



August 25, 2022

**MEMORANDUM**

**FOR** : Regional Executive Director  
MIMAROPA Region

**THRU** : The ARD for Technical Services  
DENR MIMAROPA

**FROM** : In-Charge, Office of the PENRO  
Oriental Mindoro

**SUBJECT** : **SUBMISSION OF MONTHLY REPORT ON DATA  
GENERATED FROM THE SCIENCE-BASED REAL-TIME  
WATERSHED MONITORING INSTRUMENTS FOR THE  
MONTH OF AUGUST 2022**



Submitted are the data generated from the Automated Water Level Station (AWLS) within Mag-Asawang Tubig River Watershed located in Sitio Abaton, Barangay Parang Calapan City. It was noted that the maximum level of water was observed on August 12, 2022 at 10:15 am while the lowest level was observed on August 23, 2022 at 4:30 pm. These observations were considered at its normal level since no area was flooded within the vicinity of Mag-Asawang Tubig River Watershed on said period.

With regards to data logger procurement for the Ground Level Water Monitoring Station it was awarded to PHIL INSTRUMENTS CORP. and the item was delivered last August 19, 2022 to this Office. The replacement logger was inspected and installed last August 25, 2022 and is now functioning well at present.

The two (2) Automated Weather Station from Department of Agriculture compound and Macatoc Elementary School, both located in Victoria, Oriental Mindoro, are already re-installed and are now functional. Only one (1) remaining AWS in Hagan, Bongabong will be re-installed on the first or second week of September depending on the weather condition in the site. Complete analysis of data will be available on September 2022.

Please see attached narrative report for your reference.

For information and record.

  
ALMA E. GIBE





August 25, 2022

## MEMORANDUM

**FOR :** Regional Executive Director  
MIMAROPA Region

**TRHU :** The In-Charge, Office of the PENRO  
Oriental Mindoro

**FROM :** The Database Manager IT Specialist  
CDS Personnel, PENRO Oriental Mindoro

**SUBJECT :** **SUBMISSION OF MONTHLY REPORT ON DATA  
GENERATED FROM THE SCIENCE-BASED REAL-TIME  
WATERSHED MONITORING INSTRUMENTS FOR THE  
MONTH OF AUGUST 2022**

This is to submit the monitored and analyzed data generated from the Automated Water Level Station (AWLS) of Mag-Asawang Tubig River Watershed located at Sitio Abaton, Barangay Parang Calapan City. It was noted that the maximum level of water was observed on August 12, 2022 at 10:15 am while the lowest level was observed on August 23, 2022 at 4:30 pm. These observations were considered at its normal level since no area was flooded within the vicinity of Mag-Asawang Tubig River Watershed on said period.

With regards to the update's delivery of Data Logger awarded to PHILINSTRUMENTS CORP. the said item was delivered last August 19, 2022 to this office, with Purchase Order No. P-2022-08-026 dated August 01, 2022 and Delivery Receipt dated August 19, 2022.

The PENRO Inspection and Acceptance Committee conducted an inspection on August 25, 2022 at 9:00 am. A representative from the COA was requested to conduct inspection and installation of Data Logger for Ground Water Monitoring Station at Barangay Alcate, Victoria, (*MinSU Compound*) Mag-Asawang Tubig River Watershed. The said item was installed right after the inspection and is functional well at present. The two (2) Automated Weather Station from DA compound and Macatoc Elementary School, Victoria, Oriental Mindoro was also re-installed on its same location. The data logger was successfully tested and functioning well.

At present, the AWLS in Calapan City, the GWMS in (*MinSU Compound*) Victoria and the two (2) AWS instruments from Department of Agriculture compound and Macatoc Elementary School, Victoria, Oriental Mindoro are now functional and data are now available. Only one (1) remaining AWS in Hagan, Bongabong will be re-installed on first to second week of September, 2022.

For information and record.

  
**ALISTER EARL M. MEMAN**



## MONTHLY REPORT ON DATA GENERATED FROM THE SCIENCE-BASED REAL-TIME WATERSHED MONITORING INSTRUMENTS

### AUGUST 2022

#### I. INTRODUCTION

##### **Mag-Asawang Tubig Watershed (Victoria, Oriental Mindoro)**

The Mag-Asawang Tubig Watershed (MTRW) is one of the major watersheds in Oriental Mindoro, 12,533 hectares of which is proposed for rehabilitation in the 2013-2019 PDPFP. It is a critical watershed because of its role in food production, supplying irrigation to 40,000 hectares of rice fields in the flood plains of Mag-Asawang Tubig and Bucayao Rivers. These two major rivers are connected via Panggalaan River, which branches out from Mag-Asawang Tubig and joins Bucayao River flowing through Calapan City before it discharges to Calapan Bay.

The watershed is also expected to support the proposed hydroelectric power plant which is another vital support mechanism for the development and progress of the province and the whole island.

The Municipality of Victoria is 34 kilometers-about half an hour travel from Calapan City, the provincial capital of Oriental Mindoro, Victoria is bounded on the north by the Municipality of Naujan, on the southeast by the Municipality of Socorro, and on the southwest by the Municipality of Sablayan, one of the Municipalities of Occidental Mindoro. The town's geographical location is approximately  $130^{\circ} 11'$  latitude and  $121^{\circ} 17'$  longitude.

##### **Status of Watershed Instruments Installed**

In regards with the update refers to the delivery of one (1) ZL6 Data Logger awarded to PHILINSTRUMENTS CORP with business address in 3F J. Rimando Bldg., 1706 E. Rodriguez Sr. Ave., Cubao, Quezon City. The said item was delivered last August 19, 2022 to this Office, as per Purchased Order P-2022-08-026 dated August 01, 2022 and Delivery Receipt dated August 19, 2022.

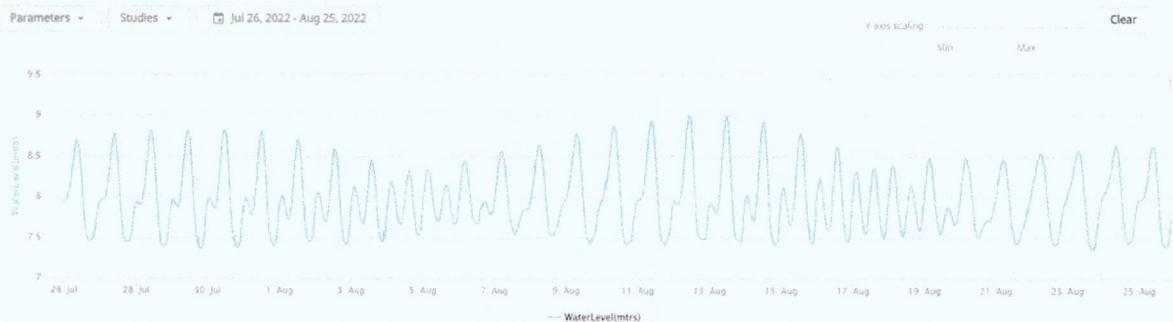
The PENRO Inspection and Acceptance Committee conducted an inspection on August 25, 2022 at 9:00 am. A representative from the COA was requested to conduct inspection and installation of Data Logger for Ground Water Monitoring Station at Barangay Alcate, Victoria, Oriental Mindoro (*MinSU Compound*) Mag-Asawang Tubig River Watershed. The said item was installed right after the inspection and is functioning well at present.

The two (2) Automated Weather Station from Department of Agriculture compound and Macatoc Elementary School, Victoria, Oriental Mindoro was also re-installed on its same location. The data logger was successfully tested and functioning well.

At present, the AWLS in Calapan City, the GWMS in (*MinSU Compound*) Victoria and the two (2) AWS instruments from Department of Agriculture compound and Macatoc Elementary School, Victoria, Oriental Mindoro are now functioning and data are now available. Only one (1) remaining AWS in Hagan, Bongabong will be re-installed on first to second week of September, 2022 depending on the weather condition of the site.

## II. DATA ANALYSIS

### A. Mag-Asawang Tubig River Watershed (MATRW)



**Figure 1.** Monthly Streamflow level (m) in Abaton Bridge, Mag-Asawang Tubig River Watershed for July 26-August 25, 2022

The stream flow level averages to 7.97 m for period of July 26-August 25, 2022. The water level rose to a maximum of 9.01 m while the lowest was detected 7.35 m. It was noted that the maximum level of water was observed on August 12, 2022 at 10:15 am while the lowest level was observed on August 23, 2022 at 4:30 pm. These observations were considered at its normal level since no area was flooded within the vicinity of Mag-Asawang Tubig River Watershed on said period.

**Table 1.** Summary of data from Automated Water Level Station (AWLS), Abaton Madlang Bridge, Parang Calapan City, Mag-Asawang Tubig River Watershed for August 2022.

Watershed Monitoring Instrument Parameter	Number of Instruments Installed	Period Covered	Average	Maximum	Minimum
Streamflow Level (m)	1	July 26 – August 25, 2022	Water Level (mtrs): 7.97 System Battery(volts): 12.27	Water Level (mtrs): 9.01 System Battery(volts): 12.74	Water Level(mtrs): 7.35 System Battery(volts): 12.40

A continuous monitoring is done using the Hydrosphere platform for the Automatic Water Level Station located at Sitio Abaton, Barangay Parang, Calapan City, Oriental Mindoro, Mag-Asawang Tubig River Watershed.

**Table 2.** Summary of data from Ground Level Water Station (GLWS), (MinSU Compound) Victoria, Mag-Asawang Tubig River Watershed for August 2022.

MinSU,Victoria	Number of Instruments Installed	Period Covered	Average	Maximum	Minimum
Groundwater Level (m)	1	No data available	No data available	No data available	No data available
Groundwater Temperature ( °C )	1	No data available	No data available	No data available	No data available
Conductivity (mS/cm)	1	No data available	No data available	No data available	No data available

**Table 3.** Summary of data from Automated Weather Station (AWS), Macatoc Elementary School, Victoria, Mag-Asawang Tubig River Watershed for August 2022.

Macatoc Elem. Sch(z6-04980)-1648366558	Number of Instruments Installed	Period Covered	Average	Maximum	Minimum
Rainfall	1	No data available	No data available	No data available	No data available
Air Temperature	1	No data available	No data available	No data available	No data available
Relative Humidity	1	No data available	No data available	No data available	No data available

Wind Velocity	1	No data available	No data available	No data available	No data available
Wind Direction	1	No data available	No data available	No data available	No data available
Solar Radiation	1	No data available	No data available	No data available	No data available
Soil Moisture	2	No data available	No data available	No data available	No data available

NOTE: Average values are computed arithmetic average for all instruments installed in the watershed (e.g., average of rainfall from all AWS installed in the watershed). Maximum and minimum values are the maximum and minimum values observed in the watershed from all instruments.

\*Data is being requested at National Irrigation Administrator for Streamflow Level (m) and Streamflow Temp (c).

**Table 4.** Summary of data from Automated Weather Station (AWS), DA Compound, Brgy. Alcate, Victoria, Mag-Asawang Tubig River Watershed for August 2022.

DA, Brgy Alcate, Victoria (z6-04979)-1648366299	Number of Instruments Installed	Period Covered	Average	Maximum	Minimum
Rainfall	1	no data available	no data available	no data available	no data available
Air Temperature	1	no data available	no data available	no data available	no data available
Relative Humidity	1	no data available	no data available	no data available	no data available
Wind Velocity	1	no data available	no data available	no data available	no data available
Wind Direction	1	no data available	no data available	no data available	no data available
Solar Radiation	1	no data available	no data available	no data available	no data available
Soil Moisture	2	no data available	no data available	no data available	no data available

NOTE: Average values are computed arithmetic average for all instruments installed in the watershed (e.g., average of rainfall from all AWS installed in the watershed). Maximum and minimum values are the maximum and minimum values observed in the watershed from all instruments.

## B. Bongabong River Watershed (BRW)

**Table 5.** Summary of data from Automated Weather Station (AWS), DENR CENRO Roxas Brgy Hagan, Bongabong, Oriental Mindoro Ranger Station), Bongabong River Watershed for August 2022.

Mun. of Bongabong(z6-04981)-1648112512	Number of Instruments Installed	Period Covered	Average	Maximum	Minimum
Rainfall	1	no data available	no data available	no data available	no data available
Air Temperature	1	no data available	no data available	no data available	no data available
Relative Humidity	1	no data available	no data available	no data available	no data available
Wind Velocity	1	no data available	no data available	no data available	no data available
Wind Direction	1	no data available	no data available	no data available	no data available
Solar Radiation	1	no data available	no data available	no data available	no data available
Soil Moisture	2	no data available	no data available	no data available	no data available

NOTE: Average values are computed arithmetic average for all instruments installed in the watershed (e.g., average of rainfall from all AWS installed in the watershed). Maximum and minimum values are the maximum and minimum values observed in the watershed from all instruments.

\*Data is being requested at National Irrigation Administrator for Streamflow Level (m) and Streamflow Temp (c).

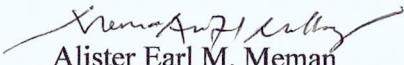
## Recommendations

The procured replacement data logger is already re-installed in (*MinSU Compound*) Victoria last August 25, 2022, a testing procedure was done in presence of a representative of PHIL INSTRUMENTS INC.

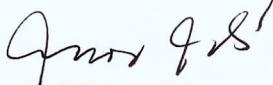
Since the three (3) AWS was calibrated successfully and pick-up last August 16, 2022 at PAGASA Manila, only two (2) AWS were re-installed successfully last August 25, 2022 on its original location. The remaining AWS for Hagan, Bongabong Site is expected to re-install on the first to second week of September depending on the weather condition.

All data will be complete and available in month of September, and expected data will be gathered from five (5) installed instruments in upper to lower stream of the watershed area of the province, thus there will be continuity of the program because the importance of these instruments is vital to the community.

Prepared by:

  
Alister Earl M. Meman  
Database Manager IT Specialist

Noted by:

  
AMOR D. ASI  
Chief, Conservation and Development Section



**Re-Installation of Automated Weather Station (AWS) at Macatoc Elementary School, Victoria, Oriental Mindoro.**



**Installation of newly purchased ZL6 Data Logger for Ground Water Level Monitoring Station at MinSU Compound, Victoria, Oriental Mindoro**



***Re-Installation of Automated Weather Station (AWS) at Department of Agriculture Compound, Barangay Alcate, Victoria, Oriental Mindoro***