

OPERATIONS MANUAL

Metro Midsayap Water District

Edition Version 1.0 October 2016

007 Poblacion 8, Midsayap, Cotabato

http://www.metromidsayap-water.gov.ph/ metromidsayapwaterdistrict@yahoo.com.ph



Republic of the Philippines Metro Midsayap Water District 007 Poblacion 8, Midsayap, Cotabato 9410 Phone: (064) 229-8215 [Fax: (064) 521-4459 Email: metromidsayapwaterdistrict@yahoo.com.ph www.metromidsayap-water.gov.ph

EXCERPTS FROM THE MINUTES OF THE BOARD OF DIRECTORS MEETING HELD AT METRO MIDSAYAP WATER DISTRICT OFFICE 007 POBLACION 8, MIDSAYAP, COTABATO PROVINCE LAST OCTOBER 17, 2016, 3:05 PM – REGULAR MEETING.

ATTENDANCE:

Present:	Mr.Godofredo R. Rapacon Mr. Guillermo L. Carisma, Jr. Atty. Amalia L. Casabar Ms.Isabelita C. Fullecido		Chairman Vice-Chairman Secretary Auditor
Also Present:	Ms. Carol S. Tolentino, CPA,MMPA Engr. Joey C. Tonzo, MMPA Mr. Bon Carlo M. Melocoton,CPA Mr. Ali Rajiv G. Zainal Ms. Michelle Y. Panara		General Manager C PED DM C SAP A IRMO C Board Recording Secretary
Absent:	Mr. Eugenio G. Morillo, Sr.	-	Treasurer

RESOLUTION NO. 078 Series of 2016

A RESOLUTION APPROVING THE METRO MIDSAYAP WATER DISTRICT (MMWD) OPERATIONS MANUAL

- WHEREAS, per Inter-Agency Task Force (IATF) Memorandum Circular No. 2016-1, dated May 12, 2016, the Guidelines on the Grant of the Performance-Based Bonus for Fiscal Year 2016 under Executive Order (EO) No. 80 and EO No. 201 was approved;
- WHEREAS, item 5.2 c FY 2016 Performance Targets of the IATF MC No. 2016-1 requires Local Water Districts classified as C and D to adopt operating standards and corresponding reportorial requirements based on established business policies and practices in the water utilities sector;
- WHEREAS, the operations manual shall provide an overview of the operation, facilities and services of the Metro Midsayap Water District (MMWD) and shall be utilized as guide of the Management and its employees of the operation of the District in providing and in the delivery of its water services under the existing rules and regulations of the governing agencies;
- WHEREAS, Management recommends for the adoption of the Metro Midsayap Water District Operations Manual, as presented;
- **NOW THEREFORE,** upon motion of Director Amalia L. Casabar and duly seconded by the MMWD Board of Directors, resolved as it is hereby resolved to approve the Metro Midsayap Water District (MMWD) Operations Manual.

Approved this 17th day of October 2016.

Certified Correct ATTY. AMALIA L. CASABAR MR. GODOFREDO R. RAPACON MR. GUILLERMO L. CARISMA, JR. Vice-Chairman Secretary (Absent) MR. EUGENIO G. MORILLO, SR. MS. ISABELITA C. FULLECIDO Treasurer Auditor Res078.2016/Page 1 of 1

ACKNOWLEDGEMENT

This Metro Midsayap Water District Operations Manual for use by the Board of Directors, management, personnel, government agencies and other stakeholders is a product of the initiative and thrust of the leadership under GM Carol S. Tolentino, CPA, MMPA to simplify and conform to the local water district's operational standards. As General Manager of the Metro Midsayap Water District and Chairperson of the Steering Committee created for this purpose, the following Committee members duly support her efforts:

Engr. Joey C. Tonzo, MMPA	:	Production and Engineering Division Manager
Ms. Derna E. Dumasis, MMPA	:	Administrative and Commercial Division Manager
Engr. Brian V. Rodriguez, MMPA	:	Engineering and Construction Section Head
Mr. Bon Carlo M. Melocoton, CPA	:	Accounting and Budget Group Head
Ms. Jesiebelle D. Taroy	:	Billing and Posting Group Head
Mr. Ali Rajiv G. Zainal	:	Industrial Relations Management Officer C

A lot of hard work, untiring efforts and unselfish dedication have been put into preparation of this Manual and gave preferential attention to the review of the draft manual and supported the Committee all the way.

We also acknowledge the assistance extended by other MMWD personnel who gave their comments/recommendations and in one way or another, contributed to the completion of this Manual.

And most especially to the highest and greatest support that came from the Almighty God, who provided grace and wisdom for the accomplishment of this Manual.

TABLE OF CONTENTS

Particulars	Page
Board Resolution	1
Acknowledgement	2
Table of Contents	3
Part 1. General Information	
Chapter I. Introduction	
1. Scope and Application of this Manual	6
2. Purpose of this Manual	7
Chapter II. Overview	
1. MMWD Profile	8
2. Mandate, Vision-Mission and Goals	9
3. Areas of Operation	11
Chapter III. Organization and Responsibilities	
1. Board of Directors	17
2. Management Team	18
Part 2. Operating Procedures	
Chapter IV. Water Production and Distribution	
1. Description of the Source	28
2. Chlorination and Disinfection	32
3. Measuring Chlorine Residual	36
4. Water Quality	36
5. Maintenance of Pump Stations	39
6. Basic Operation and Maintenance Concept	48
7. Distribution Facilities	55
8. Reservoirs	56
9. Fire Hydrants	59
10. Reducing Non-Revenue Water	60
Chapter V. Administrative and Financial Aspects	
1. Delineation of Board and Management	
Functions	63
2. Performance Parameters	64
3. Business Planning	67
4. Budget Preparation	68
5. Disbursement of Funds	70
6. Receiving Payments	75
7. Financial Reporting System	79
8. Internal Control System	84
Chapter VI. Commercial Operations	
1. Service Connection Applications	95
2. Customer Classification	99
3. Meter Reading and Posting of Billing	
Register	100
4. Customer Complaints	102
5. Dealing with Delinquent Accounts	103
6 Marketing Programs	109

	Particulars	Page
7.	Other Services Offered	 111
Annexes		
1.	Business Planning Process Flow	 118
2.	Budget Preparation Process Flow	 119
3.	Disbursement of Funds Process Flow	 120
4.	Receiving Payment Process Flow	 121
5.	Financial Reporting System - General	
	Accounting System Process Flow	 122
6.	Financial Reporting System - General	
	Journal (Adjustments) Process Flow	 123
7.	Financial Reporting System - Preparation of	
	Trial Balance Process Flow	 124
8.	Financial Reporting System - Preparation of	
	Financial Reports Process Flow	 125
9.	New Service Connection Application	
	Process Flow	 126
10	Meter Reading and Posting of Billing	
	Register Process Flow	 132
11.	Customer Complaints Process Flow	 133
12	Disconnection of Water Service Connection	
	Process Flow	 134
13.	Request for Reconnection Process Flow	 135
14	Request for Relocation Process Flow	 139
15.	Filing of Promissory Note Process Flow	 143
Appendix	es	
1.	Water Production and Distribution Forms	
	and Reports	 146
2.	Administrative and Financial Aspects Forms	
	and Reports	 157
3.	Commercial Operations Forms and Report	 177
Bibliograp	bhy	 195

PART 1 GENERAL INFORMATION

- Chapter I : Introduction
- Chapter II : Overview
- Chapter III : Organization and Responsibilities

Chapter I INTRODUCTION

1. Scope and Application of this Manual

This manual provides an overview of the operations, facilities and services of Metro Midsayap Water District and creates an important record of MMWD 's guidelines, procedures, standards and expectations.

This manual assures that the MMWD is operated in a consistent, safe, effective and efficient manner that satisfies all laws, rules, regulations and conditions needed to protect public safety and health.

The purpose of this operations manual is to document the standard operating procedures that employees of MMWD are expected to follow under normal operating conditions. It also includes contingency plans that must be followed when the facility is not operating under normal conditions, as well as emergency procedures to be implemented in the event of an emergency situation.

This documented policy and procedures provides a consistent source of document from which to manage all the operations of MMWD including a detailed system description (source, treatment, storage, and distribution), daily and routine operation and maintenance procedures for the system, in addition to record keeping and emergency response procedures, implementation of projects, maintenance of facilities, service management, service delivery and staff management. This will ensure that there is consistent practice throughout the organization.

This manual of policy and procedures should be readily available to all people involved in the management of the organization. Policies and procedures shall be regularly reviewed and amended, if necessary, to comply with the latest laws, rules and regulations and to be responsive to the needs of the organization, the customers and the employees.

- 2. Purpose of this Manual
 - 2.1 Provide guidelines, recommendations and standards for maintenance and operations of MMWD.
 - 2.2 Provide a definitive, yet flexible organizational and administrative structure for maintenance and operations of MMWD facilities.
 - 2.3 Provide organizational structures with the ability to deal effectively with multi-faceted and diverse problems that pertain to the maintenance and operations of a water utility.
 - 2.4 Provide maintenance and operations structures capable of dealing with challenges and problems of new technologies in water operations.
 - 2.5 Provide maintenance and operations structures capable of formulating strategies to effectively and efficiently deal with changing water operations and environmental regulations.
 - 2.6 Provide administrative structures capable of handling day-to-day maintenance and operations tasks common to all maintenance and operations managers and supervisors.

Chapter II OVERVIEW

1. MMWD Profile

1.1 Organizational Background

The Midsayap Water District (MWD) was formed on November 7, 1980 pursuant to the Presidential Decree (PD) 198 and was adopted by the Sangguniang Bayan (SB) through SB Resolution No. 135, Series of 1980, dated November 7, 1980 and was issued its Conditional Certificate of Conformance (CCC) No. 174 on December 16, 1981 by the Local Water Utilities Administration (LWUA).

After the MWD creation, the existing facilities of the defunct National Water Sewerage Administration (NAWASA) were turned-over to the Midsayap Water District.

This includes a 200 Cu. M. elevated concrete reservoir, transmission lines (AC, CI and GI Pipes), well sources and pump stations at Dilangalen, Poblacion 1 (revived) and at Crossing, Poblacion 8 (abandoned) in Midsayap, Cotabato.

The District started serving thirty (30) concessionaires which eventually increased to three hundred (300) and to one thousand two hundred (1,200) as of September 2000. Midsayap Water District has annexed Libungan in 1990 through Sangguniang Bayan (SB) Resolution No. 73, Series of 1990, dated September 28, 1990. Thus, it is currently named Metro Midsayap Water District (MMWD).

On expansions and upgrading, MMWD has materialized a number of plans and targets from its own funds and from the Congressional Development Funds (CDF) of then Congressman Anthony P. Dequiña of the 1st Congressional District of Cotabato, through LWUA's "Lingap sa Mahihirap" Project for an additional well source.

MMWD is serving three thousand seven hundred thirty-five (3,735) service connections in Midsayap and one thousand two hundred eighty-seven (1,287) in Libungan with a total of five thousand twenty-two (5,022) service connections as of February 2016.

- 2. Mandate, Vision-Mission and Goals
 - 2.1 Mandate

Pursuant to Presidential Decree (PD) No. 198 (Provincial Water Utilities Act of 1973), the Metro Midsayap Water District was formed for the purpose of the following:

- Acquiring, installing, improving, maintaining and operating water supply and distribution systems for domestic, industrial, municipal and agricultural uses for residents and lands within the boundaries of such districts;
- Providing, maintaining and operating wastewater collection, treatment, and disposal facilities; and
- Conducting such other functions and operations incidental to water resource development, utilization and disposal within such districts, as are necessary or incidental to said purpose. (PD No. 198, Chapter II, Sec. 5).

2.2 Vision

A Water District that provides abundant, potable and affordable water assured through the protection of watersheds under an efficient, creative and dedicated Management directed by an evaluative but supportive Board of Directors.

2.3 Mission

To pursue the protection of watersheds, the application of regular water control measures and the on-going training and updating of the Board of Directors, Management and personnel.

2.4 Corporate Philosophy

"Service with Commitment and Integrity

2.5 Corporate Core Values

In providing abundant, potable and affordable water twenty-four hours daily, We, the officials and employees of the MMWD, Commit to:

Serve the people of Midsayap and Libungan and its barangays promptly and efficiently with utmost courtesy;

 ${f E}$ ffect Reasonable and affordable water rates and other charges;

Regularly and timely informs the public on water interruptions, conduct of preventive maintenance measures, system

improvement plans and implementation of programs and projects, with easy 24/7 access to information and announcements;

Value every customer's needs, complaints, comments, suggestions and requests, for prompt and appropriate action through easy access to CP No. 09189793379 or to our Hotline Tel. No. (064) 229-8215; and

Educate and empower the people of Midsayap and Libungan and its Barangays the need to take proactive stance on environment care protection for a sustainable supply of abundant and potable water.

All these we pledge because we value PUBLIC SERVICE.

3. Areas of Operation

3.1 Location and Land Areas

The Metro Midsayap Water District is supplying water to two (2) adjacent municipalities, namely: Midsayap and Libungan located in the Province of Cotabato.

3.1.1 Midsayap

The municipality of Midsayap is geographically located in the southwestern portion of the province. It is approximately 47 km from Cotabato City, 174 km from Davao City and 64 km from Kidapawan City, the capital of Cotabato Province. Midsayap has a total land area of 35,502 hectares. It is bounded in the north by the Municipality of Libungan, in the south by the Rio Grande de Mindanao, in the east by the Municipality of Aleosan and in the west by the Municipality of Kabuntalan, Maguindanao.

3.1.2 Libungan

The municipality of Libungan is located in the northwestern portion of the Province of Cotabato. It is bounded in the north by the Municipality of Alamada, in the south by the Municipalities of Midsayap and Aleosan, in the east by the Municipality of Carmen and the Municipality of Pigcawayan in the west. It is approximately 40 km from Kidapawan City. The Poblacion is 7 km from the trade center of Midsayap which contributes largely in terms of educational facilities, hospitals, marketing advantage and recreational facilities. The total land area of the municipality is 20,717 hectares which is 2.99% of the total land area of the province.

Figure 1. Location Map of Midsayap and Libungan Municipalities



3.2 Population Size, Growth and Density of Midsayap & Libungan

3.2.1 Midsayap

The 2010 Census of Population and Housing of the National Statistics Office recorded the population of Midsayap at 134,170 with 26,834 households. It is the most populous among the municipalities of the province with a density of 453 persons per square kilometer. Growing at the pace of 1.92 percent for the past five years, the town is expected to double its population within 36 years.

3.2.2 Libungan

Based on the 2010 Census, the NSO recorded the population of Libungan at 45,295 with 9,520 households with a growth rate of 1.09% for the past five years. However, in terms of population density, Abaga & Poblacion are more populated than the other barangays with 7 persons per hectare for Abaga and 32 for Poblacion while the average for the municipality is 2 persons per hectare.

3.3 Service Area Coverage

3.3.1 Midsayap

The present service area of Midsayap includes 16 barangays namely: Poblacion 1 to 8, Kimagango, Kiwanan, Bual Sur, Central Katingawan, Lower Katingawan, Nalin, Sadaan and Villarica. It is expected that by the year 2025 barangays of San Isidro, Pantindeguen, Ilbocean, Central Glad, Upper Glad 1 & 2, Bual Norte, Agriculture and Salunayan will be served through continuous implementation of expansion projects.



Figure 2. Service Area in the Municipality of Midsayap

3.3.2 Libungan

The present service area of Libungan includes 5 barangays namely: Poblacion, Abaga, Cabaruyan, Cabpangi and Gumaga. It is also expected that an additional of 4 barangays will be served by the year 2025 through continuous implementation of expansion projects, as follows: Batiocan, Ulamian, Sinawingan and Baguer.

Figure 3. Service Area in the Municipality of Libungan



3.4 Supply and Distribution

3.4.1 Water Systems

At present, the Metro Midsayap Water District has 8 active deepwell sources with a total capacity of 1800 cubic meters per day and the Bulk Water Supply with a minimum capacity of 2500 cubic meters per day (expandable) supplying water to both Midsayap and Libungan. One (1) deepwell, DPS is located at Poblacion 1, Midsayap; Seven Deepwells located at Libungan namely: APS1, APS2 and APS3 which are located at Abaga, Libungan, LPS 1 and LPS 6 at Lower Cabaruyan, Libungan, LPS2 at Public Market, Poblacion, Libungan and LPS5 located at Cabpangi, Libungan. The Bulk Water Filtration Plant is located besides Libungan Bridge at Poblacion, Libungan.

MMWD has also four existing reservoirs. 290 cubic meters capacity elevated concrete reservoir at Cabpangi, Libungan; 200 cubic meters capacity concrete ground reservoir at Cabaruyan, Libungan; 200 cubic meters capacity bolted steel ground reservoir at Abaga, Libungan and a 200 cubic meters capacity elevated concrete reservoir at Poblacion 3, Midsayap.

3.4.2 Modes of Distribution

Transmission lines ranging from 6" to 8" diameter pvc pipes are laid from the well sources to the service areas in Midsayap and Libungan. PVC pipes at 2" to 6" diameter are laid as distribution lines going to barangays in Midsayap and Libungan. Four (4) booster pumps are installed at strategic areas to boost water to service areas with higher elevations like Kiwanan, Sadaan, Kimagango in Midsayap and Cabaruyan in Libungan. A 3hp booster pump is installed at Green Valley, Poblacion 8, Midsayap for Kimagango area; a 5hp booster pump at Poblacion 8 is installed for Lower Kiwanan and Sadaan area; a 1hp booster pump is installed at Purok San Francisco Kiwanan for Kiwanan proper and Purok Gabi-Gabi (end point). And for Libungan, a 5hp booster pump is installed at LPS1 to supply water for barangay Cabaruyan, Libungan.

1. Board of Directors

The Board of Directors of MMWD is composed of individuals from the community representing the following sectors: Business, Professional, Civic, Education, and Women. All powers, privileges, and duties of the district shall be exercised and performed by and through the Board. As a policy-making body, it would have full policy control on the district. Part of its functions is to hire the General Manager and other personnel for the day-to-day operations of the district. The executive administrative or ministerial power is delegated to the General Manager and to the officers of the district.

Executive Power in this sense is the authority to enforce orders and to ensure they are carried out as intended. Administrative power however is discretionary powers conferred for the purpose of giving detailed effect to broad policies. While Ministerial power relates to a mandatory act or duty admitting of no personal discretion or judgment in its performance.

Executive power delegated to the General Manager may include supervision and control of the maintenance and operation of water district facilities; sign contract for agreement or securing loan, or representing the district in a meeting or conference.

Administrative power delegated to the General Manager includes the power and authority to appoint all personnel of the district except in the supervisory level; or payment of salaries and compensation to employees of MMWD, or submitting reports to concerned government agencies.

2. Management Team

The management team is responsible for planning, leading, organizing, coordinating, staffing and controlling functions to ensure that all the functional areas of the organization are in place and operating successfully.

2.1 Office of the General Manager

- ✓ Full supervision and control of the maintenance and support of MMWD facilities;
- ✓ Direct and manage the day-to-day affairs and business of MMWD;
- ✓ With the approval of the Board of Directors, determine the staffing pattern and the number of personnel of MMWD and define their duties and responsibilities;
- ✓ To appoint, remove, suspend or otherwise discipline for cause any employee of MMWD;
- Perform such other duties as may be necessary, implied and incidental to his/her responsibilities as well as may be delegated or assigned to him/her by the Board of Directors from time to time.

2.1.1 General Services Group (GSG)

- Responsible in implementing the maintenance of ground, building, electrical, industrial, fabrication, janitorial and sanitation, furniture and fixtures, appliances, security and safety of offices including the satellite offices and facilities;
- ✓ In-charge of the dispatching of vehicles and other motorpooling services; and
- Responsible in implementing the repair and maintenance of all vehicles, motorcycles, heavy equipment and industrial equipment.

- 2.2 Office of the Administrative and Commercial Division (ACD)
 - ✓ Establishes the Division's goals and objectives, recommends policies, rules and regulations for management action, and carries out all Board and Management policies in achieving utility objectives.
 - ✓ Supervises, monitors and controls the effectiveness, efficiency and timeliness of the daily activities, transactions and deliverables of the Administrative and Commercial Division.
 - 2.2.1 Administrative Section

2.2.1.1 Human Resource Management Group (HRMG)

- ✓ Implements District's policies on wages and salaries including leave administration and other CSC policies on employees' benefits. Provides assistance to employees' application for retirement benefits and separation pay;
- ✓ Responsible for the control of source documents for payroll deductions, preparation of payroll, and maintenance of records of salaries and wages of employees of the District;
- ✓ Assists management in handling labor relations problems;
- ✓ Oversees the over-all development of the employees in terms of training, scholarship, and Knowledge, Skills, Attitude development / enhancement; and
- ✓ Conducts in-house training for employees including other training requests and requirements of other water districts.

- 2.2.1.2 Property Management Group (PMG)
 - ✓ Responsible for the procurement activities for the acquisition of materials, office supplies, equipment, and other purchases necessary for the operation of the District;
 - Responsible for the administration, documentation, safeguarding, and monitoring of the periodic physical inventories of materials and supplies, fixed assets, and other district properties;
 - ✓ In-charge of the physical receipt and issuance of materials and supplies, machinery and equipment and other appurtenances; and
 - ✓ Ensures security and orderliness of the storeroom/stockroom and maintains adequate operational and functional requirements.
- 2.2.1.3 Accounting and Budget Group (ABG)
 - ✓ Responsible for the over-all maintenance of the corporate books of accounts and all accounting records, documents and the preparation of Financial and Accounting reports and analysis;
 - ✓ Preparation and consolidation of the Annual Budget;
 - ✓ Summarizes, monitors, and evaluates utilized funds, ensuring that is in accordance with the District's budgetary system;
 - ✓ Determines the financial resource available to carry out programs and additional financing requirements both amount and source; and
 - ✓ Summarizes, monitors, and evaluates utilized funds, ensuring that it is in accordance with the District's budgetary system.

2.2.2 Commercial Section

2.2.2.1 Customer's Account and Marketing Group

- ✓ In-charge of the processing of application for New Service Connection;
- ✓ Conducts UR&R orientation to new applicants/employees;
- Verifies new applicant's data and enrolls to customer database;
- Attends to customer complaints, queries, and requests such as disconnected accounts, high-consumption, low-consumption, reconnection/relocation, penalties and surcharges, and billing adjustments;
- ✓ Investigates illegal connection, service connection for reclassification and implements policy on delinquent customers;
- Supervises the bill handling services and ensures that all procedures in the billing unit are implemented according to existing policies;
- ✓ Recommends improvements on systems and procedures related to billings, delinquencies and adjustments;
- Takes charge of the monitoring of customer's accounts based on meter reading and billing reports, including report of abnormalities, uncovered, and conducts analysis of consumption records of customers;
- ✓ Monitors status of the customers with delinquent accounts, initiates appropriate action and maintains records in accordance with dormant accounts collection policy;

- ✓ Conducts quarterly/monthly barangayan for marketed and/or surveyed areas;
- ✓ Recommends marketing strategies; and
- Investigates illegal connection, and implements policy on delinquent customers.
- 2.2.2.2 Meter Reading Group (MRG)
 - ✓ Timely and accurately read water meters;
 - ✓ Read and bill each concessionaire's water meter;
 - ✓ Accepts and entertains concessionaires requests and complaints;
 - ✓ Distributes Notices of Disconnection and Demand Letters;
 - ✓ Recommends relocation, pull-out of water meter, change water meter, and re-classification of service connection; and
 - ✓ Reports leakages and alleged illegal connections.
- 2.2.2.3 Billing and Posting Group (BPG)
 - Ensures the accuracy of the concessionaires' data in preparation for billing;
 - ✓ Generates billing schedules and reports;
 - ✓ Generates collection reports, collection summaries and other related reports (i.e. aging of accounts, etc.);
 - ✓ Generates report of list of disconnection for disconnection schedule;
 - ✓ Generates Billing Adjustment Summary;
 - ✓ Generates Aging of Accounts Receivable for the month; and

 Takes charge of the monitoring of customer's accounts based on meter reading and billing reports, including reports and analysis of abnormalities in consumption.

2.2.2.4 Cash Management Group (CMG)

- ✓ Accepts payments and issues receipts to concessionaires;
- ✓ Manages and monitors cash transactions;
- Monitors cash collections and deposits and prepares relevant reports;
- ✓ Safe keeps un-deposited collections, change funds and accountable forms;
- Prepares checks and bank advice for vouchers ready for disbursement and prepares relevant reports;
- ✓ Prepares and monitors the distribution and status of Demand Letters; and
- ✓ Ensures that proper control exists and that proper procedures are followed in the disbursement of fund of the District.

2.3 Production and Engineering Division

2.3.1 Production and Water Quality Section (PWQS)

2.3.1.1 Production Group (PG)

✓ In-charge of the over-all operation of the pumping stations, and reservoirs, water treatment plants and ensures smooth and effective operation, including recommendation of latest equipment / procedures on water production management;

- ✓ Conducts predictive maintenance of pumps and appurtenances;
- In-charge of the overall operation and maintenance of all motors, pumping stations, wells, and production facilities and appurtenances; and
- ✓ Conducts tree planting/nurturing, watershed protection and other activities related thereto.

2.3.1.2 Water Quality Group (WQG)

- ✓ Ensures the disinfection of various water facilities/mainline/distribution lines within the approved standards;
- ✓ Conducts regular laboratory works such as bacteriological tests, physical and chemical examinations, and chlorine residual tests as required by the Department of Health (DOH) and Local Water Utilities Administration (LWUA);
- ✓ Submission of water test results to different water regulatory agencies; and
- Monitors and make the necessary adjustments on the treatment facilities to ensure water quality of all water sources and water distribution so as to meet the standards set by the Philippine National Standards for Drinking Water (PNSDW).
- 2.3.2 Engineering and Construction Section (ECS)
 - 2.3.2.1 Planning and Construction Group
 - Responsible for the conduct of Technical Planning and Feasibility Studies on existing and proposed water supply system projects and preparation of necessary

documents for infrastructure projects and turned-over water supply facilities;

- ✓ Responsible for the cost estimates, detailed design, and analysis of the water supply system facilities and other structures necessary in the systems and office operations;
- ✓ Performs research and technical survey and investigation for potential water supply and mainline expansion, including construction and installation of transmission and distribution of water pipelines and its appurtenances;
- Implements engineering works for water supply system improvement and other special and infrastructure projects by administration;
- Ensures quality workmanship that conforms with the set construction standards;
- ✓ In-charge of the calibration of meters, such as production meters and consumer meters, and other measuring devices;
- Ensures the safety of the public during the conduct of construction works;
- ✓ Secures and complies with the necessary construction permits; and
- ✓ Conducts predictive and corrective water meter maintenance, including monitoring and implementation of water meter standards.

2.3.2.2 Repairs and Maintenance Group (RMG)

 Responsible in the operation of valves and water distribution network, repair and maintenance of transmission, mainlines, and distribution pipelines;

- ✓ In-charge of the restoration of pavement and structures, including conduct of emergency repairs and maintenance of service connections including water meters and all related fittings;
- ✓ Responsible for the replacement of old and dilapidated pipes, arrangement of service lines and connections, and conducts leak detection surveys;
- ✓ Secures and complies with the necessary excavation permits; and
- Ensures the safety of the public during the conduct of maintenance works.
- 2.3.2.3 NRW Reduction Group (NRG)
 - ✓ Investigates incidents that contribute to the NRW;
 - ✓ Conduct activities that will help reduce NRW such as foot patrols, detection of leakages, and others related thereto;
 - Accounts unbilled and unmetered water usage such as flushing at blow-offs/by-pass/water meters, withdrawal from fire hydrants, cleaning of reservoir and other related activities;
 - ✓ Prepares reports of NRW and recommends NRW Reduction measures.

PART 2 OPERATING PROCEDURES

Chapter IV:Water Production and DistributionChapter V:Administrative and Financial AspectsChapter VI:Commercial Operations

Chapter IV WATER PRODUCTION AND DISTRIBUTION

1. Description of the Source

The Metro Midsayap Water District, as of June 30, 2016, has 8 active deepwell sources with a total capacity of 1800 cubic meters per day and the Bulk Water Supply with a minimum capacity of 2500 cubic meters per day (expandable) supplying water to both Midsayap and Libungan. One (1) deepwell, DPS is located at Poblacion 1, Midsayap; Seven Deepwells located at Libungan namely: APS1, APS2 and APS3 which are located at Abaga, Libungan, LPS 1 and LPS 6 at Lower Cabaruyan, Libungan, LPS2 at Public Market, Poblacion, Libungan and LPS5 located at Cabpangi, Libungan. The Bulk Water Filtration Plant is located besides Libungan Bridge at Poblacion, Libungan.

MMWD Pumping Stations

✤ ABAGA PUMPING STATION #1

APS 1, Abaga, Libungan			
Status	:	Active	
Year Constructed	:	2002	
Well Depth	:	60 mtrs	
Well Casing	:	200 mm	
Well Capacity	:	7 lps	



ABAGA PUMPING STATION #2 ** - - - 1

DO 0 11

APS 2, Abaga, Libungan			
Status	:	Active	
Year Constructed	:	2006	
Well Depth	:	56 mtrs	
Well Casing	:	200 mm	
Well Capacity	:	7 lps	



♦ ABAGA PUMPING STATION #3

APS 3, Abaga, Libungan			
Status	:	Active	
Year Constructed	:	2011	
Well Depth	:	30 mtrs	
Well Casing	:	200 mm	
Well Capacity	:	5 lps	



***** LIBUNGAN PUMPING STATION 1

LPS1 - Cabaruyan, Libungan			
Status	:	Active	
Well Depth	:	60 mtrs	
Well Casing	:	150 mm	
Well Capacity	:	1 LPS	



***** LIBUNGAN PUMPING STATION 2

LPS 2 – Public Market, Libungan				
Status	:	Active		
Well Depth	:	60 mtrs		
Well Casing	:	200 mm		
Well Capacity	:	2.5 lps		



♦ CABPANGI PUMPING STATION

LPS 3, Cabpangi, Libungan			
Status	:	Inactive	
Year Constructed	:	2011	
Well Depth	:	30 mtrs	
Well Casing	:	200 mm	
Well Capacity	:	15 lps	



♦ GUMAGA PUMPING STATION

LPS 4, Gumaga. Libungan			
Status	:	Inactive	
Year Constructed	:	2011	
Well Depth	:	30 mtrs	
Well Casing	:	200 mm	
Well Capacity	:	15 lps	



* CABPANGI NURSERY

LPS 5, Cabpangi, Libungan			
Status	:	Active	
Year Constructed	:	2004	
Well Depth	:	30 mtrs	
Well Casing	:	100 mm	
Well Capacity	:	1 lps	



***** LIBUNGAN PUMPING STATION 6

LPS 6 – Cabaruyan, I	Lib	ungan
Status	:	Active
Well Depth	:	30 mtrs
Well Casing	:	100 mm
Well Capacity	:	1 LPS



✤ DILANGALEN PUMPING STATION

DPS - Poblacion 2, Midsayap			
Status	:	Active	
Turned-over from the defunct NAWASA			
In year 1980 and rehabilitated in 1999			
Well Depth	:	35 mtrs	
Well Casing	:	150 mm	
Well Capacity	:	2.5 lps	



✤ MACTAN ROCK TGV BUILDERS CORPORATION

Bulk Water Supplier

Started Operating February 21, 2014

Supplied Volume as per Contract: 2500CMD (Expandable)



2. Chlorination and Disinfection

Chlorination is the most widely used means of disinfecting public water supplies. The aim of disinfection is to kill any disease-causing micro-organisms that might get into the water supply system.

There are two basic ways of introducing chlorine into the water: (1) is Hypochlorination or injecting of a chlorine solution, and (2) the injection of pure chlorine gas.

There are many types of chlorinators, and the operator should refer to the instruction manuals provided by the manufacturers of the specific equipment he will operate. It is essential that the operator has a clear understanding of the basic principles of chlorination and of the type of equipment used.

2.1 Terminology of Chlorination

Chlorine Demand

There are many compounds in water that will combine chemically with chlorine, such as ammonia, iron, manganese and hydrogen sulfide and others. The amount of chlorine that reacts with these compounds, or chlorine demand is not available for disinfection. Once the chlorine demand of a given water is known, the chlorine dosage needed for disinfection can be established, taking it into account, and feeding enough more that there is always a measurable free chlorine residual at the farthest points of the distribution system.

Chlorine Residual

The amount of chlorine available for disinfection after chlorine demand is satisfied.

Contact Time

This is the time required to kill a micro-organism after chlorine first comes in contact with it. This time varies from a few seconds to about two hours, depending on the type of organism and the pH of the water. The term contact time is also used to describe the time between injection of chlorine and delivery of the chlorinated water to the consumers. To be safe, at least 20 minutes contact time must be allowed.

Dosage

Dosage refers to the amount of chemical applied to the water expressed in milligrams per liter (mg/l) or parts per million (ppm). These terms may be used interchangeably, i.e. 1.0 mg/l = 1.0 ppm.

Feed Rate

This is the rate, usually expressed in kg per hour or kg per day, at which chlorine solution or gas is injected into the water.

2.2 Mixing Hypochlorite Solutions

Any chlorine solution contains acids and is therefore very corrosive. The solution container should be plastic, wood, ceramic or other non-corrosive material. Hypochlorite solution can damage the eyes or skin and destroy clothing. Therefore, it should be handled with care. Rubber gloves and a rubber apron should be worn while mixing. If chlorine solution is splashed into the eyes or on the skin, flush immediately with plenty of cold water.

If Calcium hypochlorite is used, a 24-hour supply of chlorine solution is prepared each day for use on the following day. This allows time for impurities and insoluble materials to settle.

Follow the hypochlorinator manufacturer's recommendations on strength of solution. If none are given, use a 2 percent solution (2 parts available chlorine per 98 parts water by weight).

- 2.3 Procedures in mixing Hypochlorite
 - Step 1 Place the required amount of calcium hypochlorite in a suitable container;
 - Step 2 Make a thick paste by slowly adding to 2-3 liters of water each kilogram of calcium hypochlorite and stirring with a wood paddle;
 - Step 3 Stir the paste thoroughly breaking up all lumps and being sure there are no dry pockets on sides, bottom or corners of the container;
 - Step 4 Fill the chlorine solution tank with the required amount of water (taking into account the water used in making the chlorine paste), add chlorine paste and stir with paddle as the tank fills.
- 2.4 Calculating Proportions, Dosage and Feed Rates
 - Given: Suppose it is desired to inject a 2 percent solution of calcium hypochlorite to a flow of 100 l/s at a dosage a rate of 1.0 mg/l. Find the amount of calcium hypochlorite and water required for a 24-hour supply and determine the feed rate setting of the hypochlorinator.

Computation:

- a Required amount of available chlorine
 - = 1.0mg/l x 100 l/s x 3600 sec/hr x 24 hr
 - = 8,640,000 mg/day or 8.64 kg/day
- b Required amount of calcium hypochlorite (Since calcium hypochlorite contains only 70% available chlorine)

= 8.64 kg / 0.70

= 12.34 kg

c Required water

= 8.64 kg x 98/2kg

= 423.4 kg or 423.4 liters

Conclusion:

Therefore, it would be necessary to mix 12.34 kg of calcium hypochlorite in a 423.4 liter of water. In practice, these quantities would be rounded off to 12.5 kg and 450 liters, respectively resulting in a negligible error in the dosage rate.

Required Feed Rate of solution: Feed Rate = 462.5 kg solution/day x day/24hours = 19.3 kg/hour

2.5 Maintenance of Hypochlorinator Equipment

The most frequent problem encountered in case of hypochlorinators is clogging at points where solution flow is restricted. This is more likely to be a problem where calcium hypochlorite is used than where sodium hypochlorite is used, because there are insoluble particles in calcium hypochlorite and none in sodium. This problem is especially troublesome if the water is fairly hard or contains iron.

2.5.1 Daily maintenance procedures

- Step 1 Flush all vital parts with clear water;
- Step 2 Remove strainer;
- Step 3 Flush and clean with a stiff vegetable fiber brush; and
- Step 4 Flush out chlorine solution lines with clear water.

2.5.2 Every Six (6) Months maintenance procedures

- Step 1 Take the chlorinator apart for inspection and remove all buildup deposits by brushing and rinsing;
- Step 2 Use a 5 percent solution of muriatic acid or acetic acid, if necessary, to remove stubborn deposits;
- Step 3 Replace all worn or damaged parts; and
- Step 4 Lubricate and reassemble.
3. MEASURING CHLORINE RESIDUAL

Chlorine residual should be maintained throughout the system to ensure that any micro-organisms entering the system through cross connections will automatically be killed. A 0.30-0.50ppm of chlorine residual should be maintained at any point in the system. Chlorine residuals are checked using a chlorine comparator.

4. WATER QUALITY

Water quality plays a very significant role in the water safety plan. The Water Quality Unit's aim is to conform to the Guidelines in Identifying Priority Drinking-Water Quality Parameters for Monitoring which have been set by the Philippine National Standards for Drinking Water (Administrative Order No. 2007-0012).

The following priority parameters are as follows:

1. Microbiological Test	8. Turbidity
2. Arsenic	9. Iron
3. Cadmium	10. pH
4. Lead	11. Manganese
5. Nitrate	12. Chloride
6. Benzene	13. Sulfate
7. Color	14. Total Dissolve Solids (TDS)

A water sample for bacteriological analysis must be truly representative of the water to be tested. Therefore, the frequency and location of sampling is very important. Also, the person in-charge must be very careful to avoid adding any bacteria or chemicals to water while, or after, collecting samples. Sample collecting techniques may vary, depending on the kind of test to be made. A carelessly collected sample can make the highest quality water, or the best of treatment processes appear bad.

MMWD collects water samples for physical and chemical analysis from eight (8) deep wells and from the Bulk Water Supply.

Samples for bacteriological testing are taken widespread at random in the distribution system. Four (4) samples are collected from Midsayap and three (3) samples from Libungan.

Frequency of Sampling

The Philippine National Standards for Drinking Water (PNSDW) includes minimum standards for water quality and frequency of the water sampling of potable water supplies.

4.1 Chemical and Physical Quality Sampling Procedures

- Step 1 When sampling water from a water surface, lower the bottle as far below the surface as possible, holding the cap over the opening. Then remove the cap, allow the bottle to fill and replace the cap under water;
- Step 2 When sampling from the pump discharge, faucet, fire hydrant, etc. let it run for at least a minute then hold the bottle opening under it, being careful not to touch the opening against the tap;
- Step 3 Immediately check the temperature of the water and of the air with a centigrade thermometer;
- Step 4 Check the chlorine residual;
- Step 5 Tightly cap the bottle with a non-metallic lid or cork;
- Step 6 Put a label on the sample bottle showing the following:
 - Type of sample
 - Date and time of collection
 - Exact location
 - Name of person taking sample
 - Air and water temperature

• Chlorine residual

Step 7 Send sample to laboratory within 24 hours.

4.2 Bacteriological Sampling Procedures

- Step 1 If sample is taken from the surface of a body of water, use the procedure previously given for chemical and physical quality sampling;
- Step 2 Open tap and let water run for at least five (5) minutes to flushout the water in the service pipe and shut off the faucet/stopcock;
- Step 3 Expose faucet to flame of portable burner for a minute; especially the inner edges. A small, portable liquid propane or butane torch is ideal, but a cigarette lighter may be used;
- Step 4 Turn on faucet and let water run with a stream about the diameter of a pencil, for at least three (3) minutes to displace water in the service piping;
- Step 5 Remove stopper from sample bottle without removing paper foil liner from cap and fill bottle from faucet by holding at an angle to provide a little opening as possible to be exposed to air. When bottle is ³/₄ full, take away the bottle without it touching the faucet and replace stopper tightly;
- Step 6 Check air temperature with thermometer then hold under faucet to check water temperature;
- Step 7 Check chlorine residual;
- Step 8 Put label on bottle showing the following information:
 - Type of sample
 - Date and time of collection
 - Exact location
 - Name of person taking sample
 - Air and water temperature
 - Chlorine residual

- Step 9 Take sample to laboratory within 2 hours, if possible. In no case should a sample be more than 4 hours old when reaching the laboratory. If travel distance to the laboratory will not permit sample to be delivered in less than 4 hours, keep packed in ice until delivered to laboratory.
- 4.3 Minimum Frequency of Sampling for Drinking Water Supply System Bacteriological Test

Source and Mode of Supply	Population Served	Minimum Frequency of Sampling
a. Level I – Hand Pump	90 – 150	Once in three months
b. Level II – Communal Faucet	600	Once in two months
c. Level III – Metered Individual Connection	Less than 5,000	1 sample in a month
	5,000 - 100,000	1 sample per 5,000 population in a month
	More than 100,000	20 samples plus 1 sample per 10,000 population in a month
d. Bottled Drinking Water		Once every two months
e. Emergency Supplies of Drinking Water		Before delivery to users

Table 1. Minimum Frequency of Sampling for each Source and Mode of Supply

5. Maintenance of Pump Stations

A well may be considered as consisting of two main parts. The upper part or cased section serves as housing for the pumping equipment and as a vertical conduit through which water flows from the aquifer to the pump. It is of water tight construction. The lower part is the intake section where the water from the aquifer enters the well casing. The intake section is actually a screen or perforated part of the casing located in the water bearing formation.

The casing must be able to withstand the pressures of the earth tending to crush it and must be large enough to accommodate the pump with sufficient clearance for easy installation and efficient operation.

The intake section or screen must also be able to resist crushing pressures of the earth. It is designed to permit entry of sufficient flow from the aquifer and at the same time prevent entry of the aquifer materials.

5.1 Terminology of Hydraulic Wells

Sanitary Seal

In a properly constructed well, the top 12-15 meters of the space between the casing and borehole is filled with cement slurry to create a seal against contaminated surface water or sub-surface water that might otherwise percolate down the well between the casing pipe and the borehole.

Pump Base

After the well is drilled, cased and developed, a large block of concrete is cast around the top of the well casing to serve as a foundation for the well pump. The gravel chute allows gravel to be added as the gravel pack settles. The sounding tube permits measurement of well depth and pumping levels with the pump in place.

Static Water Level

The maximum level that water will rise in the well when the pump is not operating.

Pumping Water Level

When the well is pumped the water level will drop to a certain depth and remain nearly constant for as long as the pumping rate is not changed. For a given static level, every well has a specific, steady pumping level for every flow rate; the greater the flow rate, the lower the pumping water level.

Drawdown

The distance that the water level falls below the static level while pumping. In other words, pumping water level minus static water level equals drawdown.

Yield

The amount of water a well can produce under a given set of conditions. Maximum yield or capacity is the greatest flow rate that can be steadily pumped out of the well.

Discharge

The amount of water being pumped out of a well at a given time (same as flowrate)

Specific Capacity

The well discharge that will result in one meter of drawdown, expressed in cubic meters per hour per meter (cm/h/m) or liters per second per meter (l/s/m). Specific capacity is nearly constant at all flow rates and is therefore a convenient way to express the ability of the well to produce water.

Well Recovery

When a pump is stopped, the water level will rise, or recover, to the static level over a period of time; the higher the well capacity, the quicker the recovery.

5.2 Checking Well Performance

Over a period of years, or even months, a well's performance may deteriorate, with decreasing specific capacity and slower recovery. This results from clogging of screens or of the water-bearing formation around the screen by sand, clay or encrusted mineral deposits.

Decreased well performance results in higher electric power costs because more energy must be supplied by pumps to extract water from the well. Also, the amount of water pumped decreases, which means that less water is available to meet the needs of the public.

The performance of a new well should be checked at least once each day for the first several days, then if the performance seems stable, it should be checked once each month for the first year which constitutes a climatic cycle.

After the first year, and as long as the performance remains stable it should be checked at least every six months. A permanent record of well performance checks should be kept and matched between checks made to discover any trends towards deterioration.

The well performance check consist of the following procedures:

- Step 1 Before starting the pump, carefully measure the static water level and record on the Well Performance Record Card (WPRC). (The pump should have been stopped for at least 12 hours before doing this);
- Step 2 The pump is operated for several hours at steady rate; then the pump discharge and pumping water level are carefully checked and recorded on the WPRC. The drawdown is computed by subtracting the static water level from the pumping water level and noted on the WPRC;

- Step 3 The pump discharged is divided by the drawdown to compute the specific capacity. This is also recorded in the WPRC;
- Step 4 A well recovery test is carried out when the pump is stopped; and
- Step 5 The depth of the bottom of the well is measured. This will reveal build-up of sand in the bottom.

5.2.1 Measuring Pumping Levels

Electric Probe Method

Materials:

- a. Electric Tester, battery operated. Check batteries before using.
- b. Probe wire consisting of a length of insulated copper wire, 30-40 meter in length, marked in one-meter intervals with bands with electric tape. Insulation is stripped about one centimeter at both ends, with a 500 gram weight attached to one end and a spring loaded clip on the other. When marking the one-meter length of the probe wire, be sure it is laid out straight with a slight tension, and use a long, 25-30 meter measuring tape so that the marking can be done with one, or at the most, two settings of the tape along the wire. In this way the probe wire will be accurately marked.

The weight should be shielded with plastic or rubber to prevent false readings if it comes into contact with the casing or pump column.

- c. Ground wire consisting of a length of insulated copper wire, two meters long, with spring loaded clips on both ends.
- d. A wood yardstick, one-meter long, marked in centimeters.

Procedures

The probe wire is connected to the electric tester, and the weighted end lowered into the well. The short wire is connected from the tester to a good metal contact on the well casing or sounding tube. When the weighted end of the probe wire is immersed in water, a circuit is completed through the tester, probe wire, water, well casing and ground wire, resulting in a current reading on the electric tester dial;

- Step 1 With both wires properly connected, lower the probe wire into the well until the tester shows a current flow; and
- Step 2 Grip the probe wire with thumb and forefinger at the entrance to the top of the sounding tube; then pull out the probe wire and lay along meter-stick with the known tape depth marker at the zero end. Read fraction of a meter location of thumb on yardstick. Add numbered marker to thumb to obtain exact distance from top of well to the water surface.

5.2.2 Measuring Well Pump Discharge

Production Flow Method – If a flow meter is available on the well pump discharge piping, read discharge directly from the flow rate dial or if there is no dial, by observing the change in cumulative register over a period of at least 4-5 minutes of time, using a stop watch or the sweep second hand of a wristwatch.

5.2.3 Measuring Well Depth

The only way of measuring the depth of a well is by sounding. This simply amounts to lowering a strong wire or cord with a weight attached down the well and measuring the length. The sounding line should be lowered and raised slowly to avoid wrapping of the line around the pump column. A well should never be sounded below the pump while the pump is running.

Performing the Necessary Checks to Determine the Well Performance

The operator can diagnose the results to determine not only the general conditions of the well, but usually the type of developing problems.

Following are some examples of information gained.

- a. If the static level drops but the drawdown is the same, the operator knows that the water table is dropping. This means that the aquifer is being depleted faster than it can recharge itself.
- If the static level is unchanged but the drawdown is increased, the operator knows that the screen or the aquifer near the screen is clogged and water is not flowing freely into the well.
- c. If the static level is unchanged but the drawdown is decreased, the operator knows that the pump has lost its efficiency. When measuring the static or pumping levels sufficient time must be allowed for the true levels to be reached.

5.3 Rehabilitation and Maintenance

- 5.3.1 Causes of Decreased well yield
 - a. Accumulation of sand and silt in bottom of the well until part of the screen is blocked.
 - Encrustation, or clogging of the water-bearing formation next to the screen and/or in the opening of the screen itself, due to build-up of mineral deposits or clay.
 - c. Metal corrosion deposits in screen opening.
 - d. Bacterial deposits: some bacteria feed on iron or carbon compounds in the water, producing a biologically harmless slime which collects

on the screen or surrounding formation. This slime traps mineral salts from water passing through the screen, resulting in clogging of the screen openings.

5.3.2 Procedures

- Step 1 Remove the well pump from the well, and remove the strainer and foot valve;
- Step 2 Prepare a perforated length of 100mm PVC Pipe, 4m long, with a 3.0mm diameter stainless steel cable long enough to reach down to the water bearing formation;
- Step 3 Fill the perforated cylinder with sodium hypochlorite powder (HTH) and cap both ends;
- Step 4 Lower cylinder to the bottom of the screen, then alternately raise and lower between the bottom and top of the screen section, agitating briskly to dissolve the chlorine powder;
- Step 5 Let well sit overnight;
- Step 6 Fill the cylinder with hexametaphosphate (sold in the Philippines under the brand name, "Calgon") and repeat the procedure used to place chlorine;
- Step 7 Install well pump;
- Step 8 Alternately start stop the pump at two or three minute intervals for about one hour and run water to waste;
- Step 9 Check pump discharge for chlorine odor, discoloration of water or other indications that chlorine or calgon remain in the well. If so, continue the surge pumping procedure. When the water is clear, with no odor of chlorine, allow the pump to run continuously for several hours, checking well performance at frequent intervals; and
- Step 10 Remove the well pump, if necessary, to replace the foot valve and either reinstall the pump or if procedure has been ineffective, call a well drilling contractor, as appropriate.

- 5.4 Routine Maintenance
 - a. Add make-up gravel During the first year of operation of a new well, the gravel pack may settle. The gravel chute cap should be removed and with the pump running, gravel added slowly as necessary to fill the gravel chute up to the top.
 - Periodic Chlorination Once every six months, the well should be chlorinated to help prevent the build-up of encrustation

This is most easily accomplished as follows:

- Step 1 Dump 10 kg of 70% powdered chlorine down to well, and let sit for 20-30 minutes to dissolve;
- Step 2 Run pump (discharging to waste) until an odor of chlorine is detectable at the pump discharge. The odor should be detectable in a very short time;
- Step 3 Shut the pump down and let sit for several hours, preferably overnight;
- Step 4 Before putting pump back in service, operate (again discharging to waste) until chlorine odor is no longer detectable at the outlet; and
- Step 5 If is there is no odor of chlorine, or chlorine residual, during this final pumping it is necessary to re-chlorinate, because the well has been contaminated and has a high chlorine demand. In other words, a good job of chlorinating the well has not been accomplished.
- 5.5 Sanitation Aspects of Operation of Wells

All ground water supply systems must be adequately protected from contamination or pollution. It is the responsibility of the water district employees to be constantly on guard against any condition that could lead to possible contamination.

Sources of pollution include septic tanks, and other private or public sewage disposal facilities, animals, fertilizers and pesticides. The casing head or discharge head and all vents into the well should be properly constructed and maintained to prevent contamination.

For safety and as a precaution against possible contamination of the aquifer unused wells used be capped, and abandoned wells should be filled with clean, disinfected sand to a point above the aquifer, then with selected dirt, then concrete for the top 2-3 meters.

Pump houses should be kept clean, adequately drained and protected from flooding.

- 6. Basic Operation and Maintenance Concept
 - 6.1 Locating Water Mains

The exact location of pipes can be determined by referring to records or as-built plans of the water supply system. In cases where records are inadequate or lost, underground pipes might be pinpointed by the following, to wit:

- a. By asking old residents who witnessed their installation;
- b. By using pipe locators; and
- c. By trial excavation.

6.1.1 Locating Pipes with Pipe Locators

The position of water mains can easily be pinpointed with the use of a pipe locator. A small water utility, however, is unlikely to own this very expensive piece of equipment. It may have to rent one, unless it can be borrowed from a government agency that has one.

6.1.2 Locating Pipelines by Trial Excavation

- a. In the vicinity of the reported problem, select a primary reference joint that you can use to establish the position of the problem pipeline. An exposed pipe section, a gate valve, or gate valve box would be a good primary reference point;
- b. Where there is no exposed pipe section, select any point on the north or east side of the road and make an excavation. In the Philippines, water mains are usually installed at the north or east side of the road;
- c. If a water main is not found at the first point excavated, try again at another point on the north or east side of the road within the same vicinity. Continue the trial and error process until a water main is located;
- d. Using the water main just located as reference point, select a second point 50 to 100 meters from it and make another excavation;
- e. Once a second excavation point reveals the water main, draw an imaginary line connecting the successful excavation points 1 and 2. The connection of the two points is the exact position of the buried pipe; and
- f. Repeat the above processes using the identified points as reference until all pipelines are pinpointed.

6.2 Cleaning of Pipelines

Water going through the pipelines may sometimes carry sand, sediments, and organic and other objectionable solid elements. When water velocity is low, these tend to get deposited and build up inside the pipes. The built-up deposits decrease the carrying capacity of the pipelines.

6.2.1 Flushing of the Pipelines Procedures

- Step 1 Isolate and increase the water pressure at the section of the pipeline to be cleaned using gate valves;
- Step 2 Identify and open the nearest blow-off;
- Step 3 Flushing at the blow-off until the water becomes clear; and
- Step 4 Open isolation gate valves and shut off the blow-off.

6.3 Repairing Pipe Leaks

Leaks in water mains should be fixed as soon as they are detected. Once the leak is pinpointed, the water in the isolated main must be removed. The repair job then consists of sealing the leaks and/or replacing the defective pipe section. The different methods of fixing leaks are as follows:

6.3.1 Using Epoxy (for Small Leaks)

Step 1 Dry the surface of the area to be repaired;

- Step 2 File the surface to make it rough, and slightly enlarge the crack or hole;
- Step 3 Apply the epoxy, forcing some of it into the crack or hole to produce a seal; and
- Step 4 Normally, the epoxy will set in 2 to 4 hours before the pipe can be disinfected and put back into service. However, be sure to check the directions for use of the epoxy as some types may require more or less time.

6.3.2 Using Sleeve Type Coupling

A Sleeve type coupling is a basic type of coupling. This consists of a pipe whose bore is finished to the required tolerance based on the shaft size. Based on the usage of the coupling a keyway is made in the bore in order to transmit the torque by means of the key. Two threaded holes are provided in order to lock the coupling in position.

Sleeve couplings are also known as Box Couplings. In this case shaft ends are coupled together and abutted against each other which are enveloped by muff or sleeve. A gib head sunk keys hold the two shafts and sleeve together.

6.3.3 Using Strips from the Inner Tube ("Interior") of a Rubber Tire

In emergency work when no other repair materials are available, cut a discarded inner tube of a rubber tire into strips and wind the strong, flexible rubber strips tightly around the pipe to cover the leak and its surrounding surfaces.

6.4 After the Leak Is Repaired

Step 1	Open the control valve to allow water to flow into the repaired
	section;
Step 2	Observe carefully to verify if the leak is completely sealed;
Step 3	After sealing, backfill the excavation and restore the surface to
	its former condition; and
Step 4	Apply the disinfection procedures.

6.5 Replacing Damaged Sections of Pipelines

When the damage in a certain section of a water main is extensive, repair may involve cutting off and replacing the damaged section. The procedures for repairs are as follows:

- 6.5.1 For Galvanized Iron (G.I.) Pipes
 - Step 1 Isolate the defective section by closing appropriate control valves;

- Step 2 Excavate the water main;
- Step 3 Determine the exact location of the leak;
- Step 4 Cut the defective portion of the water main;
- Step 5 If a nipple of appropriate length is not available, prepare a substitute nipple using a short pipe of the same kind, diameter and length as the cut off defective pipe;
- Step 6 Thread the ends of pipe to be joined;
- Step 7 Install G.I. coupling and union parts;
- Step 8 Assemble them;
- Step 9 Open the control valve to allow water to flow into the repaired section. Observe carefully if the repaired section is not leaking;
- Step 10 If there is no more leak, backfill the excavation and restore the surface to its former condition; and
- Step 11 Disinfect the repaired section.

6.5.2 For Polyvinyl Chloride (PVC) Pipes

- Step 1 Isolate the defective section by closing the appropriate control valves;
- Step 2 Excavate the water main;
- Step 3 Pinpoint the leak;
- Step 4 Measure and cut the defective portion of the pipeline. The length of the pipe cut should have an equivalent commercially available threaded nipple;
- Step 5 Install the PVC socket and sleeve type coupling;
- Step 6 Join the two cut portions of the water main with the nipple in between. (In case PVC threaded nipple is not available, use the equivalent G.I. threaded nipple);
- Step 7 Open the control valve to allow water to flow into the repaired section and observe if it is not leaking;
- Step 8 If there is no more leak, backfill the excavation and restore the surface to its former condition; and

Step 9 Disinfect the repaired section.

6.5.3 For Polybutylene (PB) and Polyethylene (PE) Pipes

- Step 1 Isolate the defective section by closing the appropriate valves and excavate main;
- Step 2 Cut the defective portion of the water main;
- Step 3 Check if the two separate ends of the cut can be pulled together to be joined Otherwise, a small connecting section must be inserted;
- Step 4 Join the 2 separated ends. For PB, use the flaring method. For PE pipes, use PE connector;
- Step 5 Open the control valve to allow water to flow and observe for leaks;
- Step 6 Backfill and restore surface to its former condition; and
- Step 7 Disinfect the repaired section.

6.6 Valve Operation

- a. Valves operated manually should be opened all the way, then closed one quarter turn of the hand wheel to prevent the valve from sticking in the open position;
- b. Valves should be opened and closed slowly at an even rate to reduce the risk of water hammer;
- c. Unless otherwise indicated, valves are opened by turning the hand wheel or key counterclockwise; and
- d. Always consult the manufacturer's instructions for operating a specific type of valve. It is good practice to operate (exercise) valves periodically (or at least 2 times a year).

6.6.1 To check whether a valve is operational or not:

Step 1 First close the valve completely and then open it completely;

- Step 2 Back off on the valve about one turn to avoid locking it in an open position; and
- Step 3 If the valve does not operate properly, repair or replace at once.

6.6.2 Things to check:

- Step 1 Ensure that the valve boxes are not full of mud or debris, or become buried;
- Step 2 Inspect the valves for leaks around the valve stem;
- Step 3 Ensure that the valve handles are intact;
- Step 4 Ensure that each valve can be fully opened and fully closed;
- Step 5 Record the inspection date, whether the valve is right- or lefthanded, and whether it is normally open or normally closed; and
- Step 6 Record any needed repairs or replacements.

6.7 Common Causes of Failure and Their Remedies

6.7.1 Corrosion

If valves are not operated or lubricated for a long time, they may become inoperable due to corrosion. If the corrosion damage is not extensive, the valve may be made operable again by pouring kerosene or dilute lubricating oil down the valve key to lubricate the joint between the stem and packing. However, if the valve is still inoperable after this procedure, it should be replaced.

6.7.2 Closing the Valve Too Tightly

Closing the valve too tightly may damage the valve washer, the valve seat, or the threads of the valve stem, causing the water to leak. To solve this

problem, it is suggested to put markers showing the direction of opening and closing and to close the valve just tight enough to stop the flow of water.

6.7.3 Worn-Out Washer or Loose Packing

Worn-out washers or loose packing should be replaced to prevent the loss of water.

6.7.4 Cavitation

Cavitation results when a valve is left partially closed or open for a long period. Leaving a valve partially closed or open will cause a partial vacuum or void in the downstream side that may eventually be filled with lowpressure vapors from water. When these vapor pockets collapse, a mechanical shock (cavitation) is created, this may produce cavities. After some time, the valve will be destroyed and even the pipelines may be affected. Cavitation can be avoided by keeping the valves fully closed or fully opened at all times.

6.7.5 Water Hammer

Water hammer is caused by sudden closing of valves. When the flow of water is suddenly stopped, enormous pressure is created which may damage the pipe or valves. This problem can be prevented by closing the valve slowly.

7. Distribution Facilities

Transmission lines ranging from 6" to 8" diameter pvc pipes were laid from the well sources to the service areas in Midsayap and Libungan. 2" to 6" diameter pvc pipes were laid as distribution lines going to barangays in Midsayap and Libungan. Four (4) booster were installed at strategic areas to boost water to service areas with higher elevations like Kiwanan, Sadaan, Kimagango in Midsayap and Cabaruyan in Libungan.

LOCATION	CAPACITY	SERVICE AREA
Poblacion 8 (STEM), Midsayap	5 Hp	Barangay Kimagango, Midsayap
Poblacion 8 (BPH), Midsayap	5 Hp	Barangays Kiwanan and Sadaan, Midsayap
Purok San Francisco, Kiwanan, Midsayap	1 Hp	Barangay Kiwanan, Midsayap
Cabaruyan (LPS 1), Libungan	5 Hp	Barangay Cabaruyan, Midsayap

Table 2. List of Booster Pumps

Figure 4. Water Distribution System



8. Reservoirs

The installation of storage facility within the System does not only provide an additional production during peak hour demands but also defuses excessive line pressure during non-peak hours.

Reservoirs	Maximum Capacity
Elevated Concrete Reservoir, Poblacion 3, Midsayap	200 Cubic Meters
Ground Steel with Liner Reservoir, Abaga, Libungan	200 Cubic Meters
Ground Concrete Reservoir, Cabaruyan, Libungan	200 Cubic Meters
Elevated Concrete Reservoir, Cabpangi, Libungan	10 Cubic Meters
Elevated Concrete Reservoir, Public Market, Libungan	25 Cubic Meters

Table 3.	List of Rea	servoirs wi	th their	Maximum	Capacity

8.1 Elevated Concrete Reservoir, Poblacion 3, Midsayap

The Elevated Concrete Reservoir was inherited by the MMWD, formerly Midsayap Water District (MWD), from the defunct NAWASA. A reinforced concrete elevated cylindrical type reservoir and with a maximum capacity 200 cubic meters was constructed in 1964.



8.1.1 Ground Steel Bolted Reservoir with Liner, Abaga, Libungan

The Ground Steel Bolted Reservoir with Liner at Abaga, Libungan was constructed on 2009, a bolted steel and sealed cylindrical panel with 0.55mm thick Aquatex PVC liner mounted on a concrete cylindrical foundation. It has a maximum capacity of 200 cubic meters. The said reservoir was included in the Php20M project loaned from LWUA.



8.1.2 Ground Concrete Reservoir, Cabaruyan, Libungan

The Ground Concrete Reservoir located at Cabaruyan, Libungan was inherited from the LGU Libungan. It is a cylindrical ground concrete reservoir with a maximum capacity of 200 cubic meters.



8.1.3 Cabpangi Elevated Concrete Reservoir

The Cabpangi Elevated Concrete Reservoir was turned over to the MMWD by the Barangay Cabpangi Council on the year 2004. It is a box type elevated concrete reservoir with a maximum capacity of 10 cubic meters.



8.1.4 Public Market Elevated Concrete Reservoir

The Elevated Concrete Reservoir located at Public Market, Libungan was inherited from the LGU Libungan. It is a box type elevated concrete reservoir with a maximum capacity of 25 cubic meters.



9. Fire Hydrants

9.1 Midsayap

9.1.1 Front of One Stop Convenience Store, Jaycees Avenue, Poblacion 2

9.1.2 Fronting Uncle Mars Bakeshop, Jaycees Avenue, Poblacion 2

9.1.4 Besides Keemart Bakeshop, Pioneer St, Poblacion 1

9.1.3 Fronting PSR Marketing, Pioneer St, Poblacion 1

9.1.4 Fronting Tenorio Building, Sto. Niño St, Poblacion 1

9.1.5 Corner Quezon Avenue and Burgos St, Poblacion 6

9.1.6 Carpark besides Chowking, Poblacion 6

- 9.1.7 Corner Quezon Avenue and Old Cemetery, Poblacion 6
- 9.1.8 Corner Quezon Avenue and Irrigation Road/Petron Poblacion 8



Figure 5. Location of Fire Hydrants at Midsayap

9.2 Libungan

9.2.1 Fronting Lope Quial Central Elementary School, Poblacion

9.2.2 Fronting Fish Section, Public Market, Poblacion

9.2.3 Corner Lamas St, Poblacion

Figure 6. Location of Firehydrants at Libungan



10. Reducing Non-Revenue Water

One of the major concerns of MMWD is to reduce the Non-Revenue Water (NRW) to at least 20%, the standard percentage of NRW set by LWUA. At present MMWD has an average of 30% NRW. Thus to address this problem, MMWD has implemented the following plans and programs:

10.1 Created foot patrol and leak detection team – the team will conduct foot patrol survey and leak detection along the service lines, distribution lines, transmission lines.

- 10.2 Meter replacement program old waters installed five (5) years and above are subjected to meter replacement to ensure the accurate measurement of water consumption of every customer.
- 10.3 Cutting off of at least three (3) months disconnected service connections from tapping point to avoid illegal connection all disconnected service connections which are not reconnected within three (3) months are cut-off at tapping point. The retrieved water meters are subjected to accuracy test to determine whether it could re-use or junk/dispose.
- 10.4 Calibration of New Water Meters all new water meters are subjected to meter accuracy test and should be within the allowable limit at 98% to 102% accuracy.

10.4.1 A meter calibration bench using the mother meter as the reference meter is use.

10.4.2 All new water meters are installed in series together with the mother meter

10.4.3 Record the initial reading of the water meter installed in series including the mother meter and let the water run until the mother meter registers 100 liters consumption

10.4.4. Shut off the gate valves and record the present readings of the water meters. Repeat the activity in three (3) trials. Compute its rate of accuracy using the formula:

Rate of Accuracy = $(Present Reading - Last Reading) \times 100$ 100

10.5 Regularly check the rate of accuracy of the production meters at well sources – all production meters are subjected to accuracy test every month to ensure the reliability of its reading. The PWQS use volumetric method. The reading registered in the flowmeter is compared to a 50-liter capacity canister using the following formula to determine its rate of accuracy. The flowmeter accuracy should be within 98% to 102% accuracy.

Rate of Accuracy =
$$(Present Reading - Last Reading) \times 100$$

50

10.6 Installation of isolation valves – isolation valves or gatevalves are installed at every intersection of the transmission and distribution line to isolate affected areas during repair of mainline leakages. 10.7 Maintenance and upgrading tools and equipment – Tools and equipment should be regularly maintained and readily available during emergency repairs.

Box and Open Wrenches - for tightening of bolts and fittings
Pipe Wrench - for pipe fitting and installation
Pipe Threader - for threading both ends of G.I. pipes
Hacksaw - for cutting pipes
Shovel and Digging Bar - for excavation and backfilling
Concrete Cutter - for cutting and demolition of concrete pavement

Water Pump - for dewatering trenches and excavated areas.

- 10.8 Upgrading of communication equipment purchase of portable handheld radio to expedite the relay of communication to maintenance personnel during emergency leakages
- 10.9 Intensify effort on detecting illegal connections revisit and conduct survey, inspection and investigation to all in-active service connection and determine their present source of water
- 10.9.1 Strictly monitor and properly record water use (flushing, by pass, BFP withdrawals and others)- all fire hydrants are installed with padlocks. BFP Midsayap and Libungan are advised to personally request to the office of any water withdrawals at the fire hydrants. In case of emergency like fire, they are advised to report immediately to the office the total volume consumed during firefighting.

1. Delineation of Board and Management Functions

The most important factor for the success of a water district is the quality of the people who manage and operate it. They need, however, to work within a clear, supportive administrative system that channels their capabilities and enables them to fulfill their unique functions within the organization. Metro Midsayap Water District is composed of Board of Directors (BOD), a General Manager, and personnel. The BOD establishes policies and regulations to carry out the business affairs of the water district while the management and operating personnel, headed by the General Manager, handle the day-to-day operations.

All powers, privileges and duties of the district is exercised and performed by and through the Board. However, the executive, administrative and ministerial power is delegated to the General Manager. (Sec. 17, Chapter V, PD 198)

- 1.1 Duties and Functions of the Board of Directors (Chapter V, PD 198)
 - 1.1.1 Section 18. Functions Limited to Policy-Making The function of the Board is to establish policy. The board shall not engage in the detailed management of the district.
 - 1.1.2 Section 19. By-Laws At the first meeting, the Board shall adopt, and may thereafter from time to time amend by-laws for the operation of business and affairs of the board and the district. Bylaws may not be amended without 30 days public notice to that effect, and a public hearing held.
 - 1.1.3 Section 20. System of Business Administration The Board shall, as soon as practicable, prescribe and define by resolution a system of business administration and accounting for the district, which shall be patterned upon and conform to the standards established by the Administration. Auditing shall be performed by a Certified Public

Accountant not in the government service. The Administration may, however, conduct annual audits of the fiscal operations of the district to be performed by an auditor retained by the Administration. Expenses incurred in connection therewith shall be borne equally by the water district concerned and the Administration.

1.1.4 Section 22. Contracts – All contracts of the district shall be entered into by or pursuant to authority of the Board, provided, however, that the Board may be resolution delegate or re-delegate to the General Manager, under such conditions and restrictions as shall be fixed by the Board, the power to bind the district by contract.

1.2 Duties and Functions of the General Manager (Chapter VI, PD 198)

1.2.1 Section 24. Duties – The duties of the General Manager and other officers shall be determined and specified from time to time by the Board. The General Manager, who shall not be a director, shall have full supervision and control of the maintenance and operation of water district facilities, with power and authority to appoint all personnel of the district, provided, that the appointment of personnel in the supervisory level shall be subject to approval by the Board.

2 Performance Parameters

The Department of Budget and Management (DBM) and the Local Water Utilities Administration (LWUA) in a series of memorandum circulars established a standard Major Final Outputs (MFOs) and Performance Indicators (PIs) under operations that Local Water Districts (LWDs) are mandated to adopt. These are the following:

2.1 MFO 1 – Water Facility Service Management

PI 1 (Quantity) –	Percentage of barangay with access to potable
Access to Potable	water against the total number of barangays
Water	within the coverage of the LWD
PI 2 (Quality) –	Percentage of household connections receiving
Reliability of Service	24/7 supply of water
PI 3 (Timeliness) –	Source capacity of LWD to meet demands for
Adequacy	24/7 supply of water

2.2 MFO 2 – Water Distribution Service Management

PI 1 (Quantity) – Non	Percentage of unbilled water to water production
Revenue Water	
PI 2 (Quality) –	Average deviation from the Philippine National
Potability	Standards for Drinking Water (PNSDW) -
	chlorine residual requirements from January 1 to
	December 31
PI 3 (Timeliness) -	Average response time to restore service when
Adequacy/Reliability	there are interruptions based on the Citizen's
of Service	Charter of LWD proposed for approval by the
	Civil Service Commission (CSC)

2.3 MFO 3 – Support to Operation

PI 1 – Staff	The Staff Productivity Index of one (1) position for
Productivity Index	every one hundred (100) service connections for
	Category D, and one hundred twenty (120)
	service connections for Categories A to C, shall be
	strictly observed in the determination of the total
	number of positions in a LWD

PI 2 – Affordability	Reasonableness/Affordability of water rates to
	consumers with access connections. Water rate for
	the 1st cu.m. must not exceed 5% of the average
	income of Low Income Group (LIG)
PI 3 – Customer	Percentage of Customer Complaints acted upon
Satisfaction	against received complaints

2.4 MFO 4 – General Administration and Support Services

PI 1	Financial viability & sustainability of LWD		
	operat	ions	
	a.	Collection Ratio	
	b.	Operating Ratio	
	с.	Current Ratio	
PI 2	Comp	liance with Commission on Audit (COA)	
	report	ing requirements in accordance with	
	conten	at and period of submission	
	a.	Balance Sheet	
	b.	Statement of Income & Expenses	
	c.	Statement of Cash Flows	
	d.	Statement of Government Equity	
	e.	Notes to Financial Statements (FS)	
	f.	Report on Ageing of Cash Advances	
PI 3	Comp	liance with LWUA reporting requirements	
	in acco	ordance to content and period of submission	
	a.	Monthly Data Sheet	
	b.	Balance Sheet	
	c.	Income Statement	
	d.	Cash Flow Statement	
	e.	Microbiological, Physical, Chemical,	
		Chlorine Residual Report	
1	1		

f.	Approved LWD Budget with Annual
	Procurement Plan (APP)
g.	Annual Report

3 Business Planning

Business Planning is a systematic process to ensure that strategic operational, financial and project planning are carried out regularly to enable the Board of Directors to direct and control the future of the district vis-à-vis service delivery to its constituents.

Thus, business planning has several benefits in which it:

- Reduces uncertainty to operations;
- Conserves valuable resources;
- Promotes program stability, continuity, and orderly change;
- Provides basis for monitoring and controlling work performance;
- Improves effectiveness and efficiency; and
- Complies with LWUA guidelines on the preparation of cash flow projections.

The basic features of Business Planning are: (See Annex 1 for the Business Planning Process Flow)

- 3.1 Identify Major Final Outputs (MFOs) and Performance Indicators (PIs) set by the regulatory bodies specifically DBM and LWUA and adopt the same for the operation of the district.
- 3.2 The General Manager together with the key personnel of each divisions identifies the Key Result Areas (KRAs) for each MFOs and PIs.
- 3.3 Assessment from previous year's performance is conducted before each objectives are set to meet each KRAs.
- 3.4 Environmental factors both internal and external are identified and analyzed to establish organizational resources and assess the district's strengths, weaknesses, opportunities and threats (SWOT).

- 3.5 Upon establishing the capacity of the district both internal and external, strategies, programs and activities are formulated to address the objectives set to meet the KRAs for each MFOs and PIs.
- 3.6 Programs and activities are consolidated with targets, primary responsible, time frame and budget to come up with the Annual Development Plan (ADP).
- 3.7 The General Manager together with the key personnel of each division present to the BOD the ADP.
- 3.8 The BOD reviews the ADP, makes corrections if necessary and approves the same.
- 4 Budget Preparation

Budgets are plans dealing with the acquisition and use of resources over a specified time period. In which it can be regarded as money, time, acquisition and use of materials, production volume and number of service connections.

A budget is merely a plan expressed in quantitative (monetary) terms. Its preparation involves setting targets for the revenues and expenditures of the district. Being a simulation of how the financial inflows, outflows and other accounts will behave as it implements its plans within the budget period. Budget also involves the analysis of trends and anticipated changes within business categories, such as operations and capital expenditures. The adoption of a relatively detailed annual budget is a key element in improving the district's effectiveness.

The budget is prepared by the management during the second semester of the year, and should be approved by the BOD before being submitted to the stakeholders and to the regulatory bodies like, DBM, COA or LWUA. The basic components of a Budget are:

- Statement of Objectives;
- Operation and Maintenance Budget;
- Capital Expenditure Budget;
- Annual Procurement Plan; and
- Financial Statements, including the Cash Flows and Income Statements.

The basic features of Budget Preparation are: (See Annex 2 for the Budget Preparation Process Flow)

- 4.1 At the beginning of the 2nd semester, budget for the next year is prepared by the General Manager together with the key personnel of each divisions and the Budget Officer Designate.
- 4.2 The Budget Officer Designate prepares the Estimated Operation and Maintenance Expenses relative to the Annual Development Plan submitted by the different divisions and offices.
- 4.3 Estimated water revenues and miscellaneous service revenues are forecasted based on the targeted number of service connections for the budgeted year.
- 4.4 The Budget Officer Designate consolidates the estimates into a projected Revenue and Expense Budget.
- 4.5 Capital Expenditures Budget are also prepared and must be supported by a listing of justification like price increase or inflation increase production and other related documents.
- 4.6 Budget hearings are conducted to raise issues and concerns relative to the budget proposal to come up with the Proposed Budgetary Requirements (PBR) for the budgeted year.
- 4.7 The General Manager together with the key personnel of each division and the Budget Officer Designate present to the BOD the PBR.
- 4.8 The BOD reviews the PBR, makes corrections if necessary and approves the same.

5 Disbursement of Funds

Government expenditures include all charges against the fund of the district for current operating expenditures, capital outlays and provisions for retirement of long term obligations. The charges are both the amount actually paid and those incurred and recorded as liabilities to be paid in the future.

Under the New Government Accounting System (NGAS), government expenditures are classified as follows:

- Personal Services
- Maintenance and Other Operating Expenses
- Financial Expenses
- Capital Outlays

Purchases charged to capital outlay are no longer taken up as expenses but are immediately recorded as assets.

Financial operations, transactions and disbursements of the district are governed by the following fundamental principles as stipulated in Sec 5 of PD 1445 known as the "Government Auditing Code of the Philippines":

- No money shall be paid out of any district treasury or depository except in pursuance of an appropriation, law or other specific statutory authority;
- District funds or property shall be spent or used solely for public purpose;
- Trust funds shall be available and may be spent only for the specific purpose for which the trust was created or the funds received;
- Fiscal responsibility shall, to the greatest extent, be shared by all those exercising authority over the financial affairs, transactions, and operations of the district;
- Disbursement or disposition of district funds or property shall invariably bear the approval of the proper officials;

- Claims against district funds shall be supported with complete documentation;
- All laws and regulations applicable to financial transactions shall be faithfully adhered to; and
- Generally accepted principles and practices of accounting as well as of sound management and district administration shall be observed, provided that they do not contravene existing laws and regulations.

NGAS Volume I Chapter 3 Section 27 defines Disbursements as, all cash paid out during a given period either in currency (cash) or by check. It may also mean the settlement of government payables/obligations by cash or by check. It shall be covered by Disbursement Vouchers (DVs)/Petty Cash Vouchers (PCVs) or payroll.

Furthermore, NGAS Volume I Chapter 3 Section 28 enumerates the basic requirements for disbursements as follow:

- Existence of a lawful and sufficient allotment certified as available by the Budget Officer;
- Existence of a valid obligation certified by the Chief Accountant/Head of Accounting Unit;
- Legality of transactions and conformity with laws, rules and regulation;
- Approval of the expense by the Chief of Office or by his duly authorized representative; and
- Submission of proper evidence to establish the claim.

Thus, the water district as a Government –Owned and/or –Controlled Corporation (GOCC), maintains disbursement procedures to keep track of the expenses and accountability purposes. There are different purposes for the disbursements and the water district ensures that its disbursement procedures cover the following purposes:

- Payroll;
- Operational expenses like chemicals, fuel, repairs;
- Capital Expenditures;
- Debt Service;
- New service connections;
- Maintenance expenditures; and
- Emergency procurement

The basic features of Disbursement of Funds are: (See Annex 3 for the Disbursement of Funds Process Flow)

5.1 Supporting documents are forwarded to Accounting and Budget Group (ABG) for budget monitoring and preparation of Request for Schedule of Payment (RSP). Supporting documents for each disbursements are at least as follows (COA Circular 2012-001 dated June 14, 2012):

Transaction	Supporting Documents
Payroll	Approved Payroll
Local Travel	Travel Order
	• Duly Approved Itinerary of Travel
Replenishment of Petty	Summary of Petty Cash Vouchers
Cash Fund	Petty Cash Replenishment Report
	Bills, Receipts, Sales Invoices
	• Reimbursement Expense Receipt (RER), if
	necessary
Payment of Last Salary	Last Pay computation
	Clearance from money, property and
	legal accountabilities
	• Approved Daily Time Record (DTR)
Honorarium for Governing	Honorarium computation
Board	• Attendance Sheet as certified by the
	Board Secretary
Longevity Pay	Service Record
	Certification issued by the Personnel
	Officer that the claimant has not incurred

	more than 15 days of vacation leave		
	without pay		
Monetization of Leave	Approved Leave Application at least ten		
Credits	days with leave credit balance certified by		
	the Human Resource Management Group		
	(HRMG)		
	• Request for leave covering more than ten		
	days duly approved by the Head of		
	Agency		
Loyalty Cash	Service Record		
Award/Incentive	• Certification from the HRMG that the		
	claimant has not incurred more than 50		
	days authorized vacation leave without		
	pay within the 10-year period or an		
	aggregate of more than 25 days		
	authorized vacation leave without pay		
	within the 5-year period, as the case may		
	be		
Operational Expenses	Statement of Account, Billing Statement		
	Charge Invoice		
Purchases to Supplier of	Receiving and Inspection Report		
Goods	Certificate of Acceptance		
	Purchase Order		
	Abstract of Quotation		
	Request for Quotation		
	Purchase Request		
Purchases to Supplier of	Accomplishment Report		
Services	• DTR		
	Job Order		
	Abstract of Quotation, if necessary		
	5		

	•	Request for Job Order
Other Disbursements	•	As necessary or as may be prescribed

- 5.2 The ABG verifies the completeness of the supporting documents and ascertain that budget is allotted before acknowledging the RSP and forwarding the RSP together with supporting documents to the Cash Management Group (CMG) for scheduling of payment.
- 5.3 The CMG schedules the payment respective to the disbursements due date and availability of funds and updates the Daily Cash Position Report (DCPR) to monitor the daily cash balances.
- 5.4 Once the disbursement is ready for payment and funds are made available, the CMG forwards the RSP and supporting documents together with its corresponding check to the ABG.
- 5.5 The ABG prepares check, Disbursement Voucher (DV) and Journal Entry Voucher (JEV) to record the transaction.
- 5.6 The ABG head reviews the accuracy of the DV and JEV and acknowledges the same and forward the DV, JEV, RSP with supporting documents, and check to the CMG.
- 5.7 The CMG prepares the bank advice and forwards it together with the check and related documents to the Administrative and Commercial Division Manager (ACD-DM) for review and verification as to the legality of the transactions.
- 5.8 The ACD-DM forwards the same to the General Manager for approval and returns the approved disbursement to the CMG for releasing.
- 5.9 The CMG releases the check and have the DV acknowledged by the payee, affixing payee's name, signature and date of receipt of check.
- 5.10 The CMG then stamps "PAID" to the released disbursements, retrieves the duplicate copy of the DV and check for their file, and forwards the duly acknowledged disbursements to the ABG.
- 5.11 The ABG files the duly acknowledged DVs with its supporting documents in chronological order in preparation for COA audit.

- 5.12 The ABG updates the General Ledger and respective Subsidiary Ledger in preparation for Trial Balance and Financial Statement preparation.
- 6 Receiving Payments

Receipt refers to all cash inflows whether actual or constructive regardless of source or purpose and whether pertaining to the agency or not. It includes not only income or revenue actually collected but also trust receipts, fund deposits, inter-fund and inter-agency transfers and equity contributions received by the district. It also refers to income realized from operations and activities of the district or are received by it in the exercise of its corporate functions, consisting of charges for services rendered, conveniences furnished, or the price of commodity sold, as well as loan proceeds, contributions or aids from other entities.

The following policies on collections prescribed for government agencies are being followed by the district:

- Except as may otherwise be specifically provided by law or competent authority all moneys and property officially received by a district officer in any capacity or upon any occasion must be accounted for as district funds and district property. [Sec. 42, Chapter 7, Title I (B) Book V, Administrative Code of 1987; Sec. 63, PD 1445]
- No payment of any nature shall be received by a collecting officer without immediately issuing an Official Receipt (OR) in acknowledgment thereof. [Section 44 (1), Chapter 7, Title I (B), Book V, Administrative Code of 1987; Sec. 68 (1), PD 1445]
- Official receipts are designed to cover a particular kind of collection only. Unless otherwise specifically authorized, an OR shall be used only for which it is intended. General forms shall be used only for collections for which no specific form has been authorized. (Sec. 71, GAAM Vol. I)
- At no instance shall temporary receipts be issued to acknowledge the receipt of public funds. (Sec. 72, GAAM Vol. I)

- Pre-numbered ORs shall be issued in strict numerical sequence. In preparing official receipts, all copies of each receipt shall be exact copies or carbon reproduction in all receipts of the original. (Sec. 73, GAAM Vol. I)
- An officer charged with the collection of revenue or the receiving of moneys payable to the district shall accept payment for dues and other indebtedness to the district in the form of checks issued in payment of district obligations, upon proper endorsement and identification of the payee. Checks drawn in favor of the district in payment of any such indebtedness shall likewise be accepted by the officer concerned. [Sec. 67 (1), PD 1445]
- At no instance should money in the hands of the collecting officer be utilized for the purpose of encashing private checks. [Sec. 67 (3), PD 1445]
- Checks in payment for indebtedness of the district must be drawn by the payor himself and made payable to the district. (Sec. 77, GAAM Vol. I)
- Under no circumstance shall the following checks be accepted:
 - Checks drawn payable to the name of the district head or any of its officers;
 - Indorsed checks;
 - Post-dated checks;
 - Stale checks; and
 - Out-of-town checks, except those which are drawn by the Government or its instrumentalities.
- Before issuing an OR, the collecting officer shall carefully scrutinize the check presented to him/her and make sure that it is complete and correct particularly as to date, signature or countersignature, and amount in words and figures appearing on the face of the check. (Sec. 78, GAAM Vol. I)
- When a check drawn in favor of the district is not accepted by the drawee bank for any reason, the drawer shall continue to be liable for the sum due and all penalties resulting from delayed payments. Where the reason for nonacceptance by the drawee bank is insufficiency of funds, the drawer shall be criminally liable therefore. [Sec. 67 (2), PD 1445]

- Whenever a payor has a record of a previously dishonored private check drawn by him/her in payment of dues, even if such check has already been settled, any private check presented by him/her shall no longer be accepted. In such case, the payor shall be required to pay only in cash or by certified check. (Sec. 80, GAAM Vol. I)
- District officers authorized to receive and collect moneys arising from revenues or receipts of any kind shall remit or deposit intact the full amount so received and collected by them to the treasury of the district concerned and credited to the particular accounts to which the said moneys belong. The amount of the collections ultimately payable to other agencies of the government shall thereafter be remitted to the respective treasuries of these agencies. [Sec. 69 (1), PD 1445]

The following policies on deposits prescribed for government agencies are being followed by the district:

- Unless otherwise specifically provided by law, all income accruing to the district by virtue of the provisions of laws, orders and regulations shall be deposited in the duly authorized government depository bank, and shall accrue to the unappropriated surplus of the General Fund of the district. (Sec. 44, Book VI, Administrative Code of 1987)
- All collecting officers shall deposit intact all their collections, as well as collections turned over to them by sub-collectors/tellers, daily or not later than the next banking day. They shall record all deposits made in the Collection Logbook.
- At the close of each business day, the collecting officers shall accomplish the Reports of Collections and Deposits. The report lists all the ORs issued in numerical sequence including the cancelled ones. It shall be the basis in preparing the JEV for recording.
- Funds of the district may be deposited only in demand, savings or time deposit accounts with government financial institutions. They may however be placed in trust with such financial institutions in cases where funds are expected to be

available for investment purposes for a relatively long period of time. (LOI 1115; Sec. 131, GAAM Vol. I)

- All authorized depository banks shall acknowledge receipt of all funds received by them, the acknowledgement bearing the date of actual remittance or deposit and indicating from whom and on what accounts it was received. (Sec. 70, PD 1445)
- Where Combined Savings and Current Accounts are authorized to be maintained, deposits shall be made only through the Savings Account and withdrawals shall be made only by the issuance of checks to be drawn on approved vouchers against the current account. (Sec. 113, GAAM Vol. I)

The basic features of Receiving Payments are: (See Annex 4 for the Receiving Payments Process Flow)

- 6.1 Concessionaires get priority number from the Guard-on-duty and wait for the number to be called. Special lane is provided for senior citizens, persons with disability, pregnant woman, children 12 years and below and government employees wherein they can pay directly to the cashier without queuing.
- 6.2 The collecting officers for office collections and bank tellers from bank collections receives payment from the concessionaires.
- 6.3 For bank collections, the bank tellers issue ORs upon receipt of payment and the payment is credited directly to the account of the water district. Daily bank collection report is forwarded to the district main office together with the duplicate of issued ORs and water bills and the collecting officer inputs the bank collection to the Billing and Collection System to update the concessionaires' records.
- 6.4 For office collections, the collecting officers issue ORs upon receipt of payment and inputs the collection to the Billing and Collection System to update the concessionaires' records. The collecting officer hall verify:

- 6.4.1 If concessionaire has an outstanding payable to the district, any payments are to be applied to arrears first and the remaining balances will be credited to the current billings;
- 6.4.2 If the concessionaire is a senior citizen, ask for the senior citizen discount as computed by the Public Assistant Officer (PAO); and
- 6.4.3 If the payment needs to be override due to withheld taxes by the concessionaires and other related transactions, validate the computation of the deduction and ask the Commercial Section Chief for payment override.
- 6.5 The collecting officers prepare deposit slip for the office collection, update the Deposit Logbook and prepare the Daily Report of Collections and Deposits.
- 6.6 Morning office collections are deposited in the afternoon of the same day and afternoon office collections are deposited in the morning of the next banking day.
- 6.7 The CMG head reviews the accuracy and completeness of the reports including the bank collections and updates the Daily Cash Position Report to monitor the daily cash balances.
- 6.8 The Daily Report of Collections and Deposits is forwarded to the ABG after it was reviewed by the Commercial Section Chief.
- 6.9 The ABG makes the JEV for the Daily Report of Collections and Deposits, verified by the ABG head and approved by the ACD-DM, and files it in chronological order in preparation for COA audit.
- 7 Financial Reporting System

The MMWD's financial statements have been prepared in accordance with the Philippine Financial Reporting Standards (PFRS) in compliance with Commission on Audit Resolution No. 2015-040 dated December 1, 2015 and COA Circular Nos. 2015-010 and 2016-006 dated December 1, 2015 and December 29, 2016, respectively.

The Financial Reporting System includes the preparation and submission of trial balances, financial statements and other reports needed by fiscal and regulatory agencies. The sub-systems are (1) preparation and submission of trial balance and other reports, and (2) preparation and submission of financial statements.

The Trial Balance shows the equality of debit and credit balances of all general ledger accounts as of a given period. It is prepared and submitted monthly. NGAS Volume I Chapter 3 Section 58 identifies the purposes of trial balance as follows:

- It proves the mathematical equality of the debits and credits after posting;
- It uncovers errors in journalizing and posting; and
- It serves as basis for the preparation of the financial statements.

Under the matching principle, adjustment shall be made for economic activities that have taken place but are not yet recorded at the time when the financial statements are prepared. Such adjusting journal entries are made to ensure that revenues and expenses are recorded in the period when they are earned or incurred. Adjustments are of two main types:

- Adjustment for Accrued Item It is an adjusting entry for an economic activity already undertaken but not yet recorded into an asset and revenue accounts or a liability and expense accounts.
- Adjustment for Deferred Items These are adjusting entries transferring data previously recorded in an asset account to an expense account, or data previously recorded in a liability account to a revenue account.

Financial statements and their supporting schedules are the products of the district's accounting processes. These are the principal comprehensive means by which the information accumulated and processed in the district accounting system is periodically communicated to those who use them.

The financial statements and other related reports generally prepared in the district are:

- Balance Sheet is a formal statement which shows the financial condition of the district as of a certain date. It includes information on the three elements of financial position – assets, liabilities and government equity.
- Statement of Income and Expenses shows the results of operation/performance of the district at the end of a particular period.
- Statement of Government Equity shows the financial transactions, which resulted to the change in Government Equity account at the end of the year.
- Statement of Cash Flows is a statement summarizing all the cash activities of the district. This includes the operating, investing and financing activities of the district and provides information on the cash receipts and cash payments during the period. The primary purpose of this statement is to give relevant information on the district's overall cash position, liquidity, and solvency.
- Notes to Financial Statements are integral parts of financial statements, which pertain to additional information necessary for fair presentation in conformity with generally accepted accounting principles. These may explain the heading captions or amounts in the statements of present information that cannot be expressed in money terms, and description of accounting policies. Information shall be presented in a way that will facilitate understanding and avoid erroneous implications. The headings, captions and amounts shall be supplemented by enough additional data so that their meaning would be clear and not overshadowed by so much information that important matters are buried in mass trivia.
- Monthly Data Sheet shows the operation/performance of the district in terms
 of service connection data, existing water rates, billing and collection data,
 financial data, production data, administrative data, and status of institutional
 development.

Responsibility for the fair presentation and reliability of financial statements rests with the management of the district. This responsibility is discharged by applying generally accepted state accounting principles that are appropriate to the district's circumstances, by maintaining effective system of internal control and by adhering to the chart of accounts prescribed by the Commission on Audit (COA).

To achieve fair presentation and reliable information of the financial statements, the following standards are observed:

- Fairness of presentation refers to the overall propriety in disclosing financial information. Full disclosure in financial aspects requires observance of the following standards of reporting:
 - All financial data presented shall be accurate, reliable, and truthful. The requirement for accuracy does not rule out the inclusion of reasonable estimates when the making of precise measurements is impracticable, uneconomical, unnecessary or conducive to delay. All appropriate steps shall be taken to avoid bias, unclear facts, and presentation of misleading information.
 - Financial reports shall be based on official records maintained under an adequate accounting system that produces information objectively and discloses the financial aspects of all events or transactions taking place. Where financial data or reports based on sources other than the accounting systems are presented, their basis shall be clearly explained.
 - The financial data reported shall be derived from accounts that are maintained in all material respects on a consistent basis from period to period; material changes in accounting policies or methods and their effect shall be clearly explained.
 - Consistent and non-technical terminology shall be used in financial reports to promote clarity and usefulness.
- Compliance the report shall be in accordance with prescribed government requirements and international accounting standards in reporting.
- Timeliness All needed reports shall be produced promptly to be of maximum usefulness.

• Usefulness – Financial reports shall be carefully designed to present information that is needed and useful to reports users.

The basic features of Financial Reporting System are: (*See Annex 5 to 8 for the Financial Reporting System Process Flow*)

- 7.1 The ABG receives and reviews supporting documents that would involve financial transaction.
- 7.2 The ABG prepares the Journal Entry Voucher (JEV) for all transactions that requires recording for accounting purposes and records the transactions from the supporting documents to the following specialized journals:
 - 7.1.1 Collections Cash Receipt Journal (CR)
 - 7.1.2 Disbursements Cash Disbursement Journal (CD)
 - 7.1.3 Billings, Procurements and Adjustments General Journal (GJ)
- 7.3 At the end of each month, after ensuring that all documents have been received and recorded, the ABG posts the amounts in the JEV to the general and subsidiary ledgers.
- 7.4 Foots ledger and extracts balances for net monthly transactions and year to date figures. Investigate extraordinary balances.
- 7.5 The ABG head extracts the balances of the General Ledger (GL) accounts and prepares Trial Balance (TB) monthly.
- 7.6 Extends figures from the trial balance to the Statement of Income and Expenses and Balance Sheet columns. Ensures the proper extension of account balances to their corresponding statement columns.
- 7.7 Prepares Statement of Cash Flows using the CR and CD journals, Statement of Government Equity, and Notes to Financial Statements.
- 7.8 The ABG receives other information from other offices for the preparation of Monthly Data Sheet as follows:
 - 7.8.1 Commercial Section

7.8.1.1 Service Connection Data;

7.8.1.2 Existing Water Rates; and

7.8.1.3 Billing and Collection Data.

7.8.2 Production and Water Quality Section

7.8.2.1 Production Data

7.8.3 Human Resource Group

7.8.3.1 Number of Employees; and

7.8.3.2 Employee's Average Monthly Salaries.

7.8.4 Office of the General Manager and Board of Directors

7.8.4.1 Board Resolutions Passed; and

7.8.4.2 Attendance of the Board of Directors.

- 7.9 The Financial Statements, Notes to Financial Statements and Monthly Data Sheet are submitted to the Administrative and Commercial Division Manager for review and to the General Manager for approval.
- 7.10 The reports are presented to the Board of Directors and submitted to Commission on Audit, Local Water Utilities Administration and other interested parties.
- 8 Internal Control System

A sound Internal Control System (ICS) may be an assurance that the goals and objectives of the district are achieved. Control in general is the process of exercising or directing influence over the activities of an object, organism or a system. The goal of control is to prevent losses to the district arising from the different hazards in the district business operations.

Hence, internal controls refer to the district's whole system or network methods, procedures, and plans which govern its activities to accomplish its goals and objectives.

8.1 The following sub-sets comprise the ICS:

- 8.1.1 Financial Controls or Accounting Controls relate to those methods and procedures used to produce accurate records and safeguard assets. The concept of accountability is an important element in financial controls. Without it, it would be difficult to implement financial controls. Accountability is the practice that holds each employee accountable for those areas for which he/she has been delegated responsibilities. It is this aspect of accountability that the General Manager has a mechanism ensuring employees to discharge their responsibilities as required. These are designed to ensure that:
 - 8.1.1.1 Specified individuals are held accountable for transactions under their control;
 - 8.1.1.2 Accounting records are accurately and reliably maintained;
 - 8.1.1.3 There is adequate segregation of record keeping duties from custodianship of the district's assets;
 - 8.1.1.4 Transactions are properly authorized;
 - 8.1.1.5 There is adequate segregation of incompatible duties; and
 - 8.1.1.6 There are adequate checking of reconciling procedures.
- 8.1.2 Administrative Controls are primarily established to create a sound environment within which accounting controls may efficiently operate. They encompass all those organizational plans, methods and procedures that help the district to achieve operational efficiency and adherence to management policies. These are designed to ensure that:
 - 8.1.2.1 Assets are safeguarded and access to those assets is restricted;

- 8.1.2.2 The agency operation is conducted in an orderly and efficient manner that includes a detailed organizational structure that highlights lines of responsibilities, or centers of responsibilities;
- 8.1.2.3 Staff and team responsibilities match their ability;
- 8.1.2.4 Management has the necessary information to exercise sound decisions; and
- 8.1.2.5 Transactions and other decisions are properly authorized.
- 8.1.3 Program Controls are put in place to ensure that the programs/projects of the district achieve their goals and objectives. These are designed to ensure that there is/are:
 - 8.1.3.1 Responsiveness of the programs/projects to the needs of the client and stakeholders;
 - 8.1.3.2 Sustainability of the program/project; and
 - 8.1.3.3 Alternative courses of actions that have been considered in the implementation of the program/project.
- 8.1.4 Budget Controls are established to ensure that funds are properly allocated and utilized solely for the purpose for which they have been appropriated. These are designed to ensure that:
 - 8.1.4.1 Accountability of the district employees are established and maintained;
 - 8.1.4.2 Funds are used only for the intended purpose; and
 - 8.1.4.3 Material errors in the accounts and unauthorized transaction or loss of assets are disclosed.

- 8.1.5 Management Controls are processes effected by management and other personnel designed to provide reasonable assurance regarding the achievement of objectives:
 - 8.1.5.1 To keep the organization on course toward achievement of its mission, goals and objectives, while minimizing surprises along the way;
 - 8.1.5.2 To enable management to cope with rapidly changing economic and political environment, shifting service demands and priorities and the inevitable organizational restructuring that accompanies them; and
 - 8.1.5.3 To promote efficiency, reduce risk or resource loss, increase reliability of management data, and ensure compliance with laws and regulations.

8.2 The following are the objectives of ICS:

- 8.2.1 Safeguard the Reliability of Data ICS policies and procedures are designed to safeguard the accuracy and reliability of the information by preventing and detecting errors on a timely basis. Management needs accurate information for carrying out the operations since reliable information is used in making critical management decisions.
- 8.2.2 Safeguard Assets and Records ICS policies and procedures are designed to prevent or detect loss of assets and records on a timely basis. The physical assets of the district can be stolen, misused or accidentally destroyed.

The same is true with non-physical assets such as accounts receivable ledger, accountable forms and financial records.

- 8.2.3 Promote Operational Efficiency ICS policies and procedures are meant to prevent unnecessary duplication of effort, protect against waste in all aspects of operation and discourage other types of inefficient use of resources.
- 8.2.4 Encourage Adherence to Prescribed Policies ICS policies and procedures are meant to provide reasonable assurance that those procedures and rules are adhered to by the district personnel. The concept of reasonable assurance recognizes that the cost of the district's internal control structure should not exceed the benefits that are expected to be derived.

8.3 The following are the General and Specific Standards of ICS:

8.3.1 General Standards

- 8.3.1.1 Personnel Competence officers and employees possess technical competence and professional integrity commensurate with their assigned responsibilities.
- 8.3.1.2 Control Techniques Internal control techniques are designed for and operated in all the district's activities to accomplish the control objectives consistently, efficiently and effectively.
- 8.3.1.3 Reasonable Assurance and Cost ICS provide reasonable assurance that the objectives of the systems will be accomplished at a reasonable cost.
- 8.3.2 Specific Standards

- 8.3.2.1 Documentation the district's ICS, policies, procedures, accountability for resources and all financial transactions are clearly documented and adequately supported.
- 8.3.2.2 Recording of Transactions and Events financial transactions and events are promptly recorded in accordance with government accepted accounting standards.
- 8.3.2.3 Authorization and Execution of Transactions – all transactions are executed by persons acting within the scope of their authority.
- 8.3.2.4 Segregation of Duties and Functions key duties and functions such as authorization, custody and accounting are assigned to separate offices and individuals to eliminate opportunities to conceal errors and irregularities.
- 8.3.2.5 Supervision Scheme qualified and continuous supervision of subordinates are provided to assure adherence to approved policies and procedures.
- 8.3.2.6 Physical Control and Access to Agency Resources – tangible assets and records are physically safeguarded. Access to these assets and records, both direct physical access and access through document processing, shall be in accordance with management's authorization.

- 8.3.2.7 Asset Accountability accountability for the custody and use of an asset are assigned and maintained and periodic comparison are made of the existing assets with the recorded accountability and appropriate action taken on any differences.
- 8.3.2.8 Built-in Checks proofs of accuracy and documented trail of transactions are features that are built into the execution and recording of transactions to assure their correctness.
- 8.3.2.9 Presence of Appraisal Activity reviews of transactions and internal control are performed on an on-going basis for proper monitoring of adherence to prescribed policies and procedures.
- 8.3.2.10 Prompt Resolution of Audit Findings management and officers promptly evaluate findings and recommendations reported by auditors, determine proper actions in response to audit findings and recommendations, and complete within established time frames all actions that correct or otherwise resolve the matters brought to management's attention.

A good ICS will not provide assurance that waste, fraud, and abuse are eliminated or that the district's objectives are achieved. In many instances it may be impractical and expensive to obtain absolute guarantees.

8.4 The following are the limitations of ICS:

- 8.4.1 Internal control must be attained at reasonable cost. Some necessary controls maybe sacrificed to avoid additional costs in terms of personnel, time and materials;
- 8.4.2 Good internal control methods and measures are not foolproof. They are vulnerable to collusion;
- 8.4.3 Strong internal controls are still subject to human fallibility such as negligence, errors of judgment and lack of complete understanding;
- 8.4.4 Organizational changes may render internal control systems and manuals obsolete; and
- 8.4.5 The degree of compliance with internal control systems strongly influences their effectiveness.
- 8.5 The following are some factors that may reduce the effectiveness of ICS:
 - 8.5.1 Misunderstanding of instructions;
 - 8.5.2 Mistakes in judgment;
 - 8.5.3 Personal carelessness;
 - 8.5.4 Distraction, personal problems or fatigue on the part of the person responsible for performing a control procedure;
 - 8.5.5 Collusion among individuals, circumventing control procedures whose effectiveness depends on segregation of duties; and
 - 8.5.6 Management override of certain control policies and procedures.

To enable the ICS to achieve its objectives it must consist of basic elements of policies and procedures that the management designs and implements.

8.6 The following are the elements/components of ICS:

- 8.6.1 Control Environment sets the tone of the organization and is the foundation for all other components of controls. This includes the following factors:
 - 8.6.1.1 Integrity;
 - 8.6.1.2 Ethical Values;
 - 8.6.1.3 Competence of the district's employees;
 - 8.6.1.4 Management philosophy and operating style;
 - 8.6.1.5 The way management assigns authority and responsibility;
 - 8.6.1.6 The way management organizes and develops the employees; and
 - 8.6.1.7 Attention and direction provided by senior management.
- 8.6.2 Risk Assessment is a probability of an event or action having an adverse effect on the organization. It is directly tied up to control objectives and those events or action that can prevent the water district from achieving these objectives. The following are the factors that affect the risk:
 - 8.6.2.1 Ethical climate maintained by management;
 - 8.6.2.2 Competency, adequacy, and integrity of personnel;
 - 8.6.2.3 Adequacy and effectiveness of the systems of internal control;
 - 8.6.2.4 Degree of computerization;
 - 8.6.2.5 Size, complexity, volatility, geographical dispersion of operations;
 - 8.6.2.6 Degree of regulation;
 - 8.6.2.7 Impact to customers;
- 8.6.3 Control Activities are the policies and procedures that help ensure that management actions identified to assess

risks are carried out. These include approvals, authorizations, reconciliation and performance reviews, maintenance of security and the creation and maintenance of related records, which provide evidence of execution of these activities as well as appropriate documentation. The following are control activities adopted by the district:

- 8.6.3.1 Top level management reviews of actual performance;
- 8.6.3.2 Management reviews the functional or activity level;
- 8.6.3.3 Considers human capital as an asset rather than cost;
- 8.6.3.4 Controls over information systems processing;
- 8.6.3.5 Physical control over vulnerable assets;
- 8.6.3.6 Establishment and review of performance measures and indicators
- 8.6.3.7 Segregation of duties;
- 8.6.3.8 Proper execution of transactions and events;
- 8.6.3.9 Accurate and timely recording of transactions and events;
- 8.6.3.10 Access restrictions to and accountability for resources and records; and
- 8.6.3.11 Appropriate documentation of transactions and internal control.
- 8.6.4 Information and Communication consist of the methods and records established to record, process, summarize, and report the district's data. This ensures that:
 - 8.6.4.1 Information resulting from the district's operations are provided to appropriate individuals on a timely basis;

- 8.6.4.2 Financial information provided is clear and understandable;
- 8.6.4.3 Personnel receive information regarding legislation, regulatory developments, economic changes, or similar external factors that may affect the district; and
- 8.6.4.4 Emerging information needs are identified on a timely basis.
- 8.6.5 Monitoring assess the effectiveness of established internal control components and to take corrective action when appropriate. This allows management to:
 - 8.6.5.1 Promptly evaluate findings from audits and other reviews, including those showing deficiencies and recommendations reported by auditors and others who evaluate district's operations;
 - 8.6.5.2 Determine proper actions in response to findings and recommendations from audits and reviews; and
 - 8.6.5.3 Complete, within established time frames, all actions that correct or otherwise resolve the matters brought to management's attention.

It's the responsibility of the management of the district to establish the internal controls applicable to its operations. Management also evaluates internal controls to provide a framework for reviewing operating procedures. In evaluating internal controls, management identifies procedural problems that underlie perceived symptoms of inefficiencies/deficiencies and abuses.

Commercial Operations pertain to the systems and procedures in dealing with concessionaires and their bills. These systems and procedures touch on the following aspects of the water district's business:

1. Service Connection Applications

Water District provides the water directly to each customer through a metered connection, and bills them on a monthly basis. The provision of a service connection and water supply service implies a contract between two parties. Hence, all prospective consumers must sign a Service Application and Contract (SAC) with the water district which provides them with the house connection.

The SAC establishes enforceable contractual obligations between the water district and the customer, so either can take legal action in case of any breach of contract.

The basic features for a Service Connection Application are: (See Annex 9 for New Service Connection Application Process Flow Step 1)

- 1.1 Applicant gets Priority Service Number (PSN) from the Guard-onduty and waits PSN to be called;
- 1.2 Customer Service In-charge calls and receives the PSN receives request for a service connection from applicant;

- 1.3 Notes down applicant's name and address; verifies against records as to whether or not applicant has an outstanding account with the District;
- 1.4 Applicant fill out a SAC in two (2) copies; Applicant's Personal Information. If the applicant is a tenant of the lot or building, there must be a written authority from the lot or building owner as provided in the service application and contract authorizing the District to install the service connection in his premises as well as a commitment for him to pay the balances of unpaid water bills in case the concessionaire (applicant) defaults in his payments;
- 1.5 A new applicant for water service connection should submit the following requirements:
 - 1.5.1 Attend the Orientation Seminar every Tuesday or Thursday, at 1:00 pm at the MMWD Office
 - 1.5.2 I.D. Picture 1 x 1 or 2 x 2 1pc
 - 1.5.3 Xerox Copy of Government Issued I.D. 1pc
 - 1.5.4 Statement of Account/Billing Statement of either: MAGELCO/PLDT/CABLE or if not available, Certification from the Barangay Captain that you are a bonafide resident of the Barangay;
 - 1.5.5 For offices, authorization to transact is required, except if or when the owner personally transacts with the MMWD; and
 - 1.5.6 Payment of the following:

GURANTEE DEPOSIT

Residential/Government	Php	800.00
Pure-Commercial	1	L <i>,</i> 500.00
Semi-Commercial	1	1,500.00

The application fee shall be dependent on the size of the service connection applied by a service concessionaire, to wit:

APPLICATION FEE						
Size	Charges	5				
1/2 "	Php	3,755.00				
3/4 "		6,250.00				
1″		7,570.00				
2″		18,300.00				

Per Board Res. 084, S-2013, effective January 10, 2014

- 1.6 In cases of applicants who have one (1) or more active connections and who have not attended the seminar for three (3) years, they will be required to attend the said orientation. No proxies allowed, unless with written authorization from the applicant;
- 1.7 Submit all the requirements needed for New Service Connection application; pays application fee and other fees needed for installation of service connection;
- 1.8 Applicant has attended the orientation seminar for at least two (2) hours for new service connection;
- 1.9 Logs the name of new applicant and forwards the SAC to estimator.(See Annex 9 for New Service Connection Application Step 2)
 - 1.9.1 Receives the application form from the Customer Service Incharge, goes to the field and investigates adequacy of service applied for and availability of plumbing installation for connection to the system;
 - 1.9.2 Advises the applicant to settle labor and materials that exceeds the application package to the MMWD office;
 - 1.9.3 Provides copy of estimate to the applicant; advises applicant to purchase the materials needed; and

- 1.9.4 Forwards application form to the Customer Service In-charge after indicating findings thereon.
- 1.10 Receives the SAC from estimator, indicates amount of charges due to the District;
- 1.11 Applicant pays the application fee, guaranty deposit and other miscellaneous service charges to the Water District;
- 1.12 Billing Clerk assigns service connection number, posts the number in the SAC;
- 1.13 Gives the SAC to Accredited Plumber for installation. (See Annex 9 for New Service Connection Application Step 3)
 - 1.13.1 Receives original copy of approved SAC from Customer Service In-charge for installation of the service connection. Prepares Store Requisition Slip (SRS) in two copies for the service connection materials;
 - 1.13.2 Fills up the Request for Installation Form, Maintenance and Construction Order (MACO) and Receipt of Water Meter, indicating thereon the date of installation, meter number and complete materials description;
 - 1.13.3 Forwards SAC and SRS to the General Manager (GM) for approval, reviews and approves SAC and SRS; returns both documents to the Accredited Plumber;
 - 1.13.4 Receives from the GM copy of approved SAC and SRS; gives the SRS to the Storekeeper for withdrawal; and

1.13.5 Goes to service location and install the service connection.

1.14 After installation of service connection, inspector receives the original copy of SAC from the Accredited Plumber ready for inspection; forwards to Customer Service In-charge duly signed and inspected. (*See Annex 9 for New Service Connection Application Step 4*); and

- 1.15 Inspector forwards the original copy of SAC to Customer Service Incharge; encodes the newly installed service connection to the Master List of Service connections.
- 2. Customer Classification

Generally, water customers or users drawing water from the water district are categorized into 3 major types or classes for purposes of billing to wit:

- a. Residential(Domestic)/ Government
- b. Pure Commercial
- c. Semi- Commercial

These classifications are important because water tariffs are different for each category. In general, Commercial/Industrial users are billed 2 times the rate and Bulk connections 3 times the rate of Domestic users.

Residential (Domestic)/Government. Persons and establishments drawing water from the services of the Water District used for their day to day living such as cooking, washing, bathing, drinking, flushing toilets, and other domestic usage to sustain their everyday life. (Good for one (1) family only)

Pure – Commercial. Business establishment directly using water in their day to day operations.

Semi – Commercial. Business establishments indirectly using water in their day to day operations.

3. Meter Reading and Posting of Billing Register

An account number is used to identify each service connection as to location, consumer class, meter size, and concessionaire number. It also facilitates the tabulation or recapitulation of certain data like the breakdown of annual metered billings for each class and meter size, which is useful in rate study.

In order to keep track of existing account numbers and to control the number of concessionaire in each zone, a Master List of Service Connections should be prepared.

The basic features for a Meter Reading and Posting of Billing Register are: (See Annex 10 for Meter Reading and Posting Process Flow)

3.1 Meter Reading

- 3.1.1 Based on the schedule for the area assignment during the period, receives from the Billing Posting Clerk the following:
 - 3.1.1.1 Psion for read and bill system (with complete data of concessionaire downloaded to Psion); and
 - 3.1.1.2 Acknowledgement Receipt.
- 3.1.2 Observes the condition of the service connection and watches out for any service defect; ensures that District regulations are not violated;
- 3.1.3 Receives complaints from concessionaires on defects of the service connection and conducts preliminary investigations.If defects need further corrections or repairs, logs the defects in the logbook. The defects noted by the Customer Service Incharge not complained by concessionaires, and is also used to

initiate actions for regular maintenance of installed water meters;

- 3.1.4 Reads water meter, encodes the reading to the Psion; prints the bill and give the bill to concessionaire, if nobody is home puts the bill in a mailbox; and
- 3.1.5 Upon completion of reading, submits the Psion to the Billing and Posting Clerk for uploading.

3.2 Billing and Posting

- 3.2.1 Receives the Psion from the Meter Reader, uploads and post reading to the program of billing system;
- 3.2.2 Prepares Daily Billing Summary per zone, summarizing bills issued and the penalty charges indicated on overdue water bills for the day. The Daily Billing Summary should include the breakdown of metered sales which shows the total consumption in cubic meters, the amount of metered sales and the number of consumers per category;
- 3.2.3 Submits Daily Billing Summary to the Bookkeeper;
- 3.2.4 Based on the complaints from the concessionaires or as soon as billing adjustment are found necessary, prepares a Billing Adjustment Memo in two (2) copies. Forwards to the Administrative and Commercial Division Manager (ACD-DM) for review and approval of the GM;
- 3.2.5 Receives from the ACD-DM the encoded copies of the approved Billing Adjustment Memo to the billing program and prepares at the end of the month a Monthly Billing Adjustment Summary; and
- 3.2.6 Forwards to the Accounting 1 (one) copy of the Monthly Billing Adjustment Summary and the accompanying Billing

Adjustment Memo; files the 2nd copy of the Monthly Billing Adjustment Summary.

4. Customer Complaints

As a rule, every customer's complaint should be attended to as quickly as possible. There are several ways by which the water district can receive complaints from its customers. These can be made directly to the Meter Reader, or the customer can call or report directly to the office. These complaints must be recorded, classified as to their nature and date received, and resolved or acted upon. The report for each complaint should also indicate the dates for subsequent monitoring.

The basic features for a Customer Complaints are: (See Annex 11 for Customer Complaints Process Flow)

4.1 Customer Service In-charge

- 4.1.1 Customer Service In-charge logs all complaints received thru phone, from Meter Readers or directly from the concessionaires; the logbook should show data on the concessionaire's name, nature of complaints, date when Service Request (SR) was prepared, and date when it was completed;
- 4.1.2 Based on the logbook, the Customer Service In-charge prepares the SR indicating the nature of the complaints or service defect as reported; signs and forwards the SR to the Engineering and Construction Section (ECS);
- 4.1.3 Daily follows through with the Water Maintenance Man (WMM)/ Plumber SR which have been unserved for say,

more than two (2) working days as shown in the logbook. Refers any unnecessary delay to the Engineering & Construction Section Chief (ECSC); and

- 4.1.4 Receives from the WMM/Plumber accomplished copy of SRs. Reviews action taken. If concessionaire is not satisfied, investigates cause of dissatisfaction and refers the case to the Production and Engineering Division Manager (PED-DM). Indicates in the logbook the date when the complaint was resolved or acted upon. File SR.
- 4.2 Water Maintenance Man/Plumber
 - 4.2.1 Receives SR from the Customer Service In-charge;
 - 4.2.2 Determines necessary materials and requests them from the Storekeeper; brings them to the service location;
 - 4.2.3 Proceeds with the repair of the service defects; ask concessionaires or their representatives to acknowledge the repairs or corrective action taken by signing on the SR; and
 - 4.2.4 Upon return to the office, submits accomplished SR to the ECSC.
- 5. Dealing with Delinquent Accounts
 - 5.1 Disconnection of Water Service Connection

The basic features for Disconnection of Water Service Connection are: (See Annex 12 for Disconnection of Water Service Connection Process Flow)

- 5.1.1 Billing and Posting Clerk
 - 5.1.1.1 Billing and Posting Clerk prepares List of Service Connection for disconnection of scheduled Zone of

the day, checks concessionaires who applied for Promissory Note;

- 5.1.1.2 Forwards scheduled List of Service Connection for disconnection to the Disconnectors for execution;
- 5.1.1.3 Receives and files accomplished copy of List of Service Connection for disconnection from Disconnectors; and
- 5.1.1.4 Posts to the Customers Master File the last reading for billing. At the end of the month, prepares Subsidiary Ledger of disconnected service connection to offset the amount due to the guaranty deposits.
- 5.1.2 Disconnector
 - 5.1.2.1 Receives from Billing and Posting Clerk List of Service Connection for Disconnection scheduled for the day;
 - 5.1.2.2 Disconnects the service connection; records the last meter reading and date of disconnection; and
 - 5.1.2.3 Forwards the accomplished List of Service Connection for Disconnection to Billing and Posting Clerk.

5.2 Reconnection

The basic features for Request for Reconnection are: (*See Annex 13 for Request for Reconnection Process Flow*)

- 5.2.1 Concessionaire
 - 5.2.1.1 Gets PSN from the Guard-on-Duty and waits for the PSN to be called;

- 5.2.1.2 Proceeds to Customer Service Assistance Desk and requests for reconnection;
- 5.2.1.3 Proceeds to Cashier and pays unsettled bills and other miscellaneous service charges;

If found that the service connection needs to be estimated:

- 5.2.1.4 Pays inspection fee and presents his/her payment to the Customer Service In-charge and waits for 2-3 days for estimate;
- 5.2.1.5 After the estimate, receives a copy of the Bill of Labor and Materials (BLM);
- 5.2.1.6 Pays the amount indicated in the BLM at the Cashier; and
- 5.2.1.7 Waits for at least 5-10 calendar days for installation.

5.2.2 Customer Service In-charge

- 5.2.2.1 Calls the PSN;
- 5.2.2.2 Checks and verifies against records as to whether or not applicant has an outstanding account with the District;
- 5.2.2.3 Advises the concessionaire to pay his/her obligations;
- 5.2.2.4 Confirms payments and log the request and makes SR for reconnection;
- 5.2.2.5 The request for reconnection will be forwarded to the Reconnector;

If found that the service connection needs to be estimated,

- 5.2.2.6 Advises the concessionaire to pay inspection fee;
- 5.2.2.7 Confirms payment and logs the request and forwards the same to the Estimator;

- 5.2.2.8 After estimate, if payment for estimated labor and materials has been made by the concessionaire, prepares SR for reconnection and forwards to the Accredited Plumber;
- 5.2.2.9 Verify and sign the request for reconnection prepared by the accredited plumber and forwards to the GM for approval; and
- 5.2.2.10 After installation, receives the accomplishment report of reconnection and activates the service connection into the Billing and Collection System (BICOS).

5.2.3 Reconnector

- 5.2.3.1 Receives the SR from the Customer Service Incharge to reconnect the service connection:
 - If water meter is installed, reconnects the water service within the day.
 - If there is no water meter installed, reconnects the water service within two (2) days.

5.2.4 Estimator

- 5.2.4.1 Receives the SR for reconnection estimate;
- 5.2.4.2 Conducts inspection and estimates for labor and materials cost;
- 5.2.4.3 Provides a copy of BLM to concessionaire and advises him/her to pay the amount of labor and materials to the MMWD office and to purchase other necessary materials;

- 5.2.4.4 Receives the reconnection documents from the accredited plumber and conducts inspection after the installation; and
- 5.2.4.5 Confirms that the installed service connection conforms to the standard specifications, if not, advises the accredited plumber to re-install according to standard specifications.
- 5.2.5 Accredited Plumber
 - 5.2.5.1 Receives a request for reconnection;
 - 5.2.5.2 Prepares Maintenance and Construction Order (MACO), Bill of Materials & Cost of Estimate, Requisition and Issue Slip and Request for Installation Forms for approval;
 - 5.2.5.3 Withdraw and prepare materials needed from the storekeeper; and
 - 5.2.5.4 Re-install service connection.
- 5.3 Distribution of Demand Letters for Disconnected Water Service Connection

The basic features for Distribution of Demand Letters for Disconnected Water Service Connection are:

5.3.1 Billing and Posting Clerk

5.3.1 Based on the Aging of Accounts, the Billing and Posting Clerk prepares List of Disconnected Service Connections per Zone in preparation for demand letters; and
5.3.2 Forwards the List of Disconnected Service Connection per Zone to the Cash Management Group (CMG).

5.3.2 Cash Management Group

- 5.3.2.1 Receives the List of Disconnected Service Connection per Zone from the Billing and Posting Clerk;
- 5.3.2.2 Prepares first demand letters in three (3) copies per zone:
 - 1 for file copy;
 - 1 for the Concessionaire; and
 - 1 for Commission on Audit (COA).
- 5.3.2.3 Forwards demand letters with Summary of Accounts to the ACD-DM and GM;
- 5.3.2.4 Receives the approved demand letters from the GM and forwards to the Meter Readers for distribution;
- 5.3.2.5 Receives from the Meter Readers the accomplished demand letters with notations;
- 5.3.2.6 Segregates demand letters based on notations made by the Meter Reader:
 - refuse to receive send through registered mail;
 - deceased for further investigation; and
 - transfer of location get new address if possible.
- 5.3.2.7 The second and third demand letter will be prepared only if the first and the second demand letters, respectively, was duly received and no

payment has been made by the concessionaire within 15 days upon receipt;

- 5.3.2.8 If no settlement was made upon the issuance of the third demand letter, small claims will be filed at the Regional Trial Court (RTC); and
- 5.3.2.9 Files and updates records of Demand Letters.

5.3.3 Meter Reader

- 5.3.3.1 Receives demand letters per Zone with Summary of Accounts from the CMG;
- 5.3.3.2 Distributes the demand letters and have the concessionaire acknowledge the 2nd and 3rd copy of the demand letter indicating the date of receipt; and
- 5.3.3.3 Forwards the accomplished demand letters with notations to the CMG.
- 6 Marketing Programs

6.1 Barangayan / Orientation Seminar

6.1.1 Marketing Group

- 6.1.1.1 Coordinates with the barangay officials for the scheduling of the barangayan;
- 6.1.1.2 Prepares communication letter and delivers to the barangay;
- 6.1.1.3 Requests fund and other materials needed in the barangayan;
- 6.1.1.4 One day before the scheduled barangayan, the Marketing Group conducts "recurida" to

encourage prospective concessionaires to attend the orientation seminar;

- 6.1.1.5 Conducts the barangayan proper and discuss the MMWD Utility Rules and Regulations (UR&R);
- 6.1.1.6 Receives and answers queries and comments from the barangay constituents during the open forum part of the program;
- 6.1.1.7 Prepares liquidation and completion report of the said activity; and
- 6.1.1.8 Compiles necessary documents.

6.2 House-to-House Survey

6.2.1 Marketing Group

- 6.2.1.1 Identifies the barangay to be surveyed;
- 6.2.1.2 Identifies prospective customers from target areas for expansion and those without service connection within the service area of the district;
- 6.2.1.3 Conducts survey and informs the services offered by the MMWD to the prospective customers;
- 6.2.1.4 Summarizes the duly accomplished survey forms and forwards the same to the Commercial Section Head; and
- 6.2.1.5 The Commercial Section Head analyzes the result and prepares recommendations based on the survey result and submit it to the ACD-DM.

7 Other Services Offered

MMWD offers additional frontline services to provide concessionaires with basic utilities that are essential to keep the concessionaires satisfied.

The basic features for Request for Relocation are: (*See Annex 14 for Request for Relocation Process Flow*)

7.1 Relocation of Service Connection

Relocation of service connection is based on the request made by the concessionaire to the Customer Service In-charge when the concessionaire transfers residence anywhere within the service area of MMWD.

- 7.1.1 Concessionaire
 - 7.1.1.1 Gets PSN number from the Guard-on-Duty and waits for the PSN to be called;
 - 7.1.1.2 Proceeds to the Customer Service Assistance Desk and requests for relocation;
 - 7.1.1.3 Proceeds to the Cashier and pays inspection fee (only for active service connections) and/or unsettled water bills and other miscellaneous service charges (for inactive service connections);
 - 7.1.1.4 Presents his/her payment to the CSA;
 - 7.1.1.5 Receives a copy of the BLM from the estimator;
 - 7.1.1.6 Pays the amount of the labor and materials; and
 - 7.1.1.7 Waits for at least 5-10 calendar days for relocation.

- 7.1.2 Customer Service In-charge
 - 7.1.2.1 Calls the PSN;
 - 7.1.2.2 Checks and verifies the concessionaire's records as to whether or not the applicant has an outstanding account with the District (for inactive service connections);
 - 7.1.2.3 Advises the concessionaire to pay his/her obligations;
 - 7.1.2.4 Confirms payments and logs the request and makes SR for relocation;
 - 7.1.2.5 The request for relocation will be forwarded to the estimator for estimate;
 - 7.1.2.6 If payment for the amount of labor and materials has been made, prepares SR for relocation and forwards to the Accredited Plumber;
 - 7.1.2.7 Verifies and signs the request for relocation prepared by the accredited plumber and forwards to the GM for approval; and
 - 7.1.2.8 After installation of relocation, receives the duly accomplished documents for relocation.

7.1.3 Estimator

- 7.1.3.1 Receives the SR;
- 7.1.3.2 Conducts estimate for labor and materials cost;
- 7.1.3.3 Provides a copy of BLM to the concessionaire and advises him/her to pay the amount of labor and materials to the MMWD office and purchase other materials needed;

- 7.1.3.4 Receives the relocation documents from the accredited plumber and conduct inspection; and
- 7.1.3.5 Confirms that the relocated service connection conforms to the standard specifications, if not, advises the accredited plumber to re-install according to standard specifications.
- 7.1.4 Accredited Plumber
 - 7.1.4.1 Receives SR from Customer Service In-charge;
 - 7.1.4.2 Prepares Maintenance and Construction Order (MACO), Bill of Materials & Cost of Estimate, Requisition and Issue Slip and Request for Installation Forms for approval;
 - 7.1.4.3 Withdraw and prepare materials needed from the storekeeper; and
 - 7.1.4.4 Relocate the service connection.
- 7.2 Filing of Promissory Note (PN)

A promissory note is a written promise to pay the water account to MMWD. The document serves as a written evidence of the amount of debt and terms under which it will be paid, including the repayment schedule and its penalty.

The basic features for Filing of Promissory Note are: (*See Annex 15 for Filing of Promissory Note Process Flow*)

7.2.1 Concessionaire

- 7.2.1.1 Gets PSN number from the Guard-on-Duty and waits for the PSN to be called;
- 7.2.1.2 Proceeds to the Customer Service Assistance Desk and requests for Promissory Note (PN);
- 7.2.1.3 Presents his/her water bill to the Customer Service In-charge or indicate his/her account details if bill is not available; and
- 7.2.1.4 Acknowledges and receives the PN.
- 7.2.2 Customer Service In-charge
 - 7.2.2.1 Calls the PSN;
 - 7.2.2.2 Checks and verifies the concessionaire's records from the BICOS;
 - 7.2.2.3 Fills-up the PN and acknowledges as the witness; and
 - 7.2.2.4 Gives the original copy of PN to concessionaire and files the duplicate copy.
- 7.3 Investigation of Abnormal Water Consumption

An abnormal water consumption is often caused by leak (high consumption) or change in the volume of water used (high or low consumption).

- 7.3.1 Billing and Posting Clerk
 - 7.3.1.1 Prepares summary of service connections per zone with abnormal water consumption; and
 - 7.3.1.2 Forwards the list to the Customer Service In-charge.

- 7.3.2 Customer Service In-charge
 - 7.3.2.1 Prepares and forwards SR for investigation;
 - 7.3.2.2 Receives SR from the investigator duly signed inspected and with recommendations and remarks; and
 - 7.3.2.3 Implements recommended actions accordingly.

7.3.3 Investigator

- 7.3.3.1 Receives the SR from the Customer Service Incharge and conducts inspection;
- 7.3.3.2 Checks for possible causes of the abnormalities as to whether abrupt decrease or increase in consumption;
- 7.3.3.3 Remarks the SR with actions taken, observations made and recommendations; and
- 7.3.3.4 Informs the concessionaire about his observations and recommendations and have the concessionaire acknowledged the SR and forwards the same to the Customer Service In-charge.

7.4 Investigation of Service Connections for Re-classification

Water service connections are classified into three customer classes, Residential/Government, Pure-Commercial and Semi-Commercial. Based on this classification, the new service connection is classified before its installation but in the duration of using the service connections some concessionaires change the nature of using the service connection. Thus, re-classification of the service connections is deemed necessary.

- 7.4.1 Field Personnel
 - 7.4.1.1 Lists service connections subject for reclassification; and
 - 7.4.1.2 Forwards the list to the Customer Service Incharge.
- 7.4.2 Customer Service In-charge
 - 7.4.2.1 Receives the list of service connections for reclassification and prepares SR; and
 - 7.4.2.2 Forwards the SR to the investigator for inspection.

7.4.3 Investigator

- 7.4.3.1 Visits the service connection/residence of the concessionaire;
- 7.4.3.2 Inspects service lines for series connections;
- 7.4.3.3 Verifies the classification of the service connection based on the Section 7 of the MMWD Utility Rules and Regulations (UR&R); and
- 7.4.3.4 Informs the concessionaire through a communication letter to re-classify their service connection.

ANNEXES

Annex 1	:	Business Planning Process Flow
Annex 2	:	Budget Preparation Process Flow
Annex 3	:	Disbursement of Funds Process Flow
Annex 4	:	Receiving Payment Process Flow
Annex 5	:	Financial Reporting System-General Accounting System Process Flow
Annex 6	:	Financial Reporting System-General Journal (Adjustments) Process Flow
Annex 7	:	Financial Reporting System-Preparation of Trial Balance Process Flow
Annex 8	:	Financial Reporting System-Preparation of Financial Reports Process Flow
Annex 9	:	New Service Connection Application Process Flow
Annex 10	:	Meter Reading and Posting of Billing Register Process Flow
Annex 11	:	Customer Complaints Process Flow
Annex 12	:	Disconnection of Water Service Connection Process Flow
Annex 13	:	Request for Reconnection Process Flow
Annex 14	:	Request for Relocation Process Flow
Annex 15	:	Filing of Promissory Note Process Flow

Annex 1. Business Planning Process Flow



Annex 2. Budget Preparation Process Flow



Annex 3. Disbursement of Funds Process Flow



Annex 4. Receiving Payments Process Flow



Annex 5. Financial Reporting System – General Accounting System Process Flow



Annex 6. Financial Reporting System - General Journal (Adjustments) Process Flow

Accounting and Budget Group								
Liquidation of Cash Advance	Debit/Credit Memos	Water Billing Adjustment	Bad Debts Provision	Other Transactions	Year-end Closing Entries			

All supporting documents are to be verified by the Administrative and Commercial Division Manager and approved by the General Manager before processing and posting the adjustments



Sends journal entry vouchers and supporting documents/schedules to the Administrative and Commercial Division Manager for APPROVAL.

Annex 7. Financial Reporting System – Preparation of Trial Balance Process Flow



Annex 8. Financial Reporting System – Preparation of Financial Reports Process Flow



Annex 9. New Service Connection Application Process Flow













Annex 10. Meter Reading and Posting of Billing Register Process Flow



Annex 11. Customer Complaints Process Flow























Annex 15 Filing of Promissory Note Process Flow


APPENDIXES

Appendix 1	: Water Production and Distribution Forms and Reports
1.1	Daily Chlorine Residual Monitoring
1.2	Summary Report on Microbiological Test
1.3	Physical Chemical Analysis
1.4	Daily Inspection and Accomplishment Report
1.5	Annual Maintenance Check List of Wells
1.6	Monthly Maintenance Check List of Treatment Facilities
1.7	Maintenance Check List of Installing Pipes
1.8	Maintenance Check List of Distribution System

	Appendix 2	:	Administrative a	nd Financial	Aspects For	ms and Reports
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- 2.1 Official Receipts
- 2.2 Daily Report of Collections and Deposits
- 2.3 Daily Cash Position Report
- 2.4 Request for Schedule of Payment
- 2.5 Disbursement Voucher
- 2.6 Petty Cash Voucher
- 2.7 Liquidation Report
- 2.8 Journal Entry Voucher
- 2.9 Trial Balance and Worksheet
- 2.10 Balance Sheet
- 2.11 Statement of Income and Expenses
- 2.12 Statement of Government Equity
- 2.13 Statement of Cash Flows
- 2.14 Notes to Financial Statements
- 2.15 Monthly Data Sheet

Appendix 3	: Commercial Operations Forms and Report
3.1	Application Contract
3.2	Applicant Information Sheet
3.3	Bill of Materials and Cost of Estimate - MMWD's Copy
3.4	Bill of Materials and Cost of Estimate - Customer's Copy
3.5	Maintenance and Construction Order
3.6	Receipt of Water Meter
3.7	Requisition and Issuance Slip
3.8	Bill of Materials and Cost of Estimate - Plumber's Copy
3.9	Request for Installation
3.10	Billing Schedule
3.11	Acknowledgement Report
3.12	Daily Billing Summary
3.13	Posted Penalties
3.14	Summary of Billing Adjustment Memo
3.15	Service Request
3.16	Notice for Disconnection
3.17	Disconnection List
3.18	Promissory Note

Metro Midsayap Water District 007 Poblacion 8, Midsayap, Cotabato

DAILY CHLORINE RESIDUAL MONITORING

Date:		
Location	Time Collected/ Examined	Chlorine Residual
MIDSAYAP AREA		
1.		
2.		
3.		
4.		
5.		
6.		
7.		
LIBUNGAN AREA		
1.		
2.		
3.		
4.		
5.		
6.		
7.		
Conducted by:	Noted by:	

Water Resources Facilities Operator

Division Manager, PED

Submitted By:

PWQS, Section Head

METRO MIDSAYAP WATER DISTRICT SUMMARY REPORT ON MICROBIOLOGICAL TEST MONTH OF

1) Population actually served by utility

(No. of service connections x average no. of persons per service connection)

2) Required minimum number of sample

(Based on the following da	ata)		
Population Served	Minimum freque	ncy of sampling	
Less than 5000	One (1) samp	le per month	
5000 - 100,000	One (1) sample pe mon	r 5000 population thly	
More than 100,000	20 samples plus 1 pe mon	r 10,000 population thly	
3) Sample Requirement			
a. No. of samples examine	ed		<u> 8 - 8</u>
b. Percent (%) to the mini	mum required		
c. Meets standard	Yes	No No	
(If b is 100% or more	e, check Yes)		
4) Method			
4.1 Multiple Tube Fermer	tation Technique (MTF	T)	
a. Number of sample	es showing presence of	coliform group	
b. Percent (%) to san	nples to examined	(4.1.a/3.a x 100)	CG 222
c. Meets standard	Yes	No No	
(If b is 5% or less o	heck Yes)		
4.2 Membrane Filter Tech	nique (MFT)		
a. Number of sample	es showing presence of	coliform colonies	
b. Percent (%) to the	total number of sampl	es analyzed (4.2.a/3.a x 100)	() — —))
c. Meets standard	☐ Yes	□ No	
(If b is 5% or less o	heck Yes)		
4.3 Fecal Coliform Test (F	CT)		
a. Number of sample	es showing presence of	fecal coliform	32 7P
b. Meets standard	Yes	No	
(If b is zero check	Yes)		
4.4 Heterotropic Plate Co	ount (HPC)		
a. Number of HPC te	sts conducted		<u>a</u>
b. Number of sample	e showing HPC value <5	00 CFU/ml	48 59
c. Percent (%) to the	number of test conduc	ted (b/a x100)	<u></u>
d. Meets standard	☐ Yes	□ No	
(If c is 100%, check	k Yes)	10000	

(Please see attach laboratory test results with this summary form)

NOTED BY:

General Manager

Date

METRO MIDSAYAP WATER DISTRICT

PHYSICAL/CHEMICAL ANALYSIS
FOR THE YEAR

	PNSDW Maximum	m Constituent Level (mg/L) or Characteristics							
CONSTITUENT	Level (mg/L) or	NAME OF SOURCE / LOCATION							
	Characteristics	BULK WATER	DPS	APS1	APS2	APS3	LPS1	LPS2	LPS5
I. Priority Parameters	- E	52		8 3		s - 13		92 - 52	
Physical	- X.	- C		2:		02		3 — C	
1. Color Apparent	10 color units	8		8 8		8 - B		8 8	
2. Odor	No Objectionable Odor (NOO)								
3. Turbidity	5 NTU							S. 22	
4. Temperature	S 3	92 92		8 3		S - 13		9 9 9	
5. TDS	500 mg/l	8		1 - X				8 8	
6. Hardness, Total	300 as CACO3	10		a 3		e - 2		8 35	
Chemical								2 8	
1. pH	6.5 - 8.5								
2. Chloride	250 mg/l								
5. Nitrate	50 mg/l								
6. Sulfate	250 mg/l					1			
7. Iron	1 mg/l							SG - 22.	
8. Marganese	0.4 m g/l	99 19		8 3		S 13		97 - 58	
9. Arsenic	0.01 mg/l	8		8 X		8 - S		3 8	
10. Cadmium	0.003 mg/l	35		9 3				8. 8	
11. Lead	0.01 mg/l	2						a	

Prepared by:

Noted by:

Division Manager, PED

General Manager

Daily Inspection and Accomplishment Report

Metro Midsayap Water District 007 Poblacion 8, Midsayap, Cotabato

PRODUCTION GROUP DAILY INSPECTION/ACCOMPLISHMENT REPORT

PUMP STATION	Time	Chlorination	Panel Board	Production	Pressure	By-Pass	Surrounding	Remarks/Observation
DPS								
LPS 1								
LPS 2						18		
LPS 5	0							
LPS 6								
STEM Booster	5			-				
BPH Booster								
Kiwanan Booster			2 //			10		
APS 1								
APS 2	0		0 			2		
APS 3	0				1			
BULK								
DTHERS:	6	Dr 7	8 - S	(i	10 87	10		des .

Inspected by:

Noted by;

Water Resources Facilities Operator

Division Manager, PED

Submitted by:

PWQS, Section Head

Annual Maintenance Check List of Wells

Metro Midsayap Water District 007 Poblacion 8, Midsayap, Cotabato

ANNUAL MAINTENANCE CHECK LIST OF WELLS

Location/Designation:	
Name of Operator:	

Check off work completed. Explain any "NO" answers under " Remarks"

A. WELL PERFORMANCE CHECK

1. Is a satisfactory device available for measuring pumping levels?

2. Electric probe apparatus batteries checked before starting performance check?

- 3. Air line guage apparatus
 - a. Is gauge in good working order?
 - b. Is length of airline known?
 - c. Is tire pump in good working order?
 - d. Airline checked for leakage before starting performance check?
- 4. Is a flow-meter available on pump discharge pipe? (If no, show method used under " Remarks")

B. WELL PERFORMANCE RECORD CARD

- Is the record card available at the well location before starting the performance check?
- 2. Has all the upper section on well construction details been filled in?
- 3. Is well performance history up to date?
- 4. If there was a change in performance since the last performance check, has the utility management been notified?

C. WELL PERFORMANCE

- W as the static level checked and recorded on the Well Performance Record Card before starting the pump?
- 2. W as discharge carefully checked and recorded after several hours of steady pumping?
- 3. W as the pumping level checked and recorded at the time of discharge reading?
- 4. Was the drawdown computed and recorded?
- 5. Was the specific capacity computed and recorded?
- 6. W as the well recovery curve prepared and the time required to recover to 50 cm recorded?
- 7. Was the well depth measured and recorded?











D. ROUTINE PREVENTIVE MAINTENANCE

- W as the well chlorinated after completion of the performance checked?
- 2. Was make-up gravel added?

Remarks



Metro Midsayap Water District 007 Poblacion 8, Midsayap, Cotabato

MONTHLY MAINTENANCE CHECKLIST TREATMENT FACILITIES

Location/Designation:		
Month of Name of Operator:	Year	
Name of operator.		
Check off work com	pleted. Explain any "NO" answers under " Remarks"	
		Check One
		Yes No
A. CHLORINATION EQU	IPMENT	
1. Chlorination equi	pment up to date?	
2. Calcium hyphochl	orite kept dry in storage?	
3. Hypochlorite solu	tion always mixed in non-metallic container?	
4. Rubber gloves an solutions?	d apron always worn while mixing hypochlorite	
5. Calcium hypochlo	rite mixed day before used?	
6. All vital parts of h	ypochlorinators flushed with clear water daily?	
7. Strainers cleaned	daily?	
check, has the ut	lity management been notified?	
8. Chlorine solution	line flushed with fresh water daily?	
Record Card befo	re starting the pump?	
Remarks		

Maintenance Check List of Installing Pipes

Metro Midsayap Water District 007 Poblacion 8, Midsayap, Cotabato

MAINTENANCE CHECKLIST INSTALLING PIPES

Location/Designation:	
Name of Personnel:	
Check off work completed. Explain any "NO" answers under " Remarks"	
	Check One
A DREDARATION	Yes No
1. Isolating valves located in advance and tested for tight closing?	
2. Customer given advanced notice? (State how under " Remarks")	
3. Fittings and valves are pre-assembled?	
4. Work scheduled to allow curing of concrete thrust blocks?	
5. If a tapping sleeve was used, was it bolted in place and concrete thrust blocks poured several days in advance?	
B. EXCAVATION	
 Trenches excavated with even bottoms, uniform width and vertical sides? 	
2. Was excavation ahead limited to pipe laid each day?	
3. Wood shoring used in sandy soils?	
4. Rocky trench bottoms over excavated and sand bedding provided?	
5. Pipe properly bedded?	
6. Spoil stockpiled away from vehicle traffic?	
7. Trenches excavated to proper dimension?	
8. Trenches dewatered before pipelaying?	\Box

	Check	k One
	Yes	No
C. LAYING PIPE	<u> </u>	<u> </u>
 Pipe laid with spigot ends in direction of flow or bell ends ahead? 		
2. Pipe laid bells uphill?		
3. Pipe protected when lowering into trenches?		
4. Vegetable-base lubricants used with rubber rings joints?		
5. Seating of rubber rings checked with feeler gauge?		
6. Any joints deflected excessively?		
7. PVC pipe ends clean before joining?		
8. PVC pipe (solvent welded) joined above found?		
9. PVC pipe " snaked" in trench?		
D. CONNECTIONS TO EXISTING PIPE		
1. Connections made at night?		
2. Connections made before starting to lay pipe line?		
3. Supervisor is informed when existing mains were shutdown?		
4. Concrete thrust block poured?		
5. All service connections closed before flushing nd chlorinating existing pipes?		
6. All air expelled from existing main before putting back in service?		
E. THRUST PROTECTION		
1. Concrete for thrust blocks mixed in proper proportions?		
2. Thrust blocks poured against undisturbed earth?		
3. Concrete kept out of pipe joints when pouring thrust blocks?		

4. Thrust blocks backfilled immediately after pouring?

	Check Yes	One <u>No</u>
Ľ		
Ľ		
C		
E		
Ľ		
Ľ		
E		
E		
C		
C		
C		
E		

F. BACKFILLING

1. Granular soil or sand under and around non-metallic pipe?

- 2. All fill thoroughly compacted?
- 3. Fill free of rocks, large clods, sticks and vegetation?

G. CHLORINATION, FLUSHING, TESTING

- 1. Small quantities of pipe chlorinated by adding chlorine powder?
- 2. Chlorine solution added continuously while filling the pipe?
- 3. Chlorinated water allowed to sit for 24 hours?
- 4. Residual of 25mg/l after 25 hours? (If "NO" expalin action taken under " Remarks")
- 5. Suitable positive displacement pump used?
- 6. Test conducted for two full hours?
- 7. Test pressure maintained without interuption?
- 8. Leakage within allowable limit?
- 9. Lekage measured by volume of water pumped out of oil drum? (If "NO" explain method used under " Remarks")
- 10. Mainthoroughly flushed after test?

Maintenance Check List of Distribution System

Metro Midsayap Water District 007 Poblacion 8, Midsayap, Cotabato

MAINTENANCE CHECKLIST DISTRIBUTION SYSTEM

Location/Designation:	
Name of Personnel:	
Check off work completed. Explain any "NO" answers under " Remarks"	
	Check One
	Yes No
ROUTINE MAINTENANCE	
1. Every dead end main flushed during the past year?	9 - 16 - 25 - 2
2. Flushing water disposed off without creating inconvenience to the public?	
3. Discharge free of discoloration and odor?	
4. Quantity of water discharged estimated and reported to the utility management?	
5. Every valve operated at least once during the past year?	
6. Number of turns counted and recorded on valve record card?	
7. Packing or O-ring checked for leakage?	
8. Valve box checked, cleaned and adjusted?	
9. Was valved left at least one half turn from fully open or closed position?	
10. Every special purpose valve checked during the past year for proper operation, for leakage, wear, damage or clogged strainer	
11. Manufacturer's instructions consulted for special maintenance	

requirements of each type of special purpose valve?

Appendix 2.1 Official Receipts

Republic of the Philippines
METRO MIDSAYAP WATER DISTRICT
007 Poblacion 8, Midsayap, Cotabato
Tel. No.: 229-8215/521-4459 * TIN 002-240-967-NON VAT

Customer's	Name	Date Paid	
	A	2	
Account Nun	nber	Meter No.	S.C. No
	8 A	1 a	
Arrears	New York Control of the		
	Nature o	f Collection	Amount
		f Collection	Amount
A Static	TOTAL:	f Collection	Amount

Received the amount stated above.

Collecting Officer

Republic of the Philippines METRO MIDSAYAP WATER DISTRICT 007 Poblacion 8, Midsayap, Cotabato Tel. No.: 229-8215/521-4459 * TIN 002-240-967—NON VAT

OFFICIAL RECEIPT No. 341001

ince copy 01			10.		
Customer's N	Customer's Name		Date Paid		
	AN				
Account Num	iber	Meter No.	S.C. No.		
	N	10.			
Arrears	Nature of	Collection	Amount		
	38				
	TOTAL:				
	TOTAL: ARREARS:				

Received the amount stated above.

L

Collecting Officer

Metro Midsayap Water District DAILY REPORT OF COLLECTIONS AND DEPOSITS

Date

	Official Receipts			COLLEC	TIONS	TOTAL	
Date	From	То	Collectors	Tellering	Cashiering	COLLECTION	Remarks
	xxxx->	xxxx	GJ Cuadrasal				
	1. 253242.C.V			XXX	XXX	XXX	
							3
							-
	2		3			8	8
	ά.		1				8
	6		-			0,	
	2						
							2
	8						
			-				1
	то	TAL	10	XXX	XXX	XXX	2
Misesona Station	10000			0.00000		1. ISO	
	Collection per (OR Nos.		XXXX-XXXX		XXX	
Deposits:	Collection per (OR Nos.	P	XXXX-XXXXX		xxx	
Deposits: Date:	Collection per (OR Nos.	P xxx	xxxx-xxxxx			
Deposits: Date: Date: Undepo	Collection per (OR Nos.	P xxx 	xxxx-xxxx GD	P	xxx 	
Deposits: Date: Date: Undepo	Collection per (OR Nos.	P xxx rt CERTI	SDOX-SDOX	P	xxx 	
Deposits: Date: Date: Undepo	Collection per (oR Nos.	P xxx rt <u>xxx</u> rt <u>CERTII</u> my official oath t	xxxx-xxxx GD F <u>ICATION</u> hat the above i	P s a true statem	xxx 	
Deposits: Date: Date: Undepo	collection per (sited Collection I hereb collections rec	oR Nos. os, this Repo y certify on ceived by m	P xxx rt <u>xxx</u> rt <u>CERTII</u> my official oath t	SDC GD FICATION hat the above is od stated above	P s a true stateme for which Offic	xxx xxx xxx ent of all cial Receipt Nos.	
Deposits: Date: Date: Undepo	Sited Collection I hereb collections rec	oR Nos. s, this Repo y certify on ceived by mo	P xxx rt <u>cERTII</u> my official oath t e during the peric x	GD FICATION hat the above is od stated above	P s a true stateme for which Offic inclusive were	xxx xxx xxx ent of all cial Receipt Nos. actually issued b	v me
Deposits: Date: Date: Undepo	sited Collections I hereb collections rec	s, this Repo y certify on seived by ma xxxx-xxx shown ther	P xxx rt <u>CERTII</u> my official oath t e during the peric x reon. I also certify	GD FICATION hat the above is od stated above	P s a true statem for which Offic inclusive were received mone	xxx xxx xxx ent of all cial Receipt Nos. actually issued b	y me r
Deposits: Date: Date: Undepo	collection per of sited Collection I hereb collections rec in the amounts source without	s, this Repo y certify on ceived by m <u>xxxx-xxx</u> shown ther t having issu	P xxx rt <u>CERTII</u> my official oath t e during the peric x reon. I also certify red the necessary	GD FICATION hat the above is od stated above that I have not Official Receip	P for which Offic inclusive were received mone ts in acknowled	xxx xxx xxx ent of all cial Receipt Nos. actually issued b ey from whateve lgement thereof.	y me r
Deposits: Date: Date: Undepo	sited Collections p sited Collection I hereb collections rec in the amounts source without I certifi	s, this Repo y certify on eived by me <u>xxxx-xxx</u> shown ther t having issu y further tha	P xxx rt rt <u>CERTII</u> my official oath t e during the perio x reon. I also certify red the necessary at the balance sho	GD FICATION hat the above is od stated above that I have not Official Receip own agrees with	P for which Offic inclusive were received mone ts in acknowled on the balance a	xxx xxx xxx ent of all cial Receipt Nos. actually issued b ey from whateve lgement thereof. ppearing	y me r
Deposits: Date: Date: Undepo	sited Collections P sited Collection I hereb collections rec in the amounts source without I certify	oR Nos. oR Nos. y certify on ceived by me <u>xxxx-xxx</u> shown ther t having issu y further tha	P xxx rt rt <u>CERTII</u> my official oath t e during the peric x reon. I also certify reon. I also certify red the necessary at the balance sho in Cash Rec	GD FICATION hat the above is od stated above of that I have not Official Receip pown agrees with ceipts Records.	P for which Offic inclusive were received mone ts in acknowled n the balance a	xxx xxx xxx ent of all cial Receipt Nos. actually issued b ey from whateve lgement thereof. ppearing	y me r
Deposits: Date: Date: Undepo	sited Collection per of sited Collection I hereb collections rec in the amounts source without I certify	s, this Repo y certify on ceived by mo <u>xxxx-xxx</u> shown ther t having issu y further tha	P xxx rt <u>CERTII</u> my official oath t e during the perio x reon. I also certify red the necessary at the balance sho in Cash Rec	GD FICATION hat the above is od stated above that I have not Official Receip own agrees with ceipts Records.	P for which Offic inclusive were received mone ts in acknowled n the balance a	xxx xxx xxx ent of all cial Receipt Nos. actually issued b ey from whateve lgement thereof. ppearing	y me r
Deposits: Date: Date: Undepo	sited Collections per sited Collection I hereb collections rec in the amounts source without I certify	or Nos. or Nos. y certify on ceived by mo <u>xxxx-xxx</u> shown ther t having issu y further tha	P xxx rt <u>CERTII</u> my official oath t e during the peric x reon. I also certify red the necessary at the balance sho in Cash Rec	GD FICATION hat the above is od stated above of that I have not Official Receip own agrees with ceipts Records. Prepared by:	P s a true stateme for which Offic inclusive were received mone ts in acknowled in the balance a	xxx xxx xxx ent of all cial Receipt Nos. actually issued b ey from whateve lgement thereof. ppearing	y me r
Deposits: Date: Date: Undepo	sited Collections P sited Collection I hereb collections rec in the amounts source without I certify	or Nos. or Nos. s, this Repo y certify on ceived by mo <u>xxxx-xxx</u> shown ther t having issu y further tha	P xxx rt <u>CERTII</u> my official oath t e during the peric x reon. I also certify red the necessary at the balance sho in Cash Rec	GD FICATION hat the above is od stated above official Receip own agrees with ceipts Records. Prepared by:	P for which Offic inclusive were received mone ts in acknowled the balance a Name	xxx xxx ent of all cial Receipt Nos. actually issued b ey from whateve lgement thereof. ppearing of Collecting Of Position	y me r ficer
Deposits: Date: Date: Undepo	sited Collection per (sited Collection I hereb collections rec in the amounts source without I certify	s, this Repo y certify on ceived by mo <u>xxxx-xxx</u> shown ther t having issu y further tha	P xxx rt <u>CERTII</u> my official oath t e during the perio x reon. I also certify red the necessary at the balance sho in Cash Reo	GD FICATION hat the above is od stated above withat I have not Official Receip own agrees with ceipts Records. Prepared by:	P for which Offici inclusive were received mone ts in acknowled the balance a Name	xxx xxx xxx ent of all cial Receipt Nos. actually issued b ey from whateve gement thereof. ppearing of Collecting Of Position	y me r ficer

Position

Appendix 2.3 Daily Cash Position Report

METRO MIDSAYAP WATER DISTRICT DAILY CASH POSITION REPORT FOR THE MONTH OF

		DE	POSITS			DISBURSMENTS			TOTAL
	OFFICE	LBP-SA	LBP-SA					Other Bank Accounts	CASH IN
DATE	COLLECTION	GeneralAccount	Guaranty Deposit (GD)	CASH ON HAND	DATE	VOUCHER NO./S	TOTAL	Name of Account	BANK
		XXXX-XXXX-XX	XX000+X0000+X00					X000X-XXX0X-XXX	
Beg, Baland	ie .		XXX	XXX				XXX	XXX
									1942 P. 194
	3				-	3	6	5 8	
	3 2		3			8	5	6 6	
	0		2	0.		3	52.	2	
-			8		-		2	1	
			-						
	3 2		1.0			8	5	8 8	
	8		2	0		1	52.	1	
			8				2	1	
						2	0. 2		
						2			
			3			8	5	6 0	
	3					8	8	8	
TOTAL	222	XXX	YYY	0		TOTAL	XXX	YYY	
MAINTAIN	ING BALANCE		XXX		MAINTAINING	BALANCE			
	In Stratifice		¥¥¥		AVAILABLE F	UNDS			

Prepared by:

Name of Cash Management Group Head

Checked by:

Position

Name of Division Manager Position

159 | Page

Appendix 2.4 Request for Schedule of Payment

Republic of	the Philippines	Request for Schedu	ale of Payment No: 2016-00237
METRO MIDSAY	AP WATER DITRICT	Date of Request:	September 30, 2016
007 Poblacion 8, Midsaya	ap, Cotabato (North) Province	Division / Office:	Production and Engineering Division
Re	quest for Sc	hedule of	Payment
GLEAN JEEN S. CUAD Cashier C	RASAL		
Cash Management Grou	p Head		
Please schedule	e this MMWD obligation and/	or expense for payment	with the following information:
Name of Payee:	COTELCO PPALMA		
Address of Payee:	Midsayap, (North) Cotabate	0	
Claimant Classification:	Supplier	Branch: N	IAIN
Payment Description:	Electricity Consumption		
Payment Summary:	pount:	DED	72 002 47
Less:	iount.	FILE	12,050.41
VAT W	/ithheld PhP	259.35	
e-VAT	Withheld	-	
Other I	Deductions	_	259.35
NET Amou	nt for Payment:	PhP	72,637.12
Amount in Words:	Seventy Two Thousand S	ix Hundred Thirty Sever	PESOS and 12/100 ONLY
Due Date of Payment:	October 11, 2016		
Supporting Documents:	Summary (APS2, MMWD (Office)	
Page a off the users			
Respectfully yours.			
, , , , , , , , , , , , , , , , , , ,			
1999 - F. 1999 -			
Bon Carlo M. Melocoto	n, CPA		
Bon Carlo M. Melocoto Accounting and Budget (n, CPA Group Head		
Bon Carlo M. Melocoto Accounting and Budget (n, CPA Group Head Acknow	/ledgemen	ıt
Bon Carlo M. Melocoto Accounting and Budget (This is to ackno	n, CPA Group Head Acknow wledge the above request, ar	/ledgemen	It nt with the following information:
Bon Carlo M. Melocoto Accounting and Budget (This is to ackno Bank Account Name:	n, CPA Group Head Acknow wledge the above request, ar	/ledgemen	It nt with the following information: ranch: MAIN
Bon Carlo M. Melocoto Accounting and Budget (This is to ackno Bank Account Name: Check Number:	n, CPA Group Head Acknow wledge the above request, ar Check Date:	/ledgemen nd scheduled for paymen B	nt with the following information: ranch: MAIN Check Amount:
Bon Carlo M. Melocoto Accounting and Budget (This is to ackno Bank Account Name: Check Number:	n, CPA Group Head Acknow wledge the above request, ar Check Date:_	/ledgemen	nt with the following information: ranch:
Bon Carlo M. Melocoto Accounting and Budget (This is to ackno Bank Account Name: Check Number: Acknowledged by:	n, CPA Group Head Acknow wledge the above request, ar Check Date:_	Approved by:	nt with the following information: ranch:MAIN Check Amount:
Bon Carlo M. Melocoto Accounting and Budget (This is to ackno Bank Account Name: Check Number:	n, CPA Group Head Acknow wledge the above request, ar Check Date:	/ledgemen nd scheduled for payme B Approved by:	nt with the following information: ranch: MAIN Check Amount:
Bon Carlo M. Melocoto Accounting and Budget (This is to ackno Bank Account Name: Check Number: Acknowledged by: Glean Jeen S. Cuadras	n, CPA Group Head Acknow wledge the above request, ar Check Date: al	Approved by:	nt with the following information: ranch: MAIN Check Amount:
Bon Carlo M. Melocoto Accounting and Budget (This is to ackno Bank Account Name: Check Number: Acknowledged by: Glean Jeen S. Cuadras Cash Management Grou	n, CPA Group Head Acknow wledge the above request, ar Check Date: Check Date:	Approved by: Derna E. Dum AC Division Ma	nt with the following information: ranch: MAIN Check Amount: asis, MMPA anager

Appendix 2.5 Disbursement Voucher

		Repu	ublic of the Pl	nilippines			
(\square)	1	METRO M	IDSAYAP WA		RICT		
		007 P	ob. 8, Midsaya	p Cotabato			
A CONTRACTOR OF THE OWNER	DISBURS	SEMENTV	OUCHER			No :	2016-10-1543
	—1		12010201			Date	10/04/2016
lode of Payme	ent Check		Cash	Others	3	OB/DUD	10/04/2010
Payee	COTELCO PPA	LMA	00056051	3001		OR/BUR	NO.
				F	Responsibi	lity Ce	nter
Adress	Midsayap, Cotab	ato	Office	Office/Unit/P	duction	and	Code 006
		EXPLANA	TION				AMOUNT
Area : Mai Certified: Allotn obliga indica	n nent available and ated for the purpose as ated above.	B: Certified:	Supporting docu complete and pro Cash available.	ments per, and	Amount D	Ue Exper law fu direct	P 72,637.12 Ises / Advances necessa I and incurred under my supervision.
Area : Mai Certified: Allotn obliga indica gnature :	n nent available and ated for the purpose as ated above.	B: Certified:	Supporting docu complete and pro Cash available.	ments per, and	Amount D C. Certified Signature	ue Exper law fu direct	P 72,637.12 Ises / Advances necessa I and incurred under my supervision.
Area : Mai Certified: Allotn obliga indica gnature : inted Name : sition : ate :	N nent available and ated for the purpose as ated above. DERNA E. DUMASIS, MMPA AC Division Manager C	B: Certified: Signature Printed Name Position Date	Supporting docu complete and pro Cash available.	ments per, and MELOCOTON, A Budget Group	Amount D C. Certified Signature Printed Nar Position Date	ue Exper lawfu direct	P 72,637.12 Ises / Advances necessa I and incurred under my supervision. Engr. Joey C. Tonzo, MMPA Division Manager C
Area : Mai Certified: Allotn obliga indica gnature : inted Name : sition : ate : Received Paymo	n nent available and ated for the purpose as ated above. DERNA E. DUMASIS, MMPA AC Division Manager C ent :	B: Certified: Signature Printed Name Position Date Check No: Date : Bank Name : OR No.: Date :	Supporting docu complete and pro Cash available. BON CARLO M. P Accounting and He 1041455 10/05/2016 1002-1044-03	ments per, and MELOCOTON, A Budget Group ad	Amount D C. Certified Signature Printed Nar Position Date E SE ^V HUNDR	UE Exper lawfu direct : 	P 72,637.12 Tises / Advances necessa I and incurred under my supervision. Engr. Joey C. Tonzo, MMPA Division Manager C Division Manager C Division Manager C TWO THOUSAND SIX RTY-SEVEN AND 12/10 ESOS ONLY.
Area : Mai Certified: Allotn obliga indica inted Name : sition : te : Received Payma	n nent available and ated for the purpose as ated above. DERNA E. DUMASIS, MMPA AC Division Manager C ent :	B: Certified: Signature Printed Name Position Date Check No: Date : Bank Name : OR No.: Date : JEV No.	Supporting docu complete and pro Cash available. BON CARLO M. CP Accounting and He 1041455 10/05/2016 1002-1044-03	ments per, and MELOCOTON, A Budget Group ad	Amount D C. Certified Signature Printed Nar Position Date E SE ^V HUNDR	UE Exper lawfu direct 	P 72,637.12 Isses / Advances necessa I and incurred under my supervision. Engr. Joey C. Tonzo, MMPA Division Manager C Division
Area : Mai Certified: Allotn obliga indica nature : nted Name : sition : te : Received Paymo	n nent available and ated for the purpose as ated above. DERNA E. DUMASIS, MMPA AC Division Manager C ent :	B: Certified: Signature Printed Name Position Date Check No: Date : Bank Name : OR No.: Date : JEV No. 20	Supporting docu complete and pro Cash available. BON CARLO M. P Accounting and He 1041455 10/05/2016 1002-1044-03 16-10-0370-	MELOCOTON, A Budget Group ad	Amount D C. Certified Signature Printed Nar Position Date E SE' HUNDR	ue lawfu direct 	P 72,637.12 Itses / Advances necessa I and incurred under my supervision. Engr. Joey C. Tonzo, MMPA Division Manager C Division
Area : Mai Certified: Allotn obliga indica gnature : rinted Name : sition : ate : Received Payma COTEL Signature Ov	n nent available and ated for the purpose as ated above. DERNA E. DUMASIS, MMPA AC Division Manager C ent : CO PPALMA er Printed Name	B: Certified: Signature Printed Name Position Date Check No: Date : Bank Name : OR No.: Date : JEV No. 20 Date	Supporting docu complete and pro Cash available. BON CARLO M. CP Accounting and 1041455 10/05/2016 1002-1044-03 16-10-0370-	ments per, and MELOCOTON, A Budget Group ad	Amount D C. Certified Signature Printed Nar Position Date E SE ^V HUNDR P - CAROL	UE Experiawfu direct me : me : VENTY- RED THI PE VENTY- S. TO	P 72,637.12 Isses / Advances necessa I and incurred under my supervision. Engr. Joey C. Tonzo, MMPA Division Manager C Division

Batch No: 384

Appendix 2.6 Petty Cash Voucher

PETTY CASH V METRO MIDSAYAP WA Abenov		ER 8CT	No.: Date:
Payee/Office :			Responsibility Center Code:
I. To be filled up upon req	tress : To be filled up upon request		ed up up on liquidation
Particulars	Amount	Total Amour Total Amour OR No. Amount Refi (Reimbu	nt Granted nt Paid per unded/ rs ed)
A Requested by: Name of Requestor Approved by:			eceived Refund eim bursement Paid
Immediate Supervisor		Pet	ttv Cash Custodian
B Paid by: Petty Cash Custodian Cash Received by:		D Liqui Reim	dation Submitted: bursement Received by:
Signature over Printed Name o	of Payee	Date: _	Signature of Payee

007 Po	Republic of the Philip METRO MIDSAYAP WATE placion 8, Midsayap, Cotab	ppines E R DISTRICT ato (North) Province	Liquidation F Date: Division:	Report No.: 2	016-001
	LIQUIDATION REPORT Section / Group: Date OR# / Reference Particulars			oup:	
Date	OR# / Reference	Part	iculars		Amount
Amount of FOR REF	Cash Advance per DV No.	dated	ed	OTAL	
Amount of FOR REFI FOR REIM	Cash Advance per DV No. JND: per OR No IBURSEMENT:	dated	ed		
Amount of FOR REF FOR REIM A. Certified data	Cash Advance per DV No. JND: per OR No IBURSEMENT: Correctness of the above	dated B. Certified: Purpose of advance duly accompl	ed of travel/cash ished	C. Certified: S complete and	upporting docume
Amount of FOR REFI FOR REIM A. Certified data	Cash Advance per DV No. JND: per OR No IBURSEMENT: Correctness of the above	dated B. Certified: Purpose of advance duly accompl CAROL S. TOLENTI	ed of travel/cash ished NO, CPA, MMPA	C. Certified: Si complete and DERNA	upporting docume proper E. DUMASIS, MM

		No. 2016-10-0	370-CD	
			Date: 4-Oc	t-2016
RE SPONSIBILITY CENTER	ACCOUNTING ENT	RIES	BUR No.	Date:
006		ACCOUNT	AMO	UNT
000	CODE CODE		DEBIT	CREDIT
	Electricity Expense - Office	76701	21,097.91	
	Electricity Expense - Production	76702	51,798.56	
	Due to BIR - VAT Withheld	41201		259.35
	Cash in Bank CA - MGF	11101		72,637.12

Cash Disbursements	Journal	TOTAL	72,896.47	72,896.47
EXPLANATION : A Payment to electric consump	Area : Main otion for APS2 and MMWD Main Office			
Payee	COTELCO PPALMA	1	No : 0370	-A
Prepared by:		Checked by:		
DENNIS	P. PRONGCO	BON CARL	O M. MELOCOTO	N, CPA
Account	ing Processor B	Accounting	and Budget Group	p Head
		Approved by:		
		DERNA	E. DUMASIS, MN	1PA
		AC I	Division Manager C)

Batch No: 384

Appendix 2.9

Trial Balance and Worksheet

METRO MID SAYAP WATER DISTRICT 007 Poblacion 8, Mid sayap, Cotabato Province

007 Pobl	acion 8, Mid sa ya p, Co tabato Province								15		
Trial Bala	ance and Worksheet		2		-	<u>23</u>		2	-	(-)	(L)
FY:		Beginning	Balance	Total Tran	eactions	Adjusted Tri	ial Balance	Balance	Sheet	Income	State me nt
Acct Code	Act Title	Debit	<u>C redit</u>	Debit	<u>C redit</u>	Debit	Credit	Debit	<u>C rədit</u>	Debit	<u>fiber D</u>
102	Cash - Collecting Officer			5	5	10			8		î.
103	Cash - Disbursing Officer	÷	<u> </u>	-	-	12	-	199	-11		
104	Petty Cash Fund	10					1	28	16		
111	Cash in Bank – Local Currency, Curr	×.	-	-	-	80	-	-8	•		
112	Cash in Bank - Local Currency, Sav	٢	(P)	8	88	23		32	5 E		
121	Accounts Receivable				-	-		5			
301	Allowance for Doubtful Accounts		-	20	20	-	-	225	-		
122	Notes Receivable	10		5	5	1	1	칭	8		
123	Due from Officers and Employees					*2	×2	•0	•		
135	Due from NGAS	10	5				5	18	10		
13/	Due Hom GOCCS	3	8			-		<u>-</u>	1		
130	Due Hom LGOS		-			-					
139	Due from NGCSIP CS		10 - E			-	-	5	1		
144	Due hom Subsidiaries and Affiliates	-		-				- 14	•		
140	Advertise of the stand Amilia set	8							1		
140	Other Receivables								•		
149	Office Supplies Investment	-8	<u>0</u>	8			-	10	1		
100	Accountable Earner Inventory	5	5					20			
150	Dates and Medicines Inventory										
160	Medical Dental and Laboratory Supr	- 8		2							
161	Cosoline Oil and Lubricants Inventor				-						
165	Other Sunn lies Inventory							10			
157	Snare Darts Inventory			2.0	20						
158	Construction Materials Inventory	<u>s</u>	2	-			2	2			
170	Crops and Fruits Inventory	9	2				2		-		
178	Prepaid Insurance	~									
179	Prepaid Interest	<u>.</u>		2	2			2	2		
182	Deferred Charges					•					
185	Other Prepaid Expenses	2	2					2			
189	Other Current Assets	8	8	1	23	<u>2</u> 8	<u>.</u>	25	23		
191	Investment in Treasury Bills	~		-		•	-	-8	-0		
192	Investment in Stocks			-	-	2	22	1	-		
193	Investment in Bonds	55				23	-	-53	-5		
198	Sinking Fund		-	-	-			3	-		
201	Land	.0.		52	52	22	1	30	1 0		
202	Land Improvement		-	-		-	•	•	•		
302	Accumulated Depreciation - Land Im	6	(a)	12	128	28	20	25	23		
211	Office Building				5	51	57	\$2.			
311	Accumulated Depreciation - Office 8		-		-		-	-	•		
215	Other Structures	25	5			28	10	75	15		
315	Accumulated Depreciation - Other S	×.	-		-	80	81 - S	-83	•		
221	Office Equipment	٢	(B)	53	5	28		32	5 E		
321	Accumulated Depreciation - Office E		•	•	-	7	÷.	5			
222	Furniture and Fixture	-					-	-12	•2		
322	Accumulated Depreciation - Furnitur		-	73	53		13	쥥	8		
223	IT Equipment and Software			-	-	•	•	•	-		
323	Accumulated Depreciation - IT Equip	0	<u>்</u>	8		8		10	20		
226	Machinery							1	•		
326	Accumulated Depreciation - Machine				-	-	-				
223	Communication Equipment			-	2		0	-			
329	Accumulated Depreciation - Commu			-			•	-12	•12		
231	Prengrang Equipment and Accessor	0			•	<u>5</u>	1	14	14		
331	Notamulated Depreciation - Arengri		~	- 5		-	<i>4</i> 3	•	•S		
233	Accuracy Dental and Laboratory EQU	1	8	<u>6</u>	8		<u></u>	10	20		
200	Roods Equipment	3	8	5			8		3		
200	Accumulated Democration - South 1			-							
300	vooranne en netheoranni - shoue (10	52	52	69	63		\$4.		

METRO MIDSAYAP WATER DISTRICT DETAILED BALANCE SHEET

As of _____

(With Year-To-Date and CY _____ Comparative Figures)

		for the Month		CY
ASSETS				
Current Assets				
Cash and Cash Equivalents (Note 3)				
Cash - Collecting Officer	₽	-	₽	1.00
Petty Cash Fund		-		5. - 5
Cash in Bank - Local Currency, Current Account		-		17 <u>1</u> 2
Cash in Bank - Local Currency, Savings Account		120		100
Receivables, net (Note 4)				
Accounts Receivable		-		0.00
Allowance for Doubtful Accounts		-		0.75
Due from Officers and Employees		-		-
Due from Subsidiaries and Affiliates				
Other Receivables		-		0.00
Inventories (Note 5)				
Office Supplies Inventory		12		
Accountable Forms Inventory		120		1.0
Medical Dental and Laboratory Supplies Inventory				-
Other Supplies Inventory		-		-
Snare Parts Inventory				5 <u>1</u> 4
Construction Materials Inventory		120		1020
Other Current Assets (Note 6)				
Other Current Assets				
Total Current Assets	302		21 - 31 <u>2</u>	1
Investments Sinking Fund (Note 7)		-		
Property, Plant and Equipment, net (Note 8)				
Land		1 - C		
Office Building				8 9 5
Other Structures				(C. 1)
Office Equipment		353		197.4
Furniture and Fixture		-		-
IT Equipment and Software		52-0		
Machinery		-		
Communication Equipment		10.50		
Medical, Dental and Laboratory Equipment		-		8 <u>-</u> 1
Other Machineries and Equipment				1.00
Motor Vehicle		-		
Other Property, Plant and Equipment		-		
Artesian Wells, Reservoirs, Pumping Stations and Conduits		-		5 <u>-</u> -
Construction in Progress - Artesian Wells, Reservoirs, Pumping Stations		-		1.1
Accumulated Depreciation		(i -)		
Other Assets				
Other Assets		13 - 24 - 4		
Total Non Current Assets	20 1 20 1	12	a si <u>-</u>	194
TOTAL ASSETS	₽.	8.08	₽	

METRO MIDSAYAP WATER DISTRICT DETAILED BALANCE SHEET

	for	he Month	CY
LIABILITIES AND EQUITY			
Liabilities			
Payables			
Accounts Payable (Note 9)	P	- ₽	<u>_</u>
Government Agency Payables			
Due to BIR		-	-
Due to GSIS			-
Due to PAG-IBIG		<u>2</u> 2	-
Due to PHILHEALTH (Note 10)		<u> 1</u>	-
Other Liabilities (Note 11)			
Guaranty Deposits Payable		-	-
Due to Subsidiaries and Affiliates		25	
Due to Officers and Employees		÷.	-
Loans Payable (Note 12)			
Loans Payables - Domestic, Current Portion			
Loans Payables – Domestic, Non Current Portion		7 2	
Deferred Credits (Note 13)			
Deferred Credits		÷	÷
Total Liabilities			
Equity			
Government Equity			
TOTAL LIABILITIES AND EQUITY	₽	- ₽	

(See accompanying Notes to Financial Statements)

METRO MIDSAYAP WATER DISTRICT DETAILED INCOME STATEMENT the Month/Year Ended

		for the Month		YTD	CY
REVENUES (Note 14)					
Service Income	₽	1	₽	220	₽ -
Business Income		5		373	
Subsidy Income		÷		-	-
Other General Income		2	5 132	12	121
Total Revenues		5		3.53	252
EXPENSES					
Personal Services					
Salaries and Wages		2		122	(2)
Other Compensation		-		2.7	-
Personnel Benefit Contributions		-		(1 4)	-
Other Personal Benefits		<u>12</u>		121	17 <u>7</u> 7
Maintenance and Other Operating Expenses					
Traveling Expenses		-		(i)	(- 3)
Training and Scholarship Expenses				2.5	172
Supplies and Materials Expenses		-		(1)	
Utility Expenses		<u>72</u>		12	120
Communication Expenses		5		St . 5	(-))
Membership Dues		-		12	(-))
Advertising Expenses					-
Representation Expenses				.	-
Transportation and Delivery Expenses		12		323	120
Storage Expense		5		3.73	-
Professional Services		2		-	-
Repairs and Maintenance		2		12	12
Subsidies and Donations		5		1000	10 7 3)
Miscellaneous Expenses		-		24	(4))
Taxes, Insurance Premiums and Other Fees				2.53	173
Bad Debts Expenses		×			-
Depreciations		-		12	(2)
Financial Expenses					
Financial Expenses		-		21 4 8	(4)
Total Expenses		5		1.73	
NET INCOME (LOSS) (Note 15)	₽	2	₽	12	P -

(See accompanying Notes to Financial Statements)

METRO MIDSAYAP WATER DISTRICT STATEMENT OF CHANGES IN GOVERNMENT EQUITY For the Month/Year Ended

(With Year-To-Date and CY ____ Comparative Figures)

		for the Month		YTD		CY
Government Equity						
Balance beginning of period	₽	(-)	₽	-	₽	
Additions:		2 7 2				2.57
Deductions:		820	8 3	12		
Balance end of period	3		-	h a i	-	6 5 .
Donated Capital (NG Grant)						
Balance beginning of period		(-)		-		-
Additions:				-		1. . .
Deductions:		0 <u>2</u> 3		12		12
Balance end of period	1				5 2	14
Reserved / Restricted Capital						
Balance beginning of period		121		8 <u>2</u>)		12
Additions:		-		-		-
Deductions:				-		-
Balance end of period	1	1 <u>2</u> 8	53		5	12
Retained Earnings						
Balance beginning of period		-				<u>्र</u> च
Prior period adjustments (Note 16)		() <u>-</u> 9		(12)		12
Net income (loss) for the period		-		-		-
Balance end of period	1				-	87
TOTAL EQUITY	₽		₽	<u> </u>	₽	

(See accompanying Notes to Financial Statements)

Appendix 2.12

METRO MIDSAYAP WATER DISTRICT STATEMENT OF CASH FLOWS

		for the Month		YTD		CY
CASH FLOWS FROM OPERATING ACTIVITIES						
Cash Inflows						
Receipts from Trade Receivables	₽	÷	₽	-	₽	8 4 8
Receipts from Miscellaneous Income		2		824		120
Receipts from Employees		×		(1 7)		(*)
Concessionaires Deposits and Advance Payments		<u> </u>		5 <u>2</u> 3	201 10	349
Total Operating Cash Inflows		8	_	252		120
Cash Outflows						
Payment of Operating Expenses		2		12		120
Payment of Trade Payables				5 7 5		
Remittances to Government Agencies		-		-		
Purchase of Supplies		2		823		120
Miscellaneous Disbursements				8 .5 0		170
Total Operating Cash Outflows				1.2	58 1 20 1	140
Total cash provided (used) for operating activities			_	858		131
CASH FLOWS FROM INVESTING ACTIVITIES						
Cash Inflows						
Receipts from LWUA Assistance				12		
Total Investing Cash Inflows				9 7 9		(7.)
Cash Outflows		0	N 10-		82 - S	5 X
Acquisition of various Property and Equipment		2		12		120
Total Investing Cash Outflows					- 22	
Total cash provided (used) for investing activities			_	9 2 9	18 1 - 9 1	-2
CASH FLOWS FROM FINANCING ACTIVITIES						
Cash Inflows						
Proceeds from Borrowings						170
Total Financing Cash Inflows			N 10	-	82 - S	
Cash Outflows					98 B	
Payment of LWUA Loans		-		-		-
Payment of Interest and Other Financial Charges		-		-		1 4 4
Total Financing Cash Outflows		-	8 8 .	. .	8	5 - 0
Total cash provided (used) for financing activities		-	-	-	122 - 52 -53 - 16	5
TOTAL CASH INFLOWS (OUTFLOWS)		-				
Add: Cash Balance, Beginning				-		(-))
CASH BALANCE, ENDING (Note 3)	₽	2	₽ -	822	₽.	128

(See accompanying Notes to Financial Statements)

Appendix 2.14 Notes to Financial Statements

METRO MIDSAYAP WATER DISTRICT 007 Poblacion 8, Midsayap, Cotabato Notes to Financial Statements

1. Agency Background

The Metro Midsayap Water District was established thru Sanguniang Bayan Resolution No. 135, Series of 1980 dated November 7, 1980 of the then Sanguniang Bayan of the Municipality of Midsayap, Province of North Cotabato with Presidential Decree No. 198, as amended, as the enabling law to the creation of water districts. On December 16, 1981, the District was issued the Conditional Certificate of Conformance (CCC No. 174) by the Local Water Utilities Administration (LWUA). The mandates of the District are:

- To acquire, install, improve, maintain and operate water supply and distribution systems for domestic, industrial, municipal and agricultural uses for residents and lands within the boundaries of the district;
- To provide, maintain and operate waste water collection treatment and disposal facilities; and
- To conduct such other functions and operations incidental to water resource development, utilization and disposal within the district, as are necessary or incidental to said purpose.

The powers, privileges and duties of the District are exercised and performed by and through the Board of Directors, as the policy-making body composed of the following:

Chairman	-	Godofredo R. Rapacon
Vice-Chairman	-	Guillermo L. Carisma Jr.
Treasurer	072	Eugenio G. Morillo
Secretary	-	Atty. Amalia L. Casabar
Auditor	-	Isabelita C. Fullecido

Day to day activities are executed by its General Manager, Ms. Carol S. Tolentino, CPA, MMPA together with 29 other permanent employees.

2. Summary of Significant Accounting Policies

Cash and Cash Equivalents

The District recognizes cash and cash equivalents on its face value.

Provision for Doubtful Accounts

This is recognized accounts whose outstanding balances have been approved for termination by the board due to non-payment or non-compliance with certain provisions thereof.

Supplies Inventories

Supplies inventories are valued at cost using the moving average method.

Property and Equipment

Property and equipment are carried at cost less accumulated depreciation. Significant improvements and repairs, including incidental costs are capitalized, while cost of maintenance and repairs is charged to expense. When property is disposed, the cost and the related accumulated depreciation are removed from the accounts, and any resulting gain or loss is credited or charged to current operations.

Income and Expense Recognition

Accrual method is used in recognizing income and expenses.

3. Cash and Cash Equivalents

This account consists of:

Accounts	Curren	t Month Previ	ous Month
Cash - Collecting Officer	₽	23	5
Petty Cash Fund		-	-
Cash in Bank – Current Account		-	-
Cash in Bank – Savings Account		3	=
TOTAL		20	-

	Metro M	MONTHLY D	ATA SHEE	T No. 174)			
	Fo	or the month end	ed				
1 SERVICE CONNECTION DATA:							
1.1 Total Services		1.6	Changes			YTD	
1.2 Total Active			New				
1.3 Total Metered			Reconne	ected			
1.4 Total Active Not Billed			Disconn	ected			
1.4 I otal Billed			Market	Growth (CM)			
1.5 Population Served		1.7	Customers in	arrears			
			Number		%		
		0015					
2 PRESENT WATER RATES: Effective C	October 1,	2015		5 00/5			
LWUA Approved: Yes X No	D	ate Approved:	June	5, 2015	-		
No. of Connections		Tuno of	Minimum			0 11 4 1	
No. of Connections	Total	Connection	Charge	11-20	21-30	31.40	11-up
Residential	Tulai	Decidential 8	charge	11-20	21-50	31-40	41-up
Covernment		Causement	255.00	33.00	40.50	48.00	55.50
Court (S & P Comm)		Government			N		
Somi Commorcial		Commoroial	446.25	57.75	70.85	84.00	97.10
Puro Commorcial		Dure			-		
Total		Commonial	510.00	66.00	81.00	96.00	111.00
I Otal		Commercial			30 3		
3 BILLING AND COLLECTION DATA:							
3.1 BILLINGS (WATER SALES)		This Month (TM)	Vear to Date (
a Current (Metered)		THIS MONTH (Tear to Date (110/		
h Current (Flat)			32	25	89		
c Popalty Chargos			25	10			
C. Fendity Charges				9 .			
Total							
		714		VTD			
3.2 COLLECTIONS (WATER SALES)		LM	10	TID	<u></u>		
a. Current Accounts				(7)			
b. Arrears (Current Year)				(c)			
c. Arrears (Previous Years)				17.17			
lotal							
3.3 ACCOUNT RECEIVABLES, Beginning	g of Year	=					
3.4 ON-TIME PAID , This Month	=	(3.2a)	= %				
		3.1.a + 3.1.b	10.07				
COLLECTION EFFICIENCY, YTD	=	3.2.a + 3.2.b	= %				
an a	_	3.1 Total	<u>-12 112 0173 -</u>	-10			
COLLECTION RATIO, YTD	=	3.2 Total	= %				
		3.1 Total +3.3	-	→3			
		Harris I Do Barris Martin Color					

4.1 REVENUE	TM		YTD
a. Operating		8	
b. Non-Operating	X8 X8	7. 82	2 0
Total		=	
4.2 EXPENSES:	TM	_	YTD
a. Salaries and Wages		20 20	
b1. Pumping Cost (Fuel, Oil, Electric)			
b2. Cost of BWS			5) () ()
c. Chemicals (Treatment)	83 63	2 2	
d. Fixed Other O & M Expense			
e. Variable Other O & M Expense			
f. Depreciation Expense	51	75 (2)	
g. Interest Expense		-	
Total		5 ≓	······································
4.3 NET INCOME (LOSS)	<u>+</u>	=	<u> </u>
4.4 CASH FLOW REPORT:	ТМ		YTD
a. Receipts		- 	
b. Disbursement		_	
 Net Receipt (Disbursement) 		5 	19. 19. 16. 17.
d. Cash Balance, Beginning		- 	
e. Cash Balance, Ending		=	
4.5 MISCELLANEOUS FINANCIAL DATA:			
a. Loan Funds (Total)		C.	Inventories
1 Cash on hand		d.	Account Receivables
2 Cash in bank			(Customer)
b. WD Funds (Total)		e.	Customer's Deposit
1 Cash on Hand		f.	Payable to Suppliers
2 Cash in bank			and Other Creditors
3 Change Fund		q.	Total Debt Service
4 Working Fund		0	(LWUA Loan)

5 PRODUCTION DATA:

5.1 SOURCE OF SUPPLY

				Total Rat		Basis of Data	
	Mid.	Lib.	Total	Mid.	Lib.	Total	
a. Wells					1. <u>1</u> .		
. Springs		8 	13 		8 		20 20
. Surface/BW					· · · · · · · · · · · · · · · · · · ·		-
d. Total		8 . 3 .	(3) (3)		S 		治:

5.2 WATER PRODUCTION

5.2 WATER PRO	DUCTION				0101227111		
23	500000	TM			YTD		Basis of Data
<u>in cu.m.</u>	Mid.	Lib.	Total	Mid.	Lib.	Total	3
a. Pumped	_						
b. Bulk Wate	er						
c. Total	1				2	6	
5.3 WATER PRO	DUCTION COST		T	Λ		YTD	
a. Total Pov	ver Consumption f	or Pumping	12:	kw	'n		kwh
b. Total Pov	ver Cost for Pump	ing F	<u> </u>		P		0004040804
c. Other En	ergy Cost for Pum	ping	8 . 		2 		
d. Total Pun	nping Hours (Moto	or Drive)	50 .	hr	S		hrs.
e. Total Pun	nping Hours (Engi	ne Drive)	99 9	hr	s		hrs.
f. Total Gas	Chlorine Consun	ned		kg	s		kgs.
g. Total Pov	der Consumed		25	kg	s		kgs.
h. Total Chl	orine Dioxide Con	sumed	195	kg	S		kgs.
i. Total Chl	orine Cost	F			P		
j. Total Cos	t of Other Chemic	als F	D		P		
a. Metered I	Billed	<u></u>	13 	TM		YTD	
b. Unmetere	ed Billed						
c. Total Bille	ed (5.4a +5.4b)						
d. Meter Un	billed						
e. Unmetere	ed Unbilled						
f. Total Acc	ounted (5.4c+5.4c	1+5.4e)					
5.5 WATER USE	ASSESSMENT						
a. Ave. Mon	thly Consumption	/Connection	=	m ³			
b. Ave Per (Capita/day consun	nption	=	m ³			
c. Accounte	d Water	= 5.4.f x 100	=	%		%	
This mon	th	5.2.c	<u> </u>				
d. Revenue	Producing Water	= 5.4.c x 100	=	%		%	
This mon	th	5.2.c					
e. Unaccount	ed Water	10,000	=	%		%	
f. Non Reveni	ue Water		=	%		%	
			13				

a.	Total	Regular		Casual	0	
b.	No. of Connec	ction/Employee	=			
c.	Average Mont	thly Salary/Employee	= [
6.2 Ba	cteriological			TM	Y	TD
a.	Total Samples	s Taken	=			330
b.	No. of Negativ	ve Results	=			13
c.	Test Results \$	Submitted to LWUA (Y/N)	=	14		1-X
6.3 Ch	lorination					
a.	Total Samples	s Taken	=			
b.	No. of Sample	es Meeting Standards	=			83
c.	No. of Days o	f Full Chlorination		10		10
6.4 Bo	ard of Directors					
				TM		YTD
a.	Resolutions A	pproved			2.0	
b.	Policies Pass	ed				
C.	Directors'Fee	Paid				
d.	Meetings:				1	
	1 Held (No.)			20	
	2 Regular (No.)				
			_		3.0	

7 STATUS OF INSTITUTIONAL DEVELOPMENT: (To be filled by the Advisor)

7.1 Development Progress Indicator:

Phase	Earned	Minimum Required	Variance	Age in Months	Development rating
1					
2					

7.2 Commercial System/Audit:

 a. CPS I Installed b. CPS II Installed c. Management Audit d. PR Assistance e. Marketing Assistance f. Financial Audit 			
g SUBMITTED BY:		VERIFIED BY:	2
General Manager NOTED BY:	Date	Management Advisor RECORDED BY:	Date
OIC, Area 8 Operations	Date	FM	Date

Appendix 3.1 **Application Contract**

Ģ		ا METRC 00 Tel. r	REPUBLIC () MIDSA 7 Poblacion 10.: 229-82	DF THE PHILIPPINES YAP WATER DISTRICT 18, Midsayap, Cotabato 15/ Cell # 09189793379		NO -	
SERVICE APPLICATION	AND CONT	RACT		DA	ГЕ:		
APPLICANT							
PRESENT ADDRESS	First Name	Middle Name	Last Name	NEW	NO. O	F CONNECTION:	
TEL. /CELL NO. NAME OF SPOUSE/HEIR				SERVICE CONNECTION	J #		
AMOUNT OF CHARGES APPLICATION GUARANTEE DEPOSIT LABOR MATERIALS TOTAL OFFICIAL RECEIPT DATE ISSUED ISSUED BY HOMEOWNERSHIP: TENANT OWNER	S DUE:			SKETCH/LOCATION: CLASSIFICATION: Residential/ Government Pure	□ e Comme	Semi-Commercial rcial 🔲	
Prepared by:			Approved	for Installation			

Customer Services Assistant

General Manager

CONTRACT FOR WATER SERVICE

Application is hereby made for water service to be supplied by the METRO MIDSAYAP WATER DISTRICT, to be used by me in accordance with the rules and regulations of the METRO MIDSAYAP WATER DISTRICT, now enforce thereafter. In addition I/We hereby agree to the following conditions;

- That I/We shall attend the Orientation Seminar for at least two (2) hours for a new service connection. 1. That failure to receive my bill does not relieve me of my obligation. Any amount due shall be deemed a debt to MMWD. 2.
- That bills should be paid on or before the due date (15 days from date of delivery) to avoid 10% penalty.
- 3. That payment of water bills (current and with arrearages) and other miscellaneous service charges shall be made only at the MMWD office; and only current bills shall be paid at its authorized collecting banks: CBC, LBP, Rural Bank of Midsayap 4.
- That after twenty (20) days from the date of delivery of bills and the bills remain unpaid; water service will be disconnected without prior notice 5. regardless of the amount.
- 6.
- That I/We shall provide a box for the water meter and a mailbox where my water bill can be dropped. That placement of my water meter shall be outside or beside the fence or in a place convenient and accessible to the Water District's personnel. 8. That I/We shall notify MMWD when as owner, I will transfer the ownership of my property, or as a tenant when I will leave the premises, of my
- landlord's property. That I/We shall allow authorized representatives of MMWD to enter my premises anytime of the day to enable them to perform their official 9.
- duties That I/We shall guarantee that I will not allow any tapping of my service pipe from the distribution pipe where my service is connected without 10. authority of the MMWD and that I am responsible for the care and maintenance of the service pipe.
- That I/We shall pay the prevailing water rate at any given time. 11.
- That as lot or building owner I hereby agree to pay the balances of the unpaid water bills in case occupants of my building/ property/ (applicant)/ tenant defaults in his payment.
- That, I understand that the connection will not be made until it is approved and all charges are paid, I assume responsibility for the meter and all 13. water that passes through the connection. I will conform with the MMWD Rules and Regulations.
- In the event the concessionaire passed away, the surviving spouse and/or the surviving heir (as indentified in the service application contract) shall be responsible to settle the liability of the deceased concessionaire with the district. 14. That I shall be penalized if found guilty of committing acts qualified under Sec. 38 and 39 of the utility Rules and Regulations manual pertaining to
- 15. illegal connections and tampering with MMWD properties.

I/We hereby affix my/our signature thisday of	,20
I Consent (Surviving Heirs):	
SIGNATURE OF SPOUSE	SIGNATURE OF APPLICANT
NAME OF SPOUSE	NAME OF APPLICANT

	APPLICANT 5 PERS	SONAL INFORMATION
Name		Nature of Occupancy :
Address:		Residential ()
If Residential		Commercial ()
	1. w/ sari-sari store ()	4. Boarding House ()
	2. w/ commercial vehicle/s ()	5. Lodging House ()
	3. at the same time commercial buildin	lg ()
vo. or Housen	Adults No. of Pigs No. of Poultry	Students Family/ies W/ Orchard () Orchidarium ()
Source of Incom	1e :	
Ave., monthly I	ncome Pnp:	
		Applicant's Signature over Printed Name

Appendix 3.3

	Tel. #: 2298-215	/ 09189	9793379		
Na	me of Customer:				
Ad	dress:				
Da	te:		_SR: #		1
A. IV	BILL OF M	ATERIA	LS		
	ITEMS	QTY	UNIT	UNIT COST	cos
1	G.I. Straight Elbow, 1/2" Ø		pcs.	20	
3	G.I. Elbow reducer, 3/4" x1/2" Ø		pcs.	28	
4	G.I. Pipe, 3/4" Ø-540		ft.	40	
5	G.I. Tee, 1/2" Ø		pcs.	20	
6	G.I. Tee,3/4" ø		pcs.	28	
7	G.I. Bushing reducer 3/4" x 1/2"		pcs.	22	
8	G.I. Nipple 3/4"ø x 2"		pcs.		
9	G.I. Nipple 3/4"ø x 4"		pcs.		
10	G.I. Nipple 3/4"øx 6"		pcs.	48	
12	G.I. Nipple 1/2" Ø X 2"		pcs.	18	
13	P.E. Male adaptor 3/4" ø	and the lot of the lot of	pos.		-
14	P.E. Tube 3/4" Ø ,SDR-11		mtrs.	26	
15	P.E. Tee 3/4" Ø		pcs.		
16	P.E. Connector 3/4" Ø		pcs.		
17	P.E.Elbow Connector 3/4" ø		pcs.		
18	Saddle Clamp, 2" x 3/4" ø		pcs.	250	
19	Saddle Clamp, 2 ½" x 3/4" ø		pcs.	250	
20	Saddle Clamp, 3" x 3/4" ø		pcs.	405	
22	Saddle Clamp, 4" x 3/4" Ø		pcs.	700	
23	Saddle Clamp, 8" x 3/4" Ø	-	pcs.	800	-
24	CRP. 3/4 " Ø		DCS.	230	
25	Stop Cock 1/2" Ø		pcs.	250	
26	Water meter		pcs.	-	
27	Swing Valve, 1/2" Ø		pcs.	250	
28	Cement/Sand/Gravel			50	
29	Others:		7 1 12		
	BORCOST	Sui	o lotal:		
1	Inspection Fee			50	
2.	Tapping Fee			150	-
3. 1	Mainline Excavation			150	
4. 5	Service line Excavation		mtrs.	10	
5. (Concreting			50	
		Sub	Total:		
. A	DDITIONAL LABOR			12	
1. Se	t'n of additional one faucet		mtrs.	10	
3.00	ncrete demolition		outiet	150	
4.Cro	oss road excavation				
5.Ro	ad Cross Drilling				
6.Rel	location Fee			150	
7.Int	erconnection			150	
	A	Sub	Total:		
		tal Labo	r Cost: _		-
1 AL	E Tube 3/4" & SDP-11		mtre	25	-
2.	12. 1000 0/4 p. 000-11.		incra.	20	
3.					
	and the second	Sub	Total:		
Appendix 3.4

ddress:						
ate Attended.				Time Atte	ndadi	
			1	ime Alle	naea:	
ivivo Estimator:						······
DOITIONAL MATERIALS /To b	o nurah					
ITEM		asea a	t the	Haraward	2) EM	077
G.I. Straight Elbow, %"		nrs	PF	Tee 3/4"		011
G.I. Elbow reducer, ³ / ₄ " x1/2"		pcs.	PE	Connector	1/2"	pcs.
G.I. Elbow, 1/2" x 90°		DCS.	P.F.	Connector	3/4"	pcs.
G.I. pipe, ½" ø-s40		ft	PFF	Ibow Con	ector %"	pcs.
G.I. pipe, 3/4" ø-s40		ft	PEF	Ibow Con	ector 3/4"	pcs
G.I. Tee. '5" Ø	1	ncs	PVC	Pine 1/2"	*	pes
G.I. Tee, ¾″ Ø		pcs.	PVC	Elbow 1/2	"ø(Plain)	pcs.
G.I. Coupling, 1/2"		pcs.	PVC	Elbow 1/2	" ø (Threaded)	pcs.
G.I. Coupling reducer %" x, %"		DCS.	PVC	Coupling 1	/2"	pcs.
G.I. Bushing reducer ¾"x1/2"		pcs.	PVC	Male adar	tor 1/2"	pcs.
G.I. Nipple 3/4"ø x 4"		pcs.	PVC	Female ad	aptor 1/2"	DCS.
G.I. Nipple 3/4"ø x 2"		pcs.	PVC	Female ad	aptor 3/4"	DCS.
G.I. Nipple 3/4"ø x 6"		pcs.	PVC	Clamp 1/2	11	pcs.
G.I. Nipple 1/2"ø x 2"		pcs.	PVC	Clamp 3/2	u	pcs.
G.I. Nipple 1/2"ø x 4"		pcs.	PVC	Tee 1/2" (PI	ain)	pcs.
G.I. Plug 1/2"Ø		pcs.	PVC	Tee 1/2" (Th	nreaded)	pcs
G.I. Plug 3/4"Ø	-	pcs.	PVC	Solvent / 0	Cement	can
Gate valve 1/2"ø	-	pcs.	Con	crete Nails	3"	
Gate valve 3/4" ø		pcs.	Tie	Nire		1
P.E. Male adaptor 1/2"		pcs.	Show	wer valve		pcs.
P.E. Male adaptor 3/4"		pcs.	Show	wer Head		pcs.
P.E. Tube 1/2" Ø ,SDR-11		mtrs.	Fauc	cet		pcs.
P.E. Tee 1/2"	1	pcs.	Tefle	on Tape		rolls
ADDITIONAL MATERIALS (To L	pe purch	ased/	paid	at the MA	AWD Office)	
Materials	Qua	intity		Unit	Unit cost	Cost
1. P.E. Tube 3/4" Ø				mtrs.	26	5
2. Swing Valve, 1/2" Ø			-	pcs.	258	3
3. Stop cock, , 1/2" Ø	1			pcs.	250	
			Su	b Total:		
LABOR COST						
Services		Q	y	Unit	Unit Cost	Cost
1. Service line excavation				meters	P10	
2. Inst's of additional one faucet					P150	
3.Concrete demolition					P100	
4. Cross road excavation				meters	P50	
5. Road Cross drilling						
6: Interconnection					P150	
7. Concreting					P50	

Appendix 3.5 Maintenance and Construction Order

Republic of th METRO MIDSAYAP 007 Poblacion 8, M	ne Philippines WATER DISTRICT Aidsayap, Cotabato 3702
MAINTENANCE AND CONTRACT OF CONTRACT.	ONSTRUCTION ORDER Date:
REPORTED BY:	ACTION TAKEN.
Reopen Service Transfer Tapping Relocate Service Disco, point of Connection Others	
	Pipefitter / Plumber
FEES PAID / OR TO BE PAID Tapping Fee P Installation Fee Reopening Fee	CONCUR:
Service Repair Fee TOTAL CHARGES PREPARED BY:	REMARKS:
APPROVED BY:	
	SIGNATURE OF INSPECTOR

Appendix 3.6

	Republic of t	he Philippines
M	ETRO MIDSAYAP	WATER DISTRICT
	007 Poblacion 8, Mid	sayap, North Cotabato
		Date:
	RECEIPT OF V	VATER METER
I hereby acknowledge following description:	to have received from METRO) MIDSAYAP WATER DISTRICT the water meter/s with th
METER NUMBER:		MAKE:
SIZE AND TYPE:		INITIAL READING:
BOOK WALLER.		DD 4 MD
BOOK VALUE:		BRAND;
Thaforementioned wa	ter meter is installed in my wate	BRAND:
Thaforementioned wa Zone for w of METRO MIDSAYAP WATE cost of installing a water meter found by Metro Midsayap Wa P.D. 198 as amended by P.D. 76	ter meter is installed in my wate hich I obligated myself to be resp R DISTRICT. In case of loss, I I r or else my water service will be ter District tampered, whereby 8 shall be enforced.	BRAND:
Thaforementioned wa Zone for w of METRO MIDSAYAP WATE cost of installing a water meter found by Metro Midsayap Wa P.D. 198 as amended by P.D. 76 I hereby abide with the DISTRICT to enter my premise	ter meter is installed in my wate hich I obligated myself to be resp R DISTRICT. In case of loss, I I r or else my water service will be ter District tampered, whereby 8 shall be enforced. existing rules and regulations to a es at any time for the purpose of	BRAND:
BOOK VALUE:	ter meter is installed in my wate hich I obligated myself to be resp R DISTRICT. In case of loss, I I r or else my water service will be ter District tampered, whereby 8 shall be enforced. existing rules and regulations to a es at any time for the purpose of <i>Concurred:</i>	BRAND:
BOOK VALUE: Thaforementioned wa Zone for w of METRO MIDSAYAP WATE cost of installing a water meter found by Metro Midsayap Wa P.D.198 as amended by P.D. 76 I hereby abide with the DISTRICT to enter my premise Prepared by:	ter meter is installed in my wate hich I obligated myself to be resp R DISTRICT. In case of loss, 11 r or else my water service will be ter District tampered, whereby 8 shall be enforced. existing rules and regulations to es at any time for the purpose of <i>Concurred:</i>	r service connection located at
BOOK VALUE: Thaforementioned wa Zone for w of METRO MIDSAYAP WATE cost of installing a water meter found by Metro Midsayap Wa P.D. 198 as amended by P.D. 76 I hereby abide with the DISTRICT to enter my premise Prepared by:	ter meter is installed in my wate hich I obligated myself to be resp R DISTRICT. In case of loss, 11 r or else my water service will be ter District tampered, whereby 8 shall be enforced. existing rules and regulations to a es at any time for the purpose of <i>Concurred:</i> <u>Concessionair</u>	r service connection located at

Appendix 3.7 Requisition and Issuance Slip

G	METRO 007 REC	MIDSAYAP W Poblacion 8, Midsayap	ATER , Cotabato I D ISSU	DISTRIC Province ESLIP	CT
Division		F	Responsibility	Center Code:	RIS 5089
Office					Date:
	REQUIS	SITION			ISSUANCE
Item	Particular	rs	Quantity	Unit	Remarks
				and the second second	
		4	•		
	1				
Purpose:			Section Street		
urpose					
	Requested by:	Approved by:		Issued by:	Received by:
Signature:				E P	
Printed Name		CAROL S. TOLENTINO, CPA.	MMPA		

	Republic of the Phi METRO MIDSAYAP WAT 007 Poblacion 8, Midsay	lippines ER DISTRICT vap, Cotabato	
BILLS	OF MATERIALS & C	DST OF ESTIMA	TE
ame of Annlican	•		
ddress			
ccount Number			
Ma	terials withdrawn from the	Property Section fo	ruse
in the re	pair/installation of water se	PS number	ong.
Quantity	Description	Unit Cost	Cost
Quantity	Description		
TC	TAL COST OF MATERIA	LS	
repared by:	L	ssued by:	
		anaired but	
nstalled by:	r	keceived by:	

Appendix 3.9 Request for Installation

		METR 007 Pc	Republic of the O MIDSAYAP W oblacion 8, Midsay	Philippines /ATER DISTRICT ap, North Cotabato	
		RE	OUEST FOR IN	STALLATION	
		• • • • •	10000		DATE:
NAME:			AD	DRESS:	
Phone/Cell No.		S	ervice Connect. N	0Acct. I	No
Amount of Payment made	for:			•••	
Application:	Р		O.R. #	DATE	BALANCE
Guaranty Deposit:	P		O.R.#	DATE	BALANCE
Materials:	Р	,	O.R.#	DATE	BALANCE
Labor:	Р		O.R.#	DATE	BALANCE
TOTAL:	P		· · · ·		
ORIENTATION DATE:	1			DATE INSTALLE	D:
Initial Reading		•		METER NO.:	
Prepared & Installed by:				Noted by:	
				ENGR. DARWIN	A. DISPO, MMPA

METRO MIDSAYAP WATER DISTRICT

007 Pobalcion 8, Midsayap, Cotabato

OCTOBER 2016 BILLING SCHEDULE

	Z	ONE	S				DATES				Z	ONE	S	
FLORES	BIMBO	CAGANG	PACHES	TAN	READING	DISTRIBUTION	DUE DATE	DISTRIBUTION OF NOTICE	DISCONNECTION	FLORES	BIMBO	CAGANG	PACHES	TAN
1	1		26	26						1	1		26	26
		27										27		
3			28	28						3			28	28
	2	2									2	2		
5	5		29	29						5	5		29	29
		4										4		
6	6		30	30						6	6		30	30
		31										31		
7	7			9						7	7			9
		8	8									8	8	
10	10			13						10	10			13
		11	11									11	11	
12	12			15						12	12			15
		14										14		
16				18						16				18
		17										17		

Appendix 3.11 Acknowledgement Report

METRO MIDSAYAP WATER DISTRICT 007 Poblanco 8, Midsayap, Cotabato

ACKNOWLEDGEMENT REPORT

Batch Zone N Readin Connec	No. : lo. : g Date : ction Type :		Date P	rinted :
Line	Account No	Account Profile		Domortico
No.	Seq. No	Account Name	Meter No	Remarks
1				
2				
3				
4				
5				
5				
8				
9				
10				
11				
12				
13				
14				·
Page N	lo. 1 of 1	PAGE TOTAL		

Appendix 3.12 Daily Billing Summary

METRO MIDSAYAP WATER DISTRICT 007 Poblanco 8, Midsayap, Cotabato

DAILY BILLING SUMMARY

Date Printed : Wednesday, October 12, 2016

			Billing Info	rmation		Sundries	5
Batch	Batch Date Entered	Due Date	Zone No.	Usage	Metered Sales AC 600	Account Title No	Amount
						Water	0.0
						Meter Rental	0.0
						Misc. Service Fee	0.0
						Materials	0.0
						Guaranty Deposit	0.0
						labor	0.0
						Arrears 125	0.0
						Arrears 521	0.0
						Penalty	0.0
						Matariala Davalta	0.0

0.00

0.00

0.00

0.00

Adj. AM Current Charges

Arrears

Total Charges

Bill No. Sequence Covered : to



Page No. 1 of 1

Appendix 3.13 Posted Penalties

METRO MIDSAYAP WATER DISTRICT 007 Poblanco 8, Midsayap, Cotabato

POSTED PENALTIES Batch No. : Zone No. : Reading Date :				Date Pr	inted : Wedr	nesday, Octo	ber 12, 2016 1:24:36 PM
Line No. Account No.	Account Name	Billing No. Amount Due	Penalty N	laterials	Materials Penalty	Collection Date	OR Number
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
Recapitulation	Billed Penalty	Grand Total				_	
Amount Due							
Materials							
Grand Total							

Page No. 1 of 1

Republic of the Philippines METRO MIDSAYAP WATER DISTRICT 007 Poblacion 8, Midsayap, Cotabato

Appendix 3.14

SUMMARY OF BILLING ADJUSTMENTS For the month of AUGUST 2016 - MAIN/LSO

ACCT. NO.	NAME	BILL NO.	MEMO NO.	DATE	debit debit	CUS I. 125 credit	METEKED S debit	ALES-600 credit	debit	Y- 612 credit	SUNDRIES	debit	credit
MAIN-BAM													
	TOTAL							ļ					
	Total Net - Main - BAM						ŀ	ŀ	ŀ			•	
MAIN- AM													
		ſ		ſ									
	Total - Main- AM				9					2			×
WVa - USI		ſ		ſ									
LING - DOT								Ī	Í	Ī			
		ĺ		ĺ				I	Ī				
		Ī				Ī							
	TOTAL				- 200 -		9	8					1
	Total Net - LSO - BAM							•	•	•		1.0	•
MA - OSL													
	Total - Main- AM					•							
		BAM							AM				
	Recapitulation:		MA	z	1	00					MAIN		20
	1000 C C C C C C C C C C C C C C C C C C		dr.	cr.	dr.	cr.				dr.	cr.	dr.	cr.
	Metered Sales	600	8	x	5000 1		A/c.Re c.Oth	rers	128	£	£		
	Penalty	612			3		Guar.Dep.		227	3	1	-	
	Franchise Tax Pay.	231-C	а. С	4			Materials		242B			ĩ	
	Accounts Rec Customer	125	1.25	2	101		Franchise Ta	x Pay.	231-C	20 20		1.00 1.00	20 C
	Deferred Credit	242					Misc. Wbr. C.	onsump.	843				100 A
	Other Receivable	501		e	10		Operation E	xpense	501	e			e
	Meter Rental	768	2	r.	U		Other Incom	le l	526	r	r	2	1
	TOTAL - BAM				a		Arrears-125		522				a
							A/c.Rec.		125	2	•	8	
							Penaltv		612		2	3	
							Meter Renta	-	768		3		
							Materad Sale	20	ęw		•	•	
Prenared hv							Misc Service	Revenue	610				
								Total AM	OTO	11		1.00	1000
						-		I OTAI - AM					
Billing Group H	AROY												

ERVICE REOUEST NO.	35250
DAT	TE:
NAME:	
ADDRESS:	
COMPLAINTS/REQUEST	ACTION TAKEN
Main/Service line leakage	
High Cons/Inside leakage	
No water/Low pressure	
Flushing	
Change & Calibrate old meter	En al Martin Statistics
Reconnection - I.R.	
Disconnection - L.R.	
Relocation (W.M./S.L.)	
Estimate-Nsc/Relo./In-house	
In-house Repair	
Inspection NSC/Re-class/	
Illegal con./W.M./S.L.	
Others	
Prepared by:	Approved by:

Appendix 3.16 Notice for Disconnection



Appendix 3.17 Disconnection List

METRO MIDSAYAP WATER DISTRICT 007 Poblanco 8, Midsayap, Cotabato

LIST OF ACCOUNTS SUBJECT TO DISCONNECTION Zone 01 No. Of Bills : 1 As of Wednesday, October 12, 2016

Printed : 10/12/2016 1:13:53 PM

				Sequence No.	Meter No.	Last Reading
Account No	Account Name	Address	Service Connection No.	Billing No.	Date	Total Outstanding Amount

	-	
	-	
 <u></u>		
 	-	
 	- 	
 	- 	
 	- 	
 	- 	
 	- 	
 	- 	
 	- 	
	-	

Page No. 1 of 15

METRO MIDSAYAP WATER DISTR	ICT
007 Poblacion 8, Midsayap, Cotabato	
Restaurants	16806
PROMISSORY NOTE	
I,of legal age, a resident of	, (Midsayap/Libungan)
Cotabato with Account No, for and in consideration of t	he following payables:
Water Bill	
Materials	
	the second s
Recon. Fee	
Recon. Fee TOTAL AMOUNT DUE	
Recon. Fee	ount on epresentative to disconnect my wate the promised amount due as stated f, 20a
Recon. Fee	ount on epresentative to disconnect my wate the promised amount due as stated f, 20 a
Recon. Fee	ount on epresentative to disconnect my wate he promised amount due as stated f, 20a
Recon. Fee	presentative to disconnect my wate presentative amount due as stated f, 20a

BIBLIOGRAPHY

- 1. Commercial Practices Manual for Water Districts by the Local Water Utilities Administration;
- 2. Operations and Maintenance Manual for Local Water Districts by the Local Water Utilities Administration;
- 3. Manual on the New Government Accounting System by the Commission on Audit;
- 4. Amended Presidential Decree No. 198 and Other Related Issuances;
- 5. Training Handbook on Internal Control Structure by the Commission on Audit;
- 6. Training Handbook on Cash Management and Control System by the Commission on Audit; and
- 7. Digos Water District's Operation Manual