674,606.00	700,250.00	640,250.00

CASH PROFILE	CY 2016
Cash- Collecting Officer	1,765,244.30
Cash in Bank-Local Currency, Current Account	289,488,118.92
Time Deposits-Local Currency (90 days or less)	106,273,374.32
Cash and Cash Equivalent	**397,526,737.54**
Add:	
Short term Investment (Time Deposit more than 90 days)	**140,000,068.24**
Restricted Funds	**239,622,711.04**
TOTAL FREE & RESTRICTED CASH	**777,149,516.82**

Short term Investment (Time Deposit more than 90 days)	**CY 2016**
Capital Improvement	76,629,861.70
Expansion and Operating Expenses	23,190,206.54
General Fund-Lorraies	30,180,000.00
General Fund-Capistrano	10,000,000.00
Total Investment in Time Deposits	***140,000,068.24***

Restricted Funds	CY 2016
COWD/ LWUA JSA	***8,667,850.53***
Customers Guaranty Deposit	***3,059,063.68***
COWD Special Projects	3,790.96
COWD Contingency Fund	5,509.87
COWD Capital Improvement	15,262.67
COWD Savings Account	10,302.26
Loan Hold Out Deposits-Existing Loans	27,843,986.62
Loan Hold Out Deposits-Back to Back Loan	***200,016,944.45***
Total Restricted Funds	***239,622,711.04***

ANNEX 3
COWD INVESTMENT PLAN

PARTICULAR	AMOUNT (on yr implementation)	2017	2018	2019	2020	2021	2022
NRW Reduction Program	507,000,000.00	tender half of P458M	implementation of half of P458M - actual reduction				
			TOR & POW for Ph2 (25,000+/- SC): P50&M	apply for loan: P507M	tender P507M	IMPLEMENT: loan of P507M @ amort of P5M/mo @8% for 15yrs	
		50%	50%	48%	46%	44%	42%
		vol NRW	100	96	101.2	96.8	92.4
new building	405,000,000.00		Plan & POW & TOR: Kauswagan & Corrales offices (can be done in 2017 & all others can move a yr earlier)	apply loan	tender	CONST: loan of P405M @ amort ofP4M/mo @8% for 15 yrs	
				find rent for shop occupants	transfer occupants of shop middle of year	constn of Kauswagan Office	
alternative water source	2,700,000,000.00					Full-blown FS ready for tender (2021 - 2023)	
septage facility	231,100,000.00		(JV: Solicited or Unsolicited) phase 1 - P135.7M for 6 yrs				
VEI	79,000,000.00		P63M from National Funds and rest from COWD Capex				
JV Bulk Water Supply	P16.00/cum	20MLD	40MLD	40MLD	60MLD	60MLD	60MLD
RVWCI Bulk Supply	P10.45/cum	40MLD	40MLD	40MLD	40MLD	40MLD	40MLD
COWD Production	P5.00/cum	120MLD	120MLD	120MLD	120MLD	120MLD	120MLD

rough Cost estimates of Projects PARTICULAR	UNIT COST		QUANTITY	TOTAL COST	ESC COST @ 4% per yr
NRW Reduction Program				**450,000,000**	**506,188,800**
DMA	3,000,000		25	75,000,000	84,364,800
replacement of meters	2,100		25,000	52,500,000	59,055,360
pipe replacement (meters)	9,000		2,550	22,950,000	25,815,629
service connection rehab	10,382		25,000	259,550,000	291,958,451
GIS (25 accounts)	LUMP SUM			40,000,000	44,994,560
NEW Building				**360,000,000**	**404,951,040**
Kauswagan Site	30,000		8,000	240,000,000	269,967,360
Corrales Site	30,000		4,000	120,000,000	134,983,680
Alternative Water Source (per FS)				**2,049,898,718**	**2,697,526,867**
Source & Treatment Facility	Lump Sum (includes design & supervision)			1,078,193,829	1,418,829,524
Distribution Expension	Lump Sum (includes design & supervision)			971,704,889	1,278,697,343
Septage Facility				**215,600,000**	**257,400,000**
Phase 1	Lump Sum			127,800,000	135,700,000
Phase 2	Lump Sum			33,300,000	41,000,000
Phase 3	Lump Sum			41,200,000	58,700,000
Phase 4	Lump Sum			13,300,000	22,000,000
VEI Partnership	Lump Sum				79,000,000