

# Manolo Fortich Water District

Manolo Fortich, Bukidnon



## OPERATIONS MANUAL 2017

3<sup>rd</sup> Edition

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## **I. INTRODUCTION**

As a government agency responsible for the delivery of safe, potable and sufficient water supply to the community, Manolo Fortich Water District has this Operation Manual formulated and operational to uphold such mandate.

This Operational Manual provides the public with the general information of the district, as well as its underlying functions, operation requirements and processes for an effective and sustainable water district management and operation. This also covers the requirements of running a water district, the demands of ensuring water safety through proper treatment, the nature and requirements of operating and maintaining the water distribution system, and its administration, commercial, financial and social aspects.

## II. DEFINITION OF TERMS and ACRONYMS

### II.1 ACRONYMS

DOH	-	Department of Health
FDM	-	FOI Decision Maker
FOI	-	Freedom of Information
FRO	-	FOI Receiving Officer
LGU	-	Local Government Unit
LWD	-	Local Water District
LWUA	-	Local Water Utilities Administration
MFWD	-	Manolo Fortich Water District
NSO	-	National Statistics Office
NWRB	-	National Water Resources Board
PD	-	Presidential Decree
PhilGEPS	-	Philippine Government Electronic Procurement System
PPE	-	Property Plant and Equipment
PR	-	Purchase Requisition
SALN	-	Statement of Assets, Liabilities and Net Worth
SDs	-	Supporting Documents

### II.2 DEFINITION OF TERMS

*Access and Coverage* – performance of LWD in pursuing the goal of providing access and water service to the greater percentage of the population within their respective service areas.

*Adequacy and Reliability of Service* – performance of LWD rated in accordance with 24/7 availability of supply, capacity to meet the present and future water demand.

*Affordability* – performance of LWD rated in accordance with their ability to ensure that their rates are kept affordable for the low income groups (LIG). It has been ascertained that a water consumption of 10 cubic

meters per month will provide for the basic requirements of those in the LIG based on NSO and LGU data.

*Category C* – LWD category with 3,000-9,999 service connections and has garnered 25-49 points as determined by LWUA, according to the district performance based on Interest and Depreciation, and Staff Productivity Index Gross Revenues, Total Assets, Net Income.

*Concessionaire* – a person/organization with a registered water service connection with the water District

*Delivery Units* – Departments and Divisions of the LWD responsible for the achievement of the LWD's MFO and committed to performance targets which are tracked by a reporting system within the year verified by LWUA.

*Disconnection* - a process of closing a registered active service connection on the ground of delinquent water bill payment and/or committing fraudulent practices on water and water facilities as provided in RA 8041.

*Freedom of Information*- Executive Order No. 2, series of 2016, entitled "Operationalizing in the Executive Branch the People's Constitutional Right to Information and the State Policies of Full Public Disclosure and Transparency in the Public Service and Providing Guidelines Therefore."

*FOI Decision Maker* - Personnel designated by the General Manager tasked to conduct evaluation of the request for information and has the authority to grant the request, or deny it.

*FOI Receiving Officer* - An employee designated by the General Manager assigned to receive on behalf of MFWD all requests for information and forward the same to the appropriate office who has custody of the records.

*General Information* -This section contains the company profile, such as the brief history of MFWD, mandates and functions, its mission and vision, service pledge, pumping stations and areas of operation.

*Low Income Group (LIG)* – the sector of residential consumers having the lowest capability to pay for water service. For this purpose, the minimum charge for ½ "residential connection should not exceed 5% of the average income of the LIG in the service area. This is measure of the reasonableness

of rates and has been regarded as the maximum amount that this income group can pay for their monthly bill.

*Major Final Output (MFO)* – the good or service that a water district is mandated to provide. Its external clients through the implementation of programs, activities, and projects. It may be a single output or group of outputs targeted at the same organizational/sector outcome and capable of being summarized by a common performance indicator.

*Operating Procedures* -Contains the step-by-step procedures and work instructions of MWFD. Activity flow charts are used to illustrate the different processes involved in daily operations.

*Operational Control and Supervision* -The powers of authority are described in this part as well as the supervisory and operational controls.

*Organization and Responsibilities* -In this part of the manual, the organizational structure was shown using a diagram as of year 2015, as well as the duties and responsibilities of every division.

*Performance Indicator (PI)* – a characteristic of performance (quality, quantity, timeliness or cost) that is to be measured and will illustrate the standard by which a water district is expected to deliver its MFO. Performance indicators should be verifiable, observable, credible and sustainable.

*Performance Target (PT)* - predetermined numerical target level of performance (quantity, quality, timeliness and cost of an output) against which actual performance can be compared.

*Potability* -the quality of water that renders it safe and fit for human consumption. LWD performance with respect to the indicator shall mean compliance to the Philippine National Standards for Drinking Water (PNSDW) and all issuances and guidelines by the Department of Health (DOH) and the Local Water Utilities Administration (LWUA).

*Potable water* - water supplied to consumers which is safe to drink and food preparation and other domestic activity

*Transparency* - a set of policies that allow citizens to access information held by authorities

*Water Bill* - a statement or invoice of a water consumption by a concessionaire

*Water Utility* -a government or private entity that provides and deliver potable water supply to the public.

*Static Water Level* – The vertical distance from ground level to the water in the well when no water is being taken out.

*Well Yield* – The volume of water can be withdrawn from the well over a period of time and measured in cu.m/hr or cu.m/day.

*Pumping Water Level* - The vertical distance from ground level to the water surface in the well during pumping.

*Drawdown* – The difference between the pumping water level and the static water level.

### III. GENERAL INFORMATION

It started with a 367 service connection on July 7, 1988 when a Sanguniang Bayan Resolution No. 48 of the same date was passed under the flagship of then Honorable Mayor Johnny C. Albarece. The formation was moved to answer the clamoring demand of sufficient water supply and efficient water service delivery within barangay Tankulan, Manolo Fortich, Bukidnon. It was also a response to the national call of water crisis in the country in which Presidential Decree 198 was issued otherwise known as Water Utilities Act of 1973.

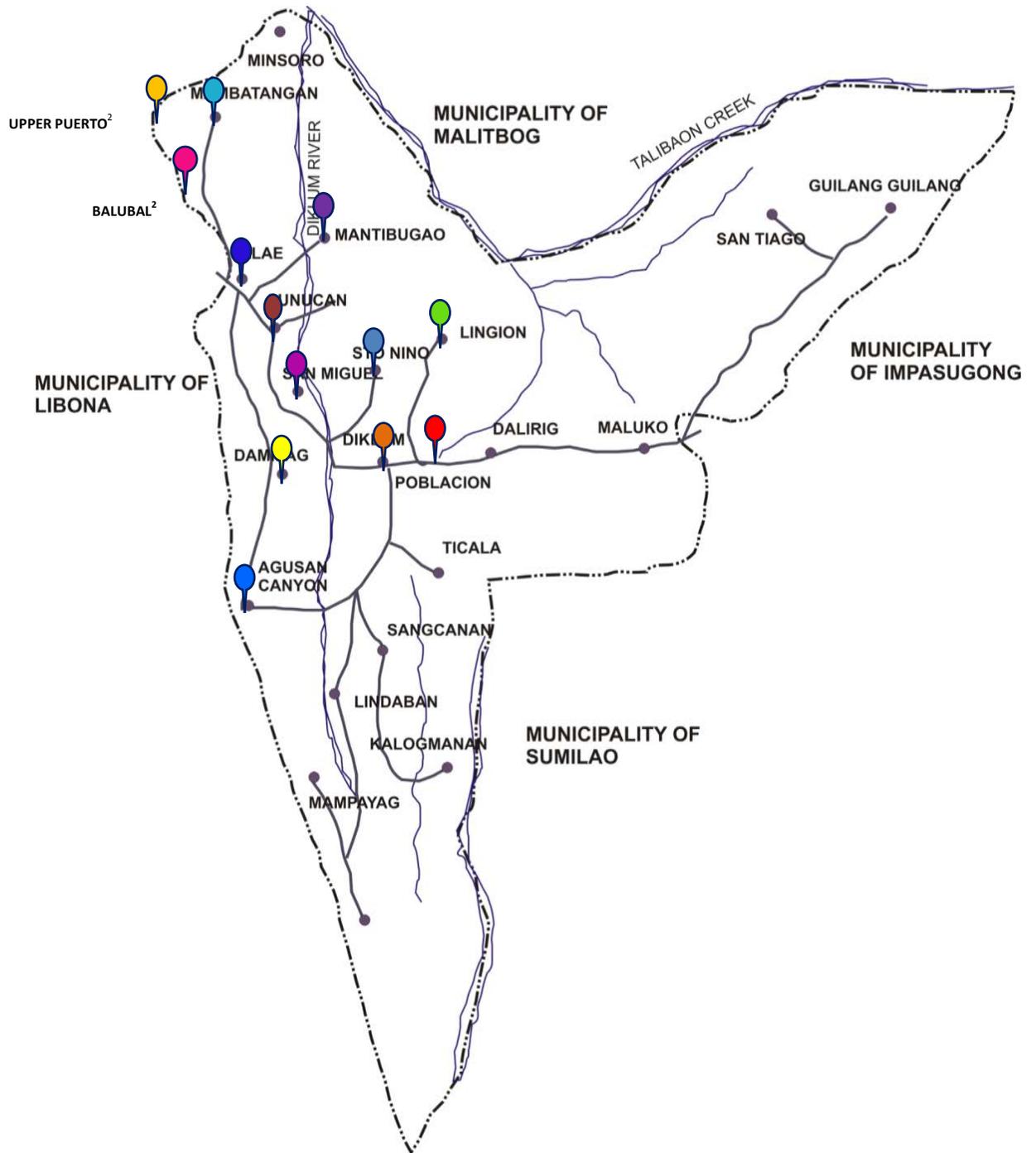
Along with the formation of Manolo Fortich Water District was the appointment of the pioneer set of Board of Directors who represented the five (5) various sectors in the community as follows:

Name of Appointed Board of Director	Sector Represented	
(Ret.) Col. Hilario B. Fernandez (D)	Civic	Chairman
Rev. Gaudencio Sustento	Education	Vice Chairman
Erlinda M. Derayunan (D)	Women	Secretary
Vincent M. Tabaco	Business	Member
Candido M. Pancrudo	Professional	Member
Apolinario Abrio		General Manager

From the mere 367 service connections in the lone barangay of Tankulan, MFWD is currently serving 13 barangays, 11 of which is out of the 22 barangays of Manolo Fortich while the 2 is from the adjacent city of Cagayan de Oro. MFWD delivers safe and potable water supply to a total of 9,284 active service connection<sup>1</sup> through a total of 90,009.0 meter stretch of transmission and distribution pipelines in various sizes to an estimated 55,704 people.

MFWD is a category C water district Under the Local Water District Manual on Categorization, Re-categorization and other related matters (LWD-MaCRO), effective March 2012.

Figure 1: Geographical Map of MFWD served area.



<sup>1</sup> as of October 31, 2017

<sup>2</sup> Barangays of Cagayan de Oro City served by MFWD

#### IV. MANDATES and FUNCTIONS

The Manolo Fortich Water District as water service provider has the mandate to operate, improve, maintain and expand service delivery of affordable, potable and safe water supply for domestic and industrial uses to all residents with in Manolo Fortich and nearby cities and municipalities where it is considered necessary. MFWD shall manage a system of water distribution that will be accessible to all sectors of society, ensure uninterrupted and adequate water and conduct other functions and operations incidental to water resource development, proper utilization and disposal.

**VISION:** To become a leading agency in environment protection for a sustainable delivery of safe, potable and affordable water supply and provides waste water services for a healthy community

**MISSION:** MFWD is committed to provide excellent water service to the community with dedication, integrity and transparency through employee empowerment and community involvement.

**OBJECTIVE:** To provide the community with quality services, efficient water system and assures safe and potable water.

**VALUE STATEMENT:** We, the officials and employees of the Manolo Fortich Water District:

**W**illingly works promptly to

**A**ttend all concessionaires' needs, with transparency, accountability, dedication, loyalty and integrity; as it gears

**T**owards efficient delivery of potable water to the community;

by

**E**nabling every employee

**R**esponsive to the call of

## **SERVICE**

### **V. ORGANIZATION and RESPONSIBILITIES**

MFWD's Organization Structure and Staffing Pattern is anchored on the structure set by LWD-Macro which consists of four (4) divisions being a Category C water district. However, with the current number of concessionaire, MFWD set up its functional organization structure (Fig. 2) which can still carry out effectively its mandate as water service provider. This lean structure consists of the Administrative, Commercial and Finance Division and Engineering and Maintenance Division. Each division heads reports directly to the General Manager who is the primary responsible for the management and performance of the water district, and who in turn reports to the Board of Directors; the policy-making body of the agency.

#### **The BOARD OF DIRECTORS**

The primary function of the Board of Directors is policy making. The Board of Directors passes resolutions and formulate policies to ensure availability of adequate financial resource to sustain quality water service to the people, thus approves annual corporate budget of the water district.

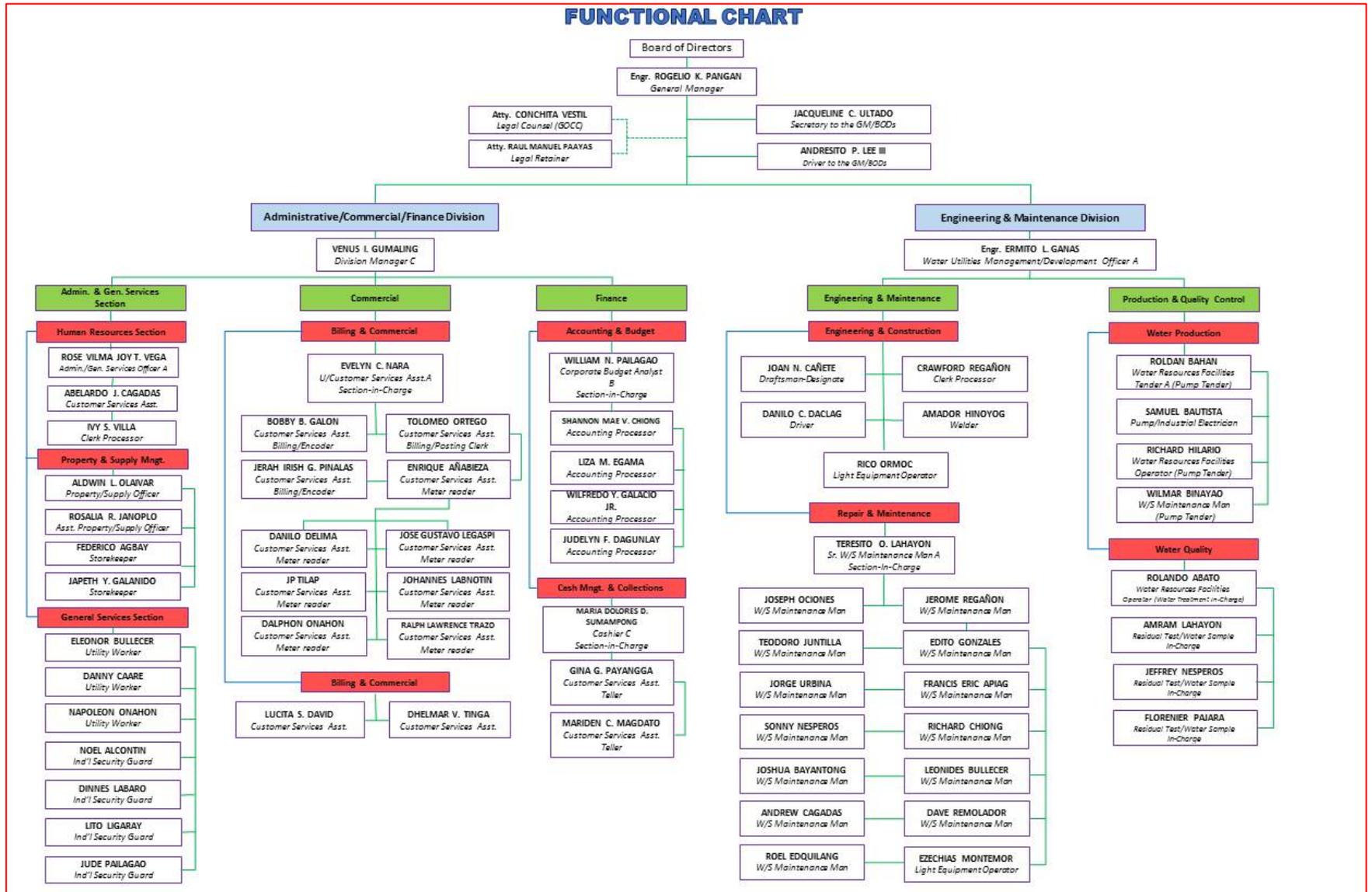
The Board of Directors is composed of five (5) members representing the five (5) sectors of the community namely; Business, Civic, Education, Professional and Women. Board of Directors are appointed by the local chief executive. No public official or government employee can be seated as Board of Director of the water district.

#### **The GENERAL MANAGER**

The General Manager's primary function as the overall in-charge in the administration of the district's management, operations and implementation of programs and services. The General Manager is also responsible for the implementation of rules, regulations and policies

formulated by the Board of Directors. He has the strategic support in planning, performance monitoring on operation and maintenance, and strong financial control to ascertain sustainability of MFWD operation as service provider of the basic need of human being- water. He has the responsibility of establishing linkages with other government and non-government agencies, stakeholders, beneficiaries in the implementation of the district's social responsibilities such as protection of the environment and other activities encompassing attainment of the agency's goal.

Figure 2. MFWD Functional Structure





## DUTIES AND RESPONSIBILITIES

### Board of Directors

The primary function of the Board of Directors is policy making. The Board of Directors passes resolutions and formulate policies to ensure availability of adequate financial resource to sustain quality water service to the people, thus approves annual corporate budget of the water district.

All powers, privileges and duties of the district is exercised and performed by and through the board. While all powers and authority of the water district are vested in its Board, its specific and proper function is the following:

To enact policies and rules for the water district;

To set the overall goals and objectives of the organization;

To approved budgets, plans, major contracts, and undertakings; and

To evaluate the performance of the water district and its management.

The board should limit itself to fulfilling these functions, using board meetings as their venue. The transparency, improvement and systemization in governance are overseen by the board of directors. The BOD is guardian of fairness, transparency and accountability in all major financial and business dealings of the WD in order to serve its mandate.

### The General Manager

The General Manager's primary function is being the overall in-charge in the administration of the district's management, operations and implementation of programs and services. The General Manager is also responsible for the implementation of rules, regulations and policies

formulated by the Board of Directors. He is responsible in establishing linkages with other government and non-government agencies, stakeholders, beneficiaries in the implementation of the district's social responsibilities such as protection of the environment and other activities encompassing attainment of the agency's goal.

The General Manager is also responsible of fulfilling the goals and objectives of the water district, prepare effective plans and recommend the same to the Board of Directors for approval. It is the duty of the general manager to make accurate and timely reports for the Board to be updated on the district's performance.

Most of these functions the General Manager fulfills indirectly but through the management team and the operating staff. As such, leadership, decision-making, communication, staff development, and problem solving are the focus of his day-to-day activities. Being in-charge of the day-to-day operations of the water district, it is he manager's responsibility to ensure the success and sustainability of the water district and he is answerable to the Board of Directors for the result of day-to-day operation of the water district.

#### Administration/General Services, Commercial and Finance Division

This division is headed by a Division Manager C with the following sections to oversee: Administrative, General Services, Human Resource Management and the Accounting and Finance and Commercial Sections.

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#### Administrative Section

Administrative section is responsible for the Human Resource management of the water district. It is also responsible for plant tours,

media and LGU relations and linkages with other government and non-government agencies. It has the focal person for the implementation of the Gender and Development program of the government and other related activities. The section oversees the procurement processes and details to ensure proper implementation of RA 9184 otherwise known as the Government Procurement Act and assist in the implementation of plans activities and programs in order to achieve the set goals and targets of the district.

It also serves as alter ego of the head of the agency.

#### General Services Section

The General Services Section is responsible in the optimum and prudent use of the district's vehicles, Property, Plant and Equipment. It monitors usage of motor vehicles of the district as well as just appropriation of fuel use for the operation. the section has the responsibility to look after the total housekeeping, maintenance and security of the administration building and equipment. It takes in-charge of storekeeping of supplies and materials and its issuances for the operation.

#### Human Resource Management Section

The Human Resource Management section is responsible in determining personnel requirement of the water district to conform to the LWUA set Productivity Index of 1 employee per 120 service connections (1:120).

The section is responsible for the actions in human resources management:

1. Acquisition of the needed personnel, thus spearheads the recruitment and selection of applicants.

2. It also serves as agent for the development and provides learning intervention to individual to fully

equip them with knowledge and skills necessary in the performance of their respective

functions and work assignments.

3. Formulates incentive, reward and recognition scheme of the agency, recognizing exemplary

performance of individual or group of employees by giving incentives and rewards in various

forms.

4. Acts as champion for the implementation of the Strategic Performance Management System

(SPMS) of the agency as mandated by the Civil Service Commission.

5. Develops of retirement program of employees.

6. Implement proper/appropriate actions in employees' discipline

7. Keep tract and monitor employees and officers attendance, leave of absences and time record

8. Keep and maintain updated employee profile and 201 files.

9. Collate accomplished Statement of Assets Liabilities and Net worth (SALN) of employees and officers and submit summary to the Office of the Ombudsman for the implementation of RA 6713.

#### Accounting and Finance Section

Is responsible for the collection and disbursement of the district's funds. It is in-charge for the recording and summarizing the financial transactions of the office which includes among others; preparation of Financial Reports and Inventory Management. The section also is responsible for the Budget Preparation and assist in proper allocation and distribution of budget and monitoring of budget performance.

Accounting and Finance Section deals with the preparation of Financial Reports based on approved Annual Budget and determines financial resources available to carry out water district programs; implements procedures on cash management particularly safekeeping; disbursement, and control of funds, collection of water bills and other revenues, prepares and maintain financial records and reports including those related to the General Ledger, Accounts Payables and Receivables, payrolls, budgets and fixed assets; Manages cash, investments, and debt-servicing management activities; conducts regular inventories on supplies and materials, equipment including other properties of the District.

#### Commercial Services Section

Commercial section is responsible for the welfare of the district's concessionaires/clients. This section is responsible for the regular meter reading and billing of concessionaires' water consumption; collection of

water sales; prepares notices to delinquent accounts, follow up the same to enhance collection efficiency; maintains accurate and updated individual customer ledger cards, receives, processes application for new service connections. The section also attends to customers complaints, query and requests and act upon accordingly for their satisfaction. It is also the section's responsibility to formulate strategies/programs for the concessionaires' benefit and implements provisions of RA 8041 otherwise known as the Water Crisis Act of 1975. Thus, this section is responsible for the conduct of investigation for any fraudulent practices relative to water supply and water services as provided for by the law. Responsible for the water meter maintenance and disconnection and reconnection of service lines.

#### Engineering and Maintenance Division

The division is manned by an in charge with the position of Water/Utilities Management/Development Officer A. Engineering and Maintenance Division is composed of two sections namely; Engineering and Maintenance and the Production and Quality Control sections.

#### Production and Water Quality Division

It is responsible for the following functions: Determines water production requirements and ensures the sufficient steady supply of water to the service area; maintain the general upkeep of water pump stations, storage and treatment facilities; monitors system water pressure, water level to ascertain equal distribution of water supply to all concessionaires; monitor water quality by conducting regular chlorine residual test, collect water samples for water analysis, bacteriological for potability and for physical and chemical tests. Results to water analysis are set to meet the

standards of PNSDW making sure that water delivered to every household is safe and potable.

## Engineering and Construction Section

It is responsible for the installation of new service connections; attends to the repairs and maintenance of water distribution lines; performing major and minor plumbing services. Install new water service connection and reconnects closed connections. Conducts feasibility studies and plans program of works and implements projects/programs on extension, expansion, rehabilitation and improvement of water supply system, facilities and other structures. Responsible for gathering and keeping data for analysis and future references.

## OPERATIONS CONTROL AND SUPERVISION

### General Manager

Oversee the entire day to day operation of the water district

Regular conduct of staff and committee meetings;

Preparation of agenda for Board meetings;

Implementation of agency's policies, rules and regulations;

Participation in district's activities with other organizations.

Check and review the financial activity of the district to ensure sustainability of operation

### Administrative, Commercial and Finance Division Manager

Directly coordinate and report to the General Manager for updates on the Administration, General Services, Commercial Services, Financial activities and Human Resources Management and concerns

Develop operational strategies that will ensure attainment of the district's goals and targets;

Coordinate and assist the General Manager in planning short and long term projects and

programs, budgets and expense control, water rates implementation and other commercial

activities

Champions manpower recruitment, development, retention and retirement programs.

Preparation of Creation, Reclassification and upgrade of Positions;

Conduct on in-house training and establish linkages with other organization for learning and development of personnel

#### Water/Utilities Management/Development Officer

Coordinate with the General Manager on the daily operation of the district in terms of water production, distribution and maintenance;

Prepare Feasibility studies and program of work for the district's expansion, extension and rehabilitation projects;

Implements programs and projects of the agency to improve water service delivery to the concessionaires;

Develop program and recommends the same to the General Manager for reduction of NRW;

Oversee maintenance and upkeep of water facilities to ensure delivery of water supply to concessionaires 24/7. This includes pipping stations, intake boxes, storage facilities, transmission and distribution lines chlorination equipment and generator sets;

Coordinate and assist the General Manager in planning short and long term projects and programs, budgets and expense control, water rates implementation and other commercial activities

Monitor conduct of water analysis for bacteriological test, physical and chemical tests to ensure safe and potable water delivered to concessionaires;

## OPERATING PROCEDURES

### VIII.1 Administration

The success of any organization depends largest on the basic factor that runs the organization – the people, the quality of workforce the agency possesses. MFWD, a government entity providing water service to community is an organization composed of a set of five (5) Board of Directors, a General Manager and the equally qualified and competent staff.

The Board of Directors formulates policies and regulations to carry out the business affair of the office. The Board holds twice a month meeting to discuss issues and concerns of the affair of the district based on the regular reports provided by the general manager. The Board of Directors are allowed and may hold 2 special board meeting when necessary.

The management headed by the general manager is supported by the operating staff manning different divisions of the district as they handle the day-to-day operation of the water district.

#### Performance Parameters and Key Indicators

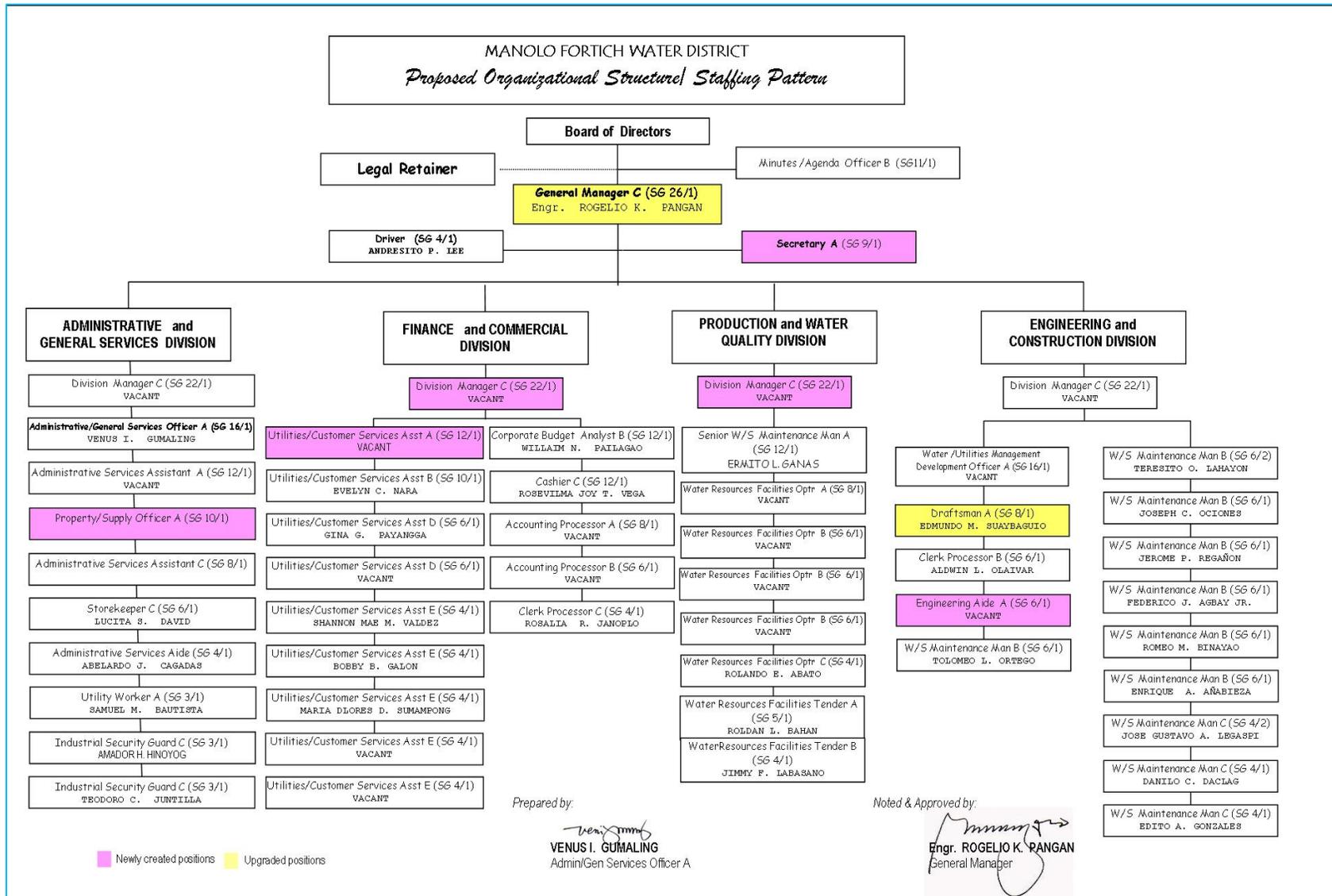
To level up service delivery of government agencies in which local water districts are being counted considering its trust of providing water services, a series of issuances, guidelines and memorandum circulars were passed by the Department of Budget and Management and the Local Water Utilities Administration in which MFWD is bound to implement. To assess the performance of a LWD, to the satisfaction of the public served, a set of standard Major Final Output (MFO) and Performance Indicators (PI) were established and each water districts are mandated to adopt as follows:

Major Final Output	Definition
<b>WATER FACILITY SERVICE MANAGEMENT</b>	
PI 1 (Quantity) Access to Potable Water	Percentage of Barangay with access to potable water against the total number of barangays within the coverage area
PI 2 (Quality) Reliability of Service	Percentage of household connections receiving 24/7 supply of water
PI 3 (Timeliness) Adequacy	source capacity of LWD to meet demands for 24/7 supply water
<b>WATER DISTRIBUTION SERVICE MANAGEMENT</b>	
PI 1 (Quantity) Non Revenue Water	Percentage of unbilled water to water production
PI 2 (Quality) Potability	Average deviation from the parameters set forth under PNSDW of 2007 from January 1 to December 31
PI 3 (Timeliness) Adequacy/Reliability of Service	Average response time to restore service when there are interruptions based on the Citizen's Charter of LWD proposed for approval by the CSC
<b>SUPPORT TO OPERATION (STO)</b>	

PI 1 Staff Productivity Index	The Staff Productivity Index shall be one (1) staff for every one hundred (100) service connections for Category D WD; and one hundred twenty (120) service connections for Category C,B,A WDs
PI 2 Affordability	Reasonableness/Affordability of water rates to consumers with access connections. Water rates for first ten (10) cubic meters (cu.m) must not exceed 5% of the average income of low income group.
PI 3 Customer Satisfaction	Percentage of customer complaints acted upon against received complaints.
<b>GENERAL ADMINISTRATION AND SUPPORT SERVICES (GASS)</b>	
PI 1	Financial viability and sustainability of LWD operations (Collection Ratio, Operating Ratio, Current Ratio)
PI 2	a. Compliance with COA reporting requirements in accordance with content and period of submission. (Submission of five (5) financial reports, i.e Balance Sheet, Statement of Income and Expenses, Statement of Cash Flows, Statement of Government Equity,

	<p>Notes to Financial Statement, Report on Ageing of Cash Advance)</p> <p>b. Compliance with LWUA reporting requirements in accordance to content and period of submission.</p>
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Figure 3. MFWD DBM-Approved Organizational Structure and Staffing Pattern



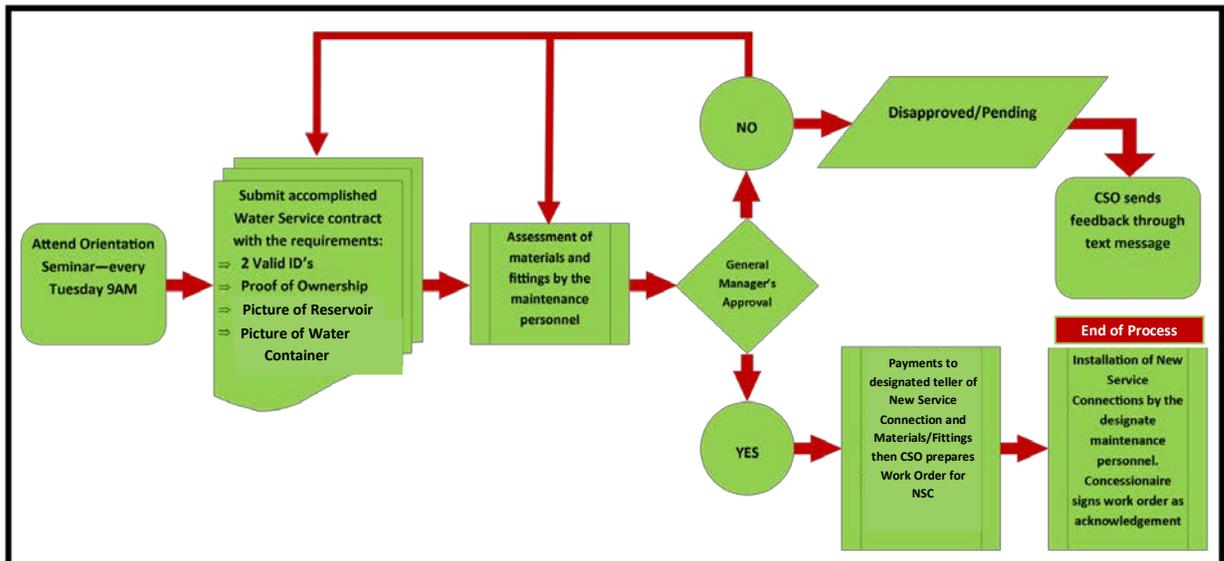
## VIII.2. Commercial Services

Commercial section receives and process service connection applications and attends to customer's complaints and requests. It also serves as the investigation body concerns pertaining illegal connections and other fraudulent practices on water, water use and water facilities as provided by the RA 8041.

### Application of New Service Connection

To avail of the basic services of the water district that is to have water right at home is to apply for a water service connection. Shows details on the process.

See Figure 4. Process Flow on Application of New Water Service Connection



## Water Meter Reading and Billing

Water districts are autonomous government owned and control corporation in terms of financial sustainability. It solely depends on its water sales and other miscellaneous service revenue. Monthly water meter reading and billing are such activity to generate revenue for the district.

Individual water meters are read. Readings are recorded in a meter reading card.

Water meter readers submit all reading to the billing section for computation of individual concessionaires' monthly water bill.

Utilities/Customer Services Assistant (Billing Clerk) will encode water meter reading. Apply appropriate command on the Water billing and collection program (WBCS) to generate individual water bills

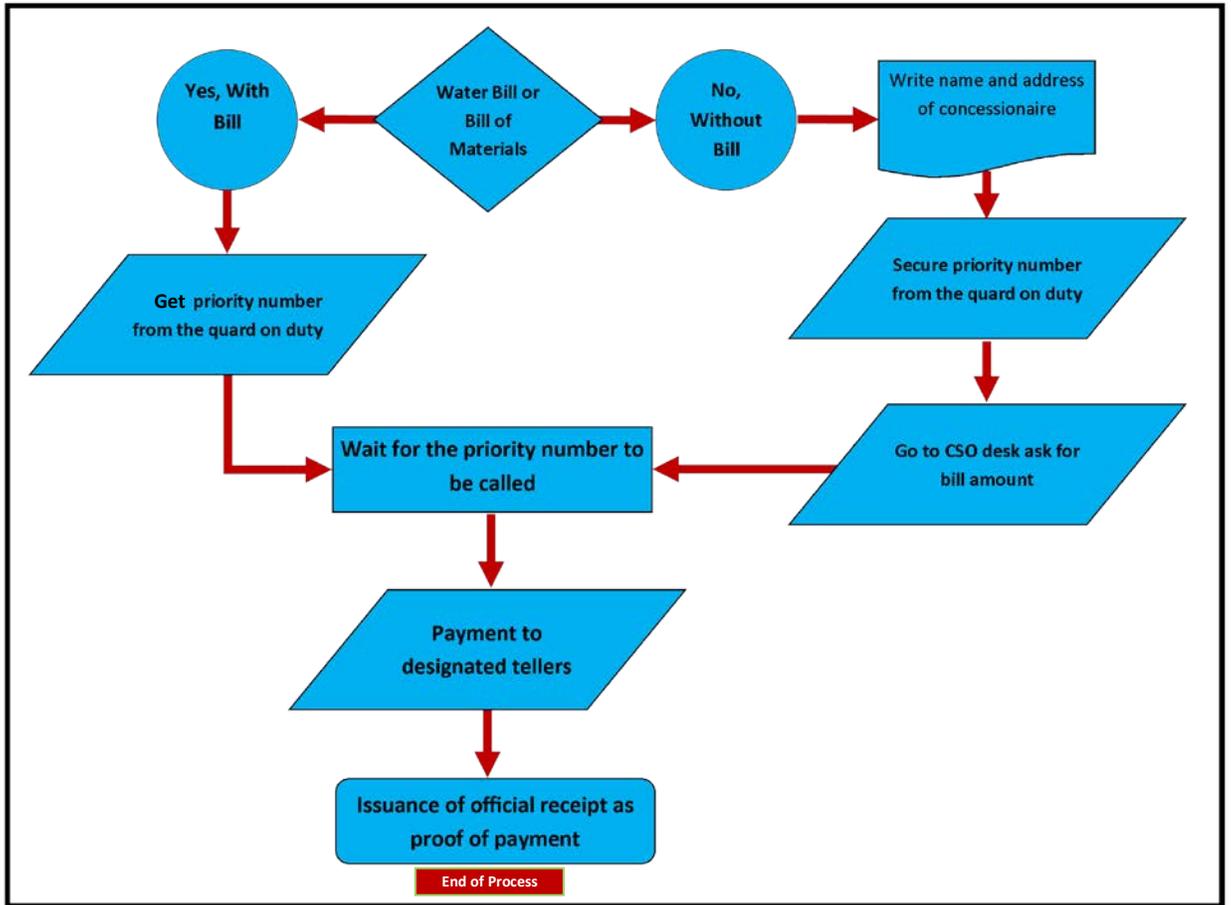
Utilities/Customer Services Assistant (Billing Clerk) double checks generated water bill, post the same to back up hard individual customer ledger cards.

Water bills will be endorsed to water meter readers for distribution to concessionaires at their respective addresses.

## Collection of Water Bill and Other Accounts with MFWD

For the district to sustain operation of water delivery, the need to collect all lawful concessionaires' payable to the water district is necessary. Appropriate policies were formulated to strengthen collection of water bill and other accounts. Concessionaires must pay their accounts in the official teller/collection officer at MFWD office. An Official Receipt (OR) will be issued by the teller to acknowledge receipt of payment. .

Figure 5. Payment of water bill and other accounts



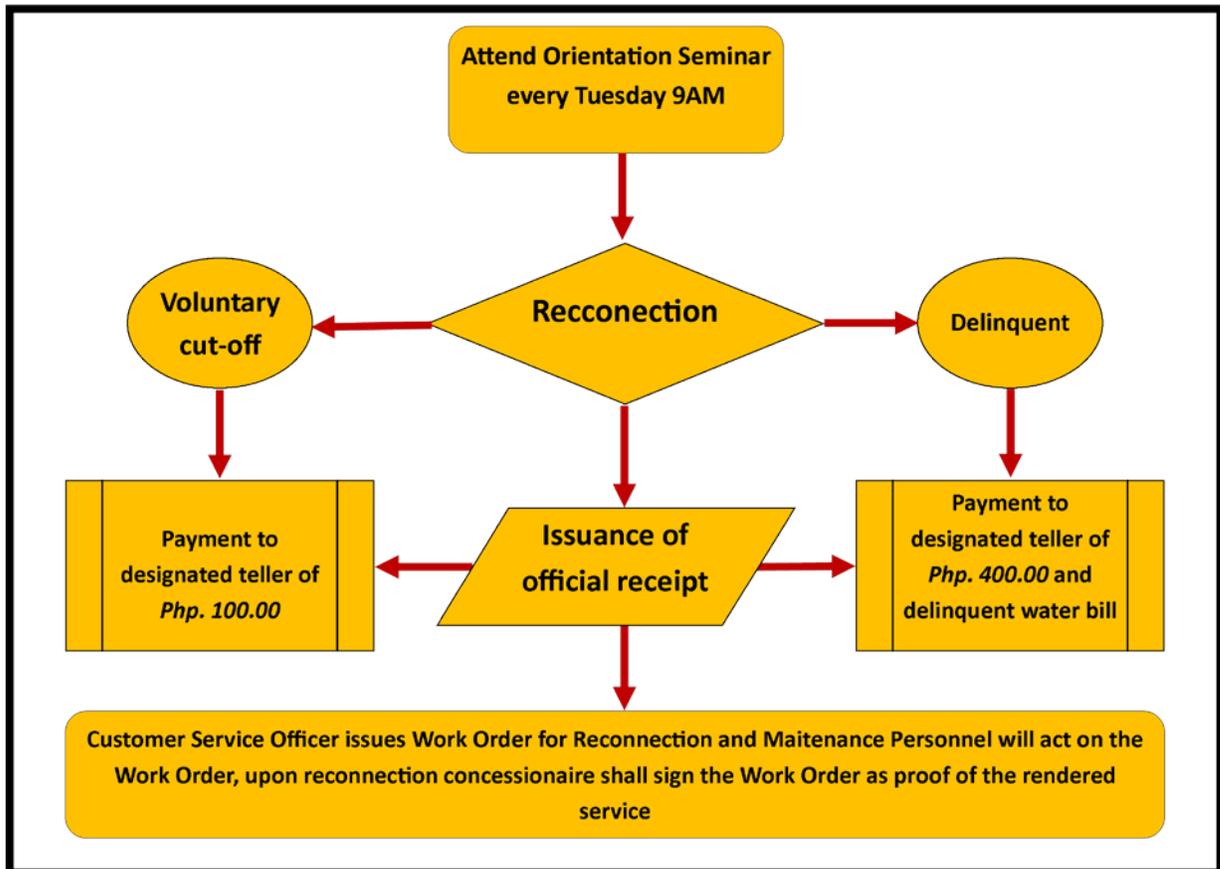
### Application for Reconnection

The Board of Directors passed a one-month disconnection policy on water bill delinquency. Service connection with accounts after due date are given seven (7) more days to have their accounts settled. Otherwise, said service connection will be closed.

Aside from non-payment of water bill, the district may close/disconnect service connections which are illegally tapped, or found to have violated provisions of Republic Act 8041, otherwise known as the “Water Crisis Act of 1975”. Reconnection of closed /disconnected service connection in violation to RA 8041 is subject to penalty and other lawful charges.

When closure of service connection is due to delinquency, the customer may request reopening/reconnection of the same after complying requirement and payment of unpaid water bills, reconnection fee and other charges.

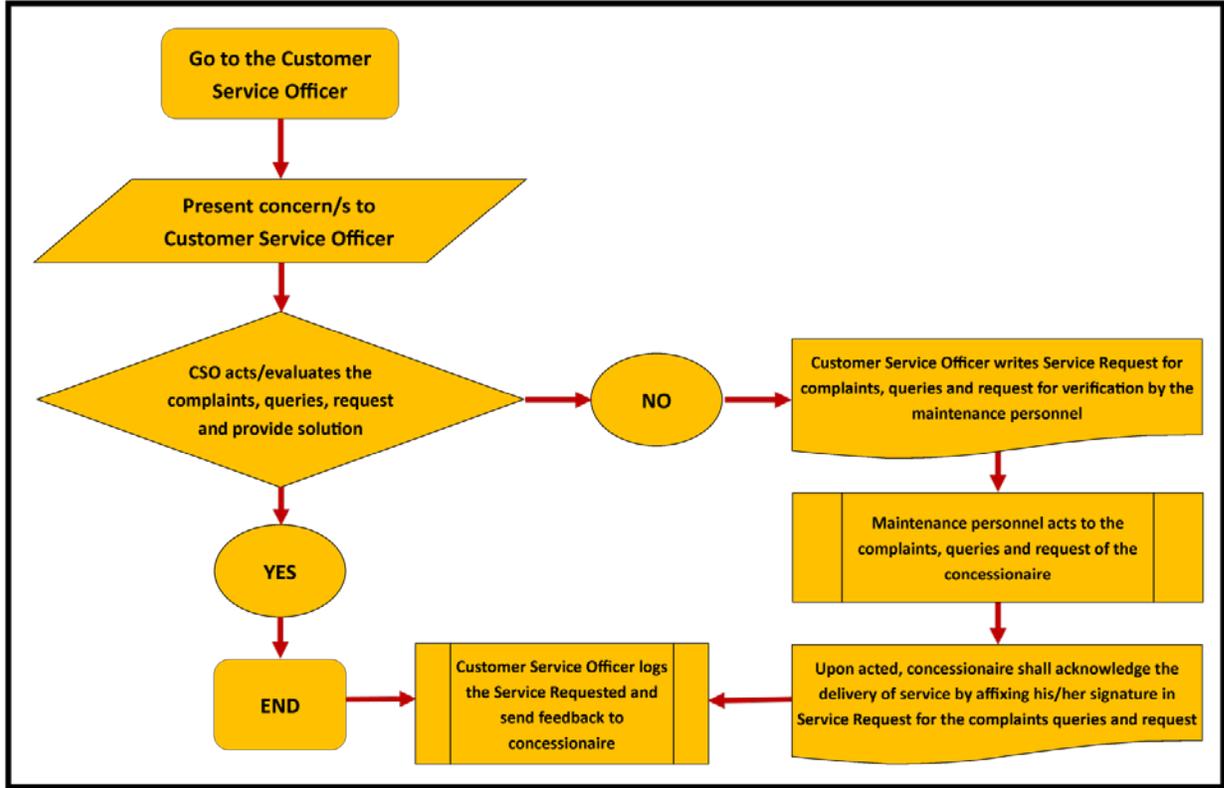
Figure 6. Request for Reconnection of Closed/Disconnected Service Connection



### Attending Customers' Complaints

Being a service utility, satisfaction of the customer is a priority. Thus, immediate action and response to complaints and queries is necessary. For any customer's concern, process flow below will guide concessionaire to avail services as requested by concessionaire.

Figure 7. Attending Customer complaints, Requests and Queries.



### VIII.3. Accounting and Finance

#### Budget Preparation

Budget are plans dealing with the acquisition and use of resources over time. It is quantifiable and can be expressed in terms of money, time, acquisition and use of materials, production volume number of service connections among others. In the local water district, budget here implies planning on the use of income generated from water sales and expenditures for the operation of the district.

The budget is prepared at beginning of the 4<sup>th</sup> quarter, based on the actual financial operations of the district. The budget is approved by the Board of Directors and further endorsed to the regulatory bodies such as DBM, COA and LWUA.

The General Manager, the Bookkeeper and the Board of Directors plays their unique vital role in the preparation of budget as follows:

#### GENERAL MANAGER

1. Obtain from the bookkeeper data needed for budget preparation:

Actual water revenue for nine (9) months

Actual miscellaneous service revenues for nine (9) months

Actual collection for nine (9) months

Active connections as of the beginning of the  
quarter with different classification

2. Based on the above data, the GM computes the estimated water revenues

per meter size and service connection classification and the estimated miscellaneous service revenues.

3. After preparing the estimates, computes the collections and reviews the

estimated expenses prepared by the bookkeeper.

Based on proposed programs and estimates, the GM solicits from the bookkeeper, billing/collection head and the engineering in charge for any requirement needed in performing their assignments which will be included in the budget preparation for the coming year.

Consolidates the estimated revenues and expenses in the Projected

## Revenue and Expense Budget

6. Forwards to the Board of Directors for review and approval.

### BOOKKEEPER

Gets from files the details of actual expenses incurred in the last nine (9) months for operation and maintenance expenses

Based on the above data, the bookkeeper computes the estimated maintenance and operation expenses, taking into consideration the projected operations of the next year.

Discuss with the General Manager the estimated expenses and secures approval.

### BOARD OF DIRECTORS

Reviews budget proposal and hear justifications of the General Manager on the proposed budget.

Make corrections if necessary/if there is any and approves the same

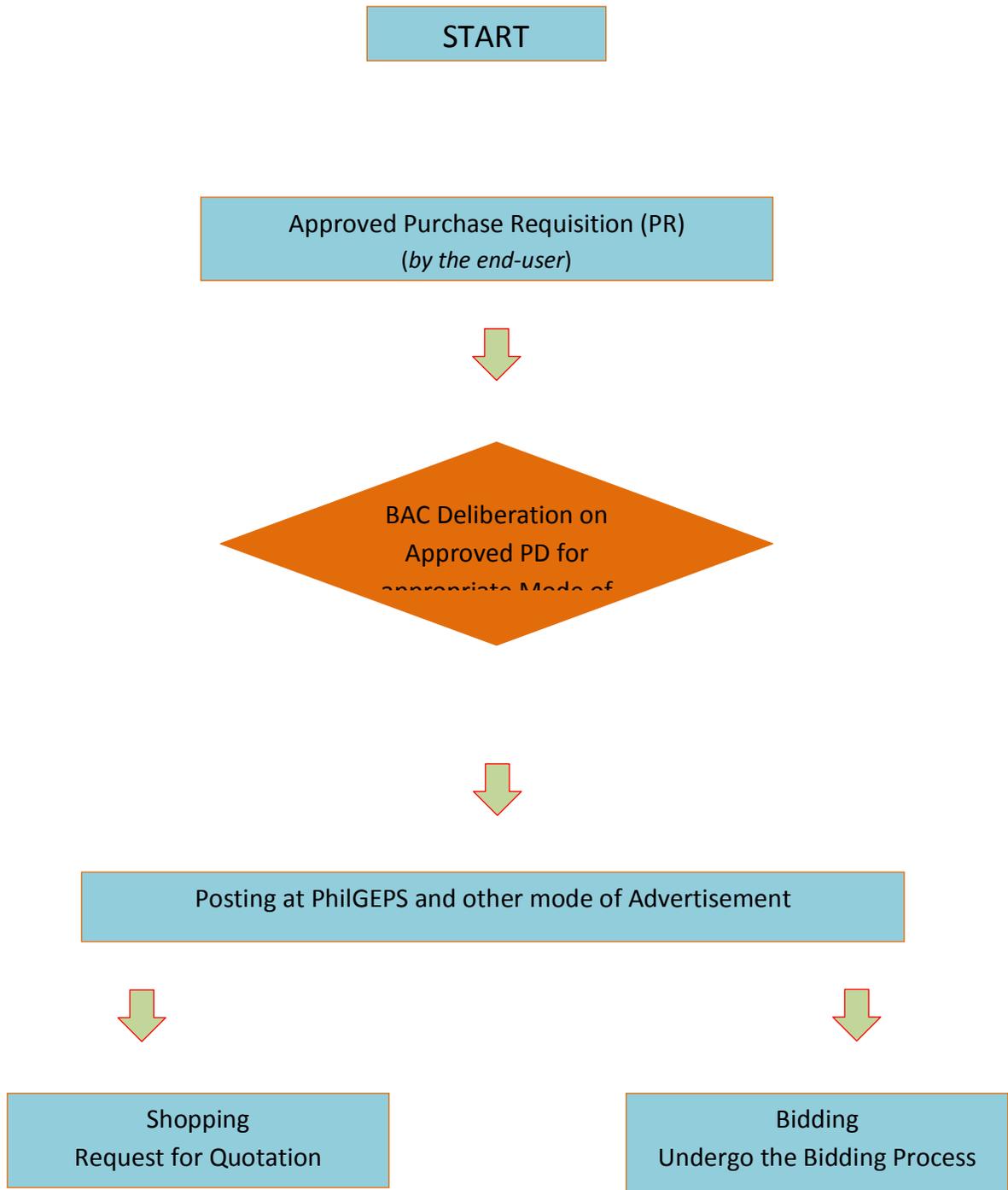
Move for a resolution adopting the approved budget proposal.

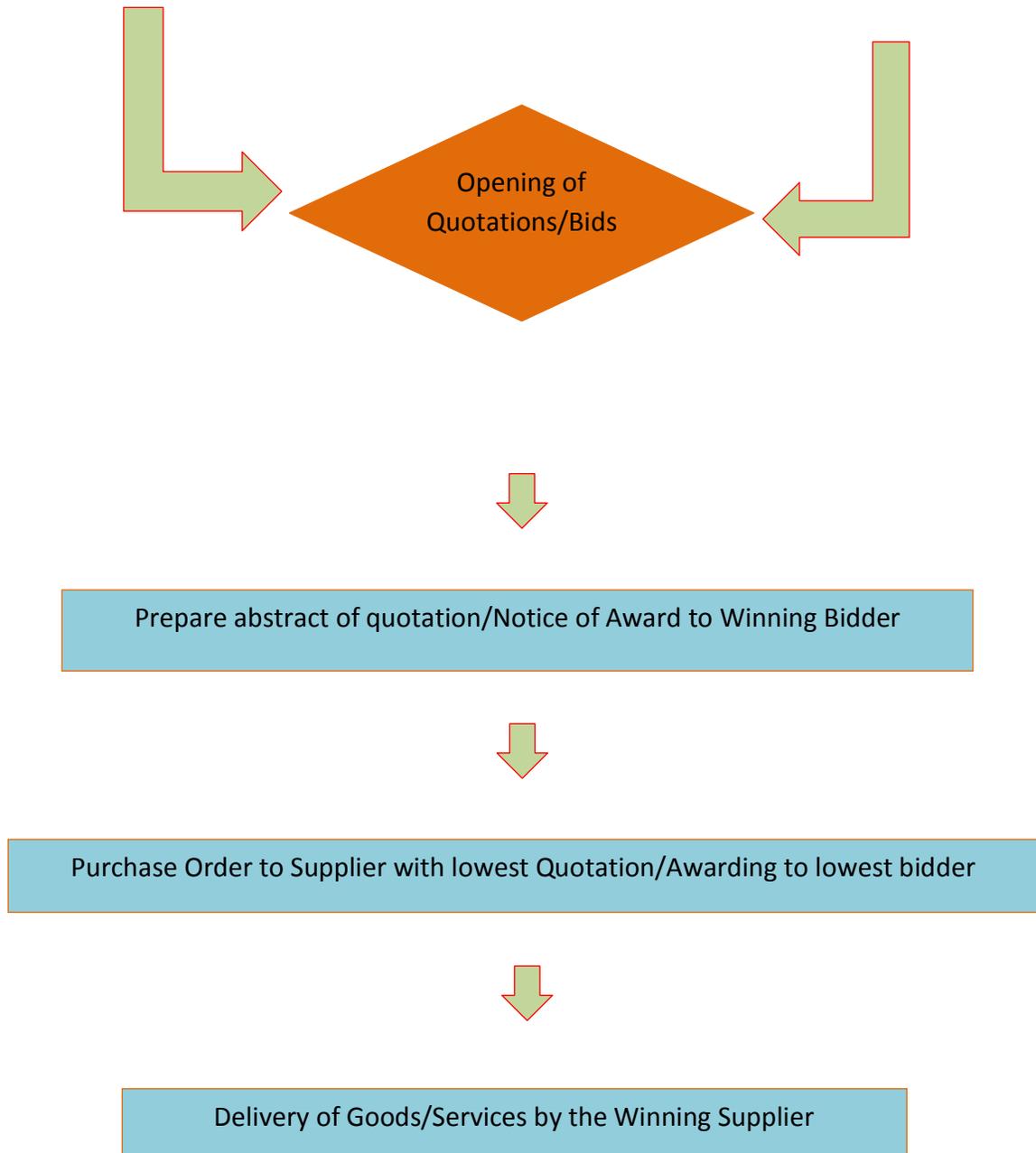
## Disbursement Procedures

The water district maintains a disbursement procedure to monitor expenses of the operation as part of its control system. Disbursement covers the following transactions of the water district: Payroll, operational expenses, Capital Expenditures, Debt Service, New Connections, Maintenance Expenditure and Emergency Procurement.

## Procurement Procedures

RA 9184 otherwise known as Government Procurement Act mandated all government agencies to observe the proper procurement of goods, infrastructure and services and acquire such requirement at prices most advantageous to the government. With the said law and call from the national government, MFWD has reconstituted its own set of Bids and Awards Committee to perform the functions mandated by the above Republic Act. The following is the process flow for MFWD procurement procedure:





#### VIII.4. Water Production and Distribution

##### Pumping Test

From the water system's perspective, the pumping test is the best method by which to size and start the optimal depth setting of the pump, as well as

establish water system storage and operational needs. Pumping test involves applying a stress to an aquifer by extracting groundwater from a pumping well and measuring the aquifer response to that stress by monitoring drawdown as a function of time.

#### Equipment and Tools Requirement

Flow Meter

Water Level Indicator

Stopwatch

Pumping unit (submersible pump with a capacity greater than the yield requirement by at least 20%)

Personnel Requirements

#### Procedure

Before starting pump, static water level is measured and recorded.

After starting the pump, ensure the corresponding water levels. Discharge should be greater than the required yield and should be maintained to constant rate during the entire duration of the test for 24 hours. Measurements intervals should be as follows:

Time from start of pumping (min)	Time intervals between measurements (min)
0-15	0.5 – 1
10-15	1
15-60	5
60-300	30
300 – shutdown the pump	60

Measure the water level simultaneously, take measurements of discharge.

Monitor nearby wells to determine effects during pumping.

Right after the end of the pumping test, measure the water level recovery.

Accomplish pumping test data on Pumping Test Data Collection Sheet

Plot the data obtained from the test on a semi-logarithmic paper showing the time in the abscissa (x axis) and the drawdown in the ordinate axis (y axis).

### Valve Operation Procedure

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;

Valves should be opened and closed slowly at an even rate to reduce the risk of water hammer;

Valves are opened by turning the hand wheel or key counterclockwise;

Always consult the manufacturer's instructions for operating a specific type of valve. It is good to practice to operate valves periodically.

To check whether a valve is operational or not

First to do is to close the valve completely and then open it completely;

Back off on the valve about one turn to avoid locking it in an open position, and;

If the valve does not operate properly, repair or replace at once.

## Chlorine Dosage and Demand Method

Dose the water supply randomly with a 1 mg/l amount of chlorine using chlorinator

Wait for 30 minutes and measure the chlorine residual

If residual is zero or less than 0.20 mg/l at the dead end, increase the dosage until the right residual level is obtained

If residual is more than 0.50 mg/l, then the dosage can be reduced.

c.1. For disinfections of water supplies

Dosage : 0.5 – 2.0mg/l

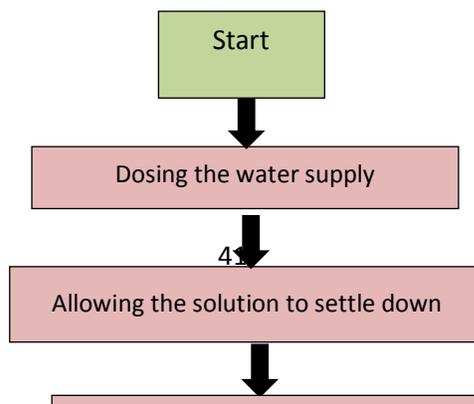
Contact Time: 20-30 minutes

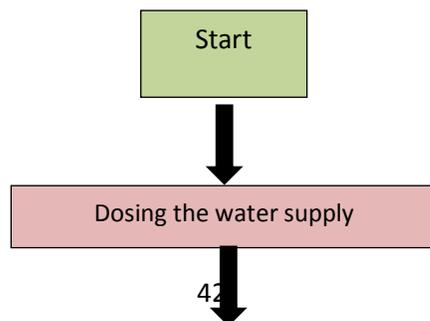
c.2. For disinfection of newly constructed/repared pipelines, spring box

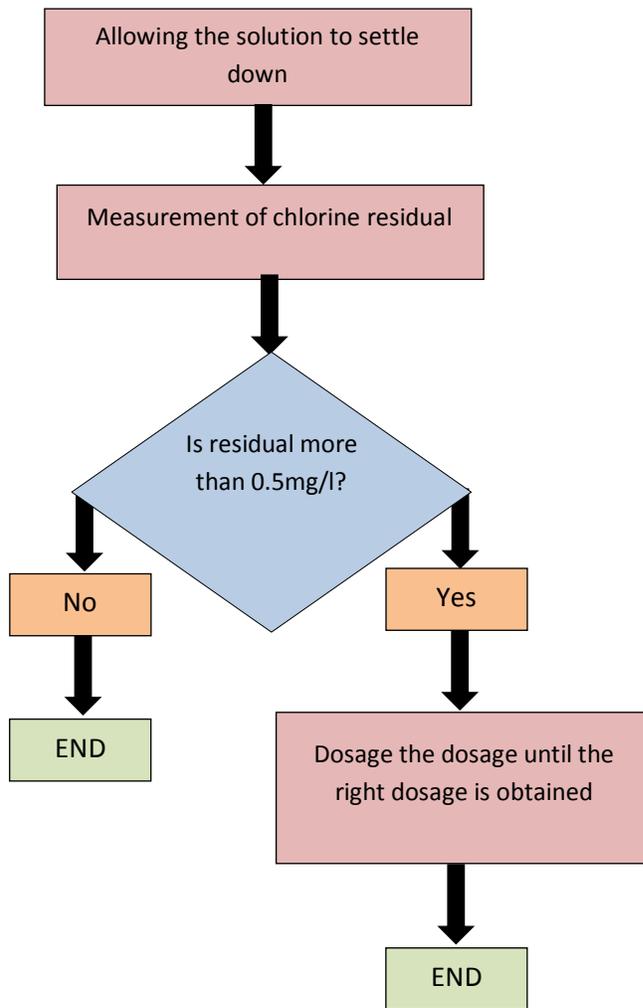
Dosage: 50mg/l

Contact Time: 24 hours

c.3. Chlorine Dosage and Demand Method (Process Flow)







#### c.4. Measuring Chlorine Residual Using Chlorine Comparator

The general procedures in measuring the free chlorine residual using a comparator is as follows:

Fill a viewing tube with 5 ml sample water and place this tube in the top left opening of the comparator;

Fill a second viewing tube with 5ml sample water;

Add the content of one DPD Free Chlorine Reagent sachet to the second tube and swirl to mix;

Place the second tube in the top right opening of the comparator;

Hold comparator up to a light source and look through the opening in front;

Rotate the color disc until the color in the 2 opening match;

Read the mg/l free chlorine in the scale window. (This reading must be done within one minute after adding the powder reagent);

If the free chlorine residual is lower than 0.1mg/l, proceed with the total chlorine residual test using the same procedures as above but with the total chlorine reagent sachet;

If the total chlorine is higher than the free chlorine, it is clear that combine chlorine is present. In that case you need to increase the chlorine dosage.

*Note:* Chlorine residuals in water of greater than 0.7mg/l can be already be tasted. Unless otherwise indicated for health reasons, it is best to keep residuals below this level to avoid taste issue and to reduce chemical cost.

#### Water Sampling and Analysis for Microbiological Quality

To reassure the safety and acceptability of drinking water supply, Manolo Fortich Water District transmits out sampling of its water and submit it to Fast Laboratory for microbiological analysis. Careful sampling point determination is employed to ensure the water samples are representative of the water throughout the system. Sampling points include but not limited to production wells, storage tanks and consumer taps. Sampling is done once a month. The following are the methods of detection and the standard values being observed:

Methods of detection and standard values being observed by MFWD

Parameters	Methods of Determination	Value	Units of Measurement
Total Coliform	Multiple Tube Fermentation Technique (MTFT)	<1.1	MPN/100ml
Fecal Coliform	Multiple Tube Fermentation Technique (MTFT)	<1.1	MPN/100ml
Heterotrophic Plate Count	Pour Plate Count	<500	CFU/ml

d.1. Procedure for Water Sample Collection

The sample should be representative of the water under examination. Contamination during collection and before examination should be avoided. MFWD observes to the protocol set by Fast Laboratory in sampling collection:

The sampling bottle should be kept unopened until the moment it is filled. Representative of the water being tested should be mindful to take sample to avoid contamination at the time of collection and in the period before examination of the sample.

Flame the top for 2 to 3 minutes.

Open the tap fully and allow the water to run to waste for 2 to 3 minutes.

Restrict the flow from the tap to one that will permit filling to bottle without splashing.

Hold the bottle near the base, remove the cover and head as a unit, taking care to avoid soiling.

Do not rinse the bottle. Fill in just below the neck to provide ample air space for mixing purposes.

Replace the cap immediately and secure the hood around the neck of the bottle.

Submit the water sample immediately after collection of the laboratory accompanied by complete and accurate identifying and descriptive data.

The use of iced coolers for storage of water samples during transport to the laboratory is a must. The temperature should be held below 10°C during maximum transport time of six (6) hours.

d.2. Water Sampling for Chemical and Physical Analysis procedure should be observed:

Collect samples from the wells only after the well has been pumped sufficiently to ensure that the samples represent the quality of groundwater that feeds the well.

When samples are collected from reservoir it is naturally subjected to considerable variations from normal causes, the choice of location. Depth and frequency of sampling will depend on the local conditions and the purpose of the investigation.

d.3. Procedure for Water Sample Collection (Phy-Chem Analysis)

Keep sampling bottle unopened until the moment it is filled.

Take samples that will represent the water being tested.

Avoid contamination of the sample during collection and examination.

Open the tap fully and allow the raw water to run to waste for 2 to 3 minutes.

Restrict the flow from the tap to one that will permit filling the bottle without splashing.

Hold the water near the base, remove the cover and head as a unit, taking care to avoid soiling.

Do not rinse the bottle; fill it just below the neck to provide ample air space.

Replace the cap immediately.

Sample containers must be properly label as to location, date and time of collection.

The use of iced coolers for storage of water samples during transport is a must and be kept in room temperature 4°C to preserve the sample in the best way.

Submit the water sample to the laboratory accompanied by complete and accurate identifying and descriptive data.

d.4. Water Sampling for Chemical and Physical Analysis procedure should be observed:

Collect samples from the wells only after the well has been pumped sufficiently to ensure that the samples represent the quality of groundwater that feeds the well.

When samples are collected from reservoir it is naturally subjected to considerable variations from normal causes, the choice of location. Depth and frequency of sampling will depend on the local conditions and the purpose of the investigation.

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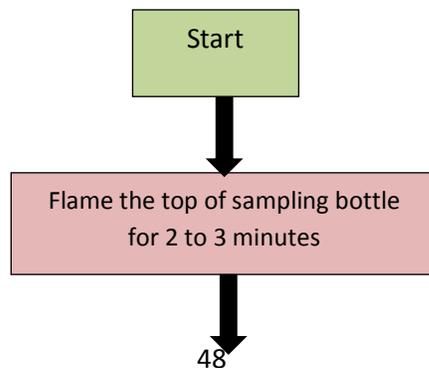
Replace the cap immediately.

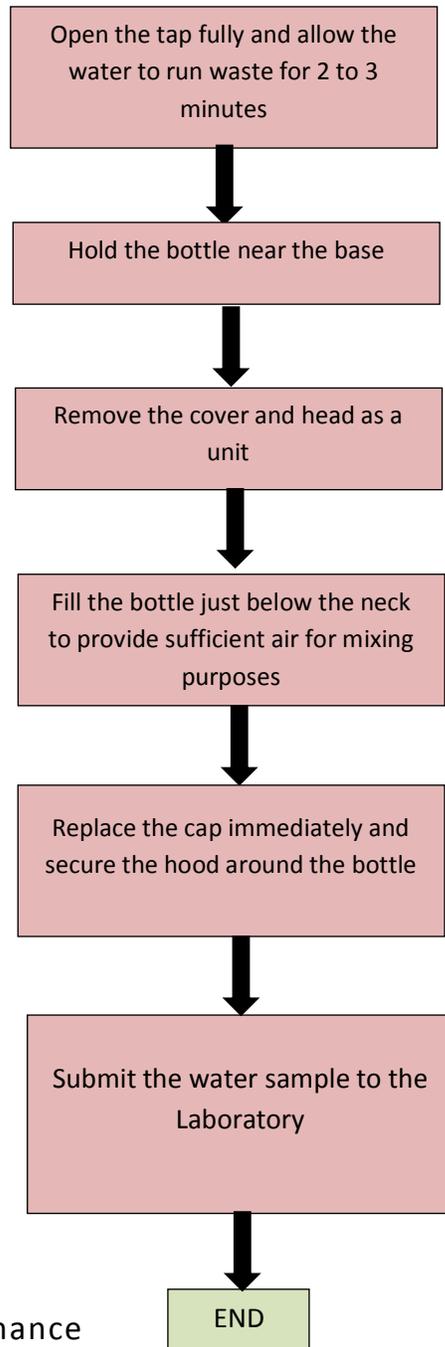
Sample containers must be properly label as to location, date and time of collection.

The use of iced coolers for storage of water samples during transport is a must and be kept in room temperature 4°C to preserve the sample in the best way.

Submit the water sample to the laboratory accompanied by complete and accurate identifying and descriptive data.

### Water Sample Collection Process Flow





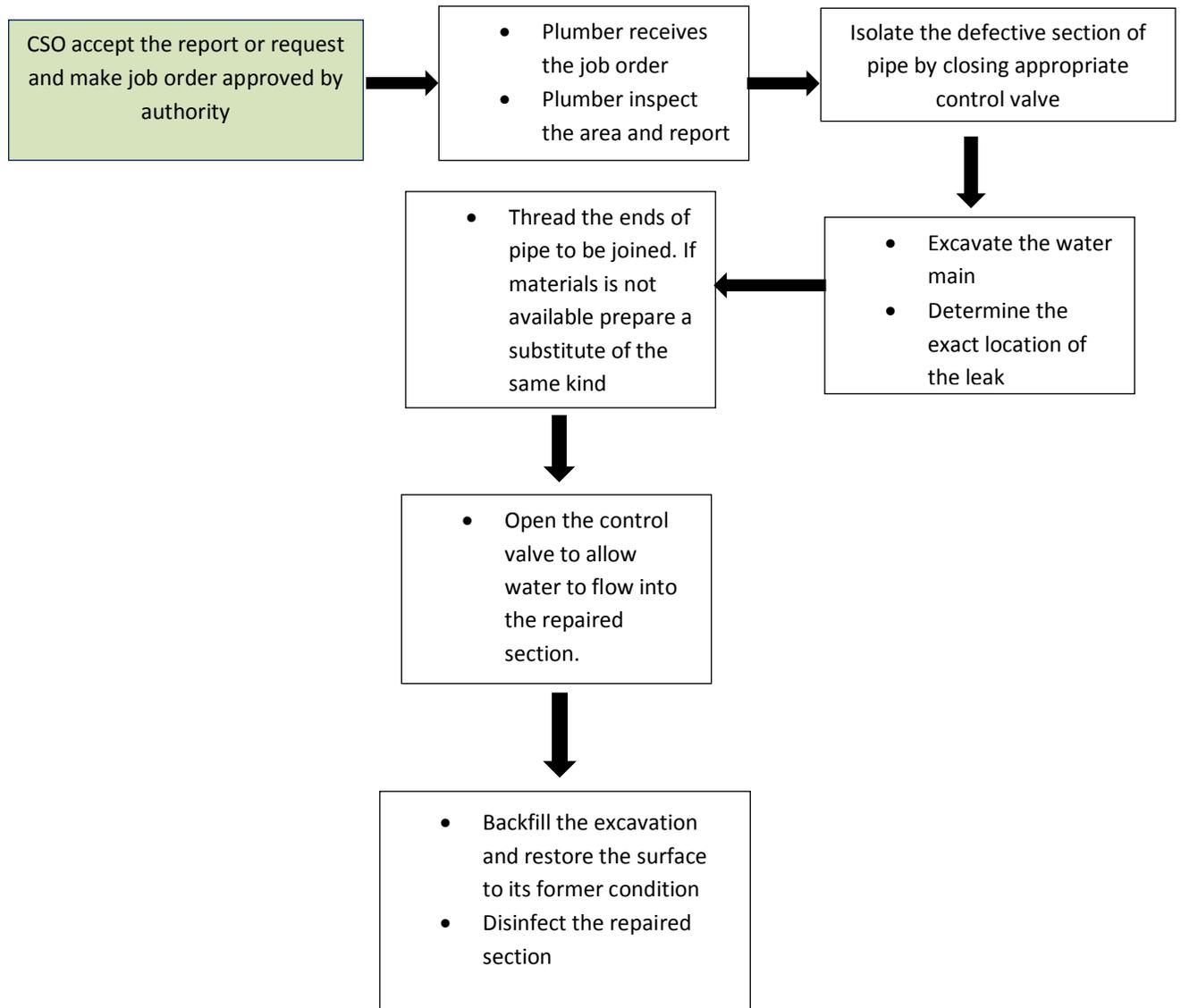
#### VIII.5. Repair and Maintenance

The engineering and construction section focuses on maintenance of pipe networks, monitoring and construction of district facilities, installation and maintenance of service connections, conducting surveys and prepare and implement Program of works (PoW) and estimates for all construction projects for the expansion, extension, rehabilitation and improvements of

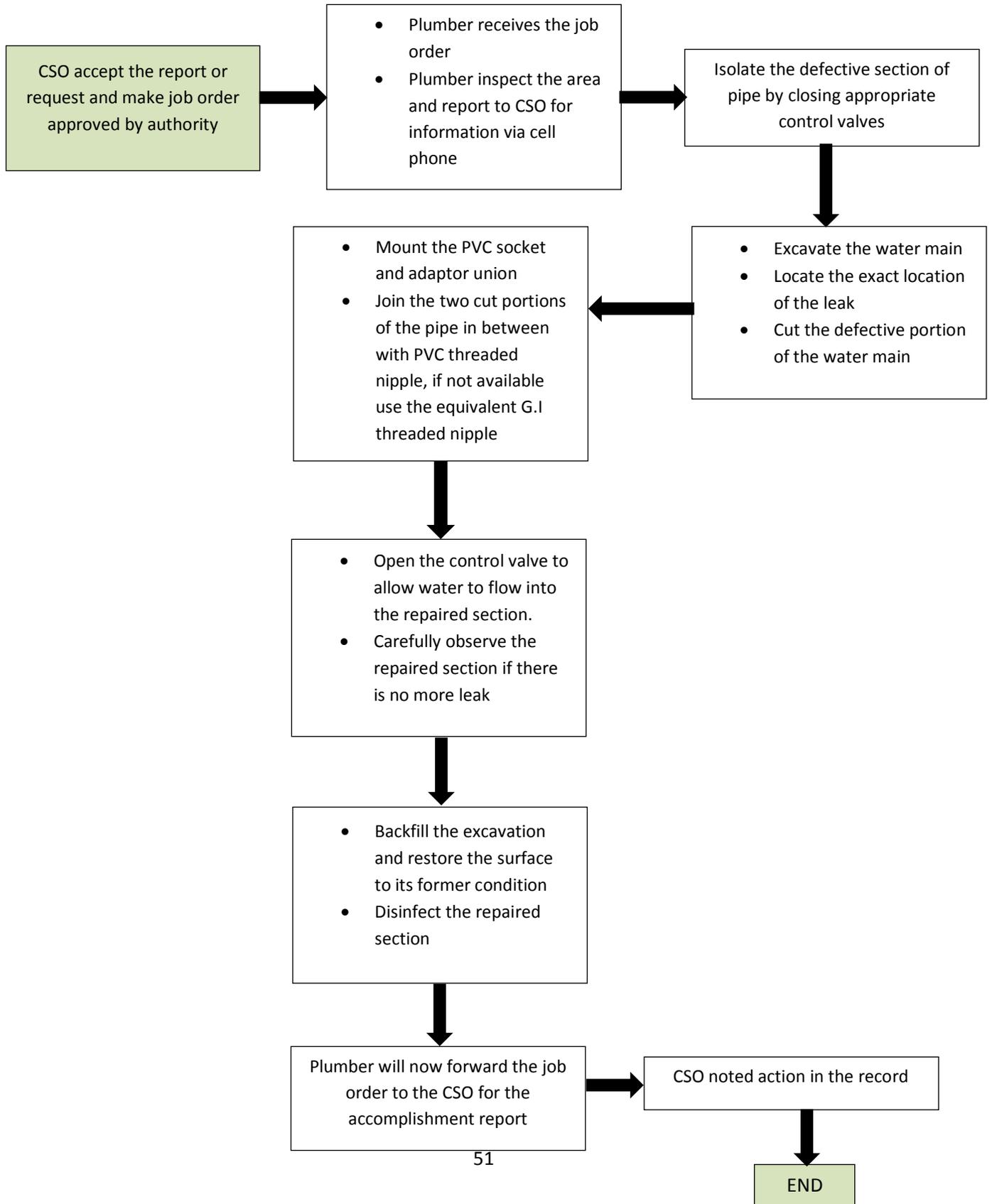
the water supply system, non-revenue management, and accomplishing job orders prepared by the commercial section.

## Repairing Pipe Leaks for Transmission/Distribution Procedure

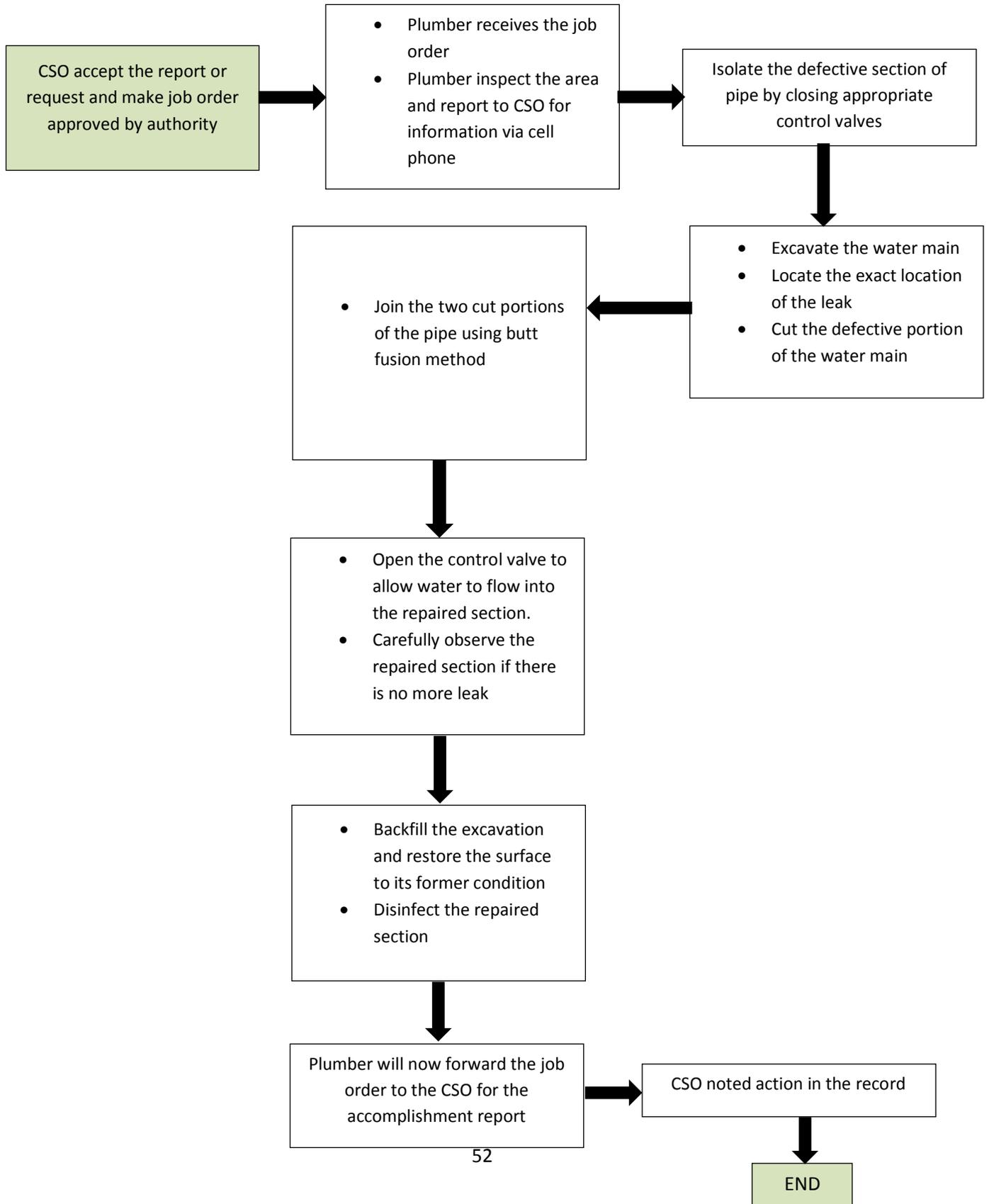
### For Galvanized Iron (G.I) Pipes



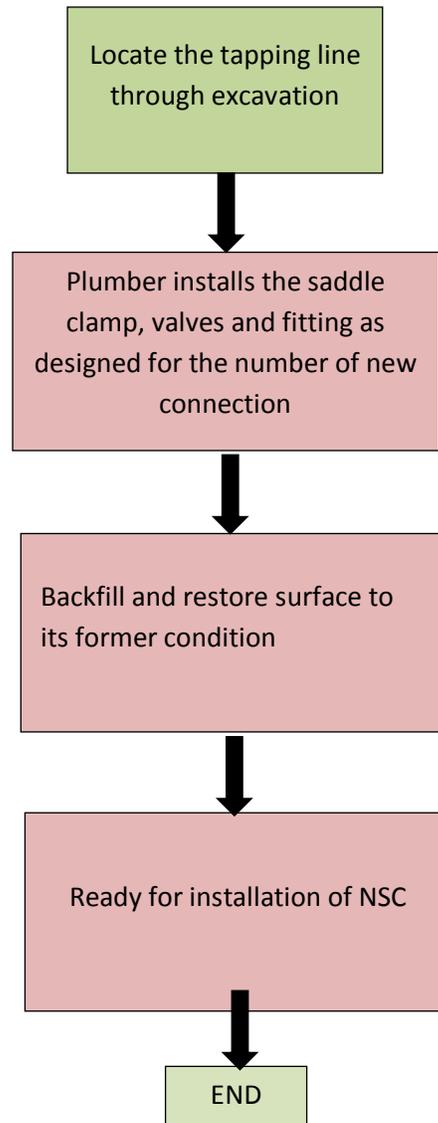
## For Polyvinyl Chloride (PVC) Pipes



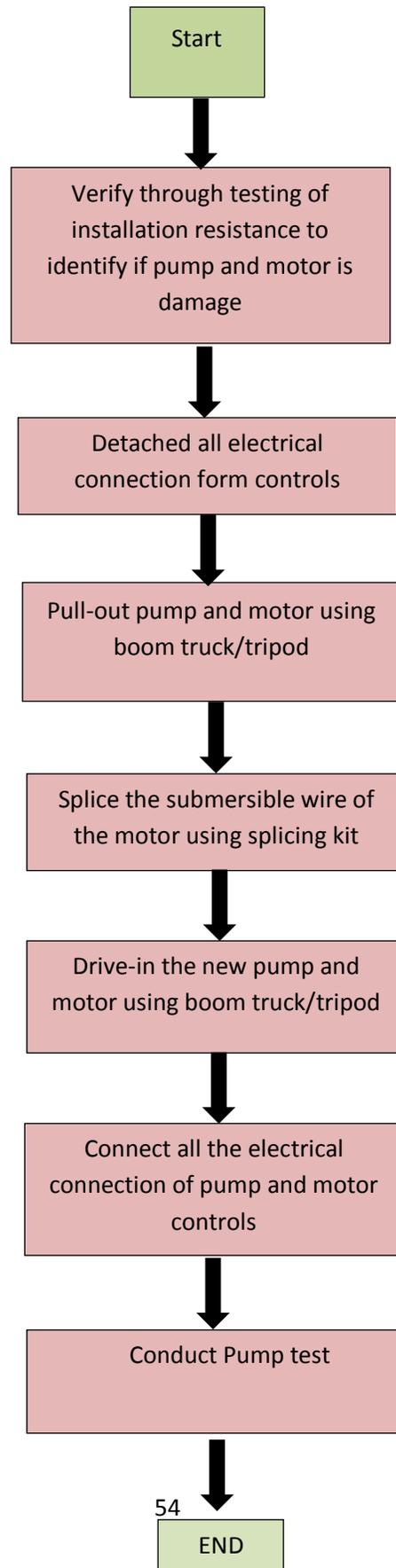
## For Polyethylene (PE) Pipes



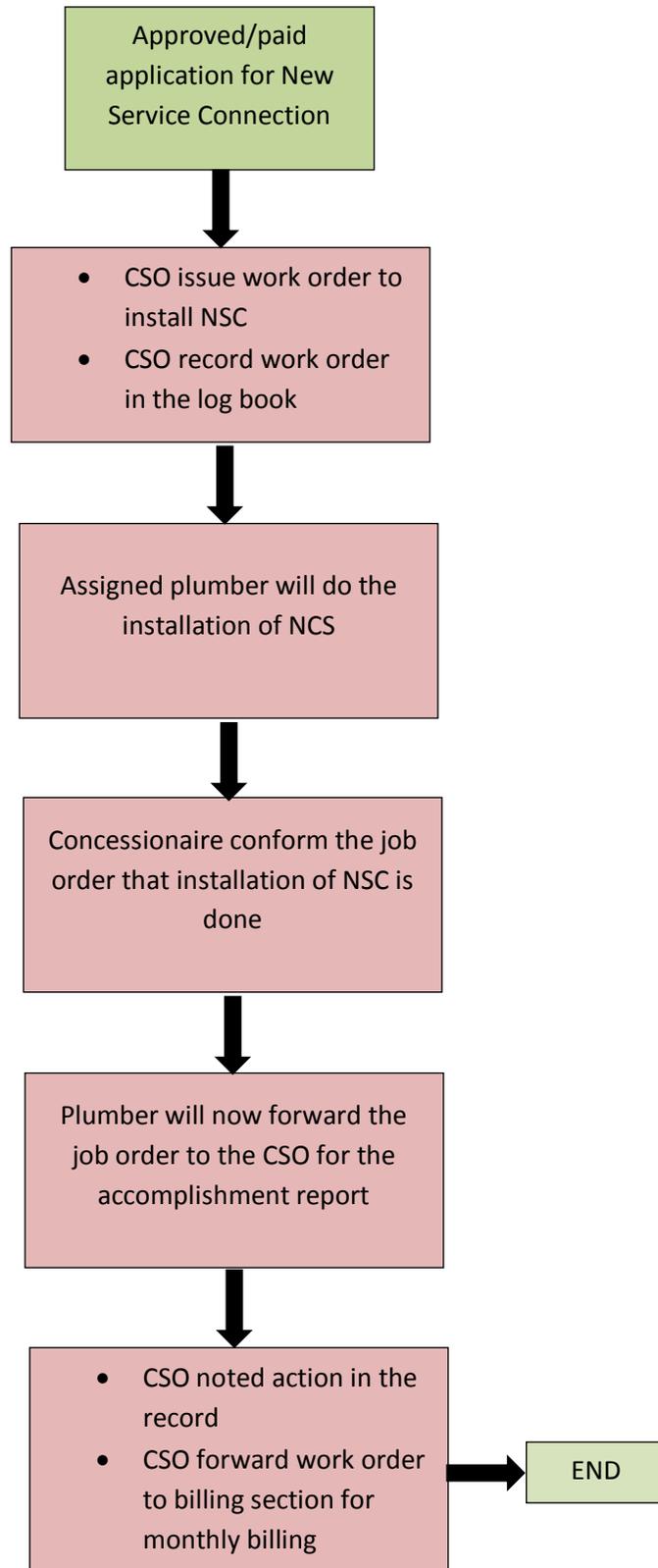
## Installation of Service Pad Procedure



## Replacement of Pump and Motor



## Installation of New Service Connection Procedure



## CONTROL OF RECORDS AND DOCUMENTS

### IX.1. Incoming Correspondence

All incoming correspondences are received by the frontline personnel, properly stamped "RECEIVED", date/time received signed by the receiver

Correspondence received are logged in a record book, sorted and delivered/endorsed to addressee

For request for information, data, records and documents from the office, MFWD has its own Freedom of Information Manual that governs procedures on acquiring information, data, records and documents.

Requestor must properly fill up request for information form to be received by the FOI Receiving Office (FRO).

Received request will be forwarded to the FOI Decision Maker (FDM) who will evaluate the request whether to grant or deny such request based on the provision of MFWD FOI Manual Executive Order No. 2, series of 2016, entitled "Operationalizing in the Executive Branch the People's Constitutional Right to Information and the State Policies of Full Public Disclosure and Transparency in the Public Service and Providing Guidelines Therefor," issued by President Rodrigo Roa Duterte on July 13, 2016.

### IX.2. Outgoing Correspondence

Prepared correspondence ready for release are logged in a record book.

Transmittal are prepared and send to the addressee with the correspondence.

Both transmittal and office file copy are made sure signed by the receiver

Transmittal and office file correspondence are file accordingly to sections/division who sent the correspondence

### IX.3. Internal Communications

Internal Communications like notices of meeting, informations for employees' consumption, announcements etc are prepared signed by the informant noted by the General Manager or the Division Manager.

All concerned employees subject of the communication are required to sign the notice etc. to affirm communication delivered and concern is properly notified.

Signe communications are filed accordingly at the administrative section

#### IX.4. Office and Memorandum Orders

Office and Memorandum Orders are prepared and signed by the General Manager

Concern employees are required to sign received of the document attesting receipt of the communication.

Office copy of the Office/Memorandum Order are filed and kept at the administrative section.

#### IX.5. Board Resolutions and Minutes of the Meeting

Minutes of the meeting/ Board Resolutions and Policies formulated are keep by the Secretary to the Board

Copies of Board Resolutions and Policies are given to concern employee/official, if any for proper action and implementation

#### IX.6. Financial Documents

Financial Statements, Journal Vouchers and other documents pertaining financial operations of the district are being filed and kept properly by the accounting section

#### IX.7. 201/Personnel Files

201 files of all employees are properly filed and has a retrieval time of 5 minutes upon request of the. All 201/personnel files are tabbed individual, filed properly and kept securely by the administrative section.

#### IX.8. Old Files/Documents

Old files and documents are kept and archived in a separate steel cabinet stored in the record room for future references.

#### IX.9. Others

Other files of importance are filed in folder and kept by section/ employee concern which he may use for future references or for his own personal purposes.

Note: All files are secured in steel cabinets. Others are filed in a covered filing boxes for safety.

# APPENDICES



# Appendix B. Water Service Contract



**MANOLO FORTICH WATER DISTRICT**  
 A. Ditona St. Tankulan, Manolo Fortich, Bukidnon  
 Mobile No. 0917-7181-311

-000-

## WATER SERVICE CONTRACT

THIS CONTRACT OF WATER SERVICING is made and entered by and between the **MANOLO FORTICH WATER DISTRICT**, represented by General Manager, **ENGR. ROGELIO PANGAN**, herein referred as the "District", and \_\_\_\_\_ of legal age, Filipino, married to \_\_\_\_\_ with residence and postal address at \_\_\_\_\_ herein referred as the "Concessionaire".

### WITNESSETH

That the "District" and the "Concessionaire", in consideration of the Mutual Covenants and Agreements made hereby these presents, enter into Contract of Water Service effective \_\_\_\_\_ with the following conditions:

#### A. INSTALLATION

- The District shall install a water service connection to the property of the concessionaire as described in the accomplished application for installation form. Installation will be made only upon approval of the submitted application form by the General Manager and upon payment of the required application fee and other charges relative thereto.
- The water meter should be installed only at the designated water service pads/tapping points by the District's authorized plumbers. All materials after the water meter will be provided by the concessionaire, labor expenses relative thereto will be at the concessionaire's expense.
  - Distribution lines after the water meter shall be maintained by the concessionaire and any wastage or damage or leakage not caused by the District shall be shouldered by the concessionaire.
  - For concessionaire's whose service line passes through private property/ies, it is the concessionaire's responsibility to secure written permission from the rightful owner of said property/ies. This written permission shall be part of the requirements for application.
- The District shall have a regular inspection for maintenance or repairs of the water meters main lines, lateral lines and service lines. If the concessionaire wishes to have house extensions for verandas, facades, garage, fences and other structure that will obstruct or interfere the district's operation and maintenance to its water lines and facilities, the District shall not be held liable for any damage on the extension done by the concessionaire which is beyond his/her lot or property.

#### B. DISCONNECTION

The District shall discontinue its water services to a concessionaire in any of the following grounds:

- Failure to pay on due date. Disconnection notice will be given to concessionaires after due date. Disconnection of service connection due to delinquency will be implemented seventy two (72) hours after receipt of disconnection notice.
- Any violation of RA 8041 otherwise, known as the Water Crisis Act of 1995 as provided in Rule 5, Section 3 and 5.2 or any fraudulent practice in relation to the use of the water and water system.
- Non-compliance to the other District policies and Board Resolutions pertaining to water services.

#### C. RE-CONNECTION

- Disconnected installation due to delinquency and other legal ground for disconnection can be reconnected upon full payment of arrears, re-connection fees and penalty charges. However, reconnection maybe held pending in cases of water shortage or similar situation that will affect majority of the consumers.
- Request reconnection for disconnected pipelines by another person to replace the name of the original registered concessionaire may not be granted except upon application for change of name of the disconnected service connection will properly approved and upon settlement of all previous accounts and all other charges of the said registered concessionaire.

Signature of Applicant



**MANOLO FORTICH WATER DISTRICT**  
 A. Ditona St. Tankulan, Manolo Fortich, Bukidnon  
 Mobile No. 0917-7181-311

- Concessionaires who request voluntary disconnection of their service lines are required to pay the prevailing reconnection fee before reconnection is implemented.
- The water meter is property of the District, hence the concessionaire should protect it from damages and will be required to pay the equivalent amount in case of its loss or damage while in possession.

#### D. RATES AND FEES

Classification	Installation Fee and Other Charges for New Connection
Residential/Commercial/Industrial	P 2,400.00

*note: Rates and fees shall be based on the current approved schedules and is subject to change with prior notice and upon approval of the MFWD Board of Directors.*

#### E. GENERAL POLICIES

- Payment of bills shall be made only to the District's designated tellers and cashiers.
- All unpaid bills after due shall be considered as arrears and shall be subject to 10% penalty charge.
- The District shall provide a water meter to the concessionaire and in turn the concessionaire should protect it from any damage and shall be required to pay the equivalent amount in case of its loss or damage while in possession.
- Should an issued water meter be destroyed or becomes unserviceable for any reason or another, concessionaire should immediately report it to the District for appropriate action. In case of uncertainty of consumption, the average of the highest three (3) months previous consumption shall be the basis of subsequent bill consumption.
- Authorized representative of the District shall be given by the concessionaire full access to his premises or property for the purpose of inspection, repairs and disconnection and that no one is allowed to remove or tamper any installation therein unless authorized by the District.
- All other policies, rules and regulations that may hereinafter be formulated by the District's Board of Directors shall form part of this policy upon proper public notification. Relevant issuances also from the Local Water Utilities Administration and applicable stipulations of P.D. 198 and of R.A. 8041 are to be observed and considered part of this contract.
- Should this concessionaire fail to comply with any agreement and policy, the District may terminate this contract with prior notification. Termination of contract will mean discontinuance of water service to concerned concessionaire.

In witness hereof, the parties have set their hands this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ at Manolo Fortich, Bukidnon.

MANOLO FORTICH WATER DISTRICT  
 By: \_\_\_\_\_

**ENGR. ROGELIO K. PANGAN**  
 General Manager

\_\_\_\_\_  
 Concessionaire/ Signature of Applicant

#### ACKNOWLEDGEMENT

REPUBLIC OF THE PHILIPPINES  
 PROVINCE OF MISAMIS ORIENTAL  
 CITY OF CAGAYAN DE ORO S.S.

Before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ in Cagayan de Oro City, Philippines, personally appeared, **ENGR. ROGELIO K. PANGAN**, with LUMID ID No. **CRN 8081-4703-1**, issued on **October 01, 2003** at **Cagayan de Oro City** and \_\_\_\_\_ with \_\_\_\_\_ ID No. \_\_\_\_\_ issued on \_\_\_\_\_ at \_\_\_\_\_ known to me to be the same person who executed the foregoing instrument and acknowledged to me that the same is their free and voluntary act and deed.

Witness my hand and official seal.

Doc No \_\_\_\_\_  
 Page No \_\_\_\_\_  
 Book No \_\_\_\_\_  
 Series of 20 \_\_\_\_\_

Appendix C. Water Bill/ Statement of Account/ Water Bill Concessionaire's Copy

Bill Details for the Month of:				Other Accounts	
Date Billed	Due Date		Billing Period		
Date Read	Pres. Reading	Prev. Reading	Consumption		
<p><b>MANOLO FORTICH WATER DISTRICT</b>                      A. Ditona St., Tankulan, Manolo Fortich, 8703 Bukidnon                      Non Vat Reg.: TIN 001-331-018-000                      Permit No: RR-160056 (08-2013)  <b>STATEMENT OF ACCOUNT</b></p>				<p>NO: <b>0279505</b>                      ACCOUNT NO:                      METER NO:                      TIN:</p>	
<p><b>CONCESSIONAIRE'S COPY</b></p> <p>BILLING NO:                      NAME:                      ADDRESS:</p>				<p>Reminders: This also serves as your <b>DISCONNECTION NOTICE</b> after due date.                      A surcharge of 10% will be added to your bill account after due date. For check payment, please make check payable to MFWD. For complaints call 0917718-1311.</p> <p>THIS DOCUMENT IS NOT VALID FOR CLAIM OF INPUT TAX</p> <p>NOT VALID AS OFFICIAL RECEIPT.                      THIS WATER BILL/STATEMENT OF ACCOUNT SHALL BE                      VALID FOR FIVE (5) YEARS FROM THE DATE OF ATP.</p>	
				<p><b>Disconnection Date:</b></p>	

2009x 1.01x14.01x 8000 (No. 01 24001) - 400000 BIR AUTHORITY TO PRINT No. 2410001542490  
 Date of Issue: 08/20/2013  
 Date of Expiry: 08/20/2018  
 ADM. OFFICE: COM. & M. & L. BUREAU, Corporate Center, Baguio, P.I.  
 TIN: 124-089-639-005 Printer's Accreditation No. 113/M/2014/0000000009 Date Issued 01-21-2014

Appendix D.

Pumping Test Data Collection Sheet

Name of Water Source:				Owner:		
Type of Test:				Date:		
Static water Level (as measured from the reference point)						
Well Observation:						
Well Elevation (m):						
Distance of observation well from pumped well (ft):						
Time	Time (t) from start of pumping (min)	Depth of Water Level (ft)	Drawdown (ft)	t/r <sup>2</sup>	Pumping Rate (Q) (gpm)	Comments

Prepared by:

Noted:

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Maintenance Man

Eng'g & Maint Head

# FOI Request Form

**MANOLO FORTICH WATER DISTRICT**  
Manolo Fortich 8703, Bukidnon

## KAGAWASAN SA IMPORMASYON (FOI) Request Form

TITULO SA DOKUMENTO (Title of the Document): \_\_\_\_\_

MGA TUIG (Year): \_\_\_\_\_

KATUYOAN (Purpose): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

PANGALAN (Name): \_\_\_\_\_ CONTACT No./s: \_\_\_\_\_

PIRMA (Signature): \_\_\_\_\_ PETA (Date): \_\_\_\_\_

KUMPLETONG ADRES : \_\_\_\_\_  
\_\_\_\_\_

Gipakita ng ID: Passport No: \_\_\_\_\_

Driver's License: \_\_\_\_\_

School / Company ID: \_\_\_\_\_

Uban pa, palihog paghingan: \_\_\_\_\_

Paagi sa pagdawat sa impormasyon (How would you like to receive the information?):

Pls. check:

E-mail (E-mail address): \_\_\_\_\_

Fax (Fax No. : \_\_\_\_\_

Mail (Mailing address: \_\_\_\_\_

Kuhaon (Pick-up): \_\_\_\_\_

Adlaw nga gusto kuhaon panahon sa ting-opisina (Preferred time within office hours): \_\_\_\_\_

Gisumiter kay (Submitted to): \_\_\_\_\_  
(Signature over Printed Name)

Peta/Oras Gisumite (Date/Time of Submission): \_\_\_\_\_

Sertipikado ni (Certified by) : \_\_\_\_\_  
(Signature over Printed Name)

Tipo sa aksyon nga gihimo (Type of action conducted): \_\_\_\_\_  
\_\_\_\_\_

Nadawat ni (Received by): \_\_\_\_\_  
FOI Receiving Officer

Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

REFERENCES:

Presidential Decree 198

Local Water Utilities Administration- Manual on Categorization and Recategorization Order (LWUA-MaCRO)

Operations Manual: Digos City Water District

Freedom of Information Manual