



REPUBLIC OF THE PHILIPPINES  
METROPOLITAN NAGA WATER DISTRICT  
40 J. MIRANDA AVENUE, NAGA CITY

# PRODUCTION DEPARTMENT

## PROCEDURES AND WORK INSTRUCTIONS MANUAL (PAWIM)

**(PDPW03) WATER QUALITY ANALYSIS**



<b>METROPOLITAN NAGA WATER DISTRICT</b>		Document Code: <b>PDPW03</b>	
<b>PROCEDURE</b>		Revision No.:	0
<b>WATER QUALITY ANALYSIS</b>		Effectivity Date:	March 2017
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**Revision Status**

This list identifies the revisions made in this section. The date refers to the date this section was made effective and implemented and not to the date the document was signed or printed.

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Metropolitan Naga Water District Quality Management System

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## 1. PURPOSE

**1.1.**This document describe the procedures for the bacteriological, physical and chemical analysis of water as one of the support processes of the MNWD.

**1.2.**The objectives of the Laboratory

**1.2.1.**To perform Bacteriological, Physical and Chemical Analysis involving the use of standard laboratory methods and equipment.

**1.2.2.**To report accurate and detailed results.

**1.2.3.**To maintain quality system in storing data, results and pertinent documents.

## 2. SCOPE

This procedure will apply to the MNWD Quality management System on one support process which is the Water Quality Analysis, which focuses on the:

**2.1.**Request for Water Sample Analysis

**2.2.**Payment of Laboratory Fees

**2.3.**Submission of Water Sample(s)

**2.4.**Water Sample Analysis

**2.5.**Interpretation of Test Results

**2.6.**Encoding, Printing, and Signing of Results

**2.7.**Release of Results

## 3. DEFINITION OF TERMS AND ACRONYMS

Refer to "[Annex A](#)" for the ACRONYMS, and "[Annex B](#)" for DEFINITION OF TERMS

## 4. RESPONSIBILITIES

**4.1.**To extend affordable laboratory services to concessionaires, water districts and other entities.

**4.2.**Conduct complete Bacteriological, Physical and Chemical Analysis on water samples.


**4.3.**Responsible for the preparation and submission of all Bacteriological, Physical and Chemical Analysis results, monthly accomplishment reports and other related matters.

## 5. PROCEDURES

**5.1.**Request for Water Sample Analysis ([Figure 1](#))

**5.1.1.** Client fills-up the Request for Water Sample Analysis (RWSA) Form

**5.1.2.** Laboratory Personnel checks the RWSA

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## 5.2. Payment of Laboratory Fees

- 5.2.1. Client pays the laboratory fee for the requested water analysis
- 5.2.2. Cashiers issues receipt to the client
- 5.2.3. Client presents the receipt to the laboratory personnel
- 5.2.4. Laboratory Personnel checks the receipt
- 5.2.5. Laboratory Personnel releases bottle(s) to the client

## 5.3. Submission of Water Sample(s)

- 5.3.1. Clients collects and submits water sample(s) collected
- 5.3.2. Laboratory Personnel accepts submitted water sample(s)

## 5.4. Water Sample Analysis

- 5.4.1. For Bacteriological Analysis, Medical Technologist prepares nutrient media and water sample(s)
- 5.4.2. Medical Technologist conducts water sample(s) analysis
- 5.4.3. For Physical and Chemical Analysis: Chemist prepares reagents and water sample(s)
- 5.4.4. Chemist conducts water sample(s) analysis

## 5.5. Interpretation of Test Results


- 5.5.1. Medical Technologist interprets results
  - If found with no reaction, the test concludes
  - If found with reaction, another forty eight (48) hours for confirmatory test
- 5.5.2. Chemist interprets results
  - One (1) week processing

## 5.6. Encoding of Results

- 5.6.1. Medical Technologist/Chemist gives results to the Encoder
- 5.6.2. Encoder encodes/prints results
- 5.6.3. Laboratory Personnel submits results to the Pathologist, DMA, SICOA, and GMA/AGMA for signature

## 5.7. Release of Results


- 5.7.1. Client presents receipt of requested water sample(s) analysis
- 5.7.2. Laboratory Personnel checks the receipt
- 5.7.3. Laboratory Personnel issues water analysis results
  - Release of Water Analysis Results is within seven (7) working days

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## 6. FORMS AND TEMPLATES

### 6.1. Water Analysis


#### 6.1.1. Request for Water Analysis Form - "[PDF08](#)"

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	<b>ANNEX A</b>	Revision No.:	0
	<b>ACRONYMS</b>	Effectivity Date:	15 Jan 2017
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<b>ACRONYM</b>	<b>DEFINITION</b>
<b>MNWD</b>	METROPOLITAN NAGA WATER DISTRICT
<b>QMS</b>	QUALITY MANAGEMENT SYSTEM
<b>GMA</b>	GENERAL MANAGER A
<b>AGMA</b>	ACTING GENERAL MANAGER
<b>DMA</b>	DIVISION MANAGER A
<b>SICOA</b>	SENIOR INTERNAL CONTROL OFFICER A



<b>TERM</b>	<b>DEFINITION</b>
<b>BACTERIOLOGICAL ANALYSIS</b>	A METHOD ANALYZING WATER TO ESTIMATE THE NUMBERS OF BACTERIA PRESENT AND IF NEEDED, TO FIND OUT WHAT SORT OF BACTERIA THEY ARE. IT IS A MICROBIOLOGICAL ANALYTICAL PROCEDURE WHICH USES SAMPLES OF WATER AND FROM THESE DETERMINES THE CONCENTRATION OF BACTERIA
<b>PHYSICAL ANALYSIS</b>	IT INDICATES THE PROPERTIES DETECTABLE BY THE SENSES
<b>CHEMICAL ANALYSIS</b>	A TEST FOR IMPURITY IDENTIFICATION, TRACE ANALYSIS, MATERIAL IDENTIFICATION, MOISTURE ANALYSIS AND DETERMINING CHEMICAL COMPOSITION
<b>MEDICAL TECHNOLOGIST</b>	ALSO KNOWN AS CLINICAL LABORATORY TECHNOLOGISTS, PERFORMS AND ANALYZE THE RESULTS OF COMPLEX SCIENTIFIC TESTS
<b>CHEMIST</b>	AN EXPERT IN CHEMISTRY; A PERSON ENGAGED IN CHEMICAL RESEARCH OR EXPERIMENTS
<b>PATHOLOGIST</b>	ONE WHO INTERPRETS AND DIAGNOSES THE CHANGES CAUSED BY DISEASE IN TISSUES AND BODY
<b>CONFIRMATORY TEST</b>	THE TEST REQUIRED TO CONFIRM THE ANALYSIS
<b>NUTRIENT MEDIA</b>	A SUBSTANCE, EITHER SOLID OR LIQUID USED FOR CULTIVATION, ISOLATION, IDENTIFICATION OR STORAGE OF MICROORGANISMS
<b>REAGENT</b>	A SUBSTANCE OR COMPOUND ADDED TO A SYSTEM TO CAUSE A CHEMICAL REACTION OR ADDED TO TEST IF A REACTION OCCURS

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	<b>FLOWCHART</b>		Revision No.: 0
	<b>REQUEST FOR WATER ANALYSIS FLOW (FIGURE 1)</b>		Effectivity Date: March 2017
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