Annexes

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ANNEX 1

Initial Environmental Examination

Initial Environmental Examination

April 2020

Philippines: Water District Development Sector Project

METRO COTABATO WATER DISTRICT

Prepared by Metro Cotabato Water District for the Local Water Utilities Administration and the Asian Development Bank.

CURRENCY EQUIVALENTS
(as of 20 March 2020)

Currency unit	–	peso (Php)
Php1.00	=	$0.01955
$1.00	=	Php 51.15

ABBREVIATIONS

ADB	–	Asian Development Bank
AO		Administrative Order
APs	–	Affected Persons
AWWA	–	American Water Works Association
CCC	–	Climate Change Commission
CDO	–	Cease and Desist Order
CEMP	–	Contractor's Environmental Management Plan
CNC	–	Certificate of Non- Coverage
DAO	–	Department Administrative Order
DED	–	Detailed Engineering Design
DENR	–	Department of Environment and Natural Resources
DOH	–	Department of Health
DOLE	–	Department of Labor and Employment
ECC	–	Environmental Compliance Certificate
EHS	–	Environmental, Health and Safety
EIA	–	Environmental Impact Assessment
EMB	–	Environmental Management Bureau
EMB-RO	–	Environmental Management Bureau–Regional Office
EMP	–	Environmental Management Plan
GRM	–	Grievance Redress Mechanism
HIV	–	Human Immunodeficiency Virus
HSE	–	Health, Safety and Environment
IEE	–	Initial Environmental Examination
IFC	–	International Finance Corporation
IRR	–	Implementing Rules and Regulations
LGUs	–	Local Government Units
LWUA	–	Local Water Utilities Administration
MAGELCO	–	Maguindanao Electric Cooperative
MC	–	Memorandum Circular
MCWD	–	Metro Cotabato Water District
MOA	–	Memorandum of Agreement
MTC	–	Municipal Trial Court
NAAQGV	–	National Ambient Air Quality Guideline Values
NAV	–	Notice of Alleged Violation
NRW	–	Non-Revenue Water
NSCP	–	National Structural Code of the Philippines
NWRB	–	National Water Resources Board
OSPF	–	Office of Special Project Facilitators
PAGASA	–	Philippine Atmospheric, Geophysical and Astronomical Services Administration
PD	–	Presidential Decree
PEISS	–	Philippine Environmental Impact Statement System
PIU	–	Project Implementation Unit
PMU	–	Project Management Unit

PNSDW	–	Philippine National Standards for Drinking Water
PM10	–	Particulate Matter 10
PPC	–	Price and Physical Contingency
PPE	–	Personal Protective Equipment
PSA	–	Philippine Statistics Authority
RA	–	Republic Act
REA	–	Rapid Environmental Assessment
RO	–	Regional Office
SDGs	–	Sustainable Development Goals
SPDA	–	Southern Philippines Development Authority
SPS	–	Safeguard Policy Statement
TSP	–	Total Suspended Particulates
UNDP	–	United Nations Development Program
WD	–	Water District
WDDSP	–	Water District Development Sector Project
WDGRC	–	Water District Grievance Redress Committee
WHO	–	World Health Organization

WEIGHTS AND MEASURES

ha	–	Hectare
Hp	–	Horsepower
km	–	Kilometer
km²	–	Square kilometer
Lps		Liters per second
lm	–	Meter
m	–	Meter
m²	–	Square meter
m³	–	Cubic meter
mamsl	–	Meters above mean sea level
mm	–	Millimeter

NOTE

In this report, "$" refers to US dollars.

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EXECUTIVE SUMMARY

1. *Introduction.* Metro Cotabato Water District (MCWD) is an operational water supply utility located in Cotabato City, Maguindanao, Republic of the Philippines and one of the selected subprojects under the PHI: Water District Development Sector Project (WDDSP) funded by the Asian Development Bank (ADB). The project intends to improve the livability and competitiveness in urban areas outside Metro Manila through the provision of better water supply and sanitation infrastructure and services to a number of water districts (WDs). The Local Water Utilities Administration (LWUA) is the executing agency. The participating WDs, in this case MCWD, are the implementing agencies for water supply and sanitation subprojects.

2. *Subproject Description*. The proposed MCWD subproject involves the replacement of 6,780 meters (m) water transmission pipeline from Tanuel Pumping Station to the Southern Philippines Development Authority (SPDA) Junction which will be parallel to the existing line, but on the other side of the National Highway. Details of each component is discussed in Section 3 Description of the Project.

3. *Legal Framework.* The policy, legal, and administrative frameworks relevant to the environmental assessment of water supply and sanitation projects in the Philippines have long been established by the following laws and regulations: (i) Presidential Decree (PD) 198- Provincial Water Utilities Act of 1973, (ii) PD 1586 – Establishing the Philippine Environmental Impact Statement System, (iii) DOH AO 2017-010 – Philippine National Standards for Drinking Water (PNSDW) of 2017, (iv) PD 1067 – Water Code of the Philippines, (v) PD 856 – Code on Sanitation of the Philippines, (vi) Republic Act (RA) No. 9275 - Philippine Clean Water Act of 2004, (vii) DENR AO 2016-08 – Water Quality Guidelines and General Effluent Standards of 2016, (viii) PD 705 – Forestry Reform Code of the Philippines; and (ix) RA 11058 – Occupational Safety and Health Standards.

4. *Environmental Safeguard.* All ADB funded project are required to strictly comply with Philippine government's environmental laws and requirements as well as ADB's Safeguard Policy Statement of 2009 (SPS). MCWD was assessed under Category B that deemed by ADB to have some adverse environmental impacts, but of lesser degree or significance. Preparation of Initial Environmental Examination (IEE) report and securing ECC were required to prevent the possible adverse environmental and public health impact. The Environmental Management Bureau of the Department of Environment and Natural Resources (DENR) has already issued an Environmental Compliance Certificate (ECC) for this project with ECC No. ECC-OL-R12-2017-0034, issued at EMB-R12, Regional Government Center, Brgy. Carpenter Hill Koronadal City on 1 March 2017 (See **Annex 5**).

5. *Environmental and Socioeconomic Conditions*. The water sources include Tanuel Spring and Dimapatoy at Datu Odin Sinsuat, and Rebuken, Macaguiling I and II Wells at Sultan Kudaparat. The spring water source of MCWD is the Tanuel Spring, located at Barangay Tambak at the Municipality of Datu Odin Sinsuat, has an elevation of 12 meters above sea level (mamsl). The spring originates from a limestone formation at the foot of a spur of the Linagan Moutains. Dimapatoy River is primarily the source of the first water supply system of MCWD. Situated in Barangay Awang, Datu Odin Sinsuat and south of the Cotabato City, Dimapatoy River has an elevation of about 52 mamsl and an estimated catchment area of 66 km². Based on 2017 data from the Climate Change Commission (CCC), Maguindanao is one of the areas in the Philippines most vulnerable to drought and are experiencing seasonal aridity and recurrent droughts. The municipality is composed primarily of clay soil. Clay loam type of soil can be found on the eastern part of the municipality along its common boundaries with the municipality of Guindulungan. The municipality's soil is fertile and highly arable, making it capable for agricultural utilization. Issues on competing use of water

resources are not expected since MCWD's water supply subproject covers replacement of pipelines and not source development.

6. Based on the Philippine Statistics Authority (PSA), the estimated population of Datu Odin Sinsuat in 2015 is about 99,210 spread across 34 barangays. Trade and commerce areas and the former public market are temporarily located along the main highway fronting the municipal building. The newly built public market which was funded through a loan from the Land Bank of the Philippines was burned down. Vast agricultural lands are mostly owned by prominent families in the municipality. Most farmers tilling land and working on farms are mostly tenants and paid workers.

7. *Impacts and EMP*. Anticipated impacts to be considered were assessed through the following activities: (i) gathering of inputs from interested and affected parties though consultation; (ii) desk research of information relevant to the proposed project; (iii) site visit and professional assessment; and (iv) evaluation of proposed design and potential impacts. Categorization of the project and formulation of mitigation measures have been guided by ADB's General REA Checklist and SPS. Results of the environmental impacts screening shows that the impact types and magnitudes for both positive and negative impacts without the mitigating measures and the resulting situations when mitigating measures will be implemented (See **Section 5**).

8. During pre-construction phase, potential nuisances and problems to the public such as noise and dust pollution, vehicular traffic and limited public access, generation of waste, etc. during construction shall be addressed by inclusion in the tender documents the EMP which specifies provisions addressing these issues. There are no known archaeological and cultural assets in these proposed sites. Nevertheless, precautions will be taken to avoid potential damage to any archaeological and cultural assets by inclusion of provisions in tender and construction documents requiring the contractors to immediately stop excavation activities and promptly inform the authorities if archaeological and cultural assets are discovered.

9. The proposed project will not entail any involuntary resettlement and there are no adverse impacts on surrounding structures since the pipeline routes are within right of way.

10. Adverse environmental impacts during construction are temporary, minor and can easily be mitigated. There will be no massive construction activities that can damage the environment. Typical construction issues are manageable with the implementation of environmental management plan for (i) erosion and sediment runoff, (ii) noise and dust, (iii) vehicular traffic, (iv) construction wastes and spoils, (v) oil and fuel spillages, (vi) construction camps, and (vii) occupational and public health and safety.

11. Environmental problems due to operation of the proposed water supply can be avoided by incorporating the necessary measures in the design and use of appropriate operational procedures. MCWD shall ensure that the potable water consistently passes the requirements of the Philippine National Standards for Drinking Water (PNSDW) of 2017. To achieve this, implementation of the water safety plan with regular water quality monitoring shall be undertaken.

12. An Environmental Management Plan (EMP) is developed to effectively manage the environmental issues. This includes: (i) mitigating measures to be implemented, (ii) required monitoring associated with the mitigating measures and environmental ambient conditions, and (iii) implementation arrangement. Institutional set-up is presented in the implementation arrangement and discusses the roles during implementation and the required monitoring. It also outlines the requirements and responsibilities during pre-construction, construction, and

operation phases. The approved ECC of the subproject requires conditions under environmental management and administrative, as well as restrictions. Conditions on environmental management requires the development and implementation of a Maintenance and Environmental Enhancement Program, and adherence to RA 9003 or the Ecological Solid Waste Management Act and RA 9275 of the Clean Water Act.

13. *Public Consultation and Information Disclosure.* A stakeholder consultation and participation were implemented as part of the preparation and implementation strategy. This were done to address the stakeholders' needs and disclosure of the project details and the benefits they shall receive. The consultation process during the project preparation has solicited inputs from stakeholders, including government officials. Presentation of the proposed project and its details, and purpose of the project was conducted with barangay officials on 5, 7, 11 15, and 17 February 2020 in Brgy. Capiton, Datu Odin Sinsuat.

14. *Grievance Redress Mechanism.* Following discussions during the Due Diligence Report (DDR) mission, it was agreed to integrate the ADB required grievance redress mechanism (GRM) into the current consumer feedback measures that are already implemented and are well established. The DDR mission observed a publicly displayed customer charter and system to record issues with water supply, billing and complaints. The established GRM at the MCWD will receive, evaluate, and facilitate the resolution of affected persons (APs) concerns, complaints, and grievances about the social and environmental performance related to the various subprojects. The GRM will aim to provide a time-bound and transparent mechanism to voice and resolve social and environmental concerns linked to the subproject. This mechanism shall be disclosed in public consultations during detailed design and in meetings during the construction phase.

15. The MCWD will maintain a full record of all complaints and grievances received, and the actions taken. MCWD will also ensure grievances are recorded and reported in the Integrated Environmental and Social Safeguards reports that are submitted to ADB every 6 months during project implementation. All costs involved in resolving the complaints (meetings, consultations, communication, and information dissemination) will be borne by MCWD. Complaints about environmental performance of projects issued an Environmental Certificate of Compliance (ECC) can also be brought to the attention of DENR-EMB. The process of handling such complaints is described in the Revised Procedural Manual (2007) for the IRR of PD 1586.

16. *Conclusion and Recommendations.* MCWD's water supply subproject will benefit the general public by contributing to the long-term improvement in the water supply system of its coverage area and providing safe drinking water to residents and commercial establishments in the municipalities and city. The potential adverse environmental impacts are primarily associated with the construction period, which can be minimized through mitigating measures and environmentally sound engineering and construction practices.

17. With the implementation of the mitigation measures as proposed in the EMP, the subproject is not expected to cause irreversible adverse environment impacts. Also, the water supply subproject can be implemented in an environmentally acceptable manner without the need for further environmental assessment study, except for the conduct of a public consultations for compliance and further input. Should there be any significant change in the project scope, an updated or a new IEE will be prepared.

18. The proposed MCWD subproject is hereby recommended for implementation with the following requirements to be strictly followed: (i) Tendering process shall ensure environmentally responsible procurement by requiring the inclusion of EMP provisions in the

bidding and construction contract documents; (ii) Contractor's submittal of a CEMP which shall be included in the construction contract; (iii) Contract provisions on creation and operation of the WDGRC shall be included in construction contracts; (iv) LWUA, with its regulatory function, shall ensure that capability building for MCWD shall be pursued; and (v) MCWD shall continue the process of public consultation and information disclosure during detailed design and construction phases.

1 INTRODUCTION

Metro Cotabato Water District (MCWD) is an operational water supply utility located in Cotabato City, Maguindanao, Republic of the Philippines and one of the selected subprojects under the PHI: Water District Development Sector Project (WDDSP) funded by the Asian Development Bank (ADB). The project intends to improve the livability and competitiveness in urban areas outside Metro Manila through the provision of better water supply and sanitation infrastructure and services to a number of water districts (WDs). The Local Water Utilities Administration (LWUA) is the executing agency. The participating WDs, in this case MCWD, are the implementing agencies for water supply and sanitation subprojects.

The Cotabato City Water District was established in 9 March 1976 to deliver reliable, adequate and safe water supply to residents of the City of Cotabato and was later renamed Metro Cotabato Water District (MCWD) in 2004 when the water services expanded to parts of Datu Odin Sinsuat and Sultan Kudarat towns in Maguindanao Province. As of 31 January 2020, there are a total of 36,615 numbers of connections served by MCWD.

Five (5) production water sources are being utilized by the MCWD. These water sources are classified into three (3): spring, ground water, and surface water sources. The spring water source of MCWD is the Tanuel Spring, located at Barangay Tambak at the Municipality of Datu Odin Sinsuat. Three (3) Deep Wells in Sultan Kudarat are being used by the MCWD as its ground water sources. One (1) deep well is in Rebuken and the other two (2) are in Macaguiling.

The proposed project aims to replace dilapidated and aging distribution lines from Tanuel Pumping Station up to Crossing Southern Philippines Development Authority (SPDA) Junction. The project will replace existing transmission and distribution pipes as well as its fittings & appurtenances. The type of material will also be replaced from steel pipes to ductile iron pipes, since the latter is more robust, can withstand mechanical stress and physical abuse, can be laid in unfavorable terrain and operating conditions, and can work without failure, offering a long service life of at least 75 years. This proposed project is called the Water Supply Improvement Project of the MCWD.

The project can contribute to the Philippines' efforts in achieving the Sustainable Development Goals (SDGs) given by the United Nations Development Program (UNDP), specifically the SDG no. 6, which is the "Clean Water and Sanitation". The project shall address the increasing water demand of the municipality while balancing out the climate change affects that is observed, though increasing the community's resilience.

This is part of the Water District Development Sector Project (WDDSP) which is funded by the Asian Development Bank (ADB). All ADB-funded projects are required to comply with the Philippine government's environmental laws and requirements as well as ADB's Safeguard Policy Statement of 2009 (SPS). A preliminary environmental assessment using ADB's General Rapid Environmental Assessment (REA) Checklist (**Annex 1**) was employed and this project is classified environment Category B and warrants the preparation of this Initial Environmental Examination (IEE) Report. Under the Philippine Environmental Impact Statement System (PEISS), an online Environmental Compliance Certificate (ECC) application was carried out under water supply projects with Level III distribution system.

The Environmental Management Bureau (EMB) of the Department of Environment and Natural Resources (DENR) has already issued an Environmental Compliance Certificate (ECC) for this project with ECC No. ECC-OL-R12-2017-0034, issued at EMB-R12, Regional Government Center, Brgy. Carpenter Hill Koronadal City on 1 March 2017 (See **Annex 5**). As part of the ECC conditions, a Detailed Maintenance and Environmental Enhancement

Program (DMAEEP) was submitted (See **Annex 6**) within 30 days of the ECC issuance. MCWD shall coordinate with EMB-R12 prior to construction for the continuation of the subproject.

The SPS of 2009 integrates the three (3) operational safeguard policies of ADB on the environment, involuntary resettlement, and indigenous peoples, into a unified policy framework. ADB shall work with borrowers to implement the provisions of this policy framework in the form of project review and supervision, and capacity development support. The SPS also promotes participation of project-affected people and key stakeholders in project design and implementation.

The provisions of the ADB SPS of 2009 were carefully observed during the preparation of this report. This IEE Report is prepared to meet the following objectives:

(i) Provide a clear description of the proposed projects and all its components;

(ii) To present the national and local legal and institutional framework within which the environmental assessment has been carried out and the implementing agency's capacity to comply;

(iii) To provide information on the existing geographic, ecological, environmental, and social conditions, within the project's area of influence;

(iv) To assess the project's likely positive and negative direct and indirect impacts on physical, biological, socioeconomic, and physical cultural resources in the project's area of influence;

(v) To present the set of mitigation measures to be undertaken to avoid, reduce, mitigate, and manage adverse environmental impacts;

(vi) To describe the process undertaken during project design to engage stakeholders, the planned information disclosure measures, and the process for carrying out consultation with affected people and facilitating their participation during project implementation;

(vii) To describe the project's grievance redress mechanism for resolving project-related complaints;

(viii) To describe the monitoring measures and reporting procedures to ensure early detection of conditions that necessitate particular mitigation measures; and

(ix) To identify who is responsible for carrying out the mitigation and monitoring measures.

The development of this IEE is based on several field visits, review of secondary data, consultation with the Local Government Units (LGUs), officials of MCWD, and the stakeholders from the community.

2 POLICY, LEGAL, AND ADMINISTRATIVE FRAMEWORK

ADB Safeguard Policy Statement. The ADB, in its operations, requires the consideration of environmental issues in all aspects. The requirement of having an environmental assessment

in all of ADB's project loans, program loans, sector loans, sector development program loans, loans involving financial intermediaries, and private sector loans is stated in the SPS.

Screening and categorization. Categorization is to be undertaken using Rapid Environmental Assessment (REA). REA is sector-specific checklist that consist of questions relating to (i) the sensitivity and vulnerability of environmental resources in project area, and (ii) the potential for the project to cause significant adverse environmental impacts.

Projects are screened to identify their expected environmental impacts which are related to the type and location of the project; the sensitivity, scale, nature, and magnitude of its potential impacts; and the availability of cost-effective mitigation measures. This will determine the category of environmental assessment required for the project. Projects are categorized in the following four (4) categories:

(i) Category A. Projects could have significant adverse environmental impacts. An environmental impact assessment (EIA) is required to address significant impacts.

(ii) Category B. Projects could have some adverse environmental impacts, but of lesser degree or significance than those in Category A. An IEE is required to determine whether significant environmental impacts warranting an EIA are likely. If an EIA is not needed, the IEE is regarded as the final environmental assessment report.

(iii) Category C. Projects are unlikely to have adverse environmental impacts. No EIA or IEE is required, although environmental implications are reviewed.

(iv) Category FI. Projects involve a credit line through a financial intermediary or an equity investment in a financial intermediary. The financial intermediary must apply an environmental management system, unless all projects will result in insignificant impacts.

Environmental Management Plan (EMP). Identification of potential impacts and risks along with the mitigating measures through environmental assessment must be carried out. The level of detail and complexity of the EMP and the priority of the identified measures and actions will be commensurate with the project's impact and risks.

Public disclosure. In order for the affected people, other stakeholders, and the general public to provide inputs to further improve the project's design and implementation, the ADB shall post in their website the following documents:

(i) for Environmental Category A projects, a draft EIA report at least 120 days before Board consideration;

(ii) final or updated EIA and/or IEE upon receipt; and (iii) environmental monitoring reports submitted by the project management unit (PMU) during project implementation upon receipt.

International Guidelines. The International Finance Corporation (IFC) established an Environmental, Health, and Safety (EHS) Guidelines with general and industry-specific examples of Good International Industry Practice (GIIP). In line with this, all ADB-funded projects must adopt the IFC-EHS Noise Guidelines.

Under the noise management section are noise prevention and mitigation measures, noise level guidelines, and noise monitoring. MCWD must closely observe the IFC-EHS Noise Guidelines during the construction phase.

National Laws. The policy, legal, and administrative frameworks relevant to the environmental assessment of water supply and sanitation projects in the Philippines have long been established by the following laws and regulations:

(i) Presidential Decree (PD) 198 – Provincial Water Utilities Act of 1973;

(ii) PD 1586 – Philippine Environmental Impact Statement System;

(iii) RA 9237 – Mount Apo Protected Area Act of 2003;

(iv) RA 11038 – Expanded National Integrated Protected Areas System (ENIPAS) Act;

(v) R.A. No. 8371 – Indigenous People's Rights (IPR) Act

(vi) Department of Health (DOH) Administrative Order 2017-010 – Philippine National Standards for Drinking Water (PNSDW) of 2017;

(vii) PD 1067 – Water Code of the Philippines;

(viii) PD 856 - Code on Sanitation of the Philippines;

(ix) Republic Act (RA) 9275 – Philippine Clean Water Act of 2004;

(x) Department of Environment and Natural Resources (DENR) Administrative Order 2016-08 – Water Quality Guidelines and General Effluent Standards of 2016;

(xi) PD 705 – Forestry Reform Code of the Philippines; and

(xii) RA 11058 – Occupational Safety and Health Standards

The overall institutional framework is found in PD 198 (Provincial Water Utilities Act of 1973). PD 198 indicates that the LWUA and WD setup as defined by LWUA, is mandated to promote the development of WDs in the country as a government corporation. It is mandated to "primarily be a specialized lending institution for the promotion, development, and financing of local water utilities." In order to carry out the said mandate, the LWUA has major subsidiary roles such as:

(i) prescribing minimum standards and regulations in order to assure acceptable standards of construction materials and supplies, maintenance, operation, personnel training, accounting, and fiscal practices for local water utilities; and

(ii) providing technical assistance and personnel training programs.

The formation of local WDs is also mandated in the PD 198. These WDs were initially mandated to serve a single LGU or a cluster of LGUs by resolutions of the Local LGUs. These WDs, once formed becomes a legally autonomous body of the LGU. A board of directors, consisting of five (5) members representing different sectors that are appointed by either the mayor or the governor shall control the WD. The board of directors shall appoint the WD's general manager.

LWUA is the executing agency under the project, while WDs, like MCWD, are the executing agencies for their respective subprojects. LWUA is responsible for the overall coordination, implementation and liaison of the project with ADB and other government offices.

PD 1586 (Philippine Environmental Impact Statement System (PEISS)) and its implementing rules and regulation under the DENR Administrative Order No. 30 of 2003 (DAO 2003-30) cover the environmental assessment provision. The PEISS allows the project manager to receive an Environmental Compliance Certificate (ECC) from the Environmental Management Bureau (EMB) prior to the introduction of an infrastructure or development project. Under ADB's Special Assessment Report on Environmental Safeguards (2006), the Philippine environmental assessment program complies with the environmental assessment criteria of ADB.

To ensure that the quality of the water supplies are kept on a level that is suitable for human consumption, DOH Administrative Order 2017-010 (DAO 2017-010) or the Philippine National Standards for Drinking Water (PNSDW) of 2017 which prescribes the standard quality for drinking waters was issued as guide for government and private developers and operators, bulk water suppliers, water refilling station operators and other drinking-water providers. The established threshold of each water quality parameter in the PNSDW of 2017 will ensure the safety of drinking water and protect the public health.

Appropriation and utilization of waters for various purposes shall be governed by PD 1067 or the Water Code of the Philippines and its amended Implementing Rules and Regulations (IRR). The National Water Resources Board (NWRB) shall administer and enforce the provisions thereof.

Pursuant to RA 9275 or the Philippine Clean Water Act of 2004, DENR Administrative Order No. 08 series of 2016 or the Water Quality Guidelines and General Effluent Standards of 2016, defines the standards for the discharge of all industrial and municipal wastewater while PD 856 (Code on Sanitation of the Philippines) also includes sewage and septic tanks. To ensure the compliance of the facility with the specified effluent requirements, the project applicant must obtain a discharge permit from the EMB-RO.

The number of project-affected trees and ownership shall be established prior to the start of construction. During site preparation, when trees (timber or other forest products) are to be removed, a tree cutting permit shall be obtained as stipulated in PD 705 or the Forestry Reform Code of the Philippines.

As a member of the International Labor Organization (ILO), the Department of Labor and Employment (DOLE) developed an Occupational Safety and Health Hazard Standards that is in line with international labor standards To ensure a safe and healthful workplace for all the workforce and protection against all hazards in their work environment, adherence to the DOLE Occupational Safety and Health Hazard Standards must be followed, with emphasis on the following:

(i) Personal Protective Equipment (PPE-Rule 1040) which specify the use and types of eye and face protection, respiratory protection, hand and arm protection, safety belt lifelines and safety nets and safety shoes;

(ii) Personal Protective Equipment, and minimum space requirement for gas, electric welding and cutting operations (Rule1100);

(iii) Fire protection and control rule (Rule 1940);

(iv) Notification and record keeping requirements (Rule 1050);

(v) Mandatory provisions of a safety program for local Contactors in line with overall safety program of the Proponent; and

(vi) Effective preparedness program against accidents and untoward incidents through ready medical assistance as well as early detection, warning and response measures.

Table 2-1 presents the summary of environmental regulations and mandatory requirements for the proposed subproject.

Table 2-1: Summary of Applicable Environmental Regulations and Required Documents for the Subproject

Laws, Rules and Regulations	Description/Salient Features	Permit/Clearance	Required for the Project
PD 1586 and its implementing rules and regulations	Requires project proponents to secure ECC from the DENR before an infrastructure project is constructed. DAO 03-30 provides the implementing rules and regulations for PD 1586 and the Revised Procedural Manual of DAO 03-30 integrates DENR policies to promote EIA as a planning and decision-making tool. DENR MC No. 2011-005 further streamlined the PEISS.	ECC for proposed projects under the EIS system or Certificate of Non- Coverage (CNC) for proposed projects not covered by the system.	ECC granted with ECC No. ECC-OL-R12-2017-0034, last March 1, 2017
PD 705	DENR requires securing a permit before cutting any tree in both public and private properties	Permit to Cut is secured from the EMB-RO where the tree/s to be cut are located	No trees will be cut for this subproject.
RA 9275 and its implementing rules and regulations	Prohibits direct discharge of effluent to the nearby water body	None	To be implemented during construction period
RA 9003 and its implementing rules and regulations	Mandates proper disposal of solid wastes generated during construction.	None	To be implemented during construction period.
RA 8749 and its implementing rules and regulations	Specifies provisions on machineries and heavy equipment to be used and dust particle generation during construction	None	To be implemented during construction period
	Permit to Operate for air pollution source and control equipment (such as generator set) shall be secured	Permit to Operate to be secured from EMB-RO prior to the operation of the project	The subproject will not acquire a generator set
IFC-EHS Noise Guidelines	Provides measures on noise prevention and mitigation measures, noise level guidelines, and noise monitoring.	None	To be implemented during construction period.
DOLE Occupational Safety and Health Hazard Standards	Ensures a safe and healthful workplace for all the workforce and protection against all	None	To be implemented during construction and operation period.

Laws, Rules and Regulations	Description/Salient Features	Permit/Clearance	Required for the Project
	hazards in their work environment		
DAO 2017-010 or the PNSDW of 2017	Prescribes the standard quality for drinking waters as guide for government and private developers and operators, bulk water suppliers, water refilling station operators and other drinking-water providers. The established threshold of each water quality parameter in the PNSDW of 2017 will ensure the safety of drinking water and protect the public health.	None	Periodic reports shall be submitted to DOH during the operation period.

Local Laws. The legal administrative framework relevant to creating the MCWD is the Sangguniang Panlungsod Resolution No 035.

3 DESCRIPTION OF THE PROJECT

A. Existing Situation of Metro Cotabato Water District's Water Supply and Resources

Six (6) production water sources are being utilized by the MCWD to supply water to its service area. The water sources include Tanuel Spring and Dimapatoy at Datu Odin Sinsuat, and Rebuken, Macaguiling I and II Wells at Sultan Kudaparat. These water sources are classified into three (3): spring, ground water and surface water sources (See **Table 3-1**).

Table 3-1: MCWD Six (6) Production Water Sources

Source	Production Year 2019 (m^3)	Percentage (%)
1. Tanuel Spring	5,715,369	38.70
2. Dimapatoy River	6,068,483	41.10
3. Rebuken Deep well	745,755	5.05
4. Macaguiling 1 Deep well	406,034	2.75
5. Macaguiling 2 Deep well*	122,966	0.83
6. Bulk Water Supplier (Simuay River) (Mactan Rock/TGV Builder Corp.)	1,708,965	11.57
TOTAL	**14,767,572 m^3**	**100.00%**

**Note: Due to very low yield, deep well deactivated effective September 6, 2019*

Spring. The spring water source of MCWD is the Tanuel Spring, located at Barangay Tambak at the Municipality of Datu Odin Sinsuat, has an elevation of 12 mamsl. The spring originates from a limestone formation at the foot of a spur of the Linagan Moutains. The water from the spring intake box is pumped by four (4) 100-Hp turbine pump. Each pump operates for about 18 hours daily, with three (3) pumps simultaneously operating during normal operations.

Ground Water. Three (3) deep wells in Sultan Kudarat are being used by MCWD as its ground water sources. One (1) deep well is located in Rebuken and the other two (2) in Macaguiling.

These wells were designed to meet both the future and present water demands of the City of Cotabato, as well as of the municipality of Sultan Kudarat in Maguindanao.

Surface Water. Dimapatoy River is primarily the source of the first water supply system of MCWD. Situated in Barangay Awang, Datu Odin Sinsuat and south of the Cotabato City, Dimapatoy River has an elevation of about 52 mamsl and an estimated catchment area of 66 km².

The MCWD utilized six (6) storage facilities as summarized in **Table 3-2.**

Table 3-2: Summary of Storage Facilities

Size (m^3)	Type	Location	Remarks
1) 750	Cylindrical Reinforced Concrete Ground Reservoir	Rosary Heights 1 Colina Hill, Cotabato City	Serving higher parts of PC Hill Area
2) 2,000	Cylindrical Reinforced Concrete Ground Reservoir	Rosary Heights 1 Colina Hill, Cotabato City	Main Storage of MCWD
3) 2,000	Cylindrical Reinforced Concrete Ground Reservoir	Camp Siongco 6 th ID PA, Datu Odin Sinuat	Balancing Storage
4) 13	Elevated Steel Tank	Lomboy, Datu Odin Sinsuat	Serving the area of Barangay Lomboy
5) 84	Cylindrical Steel Ground Tank	Sitio Alegre, Datu Odin Sinsuat	Serving the area of Sitio Alegre
6) 46	Cylindrical Elevated Steel Tank	Alba's Compooud, Lugay-lugay Street	Covers the peak hour demand in Lugay-lugay

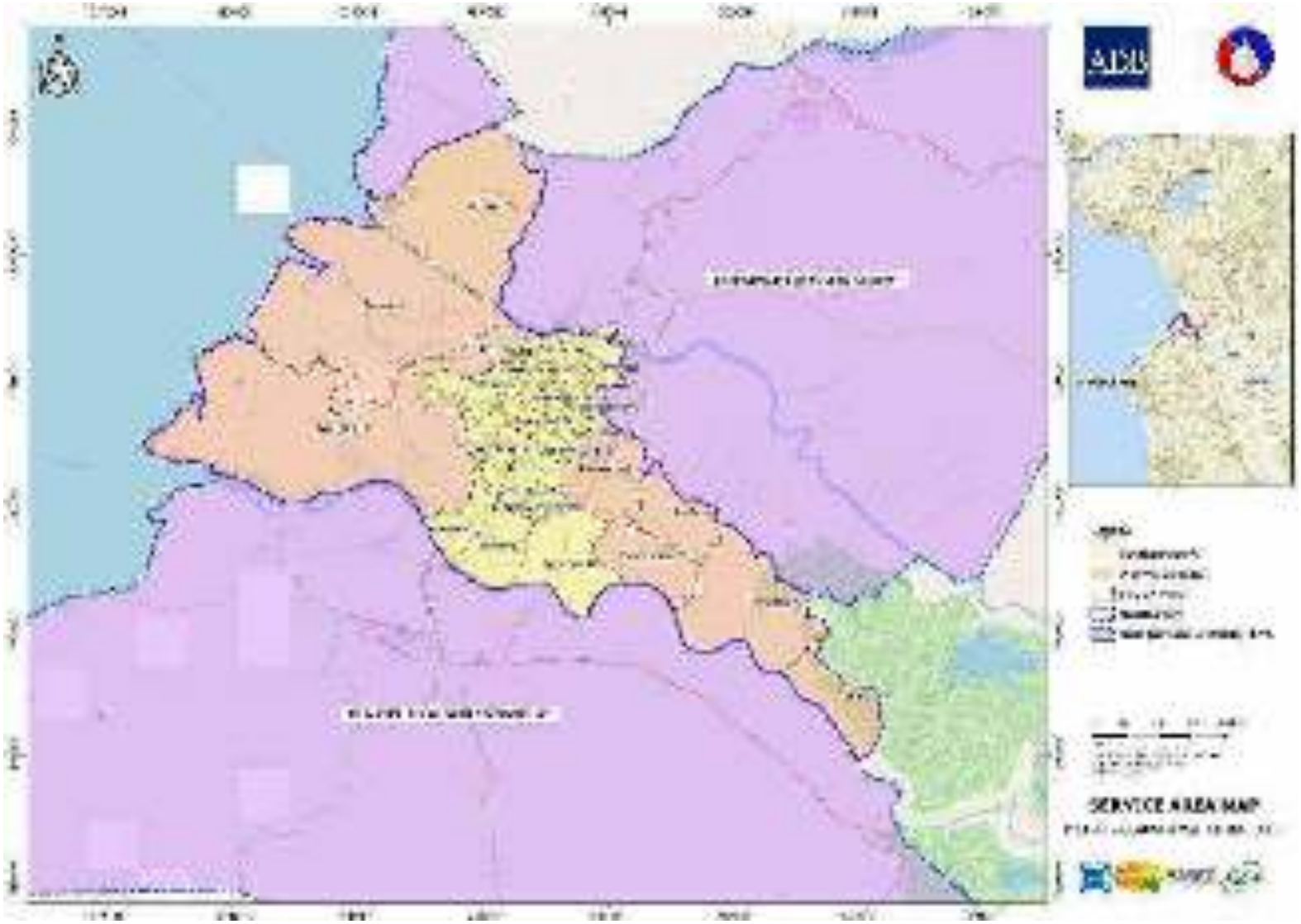


Figure 3-1: Service Area Coverage

Distribution Facilities. The distribution system consists of various sizes of pipes with diameters ranging from 50 mm to 500 mm and a total length of approximately 164 km. The distribution appurtenances include gate valves and fire hydrants. **Table 3-3** presents the breakdown of distribution pipelines.

Table 3-3: Summary of Existing Distribution Facilities

Diameter (mm)	Length (lm)
50	39,286
75	23,370
100	33,190
150	25,204
200	12,337
250	3,067
350	7,764
400	7,916
500	11,842
Total	**163,976**

B. Operation and Maintenance

The operation and maintenance of the existing water supply system is handled by the MCWD's Engineering and Maintenance Department. The operation and maintenance expenses considered comprised of pumping expenses, water treatment, annual dues to be paid to other agencies (e.g., National Water Regulatory Board), customers' account, and administration and general expenses.

C. Water Use

The water usage is classified as residential/domestic/government, commercial consumption, and bulk/wholesale. The residential/domestic consumers are persons and establishments whose connections are intended for their own personal use and other related activities while government establishments' water use are for their operation in performing public service. Meanwhile, commercial usage of water is intended for business, trade activities, occupation, or to produce a commercial or saleable product. This is further classified into Commercial A, B, or C. Finally, bulk/wholesale are connections that are intended and connected to the system for the purpose of reselling the same without transforming into a new product.

The reported total service connection for December 2019 is 36,481 of which 92% (33,611 connections) are classified under domestic/government while the remaining 8% (2,870 connections) are under commercial/industrial and bulk/wholesale.

D. Service Coverage

As of December 2019, MCWD supplies about 97% of the City of Cotabato or 36 of its 37 barangays. Likewise, the water district also served 26% (10 of 39 barangays) and 21% (7 of 34 barangays) of the municipalities of Sultan Kudarat and Datu Odin Sinsuat, both under the jurisdiction of Maguindanao Province. Water is being utilized primarily for domestic consumption.

E. Service Connections

As of December 2019, the MCWD has about 36,481 active consumers. **Table 3-4** presents the prevailing water rates within the service area per type of water connection/user.

Table 3-4: Prevailing Water Rates

Classification	Minimum Charge (Php)	Commodity Charge (Php)			
		11-20 (m^3)	21-30 (m^3)	31-40 (m^3)	41 up (m^3)
Domestic/Government	184.00	20.35	23.50	26.70	29.95
Pure Comm/Industrial	368.00	40.70	47.00	53.40	59.90
Commercial A	322.00	35.60	41.10	46.70	52.40
Commercial B	276.00	30.50	35.25	40.05	44.90
Bulk	552.00	61.05	70.50	80.10	89.95

Effectivity Date: January 1, 2006

F. Water Consumption and Total Water Production

The estimated average water consumption for residential, government, and commercial connections is 22,118.4, and 50.6 m^3 per month, respectively.

The MCWD recorded a total water production volume of 14,767,573 m^3 for 2019.

G. Non-Revenue Water

In 2019, the Non-Revenue Water (NRW) of MCWD is averaging at 27%. Large percentage of NRW may be due to leakages on transmission and distribution mains as well as unauthorized consumptions from the Tanuel Pumping Station Line up to SPDA Junction. SPDA Junction is the area where the Main/Distribution Line leading to SPDA Village starts and is located along the National Highway.

H. Description of the Proposed Subproject

MCWD's Water Supply Improvement Project includes: (i) replacement of existing distribution pipelines; (ii) procurement of necessary fittings and appurtenances, and; (iii) installation of service line and standpipe.

Pipelines, Fittings, and Appurtenances. MCWD proposed the replacement of deteriorated old pipeline to decrease the non-revenue water. The old pipeline will be abandoned in place and disconnected from the existing water source to avoid illegal tapping. Existing transmission steel pipelines shall be replaced with ductile iron material. From the pumping station, its 16" Ø steel transmission pipeline extends up to SPDA Junction that is 6,780 meters (m) in length. The project proposes to replace the said pipeline with ductile iron pipes with the same diameter. Provisions for pipe fittings, valves and blow-off fittings are also included in this item.

From Tanuel Pumping Station, the proposed transmission pipeline for replacement will traverse through five (5) barangays, namely: Tambak, Tanuel, Capiton, Awang, and Tamontaka. The new pipeline installation is parallel to the existing line, but on the other side of the National Highway. By default, pipes are embedded on a trench below FGL of existing shoulder lane of the National Highway. Bottom of the pipe should rest on compacted Item 104, 1.50 m below level of edge of existing pavement.

Service Connections. This item includes installation of service line and standpipe.

Figure 3-2: Recommended Improvements for MCWD

4 DESCRIPTION OF THE ENVIRONMENT

This section discusses the baseline conditions of the environment of the Municipality of Datu Odin Sinsuat, where the proposed improvement for water supply subproject is located.

A. Physical Resources

Geographical Location. The Municipality of Datu Odin Sinsuat is located at the Western part of the island of Mindanao and belongs to Bangsamoro Autonomous Region in Muslim Mindanao (BARMM). It is situated in the central part of the Province of Maguindanao bounded by Cotabato City on the north, Upi on the west, Kabuntalan on the east, and Talayan on the southern portion with the geographical coordinates of 7°11 20 N and 124°11 02 E.

Land Area. Datu Odin Sinsuat has a total land area of 46,180 hectares which accounts for 9.48% of the total land area of the province of Maguindanao. The municipality consists of 34 barangays.

Land Classification. The land cover within the municipality of Datu Odin Sinsuat is primarily composed of open canopy and mature trees covering of less than 50%. Other land covers that can be found within the area are grassland with grass covering 70%, cropland mixed with coconut plantation and arable land with crops mainly of sugar. Only a small portion of land is built-up areas and fishponds derived from mangrove.

Air Quality and Noise. The National Air Quality Status Report (2008-2015) provides data on air quality on a regional level. As of 2015, there were 93 air quality monitoring stations (manual and real-time) nationwide which were situated in highly urbanized cities and rural areas in different regions of the country. These monitoring stations keep track of criteria air pollutants including total suspended particulates (TSP), particulate matter with diameter of less than 10 microns (PM10), particulate matter with diameter of less than 2.5 microns (PM2.5), sulfur dioxide (SO_2), nitrogen dioxide (NO_2) and ozone (O_3) following the National Ambient Air Quality Guideline Values (NAAQGV). However, there are no monitoring station in the BARMM region for this monitoring period.

The Philippine health-based national air quality standard for PM_{10} and TSP are 60 and 90 microgram per cubic meter ($\mu g/m^3$) (measured as an annual mean), respectively, while for TSP are 150 and 230 $\mu g/m^3$ (measured as a daily concentration), respectively.

Noise level measurements will be done during detailed design phase at strategic locations on the areas with sensitive receptors to establish ambient baseline noise levels. The results will be included in the CEMP.

In addition, following the IFC-EHS noise guideline values, noise levels should ideally not exceed the values presented in

Table *4-1*. If, however baseline noise levels already exceed the guideline values, IFC-EHS allows a maximum 3 decibels [dB(A)] increase in noise levels as a result of project activities. Mitigation measures should be implemented to ensure this.

Table 4-1: IFC-EHS Noise Level Guidelines

Receptor	One Hour L_{Aeq} dB(A)	
	Daytime 07:00 – 22:00	Nighttime 22:00 – 07:00
Residential; institutional; educational	55	45
Industrial; commercial	70	70

Climate. Under the Modified Coronas Classification, Datu Odin Sinsuat belongs to Type III or climate characterized by seasons which are not very pronounced; relatively dry from November to April and wet during the rest of the year. On February 2016, Maguindanao was badly hit by El Niño, causing destruction on rice and corn fields due to drought which put the whole province under a state of calamity.

Based on a 2017 data from the Climate Change Commission (CCC), Maguindanao is one of the areas in the Philippines most vulnerable to drought and are experiencing seasonal aridity and recurrent droughts.

Topography and Soils. The municipality of Datu Odin Sinsuat's topography provided it with a natural barrier for typhoon and storms. The municipality is coastal on the west, upland and mountainous in the center and plains in the east. The municipality is composed primarily of clay soil. Clay loam type of soil can be found on the eastern part of the municipality along its common boundaries with the municipality of Guindulungan. The municipality's soil is fertile and highly arable, making it capable for agricultural utilization.

Surface Water. Tanuel and Awang springs which are sources of water for MCWD is located within the jurisdiction of Datu Odin Sinsuat. The Municipality has several water sources of reported low yield that are still untapped. These include the Margues spring, Sifaran, Nekitan, Bitu, Makir, Bagoinged, Baka, Mompong, Labungan and Badak falls.

B. Economic Development

Industries. Trade and commerce areas and the former public market are temporarily located along the main highway fronting the municipal building. The newly built public market which was funded through a loan from the Land Bank of the Philippines was burned down.

Based on recent observation very few stalls sell agricultural products, fresh meat, fish, vegetables and fruits. Most stalls along the highway sell gadgets and goods that area marked "Made in China". There is a proliferation of China products in the country because they are cheaper in cost. Native products made or manufactured in Maguindanao province are no longer visible in stores.

Transportation. Transportation by land is available in the municipality to reach Cotabato City, Tacurong in Sultan Kudarat and further to General Santos City in South Cotabato. There are available Public Utility Vehicles (PUVs) such as buses, jeepneys and privately owned vehicles within the municipality, public jeepneys and tricycles serve the public to reach their respective destinations.

Power Sources and Transmission. The municipality obtains its power supply from Maguindanao Electric Cooperative (MAGELCO) and from the Cotabato Light and Power Company (Colight). Colight serves the barangays of Awang, Tamontaka, Tanuel, Capiton and Semba which are adjacent and contiguous to Cotabato City. MAGELCO serves the remaining barangays of Datu Odin Sinsuat. There are two (2) barangays that are beneficiaries of United

States Agency for International Development's (USAID) Alliance for Mindanao Off-Grid Renewable Energy (AMORE) with solar power. These are Barangays Sifaran and Tenonggos.

Agricultural Development. Vast agricultural lands are mostly owned by prominent families in the municipality. Most farmers tilling land and working on farms are mostly tenants and paid workers. Most lands are planted with rice, corn and coconuts. Agricultural products are delivered to Cotabato City and neighboring municipalities/cities in the southern part of Mindanao.

Tourism Facilities. The Municipality of Datu Odin Sinsuat has some wonderful sites to offer. Mount Minandar is known for its green color due to being dominantly covered with grass. It is a two (2) hour hike from the foot to the summit of the mountain. It is located at the Barangay kusiong. Blue Lagoon is also known as Enchanted Lagoon because, according to the old people living nearby, there are enchantresses living in it. This deep lagoon situated at the Barangay Margues is the top tourist attraction of the municipality. Kusiong Beach is a grayish sand beach with a lot of resorts like Amayah Beach Resort, Sahara Beach Resort, and Club Kusiong. This is the nearest beach in Cotabato City. Masjid Datu Untong Balabaran of Taviran is a pagoda-style mosque, one of the last pagoda-style mosques in the Philippines.

On the other hand, Cotabato City has several attractions, which could be developed as major income source for the LGUs. Their exotic and traditions, such as its songs and dances, its cultural artifacts, its costumes, as well as its baskets and brassware lend their appeal to both foreign and local tourists.

Potential tourist attractions include Kutawato Caves, the only cave in the Philippines that is located right in the heart of the city such that its entrances are all within traffic areas. Interestingly, the name Cotabato comes from "kuta", meaning cave, and "wato", meaning stone, or a fort of stone. Historical sites such as the Bolkiah Mosque, the largest mosque in the Philippines; the Tamontaka Church, the first Catholic Church built in Central Mindanao and a memorial in honor of a gentle Japanese Officer is also found in the City of Cotabato. The Rio Grande de Mindanao, the longest ever river in Mindanao, also traverses the city. It has also 34 wandering rivers and creeks crisscrossing the city that are ideal for cruising and nature-tripping. The City of Cotabato is also famous for its crabs and halal products.

Moreover, the City of Cotabato, where the ARMM Government Center (now it's BARMM) is located, often hosts local and foreign visitors, including dignitaries, fund donors and investors.

C. Social and Cultural Resources

Population and Community. Based on the Philippine Statistics Authority (PSA), the estimated population of Datu Odin Sinsuat in 2015 is about 99,210 spread across 34 barangays and is presented in **Table 4-2**. Considering the total municipal land area of 46,180 hectares, the population density is pegged at 2-3 persons per hectares of land.

Table 4-2: Summary of Population in Datu Odin Sinsuat, 2015

Barangay	Population
Ambolodto	1,392
Awang	11,897
Badak	1,722
Bagoenged	2,056
Baka	2,775

Barangay	Population
Benolen	1,720
Bitu	1,285
Bongued	1,838
Bugawas	1,942
Capiton	2,897
Dados	2,087
Dalican Poblacion	14,094
Dinaig Proper	3,947
Dulangan	950
Kakar	491
Kenebeka	1,262
Kurintem	3,229
Kusiong	1,499
Labungan	2,712
Linek	1,929
Makir	3,974
Margues	1,678
Nekitan	1,885
Mompong	1,494
Sapalan	1,321
Semba	5,988
Sibuto	1,310
Sifaren (Sifaran)	1,239
Tambak	893
Tamontaka	10,058
Tanuel	1,637
Tapian	2,167
Taviran	2,650
Tenonggos	1,192
Total	**99,210**

Source: Philippine Statistics Authority (PSA), 2015

Health Facilities. There are several health issues and concerns that the municipality addresses in its Comprehensive Development Plan and Executive-Legislative Agenda (CDP-ELA) for the period covering years 2013 to 2016. These are as follows:

- **Inadequate health facilities.** This refers to the absence of barangay health stations (BHSs) in Dulungan, Bada, Ambolodto, Kakar, Neketan, Bagoenged, Bongued, Sapaln, Sifiran and Sibuto. Three (3) barangays: Mompong, Tanuel and Labungan, have dilapidated BHSs and therefore need renovation. This situation hinders the accessibility & delivery of quality health services in the municipality.

- **Lack of health personnel.** With the accepted ration of one (1) Public Health Nurse to every 20,000 population (1:20,000), Datu Odin Sinsuat has an actual ratio of 1:44,098, which is far away from the previously mentioned accepted ratio. Rural Health Midwives ratio should be 1 midwife to every 5,000 population (1:5,000). Datu Odin Sinsuat actual ratio is 1:7,349, which shows a big gap in health service delivery.

- **Lack of awareness on health.** Public consciousness about the importance of good health and healthy habits are keys to more sustainable health interventions. There is a perceived low level of awareness on health and health issues by the people.

- **RHU not PhilHealth accredited.** Related to the concern about inadequate health services, the RHU of the municipality is yet to attain PhilHealth accreditation to provide more access and quality services to the constituents especially the indigent members of the community.

Sanitation Facilities. There is no existing wastewater collection system in most municipalities of the province. Around 65% of the household in Maguindanao is still practicing unimproved sanitation such as pit latrine and open waste disposal. The remaining 35% uses septic tanks and single/double vault pit latrines.

On site sanitation in Datu Odin Sinsuat are flush type water closets using septic tanks for waste disposal. Septic tanks in Datu Odin Sinsuat are unlined of which leachate percolates into the ground. Some households have latrines, pit privy while rest have none at all.

Solid Waste Management. The existing solid waste management program of the LGU is limited only to urban barangays and does not address the solid waste disposal of the entire municipality. Solid waste collections were only done at the Dalican Poblacion and Barangay Awang. There are two (2) open dumpsites located in Barangays Makir and Awang.

Educational Facilities. Mindanao State University – Maguindanao (MSU-Maguindanao) is the only state university in the Province of Maguindanao. It is located in Datu Odin Sinsuat. As of 2012, the municipality has 24 functional day care centers, 36 primary schools and eight (8) secondary schools both private and public. Due to increasing number of elementary and secondary students, there is a need for construction of additional school buildings and renovations of old ones. The local government partnership with the Department of Education (DepEd) has been established for the Revised Basic Education Curriculum textbooks distribution at the secondary schools, and new textbooks and manuals for the elementary schools.

Moreover, there are establishments that cater to training/seminars, convention and gatherings, such as St. Joseph Retreat House, MSU Training Center, Awang Hillside Resort, Rany's Resort (Awang), El Grande (Capiton), and Community Research and Development Centers (Taviran).

Socio-economic Conditions. The municipal income and expenditure as well as internal revenue allotment (IRA) for the years 2010-2013 is summarized in **Table 4-3**.

Table 4-3: Income and Expenditures and IRA for the Period 2010-2013

Year	Income (Php)	Expenditures (Php)	IRA (Php)
2010	136,9135,533.50	131,047,828.97	129,595,781.00
2011	152,388,693.76	146,815,309.99	140,582,344.00
2012	168,178,754.39	165,773,005.70	135,511,041.00
2013	161,036,400.60	208,688,342.10	125,119,542.00

Source: DOS Municipal Treasurer's Office

5 ANTICIPATED IMPACTS AND MITIGATION MEASURES

This section assesses the impacts of the proposed activities on various environmental components of the subproject site.

Methodology. Anticipated impacts to be considered were assessed through the following activities: (i) gathering of inputs from interested and affected parties through consultation; (ii) desktop research of information relevant to the proposed project; (iii) site visit and professional assessment; and (iv) evaluation of proposed design and potential impacts. Categorization of the project and formulation of mitigation measures have been guided by ADB's General REA Checklist (**Annex 1**) and SPS.

A comprehensive screening of environmental impacts is carried out through assessment of general parameters associated with general construction and water supply projects against the components of the proposed MCWD subproject and the environment where the facilities will be constructed. A screening checklist was adopted using previous ADB IEE Reports which was developed using various sources such as DENR checklists, ADB's REA Checklist, and World Bank Environmental Source Book. Some items of the checklist may not be applicable to this particular subproject, however, they are still included to indicate its relevance in the screening process.

Impact Assessment. The assessment is made on the following phases of the subproject: (i) pre-construction, (ii) construction, and (iii) operation and maintenance. Results of the environmental impacts screening are summarized in **Table 5-1** which shows the impact types and magnitudes for both positive and negative impacts without the mitigating measures and the resulting situations when mitigating measures will be implemented. Discussions of each issue are presented in the succeeding sections. For ease of identification, a summary of the environmental impacts that should be included in the Environmental Management Plan (EMP) is presented at the end of this section (see **Table 5-3**)

Due to the subproject's relatively long operational life, decommissioning or closure in the near or medium term (e.g., 25-50 years) is not envisaged. Furthermore, environmental impacts arising from decommissioning of the proposed MCWD facilities are deemed to be minimal such as: (i) residual waste cleanup is not a major concern since the facilities are not industrial manufacturing plants with potential problems for toxic and hazardous wastes, and (ii) solid wastes from decommissioning is also not a major concern since the structures are mostly made of reinforced concrete and the solid wastes are mostly recyclable materials such as broken concrete materials, reinforcing steel bars used in the structures, structural steel, roofing materials, electrical wires, etc. In the event that decommissioning becomes an option, the appropriate action plan will be drawn up in accordance with the regulatory requirements of the Philippine Government.

Table 5-1: Summary of Environmental Impacts Screening

Environmental Impacts and Risks	Without Mitigation	With Mitigation
PRE-CONSTRUCTION PHASE		
Encroachment to environmentally sensitive areas	n.a.	n.a.
Impacts and risks to biodiversity conservation	n.a.	n.a.
Encroachment to historical areas and cultural areas	n.a.	n.a.
Potential nuisance and problems to the public	★ -	Δ
Interruption of other utility services	★ -	Δ
Loss of assets (IR concerns)	n.a.	n.a.
CONSTRUCTION PHASE		
Modification of construction site topography	Δ -	Δ
Displacement of Rare or Endangered Species	n.a.	n.a.

Environmental Impacts and Risks	Without Mitigation	With Mitigation
Soil erosion and sediments of construction sites	★ -	Δ
Nuisance/ public inconvenience in pipelaying	★ -	Δ
Noise from construction equipment	★ -	Δ
Local air pollution due to construction activities	★ -	Δ
Pollution due to improper waste management (solid, liquid, hazardous, spoils, and construction debris)	★ -	Δ
Vehicular traffic congestion and public access	★ -	Δ
Hazards to public due to construction activities	★ -	Δ
Pollution and health risk due to workers camp	★ -	Δ
Occupational health and safety risks to workers	★ -	Δ
Improper closure of construction sites	★ -	Δ
Increase employment opportunity in work sites	★ +	★ +
OPERATION AND MAINTENANCE PHASE		
Health hazard due to delivery of poor water quality	★ -	Δ
Pollution from increased generation of sewage and sullage	n.a.	n.a.
Increase employment opportunities	n.a.	n.a.

Legend: n.a. = not applicable; Δ = insignificant; ★ = significant; + = positive; - = negative

Table *5-2* presents the summary of government environmental compliance documents needed by the sub-project before commencement of construction works, during construction and during operation.

Table 5-2: Summary of Government Environmental Compliance Documents for Water Supply Subproject

Stage of Development	Regulatory Permit	Issuing Agency	Applicable Legislation
Pre- construction	ECC	EMB Regional Office	PD 1586 and its implementing rules and regulations
Construction	Clearing/Fencing/ Excavation Permit	LGU	LGU Ordinance
Operation	Compliance with DOH for Philippine National Standards for Drinking Water (PNSDW) 2017		DOH AO 2007-0012

A. Design/ Pre-Construction Phase Considerations

Encroachments. MCWD subproject's components will not be located in areas that are environmentally sensitive and areas with historical and cultural importance. The proposed route of the pipelines is along the national highway and residential areas from Tanuel Pumping Station up to Crossing SPDA Junction. There are no known archaeological and cultural assets in these proposed sites. Nevertheless, precautions will be taken to avoid potential damage to

any archaeological and cultural assets by inclusion of provisions in tender and construction documents requiring the contractors to immediately stop excavation activities and promptly inform the authorities if archaeological and cultural assets are discovered. Under the Cultural Properties Preservation Act (Presidential Decree No. 374) in the event that excavators shall strike upon any buried cultural property, suspension of excavation is inevitable and it shall be reported immediately upon occurrence of the event to the Director of the National Museum and shall then take appropriate actions with regards to the matter. The suspension can only be lifted by the Director of the National Museum. Accordingly, in case of archeological, historical, cultural chance finds, in order to avoid damage to cultural properties, the following steps should be observed: (i) detailed design of all civil works will be located away from all cultural/ archeological/historical properties; (ii) procedures for chance finds of valued relics and cultural values will be stipulated in the contract with contractors in order to avoid damaging such valuable properties; (iii) site supervisors will be on the watch for chance finds; (iii) upon a chance find, all work will be stopped immediately, find will be left untouched, and notify MCWD who in turn will notify the National Museum; (iv) work at the find site will remain suspended until the National Museum allows work to resume.

Impacts and Risks to Biodiversity Conservation. There are no identified impacts and risks to biodiversity conservation since the MCWD subproject's components will not be located in areas that are environmentally sensitive. The sites are not in undisturbed landscapes and over the years the ecological changes due to human activities in the area have resulted to the present residential and commercial landscapes.

Nuisance and Problems to the Public. Potential nuisances and problems coming from the public during construction can be avoided and immediately addressed through consultation and information dissemination to potentially affected people during detailed design and pre-construction phase. Tender documents shall include provisions addressing potential nuisances and problems from the nearby community during construction including environmental management provisions on the following issues: (i) erosion and sediment runoff, (ii) noise and dust, (iii) vehicular traffic, (iv) construction wastes, (v) oil and fuel spillages, (vi) construction camps, and (v) public safety and convenience.

Interruption of other utility services. Some existing utility services could be temporarily interrupted during construction especially co-located utility lines and may cause inconvenience to the public.

Mitigation. Prior to construction works, the contractor shall coordinate with respective offices in acquiring required clearances with regard to electricity, telephone lines, and other utilities/structures that may be affected. These shall all be reflected in the construction contracts.

Loss of Assets. The proposed project will not entail any involuntary resettlement and there are no adverse impacts on surrounding structures since the pipeline routes are within right of way

B. Construction Phase Environmental Impacts

Prior to the commencement of construction activities, the civil works contractor is required to submit a Contractor's Environmental Management Plan (CEMP) which is a refinement of MCWD subproject's initial EMP. The proposed mitigation in the initial EMP may be further modified or enhanced in the CEMP to make it more site-specific and include detailed management plans such as traffic management plan, spoils and wastes management plan, community and occupational health and safety plan, etc. The CEMP requirements are further

discussed under the Environmental Management Plan (EMP) section. A sample CEMP outline is presented in **Annex 3**.

Site Preparation. Replacement of pipelines will not involve modification of the construction site topography. Water supply pipelines will follow as much as possible the existing site contour. This issue is therefore considered not significant. Upon verification with MCWD, there are no timber species that will be affected by the project during vegetation clearing.

Soil Erosion and Sediment from Construction Sites. During rainy seasons, exposed soil at the construction site can easily be eroded and carried to the natural drainage system if preventive measures are not established.

Mitigation. In preventing erosion, surface runoff must be controlled using structural erosion prevention and sediment control practices which will divert the storm water flows away from the exposed areas, prevent sediments from moving offsite, and reduce the erosive forces of runoff waters. These measures must be established by the contractor: (i) interceptor dikes, (ii) pipe slope drains, (iii) straw bale barriers, (iv) sediment traps, and (v) temporary sediment basins. Whenever possible, total exposed area shall be minimized.

Nuisance/Public Inconvenience during Pipelaying. The prolonged period of water supply service interruptions during pipelaying works may result to public inconvenience. Dumping of construction materials and solid wastes in water bodies will also cause nuisance to the public aside from affecting water quality and the flow regime. Excavation and digging activities will also cause inconvenience and may restrict public access to subproject areas.

Mitigation. The contractor shall be required to perform the following: (i) installation or replacement of pipes within the shortest time possible to minimize water supply cut-off periods and/or use of night time schedules, as well as announcement of water supply interruptions two (2) to three (3) days prior to actual cut-off; and (ii) avoid dumping of earth, stones, and solid wastes in water bodies to avoid adverse impact on water quality and flow regime.

Restriction of access to the site must be done through a combination of institutional and administrative controls, including fencing, signage, and communication of risks to the local community.

Construction Noise. Potential sources of noise may come from vehicles and construction equipment, which can generate noise of 80 dB (A) from a distance of 30 meters while loud noise from sources such as blasting are not anticipated. Residential and commercial establishments are identified as receptors during pipelaying.

Mitigation. Exposure of receptors to increased noise levels can be lessened by scheduling construction during daytime only. In areas near residential areas or noise sensitive sites, noisy equipment shall not be operated during nighttime to early morning (22:00H – 06:00H). The use of noise suppressors (mufflers) in equipment and vehicles is also recommended. Workers using noisy equipment shall be provided with earplugs as well.

Ambient baseline noise levels will be established at designated strategic locations with sensitive receptors. In case baseline noise levels already exceed the guideline values, IFC-EHS allows a maximum 3 dB(A) increase in noise levels as a result of project activities. Mitigation measures may be adjusted in the CEMP based on the baseline noise levels.

Local Air Pollution Due to Construction Activities. Piles of sand, gravel and waste materials that would be generated during trenching, earthworks, and soil preparation activities can contribute to the total suspended particles in the air. Machineries and heavy equipment

used in the construction will also account for vehicular emissions during construction. Without any mitigating measures, dust generation could be significant during dry periods.

Mitigation. Machineries and heavy equipment used in the construction must be regularly maintained and operated and must comply with the requirements of the Clean Air Act regarding vehicle emissions. Piles of sand, gravel and waste materials that would be generated during site clearing should be watered frequently to prevent dust particles from affecting nearby areas. Covers for open stockpiles shall be required to prevent dust generation due to the wind current. Vehicles transporting loose construction materials such as sand, gravel, spoils, and the like shall be provided with tarpaulin cover as well.

Waste Generation. Possible wastes that may be generated from the construction activities includes: (i) domestic and office wastes; (ii) domestic wastewater; (iii) hazardous wastes such like excess grease, lubricants, and paints, and; (iv) spoils and construction debris. Improper handling and disposal of these wastes may result to pollution of soil and nearby water resources.

Mitigation. As part of the CEMP, handling and disposal of wastes must be established though a waste management plan. All domestic wastes including construction debris will be disposed of in accordance with the construction and operations waste management procedures. The project contractor will be required to install portable toilets at the construction site. As part of good construction practice, the contractors will be required to conduct an awareness program for all workers regarding the prevention and management of spills and proper disposal of used containers. Fuel and oil shall be stored in a designated secured area provided with an impermeable liner to prevent the accidental spills from seeping into the ground. Proper handling and disposal of excavated materials and other spoils shall be undertaken in accordance with existing local guidelines. Stockpiling of spoils must be avoided.

Vehicular Traffic Congestion and Public Access. Traffic flow will be disrupted if routes for delivery of construction materials and temporary blockages in heavily traveled highways and narrow streets are not planned and coordinated. Potential traffic congestion is expected along the National Highway from Tanuel Pumping Station and SPDA Junction due to construction activities.

Mitigation. A traffic management plan shall be included in the CEMP. The traffic management plans which may include traffic diversion schemes should be properly coordinated with the LGU and the local office in charge of traffic management. Prior to implementation of the traffic re-routing plan, the public must be informed in advance. The method of informing the public would be left to the discretion of the proponent. Options include posting notices in public places, in local newspapers, through local radio and television programs or through public address system. Billboards placed in strategic locations will also serve the purpose. It is recommended to place appropriate and sufficient signages at strategic locations to forewarn the public of the expected traffic problem and to suggest alternative routes that they may take. During this period, traffic aides must be assigned to manage the traffic.

Hazards to Public Due to Construction Activities. Inconvenience to the general public which may result to accidents is one of anticipated impacts during construction activities. Pipelaying along the roads as well as movement of construction vehicles and excavations would pose some hazards to the driving public. There is also risk of people falling down in open trenches since pipelaying trenches are normally left uncovered until pipeline testing is completed.

Mitigation. MCWD and the contractor should ensure that sufficient and appropriate safety warning devices, safety signs, safety nets or safety guards and cover for open ditches must

be implemented at strategic locations to ensure the safety of the people. MCWD may also consult the provincial and local government units to delineate the public safety zone or measurable distance prohibiting public entry and other possible forms of encroachment during construction operations.

Pollution and Health Risk due to Workers Camp. During the construction period, workers are expected to erect temporary workers' camps. Due to run-off of from sanitary sewage, wastewater and solid wastes brought by workforce, potential pollution may occur as a result of improper waste disposal.

Mitigation. The construction contractor shall prepare a solid waste disposal plan which shall be included in the CEMP. The construction contractor shall be required to carry out the following: (i) install proper sanitary facilities to prevent the indiscriminate discharge of sanitary wastes at the camps' surroundings, (ii) implement proper solid waste management, and (iii) prevent surface runoffs from flowing into the workers camps to avoid carrying away any contaminants. The contractor shall be required to use temporary diversion drains, catch drains, and silt-traps at these camps.

Occupational health and safety risks to workers. Workers' health and safety hazards may include inadequate supply of safe and potable water and inadequate sanitation facilities; poor sanitation practices on site; poor housing conditions; handling of hazardous substances and operation of construction equipment; exposure to extreme weather and non-observance of health and safety measures. Construction workers may also be potentially exposed to communicable and transmittable diseases.

Mitigation. Implementation of an occupational health and safety plan shall include international best practices on occupational health and safety. As minimum and whichever are applicable, the occupational health and safety plan may include the following:

(i) Communication and Training:
- Training of all workers on occupational health and safety prior to construction works;
- Conduct of orientation to visitors on health and safety procedures at work sites;
- Signages strategically installed to identify all areas at work sites, including hazard or danger areas;
- Proper labelling of equipment and containers at construction and storage sites; and
- Suitable arrangements to cater for emergencies.

(ii) Physical Hazards:
- Use of personal protective equipment (PPE) by all workers and ensure these are used properly;
- Avoidance of slips and falls through good house-keeping practices;
- Use of bracing or trench shoring on deep excavation works;
- Adequate lighting in dark working areas and areas with night works;
- Rotating and moving equipment inspected and tested prior to use during construction works. Specific site traffic rules and routes in place and known to all personnel, workers, drivers, and equipment operators; and
- Use of air pollution source equipment and vehicles that are well maintained and with valid permits.

(iii) General Facility Design and Operation:
- Regular checking of integrity of workplace structures to avoid collapse or failure;
- Ensuring workplace can withstand severe weather conditions;

- Enough workspaces available for workers, including exit routes during emergencies;
- Fire precautions and firefighting equipment installed;
- First aid stations and kits and trained personnel are available.
- Secured storage areas for chemicals and other hazardous and flammable substances are installed with access limited to authorized personnel only;
- Good working environment temperature maintained;
- Worker camps and work sites provided with housekeeping facilities; and
- Maintain records and make reports concerning health, safety and welfare of persons, and damage to property.

Improper Closure of Construction Sites. Generation of solid wastes (*e.g.* used wood materials, steel works cuttings, paint and solvents containers, used oil from equipment, unused aggregates, etc.) after construction activities may cause aesthetic problems and potential contamination of the surrounding environment.

Mitigation. The project site shall not be abandoned in disorderly condition but instead restored for functional use. Following the completion of the construction, the MCWD shall deactivate the project offices, and the construction yard including unserviceable vehicles and equipment. Wastes arising from the abandonment must be taken care of the contractor.

Increase Employment Opportunities at Work Sites. Construction activities require a considerable number of workers. The impact would be beneficial and significant to people since employment opportunities in the area will increase.

Enhancement. A robust “local first” hiring policy will be designed and implemented by the contractor in coordination with local officials and community leaders especially at the barangay and municipal levels. No preference in terms of gender during the hiring process will be observed.

C. Operation Phase Environmental Impacts

Health Hazard Due to Delivery of Poor Water Quality. Delivery of water with poor quality to distribution system is a health risk to the consumers. Threats of contamination due to presence of bacteria, viruses, protozoa, or chemicals are usually present in raw water sources up to the service connections, thus, post-treatment contamination is still anticipated as the water is transported to the consumer and considered to be a significant impact.

Mitigation. MCWD shall ensure that the potable water consistently passes the requirements of the Philippine National Standards for Drinking Water (PNSDW) of 2017. To achieve this, implementation of the water safety plan with regular water quality monitoring shall be undertaken.

A water safety plan shall enable MCWD to (i) prevent contamination of its water sources, (ii) treat the water to reduce or remove contamination that could be present to the extent necessary to meet the water quality targets, and (iii) prevent recontamination during storage, distribution and handling of drinking water.

For controlling microbial contamination, gas chlorine disinfection will ensure that water will be chlorinated and adequate residual disinfection will be maintained. The standards for chlorine residual of the 2017 PSDW are: (i) 0.3 mg/l minimum for detection at the farthest point of the distribution system and (ii) 1.5 mg/l maximum for detection at the farthest point of the distribution system.

Pollution from Increased Generation of Sewage and Sullage. Increase in generation of sewage and sullage and pollution of the surrounding areas are not expected for this subproject since there will be no addition to the water supply system, only replacement of existing pielines.

Increase Employment Opportunities. After pipelines are replaced, employment opportunities during the operation phase are not expected.

After careful and thorough assessment of impacts and risk screening, this proposed subproject is expected to have an overall beneficial net effect on the water supply system of the WD because it will improve the water resiliency in the Province of Maguindanao. In addition, the subproject will ensure a longer service life of pipelines and reduced water loss.

Table 5-3 lists the environmental impacts and risks that requires mitigation and shall be carried to the EMP Section.

Table 5-3: Environmental Impacts and Risks for Inclusion in EMP

Environmental Impacts and Risks	Without Mitigation	With Mitigation
PRE-CONSTRUCTION PHASE		
Potential nuisance and problems to the public	★ -	Δ
Interruption of other utility services	★ -	Δ
CONSTRUCTION PHASE		
Soil erosion and sediments of construction sites	★ -	Δ
Nuisance/ public inconvenience in pipelaying	★ -	Δ
Noise from construction equipment	★ -	Δ
Local air pollution due to construction activities	★ -	Δ
Pollution due to improper waste management (solid, liquid, hazardous, spoils, and construction debris)	★ -	Δ
Vehicular traffic congestion and public access	★ -	Δ
Hazards to public due to construction activities	★ -	Δ
Pollution and health risk due to workers camp	★ -	Δ
Occupational health and safety risks to workers	★ -	Δ
Improper closure of construction sites	★ -	Δ
Increase employment opportunity in work sites	★ +	★ +
OPERATION AND MAINTENANCE PHASE		
Health hazard due to delivery of poor water quality	★ -	Δ

Legend: n.a. = not applicable; Δ = insignificant; ★ = significant; + = positive; - = negative

The subproject is unlikely to cause significant adverse impacts. However, there are no impacts that are significant or complex in nature, or that needs an in-depth study to assess the impact. The potential adverse impacts that are associated with design, construction, and O&M can be mitigated to acceptable levels with the recommended mitigation measures.

6 PUBLIC CONSULTATION AND INFORMATION DISCLOSURE

A stakeholder consultation and participation were implemented as part of the preparation and

implementation strategy. This were done to address the stakeholders' needs and disclosure of the project details and the benefits they shall receive. The consultation process during the project preparation has solicited inputs from stakeholders, including government officials.

Key stakeholders were consulted during the project preparation, EMP implementation, and project implementation including the following:

(i) Local NGOs;

(ii) WDs representatives and consultants, and

(iii) ADB representatives

The public consultation activities conducted by the MCWD with its stakeholders were carried out in preparation for the construction of the proposed replacement of transmission and distribution pipelines in the area. The summary of the activities conducted is presented in Error! Reference source not found..

Table 6-1: Summary of Activities Conducted

Date	Activity	Number of Attendees	Location	Remarks
05 February 2020	Staff consultation with barangay officials	13	Brgy. Capiton, Datu Odin Sinsuat	Presentation of the proposed project and its details, and purpose of the project
07 February 2020	Staff consultation with barangay officials	20	Brgy. Tambak, Datu Odin Sinsuat	
11 February 2020	Staff consultation with barangay officials	20	Brgy. Awang, Datu Odin Sinsuat	
15 February 2020	Staff consultation with barangay officials	11	Brgy. Tanuel, Datu Odin Sinsuat	
17 February 2020	Staff consultation with barangay officials	20	Brgy. Tamontaka, Datu Odin Sinsuat	

The documentations of the meeting are presented in the **Annex 4**.

7 ENVIRONMENTAL MANAGEMENT PLAN (EMP)

The EMP addresses the need for mitigation and management measures for the MCWD subproject. This includes: (i) mitigating measures to be implemented, (ii) required monitoring associated with the mitigating measures, and (iii) implementation arrangement. Institutional set-up is presented in the implementation arrangement and discusses the roles during implementation and the required monitoring. It also outlines the requirements and responsibilities during pre-construction, construction, and operation phases. The EMP shall be included in the contract documents to guarantee an environmentally responsible procurement. Tender documents and construction contracts shall include environmental management provisions on the following issues: (i) erosion and sediment runoff, (ii) noise and dust, (iii) vehicular traffic, (iv) construction wastes, (v) oil and fuel spillages, (vi) construction camps, and (vii) public safety and convenience.

A. Environmental Mitigation

Table 7-1 presents the information on: (i) required measures for each environmental impact that requires mitigation, (ii) locations where the measures apply, (iii) associated cost, and (iv) responsibility for implementing the measures. Details of mitigating measures are already discussed in **Section 5** where the need for mitigation of each impacts was determined in the screening process.

Table 7-1: Environmental Mitigation Plan

Project Activity	Potential Environmental Impact	Proposed Mitigation Measure or Enhancement Measure	Location	Mitigation Cost	Responsibility Implementation/ Supervision
PRE-CONSTRUCTION PHASE					
Excavation requirements	Excavation requirements	Provision in tender documents that will require construction activities to be stopped immediately upon discovery of any archaeological and cultural relics and promptly reporting to the National Museum	Pipeline trenches, civil works excavations	Part of detailed design cost	Design Consultants/ LWUA Project Management Unit (PMU)
Social and community concerns	Potential nuisance and concerns from the public	Consultation with the affected communities regarding the expected impacts and proposed mitigation measures of the project Provisions to address the potential nuisances and concerns from the public during construction phase must be included in the CEMP, specifically the following: (i) erosion and sediment runoff, (ii) noise and dust, (iii) vehicular traffic, (iv) construction wastes (v) oil and fuel spillages, (vi) construction camps, and (vii) public safety and convenience	Pipelines routes	Part of detailed design cost	MCWD Project Implementation Unit (PIU), Design Consultants/ LWUA PMU
	Damage to other utility infrastructure or disruption of services	Possible utility lines that may be affected during the construction must be identified. Proper coordination with utility providers with regard to electricity, telephone lines, and other utilities/structures that may be affected. Permit/s or clearance/s must be secured, if necessary	Pipelines routes, ground reservoirs, and new office	Part of detailed design cost	MCWD Project Implementation Unit (PIU), Design Consultants/ LWUA PMU
Preparation of detailed engineering design	Natural hazards, such as earthquake and flood	Structural integrity of the water supply system shall conform with the requirements of the 2015 National Structural Code of	All structural components	Part of detailed design cost	Design Consultants/ LWUA PMU

Project Activity	Potential Environmental Impact	Proposed Mitigation Measure or Enhancement Measure	Location	Mitigation Cost	Responsibility Implementation/ Supervision
		the Philippines (NSCP) and the latest edition of the American Water Works Association (AWWA) Standards pipes, valves, and fittings - Projection of flood level using 50-year return period for catchment areas less than 40 km^2, and 100-year return period for catchment areas more than 40 km^2			
	Project-related complaints	- Establishment of a grievance redress mechanism (GRM).			MCWD PIU, PMU/ Supervision Consultant, LWUA
Site preparation	Tree cutting (if applicable)	- Assess the project area and pipe alignment and check if there are trees need to be cut. Establish ownership and avoid cutting trees of ecological importance. - Identify the number of affected trees, apply for a tree cutting permit from the DENR and comply with all government requirements.	To be identified.	Included in construction contract cost.	Contractor/ MCWD PIU, PMU, Supervision Consultant, LWUA, DENR
Baseline survey	Ambient noise level	- Baseline measurement of ambient noise shall be conducted and will be incorporated in the CEMP - If baseline noise levels already exceed the IFC-EHS guideline values, a maximum 3 dB(A) increase in noise levels as a result of project activities shall be allowed. Mitigation measures should be implemented to ensure this.	To be identified.	Included in construction contract cost.	Contractor/ MCWD PIU, PMU, Supervision Consultant, LWUA, DENR
	Improper EMP implementation	- The Contractor shall assign an Environmental, Health, and Safety (EHS) Officer who shall ensure the proper implementation of the EMP and EMoP. - A contractor's environmental management plan (CEMP) shall be prepared and cleared by PMU, PIU and ADB prior to start of construction. The CEMP will update the EMP and baseline information if necessary, and make it more site-specific and include detailed management plans such as traffic management plan, spoils and wastes management plan,	All project sites	Included in construction contract cost.	Contractor/ MCWD PIU, PMU, Supervision Consultant, LWUA

Project Activity	Potential Environmental Impact	Proposed Mitigation Measure or Enhancement Measure	Location	Mitigation Cost	Responsibility Implementation/ Supervision
		community and occupational health and safety plan, etc.			
	Non-compliance with government requirements	All applicable government permits such as ECC/CNC, water permit, permit to operate, etc. shall be secured prior to start of construction.	All project sites	Included in construction contract cost.	Contractor MCWD PIU/ PMU, Supervision Consultant, LWUA
CONSTRUCTION PHASE					
Pipelaying and other civil works	Soil erosion and sediments from construction sites during rainy periods	Minimize total exposed area Use of structural erosion prevention and sediment control practices which may include: interceptor dikes, pipe slope drains, straw bale barriers, sediment traps, and temporary sediment basins	Pipelines routes	Incorporated in construction contract	Contractor/ MCWD PIU, Supervision Consultants
	Nuisance / inconvenience to the public	Minimize water supply cut-off periods and /or use of nighttime schedules, as well as announcement of water supply interruptions 2-3 days prior to actual cut-off Avoid dumping of earth, stones, and solid wastes in water bodies	Pipelines routes	Incorporated in construction contract	Contractor/ MCWD PIU, Supervision Consultants
	Nuisance from noise of construction equipment and vehicles	All heavy equipment and machineries shall be fitted with noise dampening devices that are in good condition. Inform workers to minimize their activities to avoid disturbing the nearby communities. Avoid operating noisy equipment during nighttime (22:00 – 06:00) Vehicle horn signals will be kept at a low volume, if necessary.	Pipelines routes	Incorporated in construction contract	Contractor/ MCWD PIU, Supervision Consultants
	Air pollution due to construction activities	Water spraying for dust control Construction materials with potential for significant dust generation shall be covered Tarpaulin cover for trucks transporting loose construction materials Avoid smoke belching equipment	Pipelines routes	Incorporated in construction contract	Contractor/ MCWD PIU, Supervision Consultants
	Pollution due to improper waste management (solid, liquid, hazardous, spoils, and construction debris)	Prepare a waste management plan as part of the CEMP Conduct an awareness program for all workers regarding the prevention and management of spills and proper disposal of used containers.	Pipelines routes	Incorporated in construction contract	Contractor/ MCWD PIU, Supervision Consultants

Project Activity	Potential Environmental Impact	Proposed Mitigation Measure or Enhancement Measure	Location	Mitigation Cost	Responsibility Implementation/ Supervision
	Traffic congestion and hindrance to access	Traffic diversion schemes and other traffic management plans should be properly coordinated with the LGU and the local office in charge of traffic management, and consulted with the stakeholders. Prior to implementation of the traffic re-routing plan, the public must be informed in advance.	Pipelines routes	Incorporated in construction contract	Contractor/ MCWD PIU, Supervision Consultants
	Pollution, accident, and health and safety risks to workers	All domestic wastes will be disposed of in accordance with the construction and operations waste management procedures. Provision of sanitary or portable toilets to laborers Implementing a solid waste management plan Provision of surface runoffs control such as temporary diversion drains, catch drains, and silt-traps Provision of personal protective equipment (PPE) to workers and requiring them to use PPE appropriate to their work Conduct HSE training to workers, including, COVID-19, HIV and STD awareness Compliance to DOLE Occupational Health and Safety Standards Comply with government guidelines and protocols on COVID-19	Workers camp; construction sites	Incorporated in construction contract	Contractor/ MCWD PIU, Supervision Consultants
	Hazard to public due to construction activities and damage to properties	Implement road safety plan and safety measures including warning signs to alert people of hazards around the construction sites, barricades, and night lamps for open trenches in pipelaying Provision of temporary access Restoration or equitable compensation for damages	Pipelines routes	Incorporated in construction contract	Contractor/ MCWD PIU, Supervision Consultants
	Increase employment opportunities	A robust “local first” hiring policy will be designed and be implemented in coordination with local officials and community leaders especially at the barangay and municipal levels. At least 50% hiring of unskilled labor from local	Pipelines routes	No cost	Contractor/ MCWD PIU, Supervision Consultants

Project Activity	Potential Environmental Impact	Proposed Mitigation Measure or Enhancement Measure	Location	Mitigation Cost	Responsibility Implementation/ Supervision
		residents will be implemented as per RA 6685. - No preference in terms of gender during the hiring process will be observed. - Adopt a just compensation scheme to avoid future labor and management conflicts.			
Rehabilitation and closure of construction sites	Improper closure of construction sites	- Removal and proper disposal of all construction wastes and implement surface restoration	Pipelines routes	Incorporated in construction contract	Contractor/ MCWD PIU, Supervision Consultants
OPERATION PHASE					
Water production	Health hazard due to delivery of poor water quality	- Water disinfection using chlorine - Water safety plan implementation - Regular water quality monitoring in compliance with the 2017 Philippine National Standards for Drinking Water (PNSDW)	Pipelines routes	Part of operation & maintenance costs	MCWD / LWUA

Although details of the required mitigating measures are already discussed in the screening for impacts, the following items are discussed further to highlight their importance: (i) tender documents and construction contracts, (ii) contractor's environmental management plan, (iii) construction site management plan, (iv) water safety plan, and (v) unanticipated environmental impacts.

Tender Documents and Construction Contracts. Inclusion of provisions addressing the management of environmental impacts and risk during construction in contract documents in the form of a Contractor's Environmental Management Plan (CEMP) guarantees an environmentally responsible procurement. Tender documents and construction contracts shall therefore include environmental management provisions on the following issues: (i) erosion and sediment runoff, (ii) noise and dust, (iii) vehicular traffic, (iv) construction wastes, (v) oil and fuel spillages, (vi) construction camps, and (vii) public safety and convenience.

Contractor's EMP (CEMP). The CEMP shall be prepared by the civil works contractor prior to start of construction and needs to be approved by MCWD's PIU. This is a refinement of the MCWD subproject's EMP with details on staff, resources, implementation schedules, monitoring procedures and specific measures and procedures on how the contractor will implement the EMP during construction and allocate a budget. This will be the basis for monitoring the environmental performance of the contractor by the PMU, MCWD PIU, construction supervision consultants, and other monitoring parties. Moreover, the construction supervision consultant will be able to manage the specific items expected from the contractor regarding environmental safeguards. With the CEMP, MCWD can easily verify the associated environmental requirements each time the contractor will request approval for work schedules.

As part of the CEMP, baseline noise level measurements will be done during detailed design phase at strategic locations on the areas with sensitive receptors to establish ambient baseline noise levels.

The CEMP shall provide details on specific items related to the environmental aspects during construction. It shall include specifications on requirements for dust control, erosion and

sediment control, avoidance of casual standing water, management of solid wastes, workers' camp sanitation, pollution from oil, grease, fuel spills, and other materials due to the operation of construction machineries, safety and traffic management, occupational health and safety, avoidance of inconveniences to the public and damage to properties and, air and noise pollution control. It shall also include guidance on the proper design of the construction zone, careful management of stockpiles, vegetation, topsoil, and vehicles and machinery.

See **Annex 3** for sample CEMP outline.

Water Safety Plan. Preparation of a water safety plan is advocated by WHO for ensuring the delivery of safe drinking water to the consumers using a comprehensive risk assessment and risk management approach that covers the process of sourcing water supply up to the distribution to consumers. Similarly, MCWD shall manage the environmental risk to its water supply system in a broader scale. A water safety plan shall enable MCWD to (i) prevent contamination of its water sources, (ii) treat the water to reduce or remove contamination that could be present to the extent necessary to meet the water quality targets, and (iii) prevent recontamination during storage, distribution and handling of drinking water. It is an approach that will clearly show the desire of the MCWD in applying best practices in ensuring delivery of potable water to its consumers.

Following the DOH Administrative Order No. 2014-0027 that mandates all drinking-water service providers to develop and implement their Water Safety Plan, MCWD's Water Safety Plan is already prepared. Upon completion of MCWD's Water Supply Improvement Project, the Water Safety Plan must be updated to include the improvements in the system.

Unanticipated Environmental Impacts. In case of occurrence of unanticipated environmental impacts during project implementation, MCWD shall prepare a supplementary environmental assessment and EMP to assess the potential impacts and outline mitigation measures and resources to address those impacts.

B. Environmental Monitoring

Table 7-2 presents the information on: (i) aspects or parameter to be monitored, (ii) location where monitoring is applicable, (iii) means of monitoring, (iv) frequency of monitoring, (v) responsibility of compliance monitoring, and (vi) cost of monitoring. The PMU shall prepare semi-annual environmental monitoring reports to be submitted to LWUA management detailing the status of mitigating measures implementation.

Table 7-2: Environmental Monitoring Plan

Aspects / Parameters to be monitored	Location	Means of Monitoring	Frequency	Implementation Responsibility	Compliance Monitoring Responsibility	Monitoring Cost
PRE-CONSTRUCTION PHASE						
Specific provision in tender documents on archeological/ cultural relics	Pipeline trenches, civil works excavations	Verify draft and final documents	Twice – draft and final documents	Design consultants	LWUA PMU	Part of project management in detailed design (minimal cost)
Consultation meetings	Pipelines routes	Verify meetings documentation	After completion of meetings	MCWD, Design consultants	LWUA PMU	Part of project management in detailed design (minimal cost)

Aspects / Parameters to be monitored	Location	Means of Monitoring	Frequency	Implementation Responsibility	Compliance Monitoring Responsibility	Monitoring Cost
Specific provisions in tender documents on nuisance & concerns from the public	Pipelines routes	Verify draft and final documents	Twice – draft and final documents	MCWD, Design consultants	LWUA PMU	Part of project management in detailed design (minimal cost)
Applicable government permits and clearances	Entire project	Check for pemits/clearances or application status	Prior to start of construction	MCWD, Design Consultants, contractor	LWUA PMU	Part of project cost
CONSTRUCTION PHASE						
Total area to be exposed; runoff flowing into disturbed sites	Pipelines routes	Visual inspection of sites; plans verification	Daily during rainy periods	Contractor	Construction supervision consultants, MCWD PIU	Part of consultant's construction supervision contract; minimal cost to MCWD PIU
Water supply interruptions	Pipelines routes	Work schedules verification	Daily	Contractor	Construction supervision consultants, MCWD PIU	Part of consultant's construction supervision contract; minimal cost to MCWD PIU
Materials and solid wastes dumped in water bodies	Pipelines routes	Visual inspection of sites	Daily	Contractor	Construction supervision consultants, MCWD PIU	Part of consultant's construction supervision contract; minimal cost to MCWD PIU
Noise levels to comply with IFC-EHS noise guideline values.	Pipelines routes	Use of sound level meter	Daily	Contractor	Construction supervision consultants, MCWD PIU	Part of consultant's construction supervision contract; minimal cost to MCWD PIU
Dust, cover of stockpiles, smoke belching vehicle and equipment	Pipelines routes	Visual inspection of sites	Daily	Contractor	Construction supervision consultants, MCWD PIU	Part of consultant's construction supervision contract; minimal cost to MCWD PIU
Road closure and traffic rerouting; materials stockpiles; road restoration	Pipelines routes	Traffic plans verification	Weekly	Contractor	Construction supervision consultants, MCWD PIU	Part of consultant's construction supervision contract; minimal cost to MCWD PIU
Sanitary toilets, garbage bins, runoff controls	Workers camps	Visual inspection of camps	Once before start of construction and once monthly	Contractor	Construction supervision consultants, MCWD PIU	Part of consultant's construction supervision contract;

Aspects / Parameters to be monitored	Location	Means of Monitoring	Frequency	Implementation Responsibility	Compliance Monitoring Responsibility	Monitoring Cost
						minimal cost to MCWD PIU
COVID-19 government protocols; symptoms on workers	All project facilities and work areas	Check for compliance with government guidelines on COVID-19	Daily	Contractor	Construction supervision consultants, MCWD PIU	Minimal cost to MCWD PIU
Road safety plan; sign, barricades and night lamps	Pipelines routes	Visual inspection of sites	Daily	Contractor	Construction supervision consultants, MCWD PIU	Part of consultant's construction supervision contract; minimal cost to MCWD PIU
Construction wastes	Pipelines routes	Visual inspection of sites	Once before final stage of demobilization	Contractor	Construction supervision consultants, MCWD PIU	Part of consultant's construction supervision contract; minimal cost to MCWD PIU
Compliance with ECC conditions and other government requirements	Entire project	Check documents	Periodic, as needed	Contractor, MCWD	Construction supervision consultants, PMU	Part of project cost
Number of local labor employed	Pipelines routes	Verification of contractor's records	Once a month	Contractor	MCWD PIU	No cost
OPERATION PHASE						
E. Coli bacteria; PNSDW physical & chemical parameters	Pipelines	Water sampling and laboratory test	Monthly for bacteria; annual for physical & chemical	MCWD	LWUA	Part of MCWD's operation cost

Project Performance Monitoring. Project performance monitoring presents the desired outcomes as measurable events by providing parameters or aspects that can be monitored and verified (**Table 7-3**). For pre-construction phase, the EMP requirements need to be incorporated in construction contracts to achieve an environmentally responsible procurement as a desired outcome. Construction phase desired outcomes include effective management of environmental impacts and reduce risk to public. For the operation phase, MCWD's water supply system must meet the drinking water standards (2017 PNSDW) for physical, chemical, and bacteriological parameters.

Table 7-3: Project Performance Monitoring

Desired Outcomes	Aspects / Parameters to be monitored	Means of Monitoring	Frequency	Implementation	Compliance Monitoring	Monitoring Cost
PRE-CONSTRUCTION PHASE						
Environmentally responsive detailed design	EMP requirements incorporated	Verify detailed design documents;	Twice – (i) draft detailed	MCWD, Design consultants	LWUA PMU	Minimal cost

Desired Outcomes	Aspects / Parameters to be monitored	Means of Monitoring	Frequency	Implementation	Compliance Monitoring	Monitoring Cost
	in detailed design	EMP requirements reflected in tender documents	design documents and (ii) prior to approval of final documents			
Environmentally responsible procurement	EMP requirements incorporated in construction contracts	Verify construction contract documents	Prior to finalization of construction contract documents	MCWD PIU	LWUA PMU	Minimal cost
CONSTRUCTION PHASE						
Effective management of environmental impacts during construction	Number of public complaints on construction activities	Verification of contractor's records; MCWD's coordination with local officials	Once a month	Contractor	Construction supervision consultants, MCWD PIU	Part of consultant's construction supervision contract; minimal cost to MCWD PIU
Reduce risk to public during construction	Number of accidents involving construction activities	Verification of contractor's records; MCWD coordination with local officials	Once a month	Contractor	Construction supervision consultants, MCWD PIU	Part of consultant's construction supervision contract; minimal cost to MCWD PIU
OPERATION PHASE						
Conformance of Water quality to drinking water standards	Required drinking water quality parameters (bacteria count, color, pH, turbidity, dissolved solids, hardness, alkalinity, manganese, iron, fluoride, chloride, sulfates, magnesium, calcium, carbonates, and bicarbonates)	Water sampling and laboratory test	Monthly for bacteria; annual for physical & chemical	MCWD	LWUA	Part of MCWD's operation cost

C. Implementation Arrangement

This subsection presents the: (i) institutional set-up, (ii) implementation schedule, (iii) required clearances and permits, and (iv) capability building

Institutional Setup. For this subproject, LWUA will serve as the executing agency, while MCWD will be the implementing agency. LWUA has overall responsibility for project coordination, implementation, and liaison with ADB and other government offices. A Project Management Unit (PMU) to be created by LWUA will be responsible for coordinating the implementation at the national level. PMU shall be established by LWUA prior to the start of

construction activities. A PMU staff shall be designated as the Environment Officer for the project. Before the commencement of the subproject, a team of consultants will assist LWUA's PMU and MCWD to ensure smooth implementation and secure required documents. MCWD will be responsible for the procurement of goods, works, and services. During construction and operation phase of the subproject, MCWD will oversee the implementation of the subproject. MCWD shall create a Project Implementation Unit (PIU) for the day-to-day management of the project and will work closely with LWUA's PMU. WDGRC will handle the grievance redress mechanism and promptly address the public's complaints about environmental performance of the subproject.

ADB will assess status of EMP implementation and over-all environmental performance of the Project by reviewing environmental monitoring reports submitted by LWUA and conducting site visits to validate conditions onsite. Corrective actions will be agreed with LWUA, MCWD and the contractor to address deficiencies in EMP implementation or inadequacy of mitigation measures. ADB will disclose on its web site semi-annual environmental monitoring reports submitted by LWUA.

Environmental Corrective Action Plan. Should the mitigation measures indicated in the CEMP and EMP are observed to be inadequate during subproject implementation, the construction supervision consultants and PIU shall propose a corrective action plan to address this inadequacy and ensure compliance.

Environmental Monitoring Reports. During the construction period, the contractor shall submit to the PIU a monthly environmental self-monitoring report to be submitted to PIU, construction supervision consultants, and PMU. The PIU together with the construction supervision consultants, shall also conduct at least monthly site inspection to monitor EMP implementation and validate the contractor's environmental monitoring reports. Monthly reports of these monitoring activities shall be submitted to MCWD and the PMU. The PMU shall collate all the monthly data and prepare semi-annual environmental monitoring reports (SEMR) which shall be submitted by LWUA to ADB. SEMRs are due on 31 July for the first semestral report and on 31 January of the following year for the second semestral report. ADB will publicly disclose the SEMRs on its web site.

Implementation Schedule. The MCWD subproject is scheduled to start in January 2021 and to be completed in December 2021. MCWD shall ensure that construction contract provisions related to the EMP shall be included in the tendering stage.

Clearances and Permits. Under Philippine regulations, MCWD shall apply for an Environmental Compliance Certificate (ECC) from the EMB Region XII for the proposed augmentation of the existing water supply system. Securing the ECC from EMB Region XII will cost PhP 5,055.00.

The Environmental Management Bureau of the DENR has already issued an Environmental Compliance Certificate (ECC) for this project with ECC No. ECC-OL-R12-2017-0034, issued at EMB-R12, Regional Government Center, Brgy. Carpenter Hill Koronadal City last March 1, 2017 (See **Annex 5**). As part of the ECC conditions, a Detailed Maintenance and Environmental Enhancement Program (DMAEEP) was submitted (See **Annex 6**) within 30 days of the ECC issuance. MCWD shall coordinate with EMB-R12 prior to construction for the continuation of the subproject.

Capability Building. Capacity building activities for LWUA, the project management unit (PMU) and MCWD on ADB processes such as environmental and social safeguards, gender mainstreaming, procurement, disbursement and financial management will be provided under the WDDSP. Other trainings necessary for an efficient implementation of the subproject will

be identified and added in the future.

Environmental Cost. The indicative overall cost for the implementation of the EMP is shown in **Table 7-4**.

Table 7-4: Cost for EMP Implementation

Component	Description	Number/ Frequency	Cost per Unit (PhP)	Cost (PhP)	Source of Funds
PRE-CONSTRUCTION PHASE					
Clearances and permits	Securing ECC from EMB-RO	1 ECC	5,055/ ECC	5,055 for ECC	MCWD expense
Public consultations and information disclosure	Information disclosure and consultations during preconstruction and construction phase, including public awareness campaign through media	As per requirement	Lump sum	35,000 (for 5 Brgys)	MCWD expense
Capacity building	(i) Orientation workshop MCWD officials and staff involved in the project implementation on ADB SPS (2009), applicable laws, rules and regulations on environment;	One	Lump sum	720,000 for the 12 WDs included under the WDDSP	Part of the loan package
Baseline ambient noise level survey (24 hr)	Assessment of air quality and noise level along receptors	To be determined	Contractor's liability (approx. 4,000/ sampling station excluding mobilization and manpower cost)	Depends on the number of designated sampling stations	Covered under construction contract (CEMP)
CONSTRUCTION PHASE					
Noise and dust suppression at work sites	Application of noise and dust suppression measures	As required	Contractor's liability	Not applicable	Covered under construction contract
Traffic management	Safety signboards,	Wherever required throughout	Contractor's liability	Not applicable	Covered under

Component	Description	Number/ Frequency	Cost per Unit (PhP)	Cost (PhP)	Source of Funds
	temporary diversions, barricades, etc.	the project corridor			construction contract
Noise level monitoring	Compliance with the IFC-EHS Guidelines	Everyday along nearest receptors	Contractor's liability	Not applicable	Covered under construction contract
Hazard to workers	Implementation of occupational health and safety measures	Throughout the construction period	Contractor's liability	300,000 annually	Covered under construction contract
Any unanticipated impact due to project implementation	Mitigation of any unanticipated impact arising and defect liability period	Lump sum	Contractor's liability	As per insurance requirement	Covered under construction cost – contractor's insurance
OPERATION PHASE					
Water quality	Maximum of 35 monthly sampling of water (for bacteriological test) 1 Lot for Physical & Chemical Test Annually	3-Pumping Stations, 1-Treatment Plant and 6-Reservoirs	P600/ sample	P252,000.00 P150,000.00	MCWD operating expense

8 GRIEVANCE REDRESS MECHANISM

Following discussions during the DDR mission, it was agreed to integrate the ADB required GRM into the current consumer feedback measures that are already implemented and are well established. The DDR mission observed a publicly displayed customer charter and system to record issues with water supply, billing and complaints.

The management team were aware of the need to be able to respond to issues in a timely manner and will separate project related grievances from ongoing supply issues for reporting to ADB and LWUA. Contact information of the GRM will also be included in project information billboards or booklets, if these are required for the project.

A member of the MCWD Team will be appointed to be the focal point for GRM management and will liaise and inform Barangay administration of procedures in case of any issues. All complaints whether received verbally or in writing will be properly documented.

The Project's grievance redress mechanism shall in no way impede access to the formal legal system or the courts. The decision of the courts is for finality of case resolution. Below are the steps to be followed in filing grievances and the procedures for redress.

Step 1: The complainant provides the background and files the grievance/complaint verbally or in writing to the MCWD. If unwritten, the Secretary in the MCWD Office will record it in the MCWD complaints system noting it as a project grievance. The focal point for MCWD will

respond to the complainant within 3 days to assess whether the issue is project related and aim to resolve the issue and record it within the project grievance register.

Step 2: If no resolution or understanding is reached, the complainant files the grievance/complaint to the PMU within LWUA for it to be resolved within 15 days after filing. The written complaint shall be reproduced in four (4) copies; the original to Executing Agency – Project Management Unit (EA-PMU), two (2) for Water District – Project Implementation Unit (WD-PIU), and one (1) for the file of the complainant.

Step 3: The Lupon ng Kapayapaan ng barangay (justice system members) whenever possible to resolve the issue at the barangay level. The barangay process may take 15 days or more, including submission of complaint, recording, hearing and resolution.

Step 4: Again, if no resolution or understanding is reached and if the grievance/complaint qualifies for hearing at the Municipal Trial Court (MTC) or Regional Trial Court (RTC), the household may request for assistance of the pro bono lawyer from the Public Attorney's office, through the Water District Grievance Redress Committee (WDGRC). The pro bono lawyer shall assist the household in reproducing the formal complaint in five (5) copies to be distributed as follows: the original to the appropriate court, one (1) each for PMU, PIU, WDGRC and for the file of the complainant.

Step 5: The MTC or RTC assesses the merit of the grievance/complaint, schedules the hearing and renders a decision. Appeals can be elevated to the high court. The Supreme Court's decision is final and executory.

Aggrieved parties may also inform the Office of Special Project Facilitators (OSPF) of the ADB of any project-related grievances. APs will be exempted from all administrative and legal fees.

Unresolved grievance can be elevated to the proper courts. The MCWD will maintain a full record of all complaints and grievances received, and the actions taken. MCWD will also ensure grievances are recorded and reported in the Integrated Environmental and Social Safeguards reports that are submitted to ADB every 6 months during project implementation.

FUNCTIONAL GRIEVANCE REDRESS MECHANISM FOR STAKEHOLDERS

To protect also the indirect households, the project will integrate required GRM to include non-water district customers feedback measures during Construction and Project Implementation affecting the environment.

The MCWD management team were aware of the need to be able to respond to non-consumer entities against the Contractor in a timely manner and will separate project related grievances from ongoing environmental issues for reporting to DENR, LWUA and ADB. Contact information of the GRM will also be included in project information billboards or booklets, if these are required for the project.

A member of the MCWD as well as from the Contractor's side will be appointed to be the focal team for GRM management will liaise to inform the Contractor, DENR, and Barangay administration of procedures in case of any environmental issues. All complaints whether received verbally or in writing will be properly documented.

The Project's grievance redress mechanism shall in no way impede access to the formal legal system or the courts. The decision of the courts is for finality of case resolution. Below are the steps to be followed in filing grievances and the procedures for redress.

Step 1: The complainant provides the background and files the grievance/complaint verbally or in writing to the MCWD. If unwritten, the Secretary in the MCWD Office will record it in the MCWD complaints system noting it as a project grievance. The focal point for MCWD will respond to the complainant within 3 days to assess whether the issue is project related and environmental issue and aim to resolve the problem and record it within the project grievance register.

Step 2: If no resolution or understanding is reached, the complainant files the grievance/complaint to the PMU within LWUA for it to be resolved within 15 days after filing. The written complaint shall be reproduced in four (4) copies; the original to EA-PMU, two (2) for WD-PIU, and one (1) for the file of the complainant.

Step 3: The Barangay Committee on Environment, whenever possible, to resolve the issue at the barangay level. The barangay process may take 15 days or more, including submission of complaint, recording, hearing and resolution.

Step 4: If no resolution or understanding is reached and if the grievance/complaint qualifies for submission to DENR's Pollution and Adjudication Board for Assessment at DENR's Regional Office.

Step 5: Again, If no resolution or understanding is reached the Municipal Trial Court (MTC) or Regional Trial Court (RTC), the complainant may request for assistance of the *pro bono* lawyer from the Public Attorney's office, through the MCWD. The *pro bono* lawyer shall assist the household in reproducing the formal complaint in five (5) copies to be distributed as follows: the original to the appropriate court, one (1) each for PMU, PIU, DENR, WDGRC and for the file of the complainant with the endorsement of Barangay

Step 6: The MTC or RTC assesses the merit of the grievance/complaint, schedules the hearing and renders a decision. Appeals can be elevated to the high court. The Supreme Court's decision is final and executory.

Aggrieved parties may also inform the Office of Special Project Facilitators (OSPF) of the ADB of any project-related grievances.

Unresolved grievance can be elevated to the proper courts. The MCWD will maintain a full record of all complaints and grievances received, and the actions taken.

MCWD will also ensure grievances are recorded and reported on in the Integrated Environmental and Social Safeguards reports that are submitted to ADB every six (6) months during project implementation

Costs. All costs involved in resolving the complaints (meetings, consultations, communication, and information dissemination) will be borne by MCWD.

Complaints to the Department of Environment and Natural Resources. Complaints about environmental performance of projects issued an Environmental Certificate of Compliance

(ECC) can also be brought to the attention of DENR-EMB. The process of handling such complaints is described in the Revised Procedural Manual (2007) for the IRR of PD 1586. The steps that DENR-EMB may follow in handling complaints are: (i) DENR-EMB shall verify if the complaint is actionable under PD.1586, (ii) within 72 hours from receipt of a complaint DENR-EMB will send the proponent a Notice of Alleged Violation (NAV) and requests for an official reply as to why the proponent should not be penalized, (iii) DENR-EMB may conduct field validation, site inspection and verification or other activities to assess or validate the complaint. The proponent is required to respond within seven (7) days. Proponent's failure to respond to the NAV and further notices will force DENR-EMB to take legal actions. DENR may issue a Cease and Desist Order (CDO) to project proponents which shall be effective immediately based on: (i) violations under the PEISS, and (ii) situations that present grave or irreparable damage to the environment. PD 1586 also allows DENR to suspend or cancel the proponent's ECC if the terms and conditions have been violated.

9 CONCLUSION AND RECOMMENDATIONS

MCWD's water supply subproject will benefit the general public by contributing to the long-term improvement in the water supply system of its coverage area and providing safe drinking water to residents and commercial establishments in the municipalities and city. The potential adverse environmental impacts are primarily associated with the construction period, which can be minimized through mitigating measures and environmentally sound engineering and construction practices.

The Environmental Management Bureau of the DENR has already issued an Environmental Compliance Certificate (ECC) for this project with ECC No. ECC-OL-R12-2017-0034, issued at EMB-R12, Regional Government Center, Brgy. Carpenter Hill Koronadal City last March 1, 2017 (See **Annex 5**). As part of the ECC conditions, a Detailed Maintenance and Environmental Enhancement Program (DMAEEP) was submitted (See **Annex 6**) within 30 days of the ECC issuance. MCWD shall coordinate with EMB-R12 prior to construction for the continuation of the subproject.

It is also environment category B under ADB SPS requiring the preparation of this IEE Report.

With the implementation of the mitigation measures as proposed in the EMP, the subproject is not expected to cause irreversible adverse environment impacts. Also, the water supply subproject can be implemented in an environmentally acceptable manner without the need for further environmental assessment study, except for the conduct of a public consultations for compliance and further input. Should there be any significant change in the project scope, an updated or a new IEE will be prepared.

The proposed MCWD subproject is hereby recommended for implementation with the following requirements to be strictly followed: (i) Tendering process shall ensure environmentally responsible procurement by requiring the inclusion of EMP provisions in the bidding and construction contract documents; (ii) Contractor's submittal of a CEMP which shall be included in the construction contract; (iii) Contract provisions on creation and operation of the WDGRC shall be included in construction contracts; (iv) LWUA, with its regulatory function, shall ensure that capability building for MCWD shall be pursued; and (v) MCWD shall continue the process of public consultation and information disclosure during detailed design and construction phases.

10 REFERENCES

Asian Development Bank. (March 2014). *Philippines: Water District Development Sector Project*. Local Water Utilities Administration, of the Asian Development Bank.

Philippine Atmospheric, Geophysical and Astronomical Services Administration. (2011). *Climate Change in the Philippines.* Retrieved from https://dilg.gov.ph/PDF_File/reports_resources/DILG-Resources-2012130-2ef223f591.pdf on 02 Sep 19.

United Nations. (n.d.). *Sustainable Development Goals*. United Nations Development Programme.

USAID Be Secure Project (July 2015). *Metro Cotabato Water Supply Rapid Feasibility Study*

ANNEX 1
ACCOMPLISHED REA

Rapid Environmental Assessment (REA) Checklist

Screening Questions	Yes	No	Remarks
A. Project Siting Is the project area/site in accordance with the land use plan?			
• Within an ecologically sensitive area		✓	
• Legally protected area (i.e., wetland, watershed, mangrove, national park)		✓	
• Habitat		✓	
• Cultural heritage site		✓	
• Flood prone		✓	
• Political conflict area (unsettled claim, unsafe)		✓	
B. Project Environmental Impacts Will the project cause:			
• Impairment of historical/cultural monuments/areas/ property/landscapes?		✓	
• Alteration/modification of the surface land features and changes in soil composition?		✓	
• Deforestation or loss of precious species of flora and fauna, forest and grazing lands?		✓	

Screening Questions	Yes	No	Remarks
•	✓		
•	✓		
•	✓		
•		✓	
•		✓	
•	✓		
•	✓		
•	✓		
•	✓		
•	✓		
•	✓		
•	✓		
•	✓		
•	✓		
•	✓		

Annex 1

A Checklist for Preliminary Climate Risk Screening

Country/Project Title: LOAN [illegible] PHI:
WATER DISTRICT DEVELOPMENT SECTOR PROJECT [illegible]
[illegible]

Sector:
Subsector:
Division/Department:

	Screening Questions	Score	Remarks[1]
Location and Design of project	[illegible]	[illegible]	
	[illegible]	[illegible]	
Materials and Maintenance	[illegible]	[illegible]	
	[illegible]	[illegible]	
Performance of project outputs	[illegible]	[illegible]	

[illegible]

Response	Score
Not Likely	0
Likely	1
Very Likely	2

[illegible]

Result of Initial Screening (Low, Medium, High): LOW

Other Comments: ___

Prepared by: [illegible]
[illegible]
Date: [illegible]
[illegible]

[1] [illegible]

ANNEX 2
SAMPLE GRIEVANCE REDRESS FORM

The_____Project welcomes complaints, suggestions, queries, and comments regarding project implementation. We encourage persons with grievance to provide their name and contact information to enable us to get in touch with you for clarification and feedback.

Should you choose to include your personal details but want that information to remain confidential, please inform us by writing/typing *(CONFIDENTIAL)* above your name. Thank you.

Date		**Place of Registration**			
Contact Information/Personal Details					
Name		**Gender**	* Male * Female	**Age**	
Home Address					
Place					
Phone no.					
E-mail					
Complaint/Suggestion/Comment/Question Please provide the details (who, what, where, and how) of your grievance below: If included as attachment/note/letter, please tick here:					
How do you want us to reach you for feedback or update on your comment/grievance?					

Registered by: (Name of Official registering grievance)	
Mode of communication: Note/Lett er E-mail Verbal/Telephonic	
Reviewed by: (Names/Positions of Officials Reviewing Grievance)	
Action Taken:	
Whether Action Taken Disclosed:	Yes No
Means of Disclosure:	

FOR OFFICIAL USE ONLY

ANNEX 3
SAMPLE CONTRACTOR'S ENVIRONMENTAL MONITORING PLAN (CEMP) OUTLINE

I. Brief Project and Contract Package/Lot Description
Note: include construction activities and map/s

II. Brief Description and Purpose of Contractor's Environmental Management Plan (CEMP)
Note: include applicable laws

III. Associated Project/Lot Facilities and Sensitive Receptors – description and location
Note: include photos

a) Construction and Workers' Camps
b) Material Sources and Storage Areas – quarries, borrow pits, water
c) Workshop and Fabrication Yards
d) Hazardous Materials and Chemical Storage Areas – fuel, oil, bitumen, chemical additives
e) Wastes and Spoils Disposal Areas – construction wastes, domestic wastes, hazardous waste
f) Crushing and Batching Plants – asphalt and concrete
g) Bridges and Bypass Roads
h) Sensitive Receptors – schools, hospitals, religious institutions

IV. Construction Impacts and Mitigation Measures; Institutional Arrangements and Timing for EMP Implementation – refer to the EMP table in the IEE and contract documents as basis and indicate the mitigation measures that will be implemented for the contract package for the following):

a) Soils and Material – topsoil, soil erosion, reclaimed pavement and spoils, slope stability
b) Quarry and Borrow Sites – degradation of borrow sites
c) Water Resources – operation of quarries on river banks, siltation, spills from asphalt plants/trucks, bridge activities
d) Air, Noise and Vibration – emissions, dust, noise from construction vehicles and equipment, crushing, asphalt and cement mixing plants, construction activities
e) Waste and Hazardous Materials – solid wastes, hazardous and chemical wastes, sewage
f) Flora and Fauna
g) Construction Camps, Storage Depots
h) Local Roads – traffic management, access, congestion, road safety
i) Community – safety, disruption, access
j) Workers' Safety, Health and Sanitation – includes HIV/AIDS STD

V. Environmental Baseline Measurements and Sampling – location of sampling sites, methodology, results (if not available yet, to be included in first SEMR for the lot)
Note: include photos

VI. Environmental Monitoring Program (EMoP) – schedule of inspection, parameters to be checked and methodology, checklist for EMP Compliance Monitoring, inspection monitoring form

VII. Public Consultation, if necessary; Training

VIII. Grievance Redress Mechanism (GRM) (See Annex 2) – detailed procedure for resolving complaints

IX. Annexes

a) copies of all relevant permits (batching plants, disposal sites, tree-cutting, quarries, ECCs, etc.)
b) baseline sampling laboratory results (original copies)

Note: The CEMP should be straightforward and concise. It need not be a lengthy document.

ANNEX 4
PUBLIC CONSULTATION PROCEEDINGS

1. MCWD Staff consultation with officials of Brgy. Capiton, Datu Odin Sinsuat, Maguindanao (February 5, 2020)

Annex 4

METRO COTABATO WATER DISTRICT

[illegible]
Cotabato City [illegible]

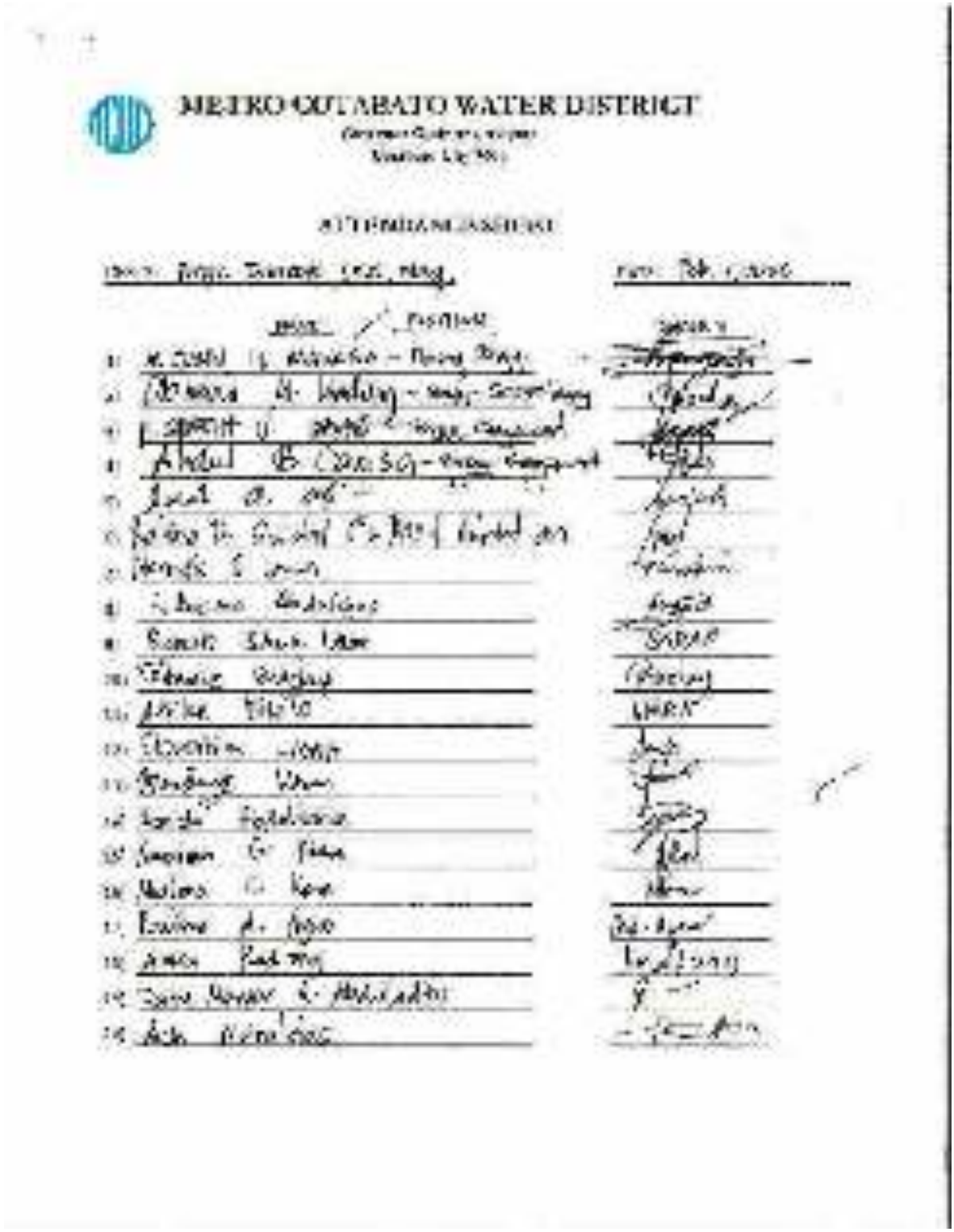
ATTENDANCE SHEET

Venue: [illegible] D.O.S., Maguindanao Date: [illegible]

"[illegible]"

	Name		Position/Office	Signature
1	Datu Ibrahim Sinsuat	—	Brgy. Kagawad	
2	Esmael Midtimbang	—	"	
3	Tammana Sabir	—	"	
4	Usop Sinsuat	—	"	
5	Datu Mohamad Rusty Sinsuat		"	
6	Bilal Abdul		"	
7	[illegible]		"	
8	Ibrahim Sinsuat		"	
9	[illegible]		[illegible]	
10	[illegible]		[illegible]	
11	[illegible]		"	
12	[illegible]		"	
13	Macmod [illegible]		"	
14				
15				
16				
17				
18				
19				
20				

2. MCWD Staff consultation with officials of Brgy. Tambak, Datu Odin Sinsuat, Maguindanao (February 7, 2020)



METRO COTABATO WATER DISTRICT

ATTENDANCE SHEET

	NAME / POSITION	SIGNATURE
1		
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3. MCWD Staff consultation with officials of Brgy. Awang, Datu Odin Sinsuat, Maguindanao (February 11, 2020)

METRO COTABATO WATER DISTRICT

February 7 2020

HON. DENNIS A. SRIVAL
Vice Governor
Province of Maguindanao
Maguindanao

Dear Mayor,

Greetings of Peace!

The Metro Cotabato Water District - MCWD is in the process of updating (Feasibility Study and Environmental Impact Assessment) its Master Plan for Bulalo, Bagumbayan, Malamote and Pigcawayan Extension Project (BBMPEP) covering Cotabato City, Datu Odin Sinsuat, Sultan Kudarat and Parts of Maguindanao.

For the purpose, MCWD, as the Environmental Compliance Certificate (ECC) Holder of the Water Development Project, is required to conduct Public Consultation as one of the requirements in the preparation of the Environmental Impact Assessment.

In this regard, I am constrained to request your kind Office to allow the conduct of Public Consultation on the proposed BBMPEP on February 19, 2020 at 10:00 AM at the Municipal Hall of Datu Odin Sinsuat, Maguindanao.

Please consider the undersigned duly authorized to represent the Office of the Governor during the Public Consultation.

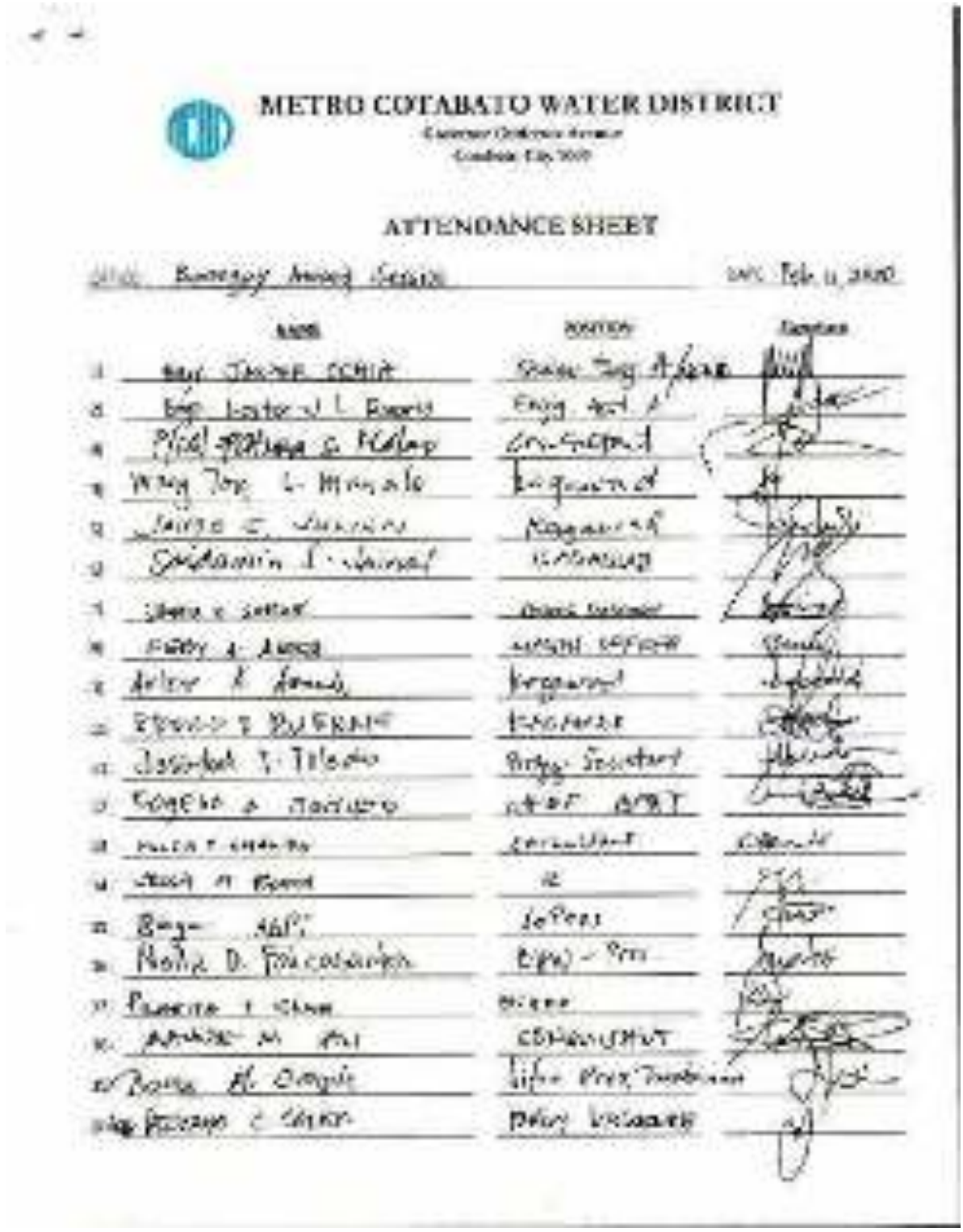
Thank you very much.

Very truly yours,

[signature]
[illegible]

Noted by: [illegible] Mayor, Datu Odin Sinsuat, Maguindanao

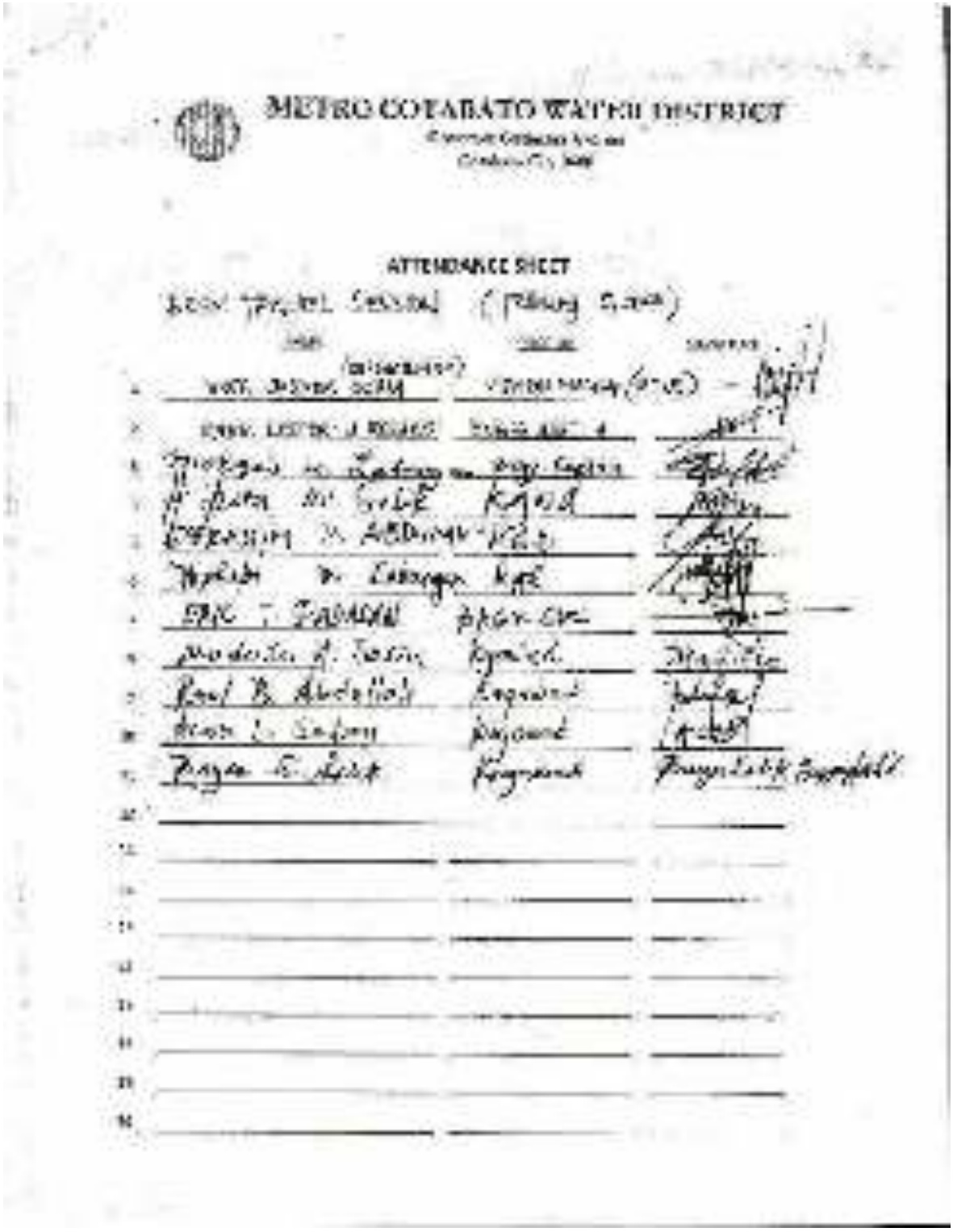
[illegible]



METRO COTABATO WATER DISTRICT

ATTENDANCE SHEET

4. MCWD Staff consultation with officials of Brgy. Tanuel, Datu Odin Sinsuat, Maguindanao (February 15, 2020)



METRO COTABATO WATER DISTRICT

ATTENDANCE SHEET

5. Staff consultation with officials of Brgy. Tamontaka, Datu Odin Sinsuat, Maguindanao (February 17, 2020)

METRO COTABATO WATER DISTRICT

ATTENDANCE SHEET

ANNEX 5
ENVIRONMENTAL COMPLIANCE CERTIFICATE (ECC)

Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU

March 1, 2017

ECC-OL-R12-2017-0004

MS. LEONORA D. CANDIANO
General Manager
METRO COTABATO WATER DISTRICT
Cotabato City

Subject: **ENVIRONMENTAL COMPLIANCE CERTIFICATE**

Dear Ms. Candiano:

This refers to the Environmental Compliance Certificate (ECC) application for the [illegible] to be located at [illegible] National Highway, [illegible], Maguindanao.

After satisfying the requirements of the said application, this Bureau has decided to grant an ECC for the above-mentioned project.

With the issuance of this ECC, you are expected to implement the measures presented in the Initial Environmental Examination Checklist (IEEC) intended to prevent and mitigate the project's adverse impacts to community health, welfare and the environment. Environmental considerations shall be incorporated in all phases and aspects of the project. You may proceed with the project implementation after securing all the necessary permits from other pertinent government agencies. This office will be monitoring the project periodically to ensure your compliance with stipulations cited in the attached ECC.

Please be guided accordingly.

MA. SOCORRO C. LAPITO
Regional Director

Annex 6

Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU
[illegible]

ENVIRONMENTAL COMPLIANCE CERTIFICATE
(Issued under Presidential Decree 1586)
[illegible]-2017-[illegible]

THIS IS TO CERTIFY THAT THE PROPONENT, **METRO COTABATO WATER DISTRICT** represented by its **General Manager** [illegible] is granted this Environmental Compliance Certificate (ECC) for the PROPOSED TRANSMISSION PIPE REPLACEMENT PROJECT [illegible] to be located at [illegible] National Highway, [illegible] Maguindanao by the Department of Environment and Natural Resources- [illegible] through the Environmental Management Bureau (EMB).

SUBJECT ONLY to the conditions and restrictions set in this ECC and in the attached document labeled as Annexes A and B.

This Certificate is issued with the following details:

PROJECT DESCRIPTION

The ECC covers the PROPOSED [illegible] REPLACEMENT/REROUTING PROJECT [illegible] to be located at [illegible] National Highway, [illegible] Maguindanao.

This Certificate is issued in compliance with the requirements of Presidential Decree No. 1586, and in accordance with DENR Administrative Order [illegible] 2003-30. Non-compliance with any of the provisions of this Certificate shall be a sufficient cause for the cancellation and/or imposition of a fine in an amount not to exceed Fifty Thousand Pesos (P50, 000.00) for every violation thereof without

Environmental Compliance Certificate
[illegible]
[illegible]
[illegible]
Maguindanao
[illegible] WATER DISTRICT

Approved

Regional Director

Annex 6

[illegible]

ENVIRONMENTAL MANAGEMENT

1. That a detailed Maintenance and Environmental Enhancement Program to preserve and protect the aesthetic value and environmental [illegible] of the project throughout its lifespan shall be developed and implemented, a copy of which shall be submitted to this Office within thirty (30) days from the issuance of this ECC;

2. That solid wastes generated during construction and installation shall be properly handled, collected and disposed in a sanitary manner [illegible] pursuant to RA 9003 better known as "Ecological Solid Waste Management Act";

3. That the proponent shall comply with the provisions stipulated under the Clean Water Act (RA 9275);

SPECIAL CONDITIONS

Further [illegible] conditions for the grant of this certificate shall be strictly complied:

4. That safety and protective measures, including the posting of warning signs in conspicuous places of the project site shall be properly observed and practiced at all times;

5. The proponent shall plant appropriate tree species within the open space of the project area to compensate for the damaged vegetation;

6. That efficient drainage system, solid waste collection and disposal system shall be provided to prevent flooding [illegible] the project implementation;

7. The proponent shall employ a Pollution Control Officer (PCO) in accordance with DENR Administrative Order No. 2014-02, who shall handle the environmental aspects of the project, which shall have the following responsibilities:

Annex 6

a. Monitor requirements [illegible] under the EMP;
b. Monitor actual project impacts vis-à-vis predicted impacts and management measures in the EMP;
c. [illegible] recommendations for the revision of the EMP [illegible];
d. Ensure that [illegible] are in place;
e. Ensure that [illegible] and reporting are [illegible];
f. Ensure compliance to all the conditions and restrictions of the approved ECC.

8. That a [illegible] billboard containing this message: "Notice to the Public. This project **4.0 KM. 400MM Transmission Pipe Replacement Project ([illegible] Junction)** of **Metro Cotabato Water District** has been issued an Environmental Compliance Certificate (____________) by the Environmental Management Bureau of the Department of Environment and Natural Resources, Region XII, on ____________." This message shall be installed at all entry and exit points of the project facing the road for the information of the general public. Photo verification of compliance to the posting of [illegible] and the billboards shall be submitted to this Office within thirty (30) days from receipt of the ECC.

9. That the proponent shall undertake and employ soil [illegible] control measures to minimize soil erosion during project implementation;

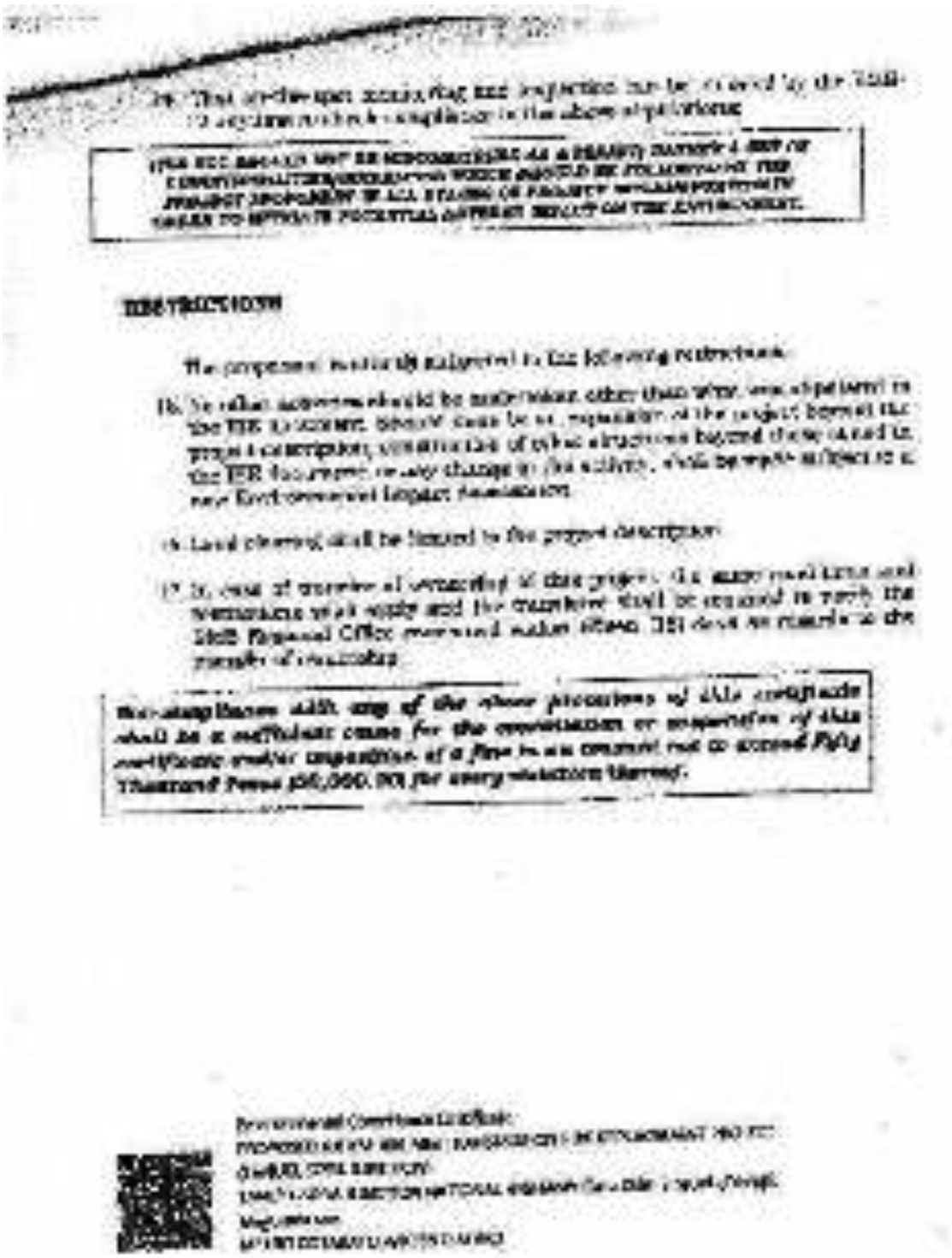
10. That proper scheduling of noise-operating equipment to be used during construction shall be observed in compliance with the Noise Standards pursuant to Section [illegible] of the [illegible] Rules and Regulations [illegible] by the DENR;

11. That [illegible] shall be provided on [illegible] areas affected by the project;

12. That the EMB-12 reserves the right to cancel or withdraw this certificate for any misrepresentation of facts and/or in the issuance of this certificate and for any violation of the conditions stipulated hereof;

13. In case of abandonment, the Proponent shall notify the EMB [illegible] office concerned within three (3) months prior to the abandonment and the Proponent shall submit an abandonment mitigation plan;

Environmental Compliance Certificate
PROPOSED 4.0 KM. 400 MM. TRANSMISSION PIPE REPLACEMENT PROJECT
([illegible] JUNCTION)
[illegible]
[illegible]
METRO COTABATO WATER DISTRICT



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Annex 6

Annex E

PROJECT ASSESSMENT PLANNING TOOL

For the assistance of the Proponent and the Government agencies concerned in the development of the Project and for better coordination in mitigation [illegible] of the Project on its surrounding areas and the environment, and by way of recommendations, forwarding these recommendations to the parties and [illegible] concerned for appropriate action.

OTHER REGULATORY REQUIREMENTS/CONDITIONS	CONCERNED GOVERNMENT AGENCIES/ENTITIES
1. That the project structural [illegible] shall [illegible] the [illegible] from the City Building Officials.	City Engineers Office
2. Need of the provision of a segregation, collection, recycling and disposal [illegible] for solid waste.	[illegible] concerned
3. Temporary sanitary toilet facilities should be provided to the construction workers and any waste should be properly disposed so as not to cause [illegible] to the immediate environment.	DOLE
4. That the [illegible]/occupational health and safety standards be complied with for all activities [illegible] a Permit to Operate.	DOLE
5. Project location must conform with the Comprehensive Land Use Plan (CLUP) of the City	[illegible]
6. Water Permit	NWRB-Manila
7. Health and Sanitation Permit	[illegible]
ENVIRONMENTAL PLANNING RECOMMENDATION FOR THE PROPOSED [illegible]	
1. Priority of employment shall be given to qualified local residents.	

[illegible]

Annex 6

Adequate public information for jobs available to local residents in the affected areas shall be provided;
2. Close monitoring of the project should be undertaken by the proponent to maintain a high level of safety and efficiency at all stages of the construction, and operation to immediately address any relevant environmental change that may take place.
5. Make use of energy saving devices.

[illegible]
[illegible] Chief, [illegible]

[illegible]
Regional Director

[illegible]
Metro Cotabato Water District

SWORN ACCOUNTABILITY STATEMENT

I, Ms. [illegible] D. [illegible], General Manager, representing METRO COTABATO WATER DISTRICT with office address located at Governor Gutierrez Avenue, Cotabato City takes full responsibility in complying with all conditions in this Environmental Compliance Certificate (ECC).

Ms. [illegible] D. [illegible]
Signature

TIN No. [illegible]

Subscribed and sworn before me this MAR 0 6 2017, the above-named affiant taking oath presenting ________ on ________ at ________

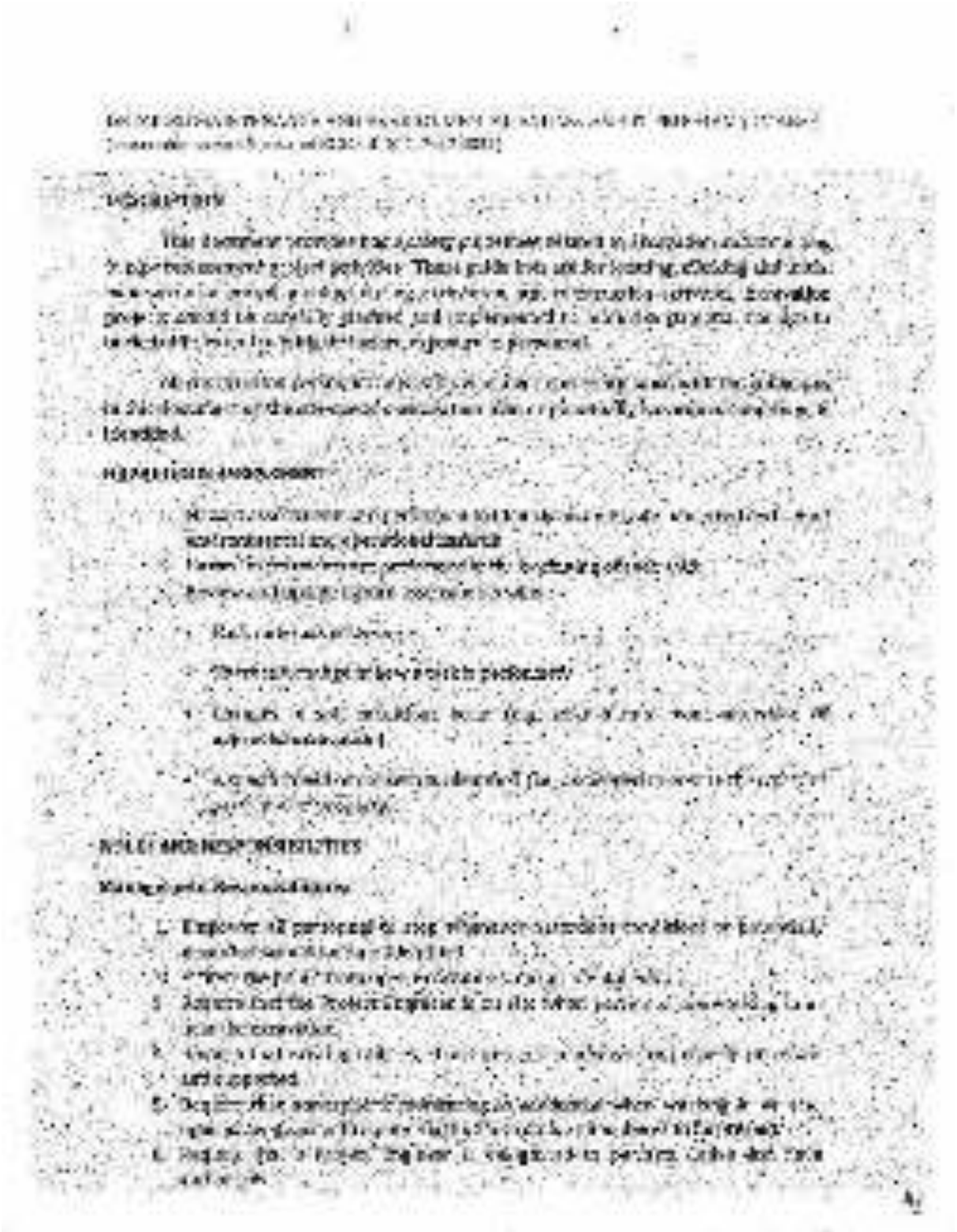
Notary Public

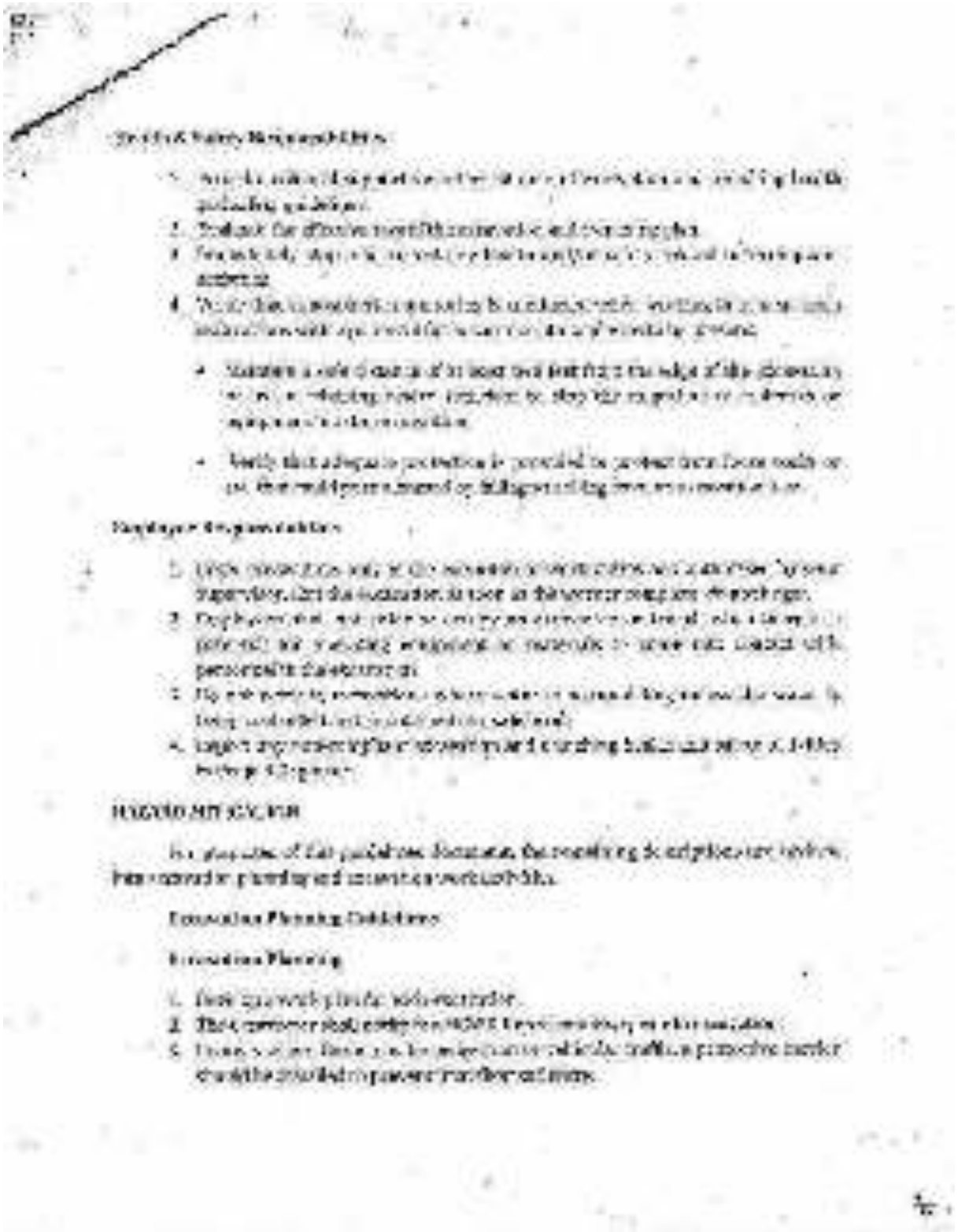
Doc. No. [illegible]
Page No. [illegible]
Book No. [illegible]
Series of [illegible]

[illegible]
Notary Public
[illegible]
Until December 31, 2017
[illegible]

[illegible]

Annex 6
Detailed Maintenance and Environmental Enhancement Program (DMAEEP)





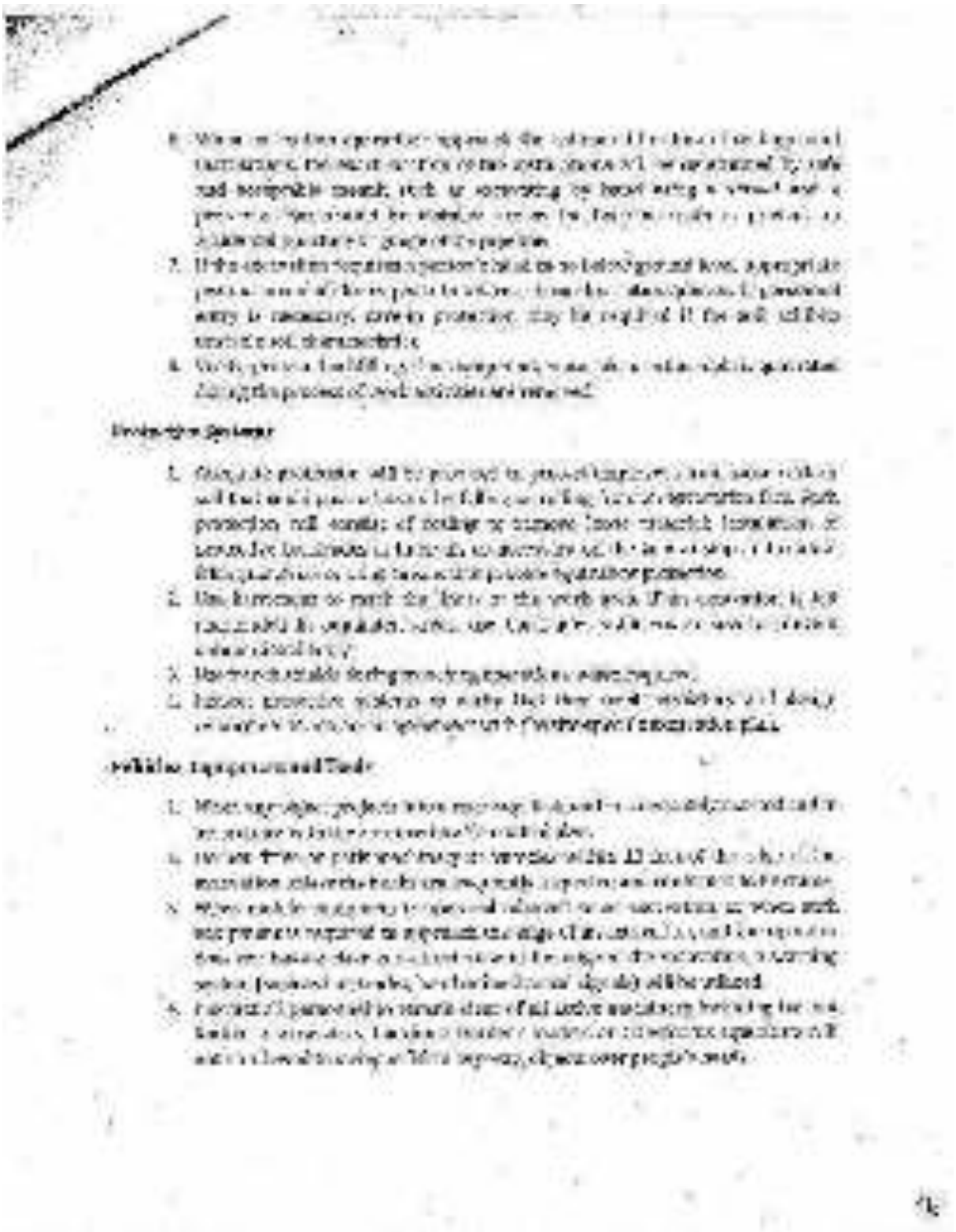
Underground Crossings and Structures

[illegible]

EXCAVATION WORK ACTIVITY GUIDELINES

General

[illegible]



ANNEX 2

Gender Action Plan

GENDER ACTION PLAN

1. **Gender Classification**. The purpose of the Project is to target less resilient water districts (WDs) in cities and municipalities outside Metro Manila including the WDs in San Fernando (La Union) and the City of Koronadal, to fund the extension and rehabilitation of their water supply (e.g., the construction of new deep wells, transmission and distribution pipelines) and sanitation projects, as well as capacity building development and institutional strengthening for the executing agency, Local Water Utilities Administration (LWUA) and WDs. Women will benefit from the Project through affordable tariffs and other pro-poor initiatives, capacity building and representation on WD Boards. The project is classified as effective gender mainstreaming (EGM) in design.

2. **Gender Action Plan (GAP) Purpose and Strategy**. The 2009 socio-economic survey shows that a small portion of households in the target WDs have piped water connections and sanitation facilities (11-18%). Among the poor in these cities, 90% of them don't have water connections despite LWUA's socialized tariff policy. The significant social and economic burden of illness, health care for the family, child care, water fetching, food preparation and other associated domestic responsibilities associated with not having water and sanitation connections, falls primarily on women. Women are positioned to benefit from the project's interventions due to their central role in water, hygiene and sanitation management. At the community level, women's participation in water system operations is low as there are no formal water associations in the pilot service areas in which theycould participate in the operation and maintenance of water and sanitation facilities. The Government's existing framework for gender action is not being maximized by LWUA and the pilot WDs.[1] LWUA and the pilot WDs have designated gender focal points and gender and development (GAD) programs. However, their GAD budgets have not been fully utilized, with limited gender-specific activities such as capacity-building for increased women's participation in technical operational roles. The Project's gender strategy will facilitate women's participation and benefits through GAP implementation (see Table below). These include enhanced hygiene and sanitation awareness and training, connections to proper water supply and sanitation, capacity building, and representation on WD Boards. Pro-poor measures include lifeline tariffs and initiatives for affordable access (e.g. socialized and/or installment schemes for connection fees).

3. **Implementation and Monitoring Arrangements**. The Borrower shall ensure that it complies with all relevant laws and regulations related to gender actions.[2] A responsibility center will be created at LWUA/project management unit (PMU), with the designation of an employee to monitor GAP implementation by LWUA and participating WDs (including preparing 6-monthly progress reports and ensuring that the bidding documents and contracts include relevant provisions for contractors to comply with the measures set forth in the GAP) and to provide implementation support to the conduct of GAP activities, such as training and capacity-building on required competencies of the project implementation units (PIUs) in compliance with those aspects of the GAP applicable to the WD. Similarly, each WD will be set up a responsibility center and a gender focal person responsible for preparing and implementing a gender action plan for the WD in order to ensure the WD's compliance with those aspects of the GAP

[1] Including Republic Act No. 7192 ("Women in Development and Nation-Building Act" passed on February 12, 1992), Executive Order No. 273 ("Approving and Adopting the Philippine Plan for Gender-Responsive Development, 1995 to 2025" passed on September 8, 1995), and Joint Circular No. 2004-1 issued by the Department of Budget and Management (DBM), the National Economic and Development Authority (NEDA) and the National Commission on the Role of Filipino Women which prescribes guidelines and procedures for the formulation and submission of agency annual GAD plans and budgets, and GAD accomplishment reports.

[2] See footnote 1.

applicable to the WD, including the preparation of budgets for, and the implementation, updating and monitoring of, the WD's gender action plan. Other staff members of the WD will be engaged to assist with various activities in the WD's gender action plan.

4. **GAP Budget**. LWUA will allocate a yearly budget for the implementation of the GAP, which will be taken from its GAD budget. In addition to enhancing its own GAD capacity, LWUA will work with participating WDs to ensure that compliance with those aspects of the GAP applicable to them.

Table 11.1 GAP Budget (pesos)

Budget Item	Year 1	Annual Budget Years 2 to 6
Training of LWUA's and WDs' gender focal points on GAP implementation and monitoring	400,000	200,000
Capacity building of LWUA and WDs staff on gender analysis, gender-responsive planning and budgeting	600,000	300,000
Supervision and monitoring of GAP implementation – database creation and maintenance	200,000	200,000
Total	1,200,000	700,000

GAP = Gender Action Plan, LWUA = Local Water Utilities Administration, WD = water district

Table 11.2 Summary of Gender Action Plan

Project Output	Proposed Actions and Targets
Client-Focused	
Output 1: Expansion and improvement of water supply systems; sanitation projects	➢ Information dissemination on new water services targeting poor households in the existing and expansion water service areas. ➢ Promoting affordability to low-income households including ensuring the minimum charge for monthly water consumption should meet LWUA's guidelines for low-income households in the areas served by participating water districts (WDs). ➢ Partnership with barangay health workers/units and non-government organizations (NGOs) for delivery of sanitation information education and communication (IEC) and training. Per subproject, IEC training for 100 barangay health workers, science, public school teachers (50% are female). ➢ Ensuring WDs consult with women and men separately about content, format, and media for IEC messages.
Organization-Focused	
Output 2: Capacity and institutional development for participating WDs and LWUA.	➢ Training to enhance sustainability of operations for WDs (business planning, project implementation, management information system [MIS], non-revenue water [NRW] reduction) (at least 30% of participants are female). [3] ➢ Designation of an employee to coordinate, monitor and report on implementation of GAP activities. ➢ Capacity development of LWUA/WDs in gender analysis, gender-responsive planning, gender budgeting, and GAP compliance. ➢ At least 30% of LWUA's overall staff and management at project management unit are female. [4] ➢ Encouraging the appointment of at least 2 women on the Board of each participating WD, of which one is a representative of a women's organization (e.g. a relevant NGO or national women's group). ➢ Allocation from LWUA's yearly GAD budget to its GAP budget to support project implementation. ➢ Detailed project performance monitoring (including compliance with GAP), reporting, accounting, and auditing systems developed, with collection of sex-disaggregated data, provide 6-monthly reports and feed data into mid-term review and Project Completion Report.

[3] Baselines will be collected for LWUA and each participating WD. If the baseline indicates a higher % of female representation than the 30% target, an appropriate higher target will be incorporated and reported to ADB.
[4] See footnote 3.

ANNEX 3

Due Diligence Report for Resettlement

Social Safeguards Due Diligence Report

April 2020

Philippines: Water District Development Sector Project

METRO COTABATO WATER DISTRICT

Prepared by Metro Cotabato Water District for the Local Water Utilities Administration and the Asian Development Bank.

CURRENCY EQUIVALENTS
(as of 20 March 2020)

Currency unit	–	peso (Php)
Php1.00	=	$0.01955
$1.00	=	Php 51.15

ABBREVIATIONS

ADB	–	Asian Development Bank
AH	–	Affected Household
AP	–	Affected Person
DA	–	Department of Agriculture
DMS	–	Detailed Measurement Survey
EA	–	Executing Agency
EMA	–	External Monitoring Agency
GAD	–	Gender and Development
GAP	–	Gender Action Plan
GRC	–	Grievance Redress Committee
GRM	–	Grievance Redress Mechanism
HH	–	Household
IA	–	Implementing Agency
IOL	–	Inventory of Losses
IP	–	Indigenous Peoples Plan
LGU	–	Local Government Unit
LWUA	–	Local Water and Utilities Administration
m3	–	Cubic Meter
MCWD	–	Metro Cotabato Water District
MDG	–	Millennium Development Goal
NEDA	–	National Economic and Development Authority
NRW	–	Non-Revenue Water
PCUP	–	Presidential Commission on the Urban Poor
PIB	–	Public Information Booklet
PIU	–	Project Implementation Unit
PMU	–	Project Management Unit
PPTA	–	Project Preparatory Technical Assistance
OCR	–	Ordinary Capital Resources
RF	–	Resettlement Framework
ROW	–	Right-of-Way
RP	–	Resettlement Plan
SAR	–	Subproject Appraisal Report
SES	–	Socio-Economic Survey
SPS	–	ADB's Safeguard Policy Statement (2009)
UFPF	–	Urban Financing Partnership Facility
WACC	–	Weighted Average Cost of Capital
WD	–	Water District
WDDSP	–	Water District Development Sector Project

NOTE

In this report, "$" refers to US dollars.

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SOCIAL SAFEGUARDS DUE DILIGENCE REPORT
METRO COTABATO WATER DISTRICT

A. PROJECT BACKGROUND

1. Rapid urbanization and inadequate water supply and sanitation investments have stretched to the limit the capacity of services and facilities in many urban areas outside Metro Manila, and increased water resources pollution. Less than 50% of urban households are estimated to have piped water, with most served by WDs. Various studies report that WDs provide better water service compared to local government unit (LGU)-run water utilities, and attribute this to corporatization (i.e., WDs do not receive subsidies from LGUs) and to access to financing, training and technical assistance from LWUA.

2. The Project will provide to WDs much-needed funds to rehabilitate and expand water facilities, strengthen institutional capacities, and enhance sustainability. According to LWUA, 511 WDs were operational at year-end 2012. Most WD operations are plagued with low profitability, high nonrevenue water (NRW) levels, and weak institutional and limited technical capacity; over half are relatively small (with <3,000 service connections). The Project will target WDs who rely primarily on LWUA for technical support and financing; these WDs are likely to be in less developed provinces, cities and municipalities. The Resettlement Framework was developed in 2014 and locations of subprojects have been finalized in 2019 requiring further due diligence for social safeguards.

3. The Resettlement Framework was developed in 2014 and locations of subprojects have been finalized in 2019 requiring further due diligence for social safeguards.

4. Cotabato City has faced rapid urbanization with a population of approaching residents in 2020 according to the MCWD. There is a high rate of Non-Revenue water in service area of Metro Cotabato Water District and a need to change dilapidated pipes, strongly supported following a consultation with the five (5) barangay officials affected by the pipe replacement project in 2020.

B. SCOPE OF REPORT

5. This Due-Diligence report covers Metro Cotabato Water District's Transmission Pipeline (16"Ø) replacement project. The report will detail the screening of project activities for potential IR and IP impacts.

Table 1 – Scope of Works

Contract Packages	Description
Transmission Replacement Program	Civil works to include pipe laying for 16"Ø transmission pipe Ductile Iron Pipe

Figure 2 – MCWD Recommended Improvements

C. SOCIAL SAFEGUARDS ASSESSMENT

6. This due diligence assessment has been carried out with reference to ADB Social Safeguards Policy Statement (SPS 2009)

7. The assessment has been informed by project plans (e.g. engineering designs), field visits to sub-project sites. Pictures and attendance sheet of barangay officials during consultations can be found **Appendix 3**.

Table 2 – Impact Description

Contract Package	Description on impacts
Transmission Main Replacement Program	No Land acquisition. Temporary disruption during replacement of pipelines. This will be detailed in the EMP and a summary of this is included below.

D. CATEGORIZATION

8. Based on the assessment of planned works, all civil works will be conducted within the ROW and within a further limited COI to avoid impact. The work will have no impact on primary structures, secondary structures, agricultural land, crops, trees and/or personal/communal assets. As there will be temporary disturbance but no anticipated economic displacement or business disruption a functional GRM is of utmost importance.

9. There is no planned land acquisition as all civil works will take place either within the ROW or within existing facilities already owned by the Water District.

10. The Project is therefore categorized as C for involuntary resettlement impacts as per ADB's Safeguard Policy Statement, 2009 (SPS) and the checklist can be found in Appendix 1

11. To trigger the IP safeguard policy statement, the proposed sub project will impact (positively or negatively) people who;

- Self-identify as members of a distinct cultural group which is recognized by others
- Have a collective attachment to geographically distinct territories
- Have cultural, economic, social or political institutions that are separate from
- Have a distinct language.

12. Sociocultural groups therefore need to be both distinct and vulnerable to trigger application of the term Indigenous Peoples in the SPS for ADB-supported projects.

13. This sub-project does not impact on any households, structures or land who meet the above criteria. The sub-project is therefore categorized as C for Indigenous People as per ADB's Safeguard Policy Statement, 2009 (SPS) and the checklist can be found in Appendix 2

E. MITIGATION MEASURES

14. Proposed mitigation measures to minimize risk of potential impacts are summarized in the table below. This sub-project does not trigger ADB SPS for IR as there is no involuntary land acquisition and any disruption of access will be temporary. Therefore, the mitigation measures shown below will be described within an Environmental Management Plan (EMP).

15. These mitigation measures will also be detailed in the bidding documents and contractor TORs and reported on in the integrated ESMR which will be submitted twice a year. A functional Grievance Redress Mechanism will be integrated into the current customer services feedback mechanism that has already been developed by Metro Cotabato Water District.

Table 3 – Mitigation Measures

Potential Impacts	Mitigation Measures	Detailed in:
Impact to any existing road or pavement surfaces,	Contractor will restore to the original condition.	EMP, bidding documents and TORs of contractors.
Restricted access to residences and commercial premises due to replacement / installation of pipelines. All works will be within the ROW but there may be traffic disruption.	Avoid disturbances by carrying out works overnight and reducing traffic disruption during the day using metal sheeting. Avoid blocking access to properties alongside the road during any construction activities; Provide steel sheets to reduce access issues	EMP, bidding documents and TORs of contractors.
Unanticipated impacts – Management of construction	GRM to be set up and integrated into current system, single point of entry, contractors to be aware, signboards at construction locations and in Barangay office to inform any affected person of entry point into GRM. Ensure contractor implements agreed measures to reduce impact and temporary disturbance.	EMP, bidding documents and TORs of contractors.
Unanticipated impacts	Any unanticipated resettlement impacts will be subject to mitigation measures as detailed in the entitlement matrix.	EMP

F. CONSULTATION AND PARTICIPATION

16. This section has been updated from the RF as meetings with Water Districts have refined the procedures for community consultation that will ensure successful implementation and are a supplement to those measures already set out in the RF.

17. MCWD will inform the Barangay of the planned construction schedule and ensure that information about expected timelines and road disruption is clearly communicated prior to the start of any civil works.

G. GRIEVANCE REDRESS

18. Following discussions during the DDR mission, it was agreed to integrate the ADB required GRM into the current consumer feedback measures that are already implemented and are well established.

19. The DDR mission observed a publicly displayed customer charter and system to record issues with water supply, billing and complaints.

20. The management team were aware of the need to be able to respond to issues in a timely manner and will separate project related grievances from ongoing supply issues for reporting to ADB and LWUA.

21. A member of the MCWD team will be appointed to be the focal point for GRM management and will liaise and inform Barangay administration of procedures in case of any issues.

22. The Project's grievance redress mechanism shall in no way impede access to the formal legal system or the courts. The decision of the courts is for finality of case resolution. Below are the steps to be followed in filing grievances and the procedures for redress.

Step 1: The complainant provides the background and files the grievance/complaint verbally or in writing to the MCWD. If unwritten, the Secretary in the MCWD Office will record it in the MCWD complaints system noting it as a project grievance. The focal point for MCWD will respond to the complainant within 3 days to assess whether the issue is project related and aim to resolve the issue and record it within the project grievance register.

Step 2: If no resolution or understanding is reached, the complainant files the grievance/complaint to the PMU within LWUA for it to be resolved within 15 days after filing. The written complaint shall be reproduced in four copies; the original to EA-PMU, two for WD-PIU, and one for the file of the complainant.

Step 3: The Lupon ng Kapayapaan ng barangay (justice system members) whenever possible, to resolve the issue at the barangay level. The barangay process may take 15 days of more, including submission of complaint, recording, hearing and resolution.

Step 4: Again, if no resolution or understanding is reached and if the grievance/complaint qualifies for hearing at the Municipal Trial Court (MTC) or Regional Trial Court (RTC), the household may request for assistance of the *pro bono* lawyer from the Public Attorney's office, through the MCWD. The *pro bono* lawyer shall assist the household in reproducing the formal complaint in five copies to be distributed as follows: the original to the appropriate court, one each for PMU, PIU, WDRC and for the file of the complainant.

Step 5: The MTC or RTC assesses the merit of the grievance/complaint, schedules the hearing and renders a decision. Appeals can be elevated to the high court. The Supreme Court's decision is final and executory.

Aggrieved parties may also inform the Office of Special Project Facilitators (OSPF) of the ADB of any project-related grievances.

APs will be exempted from all administrative and legal fees.

23. Unresolved grievance can be elevated to the proper courts. The MCWD will maintain a full record of all complaints and grievances received, and the actions taken.

24. MCWD will also ensure grievances are recorded and reported on in the Integrated Environmental and Social Safeguards reports that are submitted to ADB every 6 months during project implementation

Table 4 – Photos from site visits January 2020

Table 3 - Project Entitlement Matrix

Item	Type of Loss	Application	Entitled Persons	Compensation Policy	Implementation Issues
1a	Permanent loss of land	Agricultural/ residential/ commercial land/vacant plot	APs listed in the survey with proof of ownership/ claim to the land.	Compensation for entire loss of land (i.e., the whole land is affected by the Project, or the residual unaffected portion is no longer viable for continued use and, therefore, the entire land will be acquired by the Project) and partial loss (i.e., only a portion of the land of the AH is acquired by the Project and the residual unaffected portion still viable for continued use or meets the expected yield) is based on the principle of replacement cost which is the method of valuing assets to replace the loss at prevailing market value, plus any transaction costs such as administrative charges, taxes, registration and titling costs. If AH is found to be severely affected (i.e., the loss is equivalent to 10% or more of their total income capacity or they are physically displaced from housing or place of business), the AH will be provided additional assistance as discussed under item 4 (severe impacts) of this entitlement matrix.	Computation of valuation of land must be transparent and explained to the entitled persons If there are grievances in valuation, entitled persons must be informed of the grievance mechanism
1b	Permanent loss of land	Agricultural/ residential/ commercial land/vacant plot	APs without proof of ownership/claim to the land they occupy	Not entitled to payment for land, but will be compensated for non-land assets (structures, crops, trees, etc) at replacement cost. Entitled to cash or in-kind assistance if severely affected.	List of non-land assets to be compensated must be signed off by entitled persons Vulnerable and severely affected persons to be identified during census

Item	Type of Loss	Application	Entitled Persons	Compensation Policy	Implementation Issues
1c	Permanent loss of land	Agricultural/ residential/ commercial land/vacant plot	Tenants/ shareholders	Entitled to compensation for non-land assets (structures, crops, trees) at replacement cost. Entitled to cash or in-kind assistance if severely affected.	List of non-land assets to be compensated must be signed off by entitled persons Vulnerable and severely affected persons to be identified during census
2	Permanent full or partial loss of structures or income-generating spaces	Residential/commercial /institutional structures and income-generating spaces	AP owners located at the site during the cut-off date of the survey, regardless of tenure and status (i.e., owners, renters, sharers, caretakers)	Compensation for permanent houses and other structures affected either in full (i.e., entire main structure is affected, or the unaffected portion of the main structure is no longer viable for continued use), or in part (i.e., only a portion of the main structure of the house, house-and- store, or shop is affected and the remaining unaffected portion is still viable for use), will be determined according to replacement value for materials and labor to rebuild similar structures, at prevailing market prices in the locality. In determining replacement costs, depreciation of assets and salvage value of materials will not be taken into account. In determining compensation for movable structures including houses, where the structures can be moved easily, transfer, relocation and repair allowances will be calculated. An assessment of material replacement will be made, based on the condition of materials, with valuations calculated based on standard replacement and restoration costs. Provision of transition and moving allowance/assistance (cash or in-kind) for APs that opt for voluntary relocation.	List of structures to be compensated must be signed off by entitled persons. Computation of the valuation of affected structures must be explained to entitled persons. If there are grievances in valuation, entitled persons must be informed of the grievance mechanism.

Item	Type of Loss	Application	Entitled Persons	Compensation Policy	Implementation Issues
3	Permanent loss of crops and trees	All trees of any age, crops	All APs regardless of tenure status	Cash compensation equivalent to (i) for annual standing crops, prevailing market value of crops; (ii) for perennial crops, prevailing market value given the type, age and productive value; and (iii) for trees, the productive value or the annual production as determined by the municipal agriculturist multiplied by the estimated number of productive years; all at the time of compensation. 60 days' notice to allow owners to harvest any standing crops	List of trees and crops to be compensated must be signed off by entitled persons Computation of the valuation of trees and crops must be explained to entitled persons
4	Severe impacts (more than % of productive income affected) on productive assets	Land-based income, income from trees and crops, income from business	All APs losing 10% or more of their productive income from business and other income- generating assets. regardless of tenure status	Compensation for lost income based on actual impacts as a result of DMS. Appropriate rehabilitation measures and income restoration programs Project assistance for affected households such as job referral and placements and assistance to be trained additional skills for local employment or income-generating ventures. Additional project assistance (cash or in- kind) to poor and vulnerable households will be provided	Severely impacted (more than 10% impacted) households to be identified during census
5	Temporary Loss / impact on assets during construction	Residential structures, improvements and other physical assets affected during construction	APs with improvements of their residential or business structure (e.g. fences, driveways) and other physical assets on lots to be traversed by transmission pipes	Cash or in-kind compensation for fixed and movable assets such as houses, pavements, fences community facilities, farm structures for animals and farmers at replacement cost. Restoration or replacement of a fixed asset one month after construction of water transmission and distribution lines, sanitation facilities, reservoirs and other water facilities. Compensation for residential structures and community facilities, lost in full or part.	List of affected structures to be signed off by entitled persons. Schedule construction activities to minimize the period of disruption. Computation of the compensation must be explained to entitled persons

Item	Type of Loss	Application	Entitled Persons	Compensation Policy	Implementation Issues
6	Temporary loss of income	Income from livelihood, business or employment	APs with businesses or employment disrupted during construction	Compensation for lost income or wages calculated at prevailing and/or average historical rate multiplied by the number of days of disruption	APs and corresponding income losses per day to be identified during census
7	Temporary Loss/impact on access	Roads, pathways and access routes used by APs to conduct economic, social or cultural activities	APs whose access to land or facilities will be affected during construction	Alternative access routes shall be provided to temporarily replace the affected route.	Convincing owners of land to provide temporary access on their land
8	Any unanticipated impacts/losses		APs entitled to compensation as per RF	Any unanticipated impact or loss will be mitigated as per WDDSP RF	Close monitoring of unanticipated impacts during implementation phase

APPENDIX 1
INVOLUNTARY RESETTLEMENT IMPACT CATEGORIZATION

Date: 22 January 2020

A. Project Data

Country/Project No./Project Title : **Loan 3389/Grant 0477 – PHI: Water District Development Sector Project**
Metro Cotabato Water District Subproject
Department/ Division : SEUW
Processing Stage : Active
Modality :

[ ] Project Loan [ ] Program Loan [ ] Financial Intermediary [ ] General Corporate Finance
[X] Sector Loan [ ] MFF [ ] Emergency Assistance [X] Grant
[ ] Other financing modalities: Sector development program (linked program loan + project loan)

B. Involuntary Resettlement Category

[**X**] New [ ] Recategorization — Previous Category [ ]

☐ Category A	☐ Category B	X Category C	☐ Category FI

C. Comments

The proposed project of the Metro Cotabato Water District (MCWD) will not entail any involuntary resettlement. There will no lot acquisition as the proposed pipe laying will be on the existing RROW.	

D. Approval

Proposed by:

Solomon F. Paz
Social Safeguards Consultant CDTA
Date:22/12020

Reviewed by:

Social Safeguard Specialist, SEUW
Date:

Endorsed by:

Social Development Specialist,
Date:

Director,
Date:

Endorsed by:

Director
Date:

Approved by:

Chief Compliance Officer
Date:

Highly Complex and Sensitive Project

Involuntary Resettlement Impact Categorization Checklist

Probable Involuntary Resettlement Effects	Yes	No	Not Known	Remarks
Involuntary Acquisition of Land				
1. Will there be land acquisition?		**X**		This project does not require any land acquisition or temporary disruption during replacement of water pipes in the Row.
2. Is the site for land acquisition known?		**N/A**		
3. Is the ownership status and current usage of land to be acquired known?		**N/A**		
4. Will easement be utilized within an existing Right of Way (ROW)?	**X**			There may be a need for easement but only if the project constructed prior to DPWH proposed project which will insist on its 60-m RROW. Otherwise, all pipe laying will not require easement acquisition. But it may cause disturbance (of access and activities) to people whose structures (residential and commercial) are along the project alignment. All work will be within the ROW of the existing road thru **RA** No. **10752**, otherwise known as "An Act Facilitating the Acquisition of Right-Of-Way, Site or Location for National Government Infrastructure Projects," or "The Right-of-Way Act.". "National roads shall have a **right of way** of not less than twenty (20) meters, provided, that such minimum **width** may be reduced at the discretion of the Minister of Public Highways to fifteen (15) meters in highly urbanized areas and that a **right of way** of at least sixty (60) meters shall be reserved for roads"
5. Will there be loss of shelter and residential land due to land acquisition?		**X**		
6. Will there be loss of agricultural and other productive assets due to land acquisition?		**X**		
7. Will there be losses of crops, trees, and fixed assets due to land acquisition?		**X**		
8. Will there be loss of businesses or enterprises due to land acquisition?		**X**		Any disruption is expected to be temporary, EMP contains measures to limit the disruption to traffic and business.
9. Will there be loss of income sources and means of livelihoods due to land acquisition?		**x**		
Involuntary restrictions on land use or on access to legally designated parks and protected areas				
10. Will people lose access to natural resources, communal facilities and services?		**x**		

11. If land use is changed, will it have an adverse impact on social and economic activities?		x		
12. Will access to land and resources owned communally or by the state be restricted?		x		

Information on Displaced Persons:

Any estimate of the likely number of persons that will be displaced by the Project? [ ] No [X] Yes

If yes, approximately how many? _ No displacement – economic or physical is anticipated related to project impacts.

Are any of them poor, female-heads of households, or vulnerable to poverty risks? [**X**] No [ ] Yes

Are any displaced persons from indigenous or ethnic minority groups? [**X**] No [ ] Yes

Note: Further information regarding strategies to reduce disruption are contained within the EMP.

APPENDIX 2
INDIGENOUS PEOPLES IMPACT CATEGORIZATION

Date: 22 January 2020

A. Project Data

Country/Project No./Project Title	**Loan 3389/Grant 0477-PHI: Water District Development Sector Project** **Metro Cotabato Water District Subproject**
Department/ Division	SEUW
Processing Stage	Active

Modality

[ ] Project Loan [ ] Program Loan [ ] Financial Intermediary [ ] General Corporate Finance
[X] Sector Loan [ ] MFF [ ] Emergency Assistance [X] Grant
[ ] Other financing modalities: Sector development program (linked program loan + project loan)

B. Indigenous Peoples Category

[X] New [ ] Recategorization — Previous Category [ ]

[ ] Category A	**[ ]** Category B	**[X]** Category C	II. **[ ]** Category FI

C. Project requires the broad community support of affected Indigenous Peoples communities. **[ ]** Yes **[X]** No

D. Comments

The sub-project is not operation in an area where Indigenous People are present and will not impact on any indigenous cultural community assets or encroach on any ancestral domain.	

E. Approval

Proposed by:	**Reviewed by**:
Solomon Paz Consultant for CDTA team Date:22/1/2020	Social Safeguard Specialist, SEUW Date:
	Endorsed by: Director, Date:
Endorsed by:	**Approved by**:
Director, Date:	☐ Highly Complex and Sensitive Project Chief Compliance Officer Date:

Indigenous Peoples Impact Screening Checklist

KEY CONCERNS (Please provide elaborations on the Remarks column)	YES	NO	NOT KNOWN	Remarks
A. Indigenous Peoples Identification				
1. Are there socio-cultural groups present in or use the project area who may be considered as "tribes" (hill tribes, schedules tribes, tribal peoples), "minorities" (ethnic or national minorities), or "indigenous communities" in the project area?		**X**		5
2. Are there national or local laws or policies as well as anthropological researches/studies that consider these groups present in or using the project area as belonging to "ethnic minorities", scheduled tribes, tribal peoples, national minorities, or cultural communities?	**X**			There is a national law (Republic Act 8371 s. 1997) for protecting IP but it is not applicable in the project area.
3. Do such groups self-identify as being part of a distinct social and cultural group?		**N/A**		
4. Do such groups maintain collective attachments to distinct habitats or ancestral territories and/or to the natural resources in these habitats and territories?		**N/A**		
5. Do such groups maintain cultural, economic, social, and political institutions distinct from the dominant society and culture?		**N/A**		
6. Do such groups speak a distinct language or dialect?		**N/A**		
7. Has such groups been historically, socially and economically marginalized, disempowered, excluded, and/or discriminated against?		**N/A**		
8. Are such groups represented as "Indigenous Peoples" or as "ethnic minorities" or "scheduled tribes" or "tribal populations" in any formal decision-making bodies at the national or local levels?		**N/A**		There are no IPs or certified ancestral lands in the sub-project are.
B. Identification of Potential Impacts				
9. Will the project directly or indirectly benefit or target Indigenous Peoples?		**X**		
10. Will the project directly or indirectly affect Indigenous Peoples' traditional socio-cultural and belief practices? (e.g. child-rearing, health, education, arts, and governance)		**X**		
11. Will the project affect the livelihood systems of Indigenous Peoples? (e.g., food production system, natural resource management, crafts and trade, employment status)		**X**		
12. Will the project be in an area (land or territory) occupied, owned, or used by Indigenous Peoples, and/or claimed as ancestral domain?		**X**		

KEY CONCERNS (Please provide elaborations on the Remarks column)	**YES**	**NO**	**NOT KNOWN**	**Remarks**
C. Identification of Special Requirements *Will the project activities include:*				
13. Commercial development of the cultural resources and knowledge of Indigenous Peoples?		**X**		
14. Physical displacement from traditional or customary lands?		**X**		
15. Commercial development of natural resources (such as minerals, hydrocarbons, forests, water, hunting or fishing grounds) within customary lands under use that would impact the livelihoods or the cultural, ceremonial, spiritual uses that define the identity and community of Indigenous Peoples?		**X**		
16. Establishing legal recognition of rights to lands and territories that are traditionally owned or customarily used, occupied or claimed by indigenous peoples?		**X**		
17. Acquisition of lands that are traditionally owned or customarily used, occupied or claimed by indigenous peoples?		**X**		

D. Anticipated project impacts on Indigenous Peoples

Project component/ activity/ output	**Anticipated positive effect**	**Anticipated negative effect**
This subproject will improve water supply within the service area of Metro Cotabato Water District where there are no IPs present	None as there are no IPs present	None as there are no IPs present

APPENDIX 3
PUBLIC CONSULTATION PROCEEDINGS

1. MCWD Staff consultation with officials of Brgy. Capiton, Datu Odin Sinsuat, Maguindanao (February 5, 2020)

Appendix 3

METRO COTABATO WATER DISTRICT

ATTENDANCE SHEET

	Name	Position	Signature
1	[illegible]	Brgy. Kagawad	[illegible]
2	[illegible]	"	[illegible]
3	[illegible]	"	[illegible]
4	[illegible]	"	[illegible]
5	[illegible]	"	[illegible]
6	[illegible]	"	[illegible]
7	[illegible]	"	[illegible]
8	[illegible]	"	[illegible]
9	[illegible]	[illegible]	[illegible]
10	[illegible]	BPAT	[illegible]
11	[illegible]	"	[illegible]
12	[illegible]	"	[illegible]
13	[illegible]	"	[illegible]
14			
15			
16			
17			
18			
19			
20			

2. MCWD Staff consultation with officials of Brgy. Tambak, Datu Odin Sinsuat, Maguindanao (February 7, 2020)

METRO COTABATO WATER DISTRICT

Appendix 3

METRO COTABATO WATER DISTRICT

ATTENDANCE SHEET

3. MCWD Staff consultation with officials of Brgy. Awang, Datu Odin Sinsuat, Maguindanao (February 11, 2020)

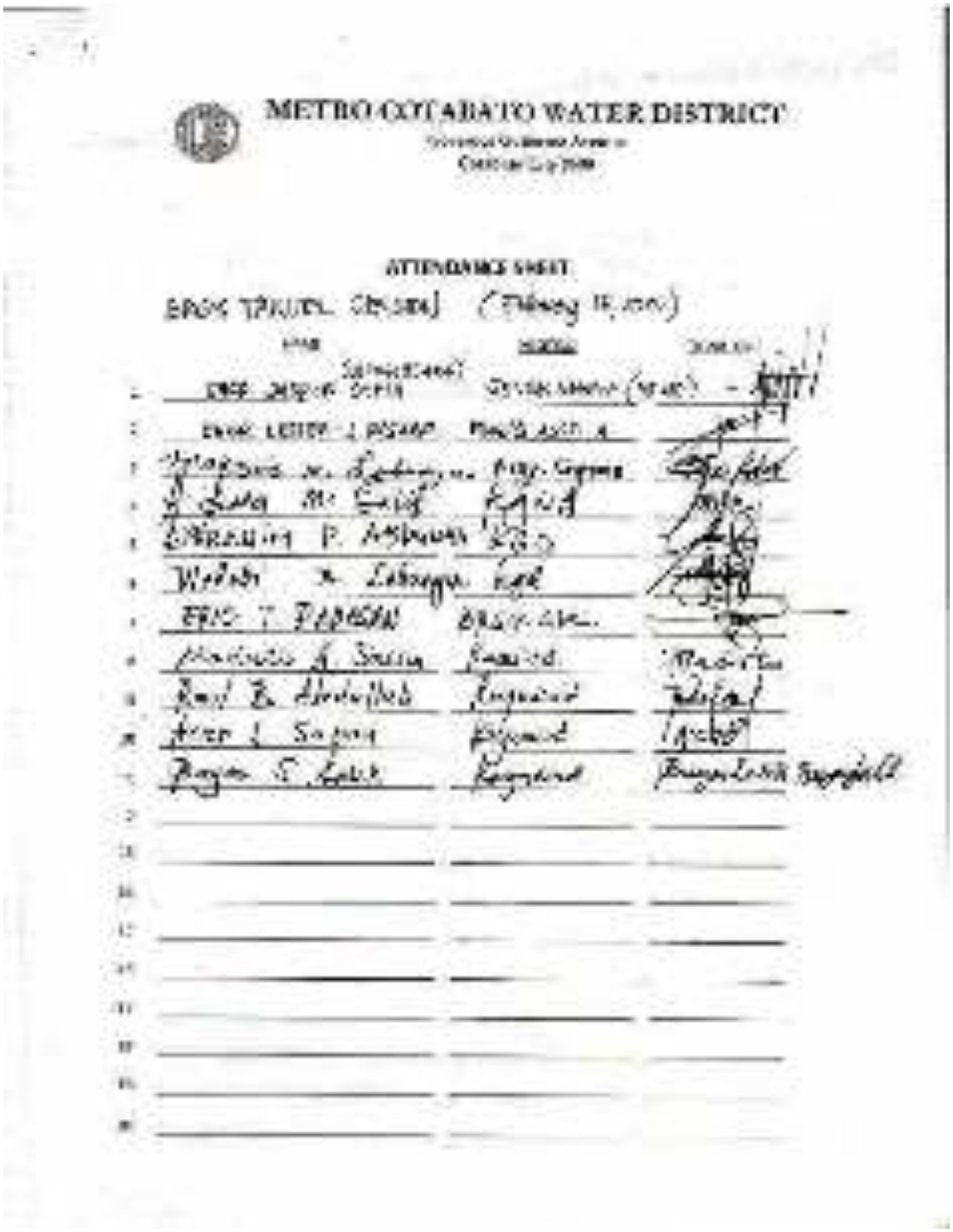
METRO COTABATO WATER DISTRICT

METRO COTABATO WATER DISTRICT

ATTENDANCE SHEET

4. MCWD Staff consultation with officials of Brgy. Tanuel, Datu Odin Sinsuat, Maguindanao (February 15, 2020)

METRO COTABATO WATER DISTRICT



METRO COTABATO WATER DISTRICT

ATTENDANCE SHEET

5. Staff consultation with officials of Brgy. Tamontaka, Datu Odin Sinsuat, Maguindanao (February 17, 2020)

METRO COTABATO WATER DISTRICT

ATTENDANCE SHEET

ANNEX 4

Construction Guidelines for Project Implementation during the period of Public Health Emergency

Construction Guidelines for Project Implementation during the period of Public Health Emergency

Background

The President declared a state of public health emergency through Presidential Proclamation No. 922 s. 2020 to address the Corona Virus Disease (COVID-19) threat, subsequently placing the whole of Luzon under Enhanced Community Quarantine (ECQ) on 16 March 2020.

The Inter-Agency Task Force for the Management of Emerging Infectious Diseases (IATF), based on its risk assessment recommended the extension of the ECQ in high risk geographic areas in Luzon and the imposition of the ECQ in some high risk areas in Visayas and Mindanao, while proposing a General Community Quarantine (GCQ) in all low risk and moderate risk areas in the country from 1 May 2020 to 15 May 2020.

Different parts of the country are expected to progress through various levels of public health emergency and declared as high, medium, or low risk areas depending on the prevalence of COVID-19 cases and related statistics, thereby placing them under corresponding community quarantine status.

The construction industry which contributes about 4.2 million workers to the country's labor force, in anticipation of the lifting of ECQ, is getting ready to return to work and would like to ensure the safety and welfare of people, most especially those of its employees/workers. Construction industry players would like to focus on preventing the occurrence of and controlling the spread of the virus in the workplace, mindful that a single case of COVID-19 can lead to an interruption, if not total work stoppage.

The global pandemic has affected livelihoods, lifestyles and industries including the construction industry which relies heavily on human resources. Total work stoppage from the time ECQ was declared has had debilitating effects not just on workers who are mostly project based and therefore paid on a daily basis but on contractors as well, majority of whom or 88% are small and medium enterprises (SMEs).

The Philippine Domestic Construction Board (PDCB), an implementing board of the Construction Industry Authority of the Philippines (CIAP), mandated to formulate policies, plans, programs, and strategies for the development of the Philippine construction industry organized a Technical Working Group (TWG) comprised of representatives from contractors of varying sizes and suppliers coming from Luzon, Visayas and Mindanao to draft the proposed protocols for the industry in preparation for resumption of construction work in areas under quarantine. The TWG drafted the "Construction Guidelines for Project Implementation during the period of Public Health Emergency" as a reference for contractors and implementing agencies, to ensure viability of projects and protection from and spread of the corona virus.

The TWG considered four (4) major components of the project cycle, namely; Materials, Manpower, Machinery and Money or the 4Ms of construction in creating the

guidelines. These were developed considering SME contractors which employ the biggest chunk of the industry's labor workforce and large contractors involved in both public and private infrastructure projects as well as vertical construction. The guidelines will give pointers in managing their human resources at this critical time but will likewise give important directions to contractors in managing their business not just for survival but to be able to contribute to the country's economic recovery program.

The TWG is presenting options or courses of actions which contractors may consider depending on applicability to the project's unique characteristics while maintaining minimum requirements based on guidelines by government authorities such as the IATF Omnibus Guidelines for the Implementation of Community Quarantine in the Philippines, Department of Trade and Industry (DTI) and Department of Labor and Employment (DOLE) Interim Guidelines on Workplace Prevention and Control of COVID-19, and DOH Department Memorandum No. 2020-220, Interim Guidelines on the Return-to-Work.

These guidelines are subject to periodic review to better respond to developments and ensure workers health and protection as well as compliance with government regulations.

Purpose

The guidelines will set key principles and minimum requirements that define responsible, healthy and safe operations for construction related operations under COVID-19 and ensure the survival of business as well as the protection of workers.

Scope / Coverage

The guidelines will include prevention, detection, and rapid response measures designed to achieve the principles above while maintaining business continuity across the construction industry.

Policy Content / Guidelines

Materials

I. Deliveries

1. All equipment and material deliveries must be carefully planned and monitored.
2. Transition and delivery zones are identified and limited to select personnel, i.e., receivers and deliverers.
    2.1. Transition personnel are regularly monitored, always provided required Personal Protective Equipment (PPEs) and may be included for optional testing.
    2.2. Social distancing and other protocols by the Department of Health (DOH) should be followed.
3. As much as possible, cargo is unloaded only by the receivers, while the deliverers do not leave their vehicles. If the receivers are not enough to unload the cargo, the deliverers must unload while the receiver has to wait at a secured distance until completed.

4. All cargo should undergo proper disinfection procedures before use. Likewise, involved staff should also be properly disinfected before entering the jobsite.
    4.1. Materials, which are exposed to the sun, such as concrete and gravel, need not be disinfected.

Manpower

I. Awareness and Communication

1. Active communication between the workers, safety officers *(as specified under Section 14 of R.A. 11058 and its Implementing Rules and Regulations (IRR) as specified in DOLE D.O. 198 S. 2018)*, site supervisors, and management is advised in planning and implementing the protocols.
    1.1. All languages and dialects should be accounted for to ensure proper communication.
2. Infographics (may adopt DOH's), signages, and posters on health and safety measures (see Annex A) must be posted at entry points and strategic areas:
    2.1. Daily updates on the latest developments.
    2.2. Self-screening measures.
    2.3. COVID-19 Hotline.
3. As much as possible, all workers should exercise the practices for reducing the risk of transmission, and proper hygiene as identified by the DOH:
    3.1. Social distancing [at least one (1) meter distance from next person].
    3.2. Proper handwashing using anti-bacterial soap (or use alcohol-based hand sanitizer when unavailable).
    3.3. Avoid contact with own eyes, nose, and mouth.
    3.4. Prohibit spitting.
    3.5. Covering of mouth with tissue or arm (if tissue is unavailable) when sneezing or coughing.
    3.6. Use and remove PPE with care.
    3.7. Do not share personal belongings such as phones, pens, PPEs.
    3.8. Avoid physical greetings (e.g. handshakes, hugs).
4. All workers' status on-site and off-site, are properly noted at all times by the safety officers.
    4.1. Fit to work
    4.2. Sick
    4.3. High temperature
    4.4. Other conditions
5. An acceptable level of health evaluation is properly communicated between new hires and management.
6. All workers would need to provide their location or place of residence prior to working. This is to help create a proper algorithm for contact tracing.
    6.1. Additionally, workers coming from COVID-19 hotspots would need to be identified.
7. Quarantined workers should also be kept track of under strict confidentiality and privacy.

II. Clearing for Return to Work

1. Stringent qualification criteria for employees/workers:

1.1. Must be 21 to 59-year-old, without pre-existing health conditions, such as, but not limited to, immunodeficiency, comorbidities, or other health risks, including any person who resides with the aforementioned.
1.2. Employees or consultants who are 60-year-old or above may be part of the workforce for construction projects as may be allowed under General Community Quarantine (GCQ) and ECQ guidelines under Omnibus Guidelines on the Implementation of Community Quarantine in the Philippines dated 15 May 2020 which states that those aged 60 and above may be allowed to work in permitted industries and offices.
1.3. Must have no COVID 19 symptoms.

2. Screening and entry at construction site. Item 4, Section 8 of the Omnibus Guidelines on the Implementation of Community Quarantine in the Philippines, dated 15 May 2020, states that "Compliance with Joint DTI-DOLE Return-to-Work Guidelines and DOH Return-to-Work Guidelines shall be considered sufficient compliance with minimum health standards. In no case shall the testing of all returning workers be construed as a condition precedent for his/her return." The most important screening step is checking all returning workers for symptoms within the last 14 days and excluding anyone who is symptomatic. (Annex B) Contractors have the option to test workers for COVID-19 thru DOH prescribed testing protocols to determine if there is asymptomatic transmission.
   2.1. The Human Resource Department should undertake daily health pre-screening (see Annexes C & D – DOLE Work Resumption Protocol & pre-screening sample form). Returning employees/workers should be made aware of giving accurate information as specified in RA 11332.
   2.2. All returning employees/workers must declare (via SMS) any recent travel history to or residence in an area with a reported case of local transmission of COVID-19 over the 14-days prior to entry.
   2.3. Returning workers that do not show any symptoms will be quarantined for 14 days within the jobsite and will be allowed to work under a zoned or grouped area.
   2.4. Those who have been living/confined in the barracks during ECQ/GCQ period for at least 14 days and with no symptoms, will be allowed to work immediately.
   2.5. Management should have an understanding and plan on how the workers travel to and from the jobsites.
   2.6. A heightened gate entrance screening protocol (see Annex E – Sample Protocol for Screening Employees and Visitors per DTI-DOLE Interim Guidelines) with the use of non-contact thermal scanners on ALL personnel upon entry to construction premises will be implemented. He/She must declare recent possible exposure to confirmed COVID-19 cases, including travel history to or residence in an area with reported local transmission of COVID-19 disease. The individual should also attest that they are not experiencing the following symptoms: (see Annex F – Daily COVID-19 Health Checklist Form)
      2.6.1. Fever
      2.6.2. Cough
      2.6.3. Shortness of breath
      2.6.4. Colds
      2.6.5. Sore throat

2.6.6. Runny nose
2.6.7. Nasal congestion
2.6.8. Muscle pains
2.6.9. Headache
2.6.10. Difficulty of breathing
2.6.11. Diarrhea
2.6.12. Loss of sense of smell
2.6.13. Loss of sense of taste

2.7. Security guard or assigned personnel/ safety engineers on duty will then refer these personnel to the Safety and Health Personnel, who will then conduct the DOH Decision Tool for COVID-19 Assessment.

2.8. Employers shall provide the DOLE through its Regional Office copy furnished DOH, monthly report of illness, diseases and injuries utilizing the DOLE Work Accident/Illness Report Form (WAIR) (see Annex G).

3. Suspected Cases (Possible cases of COVID-19)

3.1. Any individual exhibiting flu-like symptoms should not report to work. Instead, they should do the following:

3.1.1. Self-isolate, alert their safety officers or other applicable authorities.
3.1.2. Contract proper health authorities for additional guidance.

3.2. Employees/workers, who had the COVID-19 virus, should do the following before reporting to work:

3.2.1. Fulfill the adequate time for self-quarantining as recommended by the DOH.
3.2.2. Test negative for COVID-19.
3.2.3. Receive proper medical clearance, before reporting to work.

3.3. In the event of a worker contracting COVID-19 while working, the management should do the following:

3.3.1. Isolate the worker immediately in a separate well-ventilated holding area (or in site isolation room) in the workplace, away from other workers.
3.3.2. Contact local government and health authorities.
3.3.3. Gather records of all people who have worked with the infected worker, who tested positive within the past four weeks.
3.3.4. Gather information on those who have been in location or shared equipment with the person.
3.3.5. Provide COVID-19 testing to all workers, who have been working closely with the infected individual.
3.3.6. Be ready to present the information to the appropriate authorities.
3.3.7. Inform the wider workforce of the situation while protecting the privacy of the individual.
3.3.8. Clean and disinfect all site surfaces and equipment.
3.3.9. Follow any additional directions from local government and health authorities.

3.4. For senior personnel, who are working in multiple jobsites, they are expected to self-quarantine for at least 14 days, if there has been a breach in one of their jobsites.

3.5. The safety officer should have a knowledge on the proximate hospitals or quarantine facilities to ensure that in the event of a COVID-19 incident, workers can be given proper healthcare.

III. Monitoring

1. Health Checks
    1.1. Regular monitoring of personnel's health, especially for COVID-19 symptoms (e.g., mandatory regular no contact temperature check).
    1.2. Day to day monitoring of personnel's health.
2. Workers Hygiene
    2.1. Constant reminder on proper coughing etiquette.
3. Limit number of Work Personnel
    3.1. Limited mobilization of personnel and minimized skeletal staff.

IV. Proper Work Attire

1. All workers must wear the prescribed clothing of the DOLE-OSHC:
    1.1. Shirt with sleeves
    1.2. Pants
    1.3. Closed-toe boots
    1.4. Hard hat
    1.5. High visibility vest
    1.6. Other necessary Personal Protective Equipment (i.e. face masks, gloves, goggles, face shields, etc.) shall be prescribed based on specific characteristics of project.
2. As per the DOH, all workers are expected to wear proper face masks.

V. Social Distancing and Precautionary Measures

1. Social distancing should be observed at the construction site and in the office:
    1.1. All workers should respect social distancing guidelines, as much as possible.
2. Provision for transport compliant with social distancing requirements.
3. Provision of On-/Near-Site accommodations/barracks, where available.
    3.1. Enough space should be provided for every employee/worker staying in the barracks to ensure that social distancing (at least 50% reduction in density of people) are adequately implemented. This can be achieved either by providing additional space/facilities or by having occupants work (and sleep) in shifts.
    3.2. Segregate employees/workers who are coming back to work from those who originally stayed in the barracks during the ECQ period.
    3.3. Barracks should have at least one (1) meter of physical distance from each occupant and/or provision of a physical barrier in between occupants.
    3.4. Should be well ventilated / windows opened to allow fresh air circulation.
4. Provision of dedicated point-to-point shuttle service (residence-workplace-residence and compliant with social distancing).
5. Observe social distancing (e.g., no sharing of workspaces, staggered lunch breaks, use of large conference rooms only) and hygiene measures (e.g., provide hand washing and disinfection stations, mandatory use of face masks) in workplaces, shuttles and accommodations.
    5.1. Split/alternating shifts are encouraged to avoid extensive intermingling.
    5.2. Breaks should be staggered to limit the number of people in proximity with each other.

5.3. Individuals are expected to clean up their own areas after eating with proper disinfectants.
5.4. Limit the number of people operating or occupying freight elevators.
5.5. Designate smoking area:
    5.5.1. Smokers/vapers must use designated area or do so off-site and butts are to be placed in the designated receptacle. Hands must be washed before and after smoking.
    5.5.2. Stand so that smoke or vapor produced is not going into another person's breathing zone.
5.6. Site meetings:
    5.6.1. Only absolutely necessary meeting participants should attend.
    5.6.2. Attendees should be one (1) meter apart from each other.
    5.6.3. Rooms should be well ventilated / windows opened to allow fresh air circulation.
    5.6.4. Hold meetings in open areas where possible.
    5.6.5. Conduct toolbox meetings in wide open spaces to enable workers to keep the required physical distance of at least one (1) meter. (see Annex H).
    5.6.6. Meetings are to be held through teleconferencing or videoconferencing, where possible.

VI. Site Operations / Construction Work Site

1. Access and Movement to/from Construction Site
    1.1. If possible, establish one-way staircases and walkways to minimize workers' contact.
    1.2. Management can look up possible decontamination chambers (e.g. swimming pool grade-chlorine).
    1.3. All people entering and exiting the workplace should be registered, for easier contact tracing in the event of an outbreak.
    1.4. All non-essential workers are prohibited from entering the jobsite.
2. Limiting and Removing internal touch points areas.
3. Compartmentalization
    3.1. If possible, divide the construction site into zones or other methods to keep workers physically separated. This will promote social distancing and will make containment of possible outbreak easier.
        3.1.1. Limit on the number of people per zone is advised.
        3.1.2. Management can consider reducing workforce in the jobsite.
4. Construction Site Cleaning
    4.1. Regular disinfection of workplaces, shuttles, and accommodations.
    4.2. All offices and jobsites should disinfect the following at least twice per day:
        4.2.1. Door handles
        4.2.2. Railings
        4.2.3. Ladders
        4.2.4. Switches
        4.2.5. Controls
        4.2.6. Shared equipment
        4.2.7. Common and eating areas
        4.2.8. Personal workstations

4.3. Hands and common tools/equipment are cleaned or disinfected after each task.
4.4. Awareness on location of commonly used items

5. All offices and jobsites should implement additional cleaning measures of common areas as recommended by the DOH.
6. Management can look up possible decontamination chambers (e.g. chlorine, iodine, betadine, potassium persulfate).
   6.1. Demisting only decontaminates the surface, thus the need for PPEs.
   6.2. Suggested additional sanitary measures to be implemented/installed on site but are not limited to the following:
      6.2.1. Water stations
      6.2.2. Proper handwashing areas and hand washing protocol.
      6.2.3. Alcohol-based hand sanitizer shall be provided in all department areas, entrances, canteens, beside hand punch machines and other facilities.
      6.2.4. Disinfectant wiping products.
      6.2.5. Footwear disinfection treatment units (foot baths) before entering site premises or facilities (staff houses, barracks, canteens/mess halls, site offices and others).
7. Limit and remove internal touch point areas (e.g. coffee machines, water fountains, common pens). If possible, also remove doors/ door handles for jobsites.
8. A proper waste and disposal area must be provided, as well as proper disposal of contaminated products.

VII. Additional Guidelines for Vertical and Horizontal Projects

1. If possible, all construction workers are to be housed in either on-site barracks, or off-site barracks. This would make monitoring of workers' activities easier.
   1.1. All workers must use the same vehicles they came into work in, if returning to the off-site barracks.
   1.2. All vehicles would need to be disinfected, before being ready for use the next day.
2. Management can also look into using the floors of buildings, as barracks, with proper permission of the owners.

Machinery

1. All equipment deliveries must be carefully planned, monitored and managed to avoid the risk of COVID-19 transmission.
2. All delivered equipment must be cleaned and disinfected before use.
3. Assign regular worker to use the equipment, if possible. If sharing cannot be prevented, take precautions and follow the cleaning guide before and after each use.
4. Clean equipment before and after each day's work with a disinfectant, concentrating on points of contact such as handles.
5. If equipment needs to be transferred to other construction sites, the following action must be taken into considerations:
   5.1. Plan, monitor and manage the transfer of equipment.
   5.2. Equipment should be disinfected before transporting.

5.3. Transporting driver must be recorded including the assistant.
5.4. At the delivery site, equipment should be properly endorsed.
5.5. Once the equipment is received at the project site, number 2, 3 and 4 must be done.

Money

Contracting parties need to discuss, before resumption or start of work, contract provisions on: Payments, Variations and Timelines considering the effects of current government health and safety standards that have to be complied with to prevent the spread of the coronavirus pandemic and ensure workers' protection from the contagious disease. Contractors' concern on cash flow, price escalation, time extensions and productivity will need to be established and agreed with project owners. Contractors need to devise project implementation plan aligned with government approved health and safety protocols.

Contractors need to familiarize themselves with Republic Act (R.A.) 11469 or Bayanihan to Heal As One Act; R.A. 11058 and its IRR as specified in DOLE D.O. 198 S. 2018, and DOLE's D.O. 13 and ensure contracts are aligned with these landmark regulations. For projects with signed contracts before the onset of the coronavirus pandemic, contractors need to check on DOLE's guidelines on drafting new contracts so provisions on employment details, i.e. accommodations, meals, etc. can be included as these are expected to be heavily affected by new guidelines on health and safety. Company code of disciplines may likewise need to be reviewed and re-written to consider pandemic guidelines and ensure employees/workers' full support and cooperation.

Pursuant to Section 21 of DOLE D.O. 198, s. 2018, *"The total cost of implementing a OSH program shall be an integral part of the operations cost. It shall be a separate pay item in construction and in all contracting or subcontracting arrangements."* to cover the cost inflected during this Public Health Emergency. These costs include, but are not limited, to testing kits; personal protective equipment; workers' barracks; quarantine facilities; isolation rooms; disinfectants; sanitation equipment and facilities; and other expenses relative to compliance with safety and health standards during construction.

Contractors should conduct periodic audits (frequency to be determined based on a project scale and scope) to verify that the appropriate measures have been implemented and are maintained.

The site supervisors and safety officers are expected to conduct daily audits, and safety reports to management in order to make sure that the appropriate measures are implemented and followed.

Construction companies should expect to deal with heightened safety and health guidelines until such time that the pandemic has fully been eradicated, and:

1. Analyze contract requirements;
2. Comply with contractual notice requirements;
3. Adapt and Adjust schedule;
4. Coordinate and Cooperate with all participants; and

5. Document everything.

Risk Assessment and Response:

1. All contractors would need to guarantee the minimum level of standards to protect the health of the workers engaged in the construction sites.
2. Before any activity is resumed, all hazards, due to the halting of work, must be reviewed and controlled.
    2.1. Workers involved should have proper understanding of the operations and environment condition checking
3. An integrated continuity plan should also be provided in the event of a partial or complete shutdown of jobsite or if jobsite operations are severely limited.
4. All contractors should complete an integrated continuity plan to respond to partial or complete shutdown of construction sites or in the case of a severe limitation of site operations.

The COVID-19 pandemic affects working hours and earnings in all businesses, globally. However, the construction industry is unique with respect to the COVID-19 because construction contracts typically contain provisions about time for performance and fees for failing to perform on time. There is no question that all participants in the construction industry have experienced, and will continue to experience, impacts on their operations because of COVID-19 and experts say the fallout is one more factor poised to affect construction firms. These impacts include, among others, schedule delays, workforce disruptions, equipment and supply chain disruptions, reduced productivity due to on site health and safety measures (e.g., social distancing, staggering of work, enhanced sanitary measures, etc.), permit delays or restrictions on new permits, and financing restrictions or cash flow shortages.

Therefore, it is critical that construction companies be proactive rather than reactive in dealing with the COVID-19 and it is highly recommended that they take the following steps with respect to the coronavirus:

1. Define – identify the company's main vulnerabilities (convene a meeting with senior management and decision-makers to identify potential impacts on the company).
2. Assess – understand if and how the company is prepared to deal with the company's main vulnerabilities (review any existing plans and procedures to ensure they are current and begin preparing business continuity and crisis management plans and procedures aimed at minimizing potential impacts on the company).
3. Implement and Manage – ensure the company's plans and procedures work (work with senior management and decision-makers to establish and embed response and recovery arrangements and confirm senior management and decision-makers understand their roles and support how the plans and procedures will be used).
4. Communicate and Remain Vigilant – ensure the company's teams are informed (assign clear responsibilities for internal and external communications).

This pandemic was not foreseeable and unfortunately, its duration and fallout remain uncertain. What is certain is that the world is transitioning. Being prepared for this will be essential to managing the outcome and minimizing negative impacts.

Monitoring

DTI-CIAP is revitalizing its Joint Administrative Order No. 01, S. 2011 with DOLE, DPWH, DILG and the Professional Regulation Commission (PRC) to strengthen coordination and enhance the implementation of the Construction Guidelines on Project Implementation for the period of Public Health Emergency, DOLE D.O. 13 and R.A. 11058 and its IRR as specified in DOLE D.O. 198 S. 2018, and specifically, enforce strict monitoring of construction activities.

The DOLE shall refer to the Philippine Contractors Accreditation Board (PCAB) its findings, after due process, on any act or omission committed by construction contractors in violation of labor standards, safety rules and regulations and other pertinent policies.

Effectivity

These guidelines shall take effect after approval by the CIAP Board and posting in the official gazette (www.officialgazette.gov.ph) and CIAP website (www.ciap.dti.gov.ph).

References

1. *WHO – Getting your workplace ready for COVID-19, 19 March 2020*
2. *Philippines – Omnibus Guidelines on the Implementation of Community Quarantine in the Philippines as of 15 May 2020*
3. *Philippines – COVID-19 Protocols for Construction Sites Workers Safety and Security Version 3 by Philippine Constructors Association (PCA) as of 25 April 2020*
4. *Australia – Building and Construction Industry: Minimizing the Risk and exposure to COVID-19 as of 9 April 2020*
5. *Canada – COVID-19 – Standardized Protocols for all Canadian Construction Sites Version 4*
6. *New Zealand COVID-19: V&H Construction Protocols Version 2*
7. *New Zealand – COVID-19 Health and Safety Protocols for New Zealand Residential Construction Sites Version 3, 22 April 2020*
8. *DOH – Administrative Order No. 2020-015, "Guidelines on the Risk-Based Public Health Standards for COVID-19 Mitigation"*
9. *DOH Department Memorandum No. 2020-151, Interim Guidelines on Expanded Testing for COVID-19, reiterated under DOH D.M. No. 2020-174*
10. *DOH D.M. No. 2020-0220, s. 2020, Interim Guidelines on the Return-to-Work as of 11 May 2020*
11. *DPWH D.O. 39, S. 2020, Revised Construction Safety Guidelines for the Implementation of Infrastructure Projects during the COVID-19 Public Health Crisis, repealing D.O. No. 35, S. 2020*
12. *DTI - DOLE Interim Guidelines on Workplace Prevention and Control of COVID-19*
13. *DTI and DOLE Webinar on 8 May 2020*
14. *DOLE Labor Advisory No. 18, S. 2020, Guidelines on the Cost of COVID-19 Prevention and Control Measures, 16 May 2020*
15. *DOLE Department Order 13: Guidelines Governing Occupational Safety and Health in the Construction Industry*
16. *R.A.11058, "An Act Strengthening Compliance with Occupational Safety and Health Standards and Providing Penalties for Violations thereof" and its Implementing Rules and Regulations as specified in DOLE D.O. 198 S. 2018*
17. *DOLE-DPWH-DTI-DILG-PRC Joint Administrative Order No. 1, Series of 2011*

18. *EEI Guidelines on the COVID-19 Prevention and Control at the Workplace (Alert level code RED sub-level 2)*
19. *DMCI Work Resumption Protocols as of 22 April 2020*

Acknowledgment

The Construction Guidelines for Project Implementation during the period of Public Health Emergency would not have been possible without the patience, diligence and selfless dedication of the following members of the Technical Working Group (TWG) who religiously participated in the deliberations and drafting work:

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