



May 24, 2023

MEMORANDUM

FOR : The Regional Executive Director
DENR, MIMAROPA Region

THRU : The ARD for Technical Services
DENR, MIMAROPA Region

FROM : The OIC, PENR Officer
Oriental Mindoro

SUBJECT : **SUBMISSION OF MONTHLY MONITORING REPORT OF
SCIENCE-BASED REAL-TIME WATERSHED MONITORING
INSTRUMENTS FOR THE MONTH OF MAY 2023**

DENR MIMAROPA
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JUN 07 2023

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BY: _____ DATE NO. _____
TIME: _____

Submitted is the monthly monitoring report on the watershed monitoring instruments installed within the two major watersheds of Oriental Mindoro – the Mag-Asawang Tubig River Watershed and the Bongabong River Watershed.

Two (2) Automated Weather Stations experienced trouble this month. The DA-AWS station experienced a power supply failure due to charging problem even if the battery was replaced several times. Likewise, the Bongabong-AWS station encountered a data transmission problem and ceased transmitting data to the cloud database twice. The first instance was corrected after manual data upload was done using the Zentra utility application on May 4, 2023. The same problem was experienced on May 9, 2023 up to present.

Summary of the conditions of the watershed instruments are as follows:

STATION	Status	Remarks/Recommendation
Abaton AWLS	<ul style="list-style-type: none">• Good condition and complete data	<ul style="list-style-type: none">• SIM card registration done• No station problem for this month
MinSU GWMS	<ul style="list-style-type: none">• With complete data• The CTD sensor was cleaned• Vicinity is clean	<ul style="list-style-type: none">• No station problem for this month• Cleaned by DMITS personnel
Macatoc-AWS	<ul style="list-style-type: none">• Complete data except for soil moisture• Relative humidity still exceeds 100%• Vicinity is clean	<ul style="list-style-type: none">• Soil sensor replacement is yet to be requested• Needs technical expert on this error• Cleaned by school utility

DA-AWS	<ul style="list-style-type: none"> • Power supply trouble 	<ul style="list-style-type: none"> • Battery was replaced several times but continuous drop of daily minimum voltage was still experienced • Technical expert is needed to fix the problem
Bongabong AWS	<ul style="list-style-type: none"> • Data transmission problem 	<ul style="list-style-type: none"> • The data transmission ceased twice this month • Technical expert is needed to fix the problem

Attached is the photo-documentation and the report of the DMITS personnel.

For information and record.

ALAN VALLE





May 24, 2023

MEMORANDUM

FOR : The OIC, PENR Officer
Oriental Mindoro

THRU : The Chief, Technical Services Division
PENRO Oriental Mindoro

FROM : PENR DMITS Personnel

SUBJECT : **SUBMISSION OF MONTHLY MONITORING REPORT OF
SCIENCE-BASED REAL-TIME WATERSHED MONITORING
INSTRUMENTS FOR THE MONTH OF MAY 2023**

Respectfully submitting the monthly monitoring report of the DMITS personnel on the installed watershed monitoring instruments in Mag-Asawang Tubig ang Bongabong watersheds for the month of May 2023.

The registration of SIM card in Abaton AWLS station was done last April 28, 2023. It is a SMART Bro SIM card with mobile number 09470922200 and registered under the name of Forester Joel D. Morillo – the watershed focal person of this office. This is the only data logger utilizing local SIM card that needs registration pursuant to Republic Act 11934. Furthermore, The ZL6 dataloggers (used in Automated Weather Stations and Groundwater Monitoring Station) have different built-in SIM in the logger and do not need registration.

In the first week of this month, the DA-AWS station reported a low battery voltage at 0% through the Zentra cloud warning. DMITS immediately monitored the station and conducted initial troubleshooting of the datalogger's power supply. Battery from the MinSU-CTD station was transferred to DA-AWS station to check whether the battery or the solar panel is at fault. For few days of monitoring, same problem exists – daily minimum voltage keeps lowering and reported a low battery situation. The solar panel module was next to check, it was replaced from the old logger in the office but still the problem exists. For now, the DMITS is still troubleshooting the problem. On May 23, 2023, the DA-AWS station was again visited and replaced with newly charged batteries. It was observed that during noon time the solar panel of the logger is shaded with the mounting pole since it is oriented originally in south direction. The logger was reoriented 180 degrees or in south direction to have good orientation towards the sun.

Likewise, the Bongabong-AWS station experienced problem on data transmission last May 5, 2023, the Zentra cloud data was not updated in 6 days. The station was visited and monitored by the DMITS and upon checking using the Zentra utility app, the datalogger data is intact and the battery is 100% capacity. Cellular connection was tested and reported to be excellent and manual

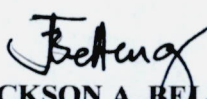
upload of data was conducted. Since then, the Zentra cloud data of the station was regularly updated. Weeding of the station was also done during the visit. After few days of cloud monitoring, on May 9, 2023, data transmission again halted at 11:00 in the evening. Cloud data is not updated recently.

The summary of the conditions of the five (5) watershed monitoring are tabulated below:

STATION	Condition	Remarks
Abaton AWLS	<ul style="list-style-type: none"> • Good condition and complete data 	<ul style="list-style-type: none"> • SIM card registration done • No station problem for this month
MinSU GWMS	<ul style="list-style-type: none"> • With complete data • The CTD sensor was cleaned • Vicinity is clean 	<ul style="list-style-type: none"> • No station problem for this month • Cleaned by DMITS personnel
Macatoc-AWS	<ul style="list-style-type: none"> • Complete data except for soil moisture • Relative humidity still exceeds 100% • Vicinity is clean 	<ul style="list-style-type: none"> • Soil sensor replacement is yet to be requested • Needs technical expert on this error • Cleaned by school utility
DA-AWS	<ul style="list-style-type: none"> • Power supply trouble 	<ul style="list-style-type: none"> • Battery was replaced several times but lowering of daily minimum voltage was still experienced • Needs technical expert to address the problem
Bongabong AWS	<ul style="list-style-type: none"> • Data transmission problem 	<ul style="list-style-type: none"> • The data transmission halted two times in this month • Needs technical expert to address the problem

The DMITS is constantly updating the CDD staffs through messenger for technical assistance from the Regional Office.

Attached is photo-documentation for information and record.


JACKSON A. BELLEN
Database Manager IT Specialist

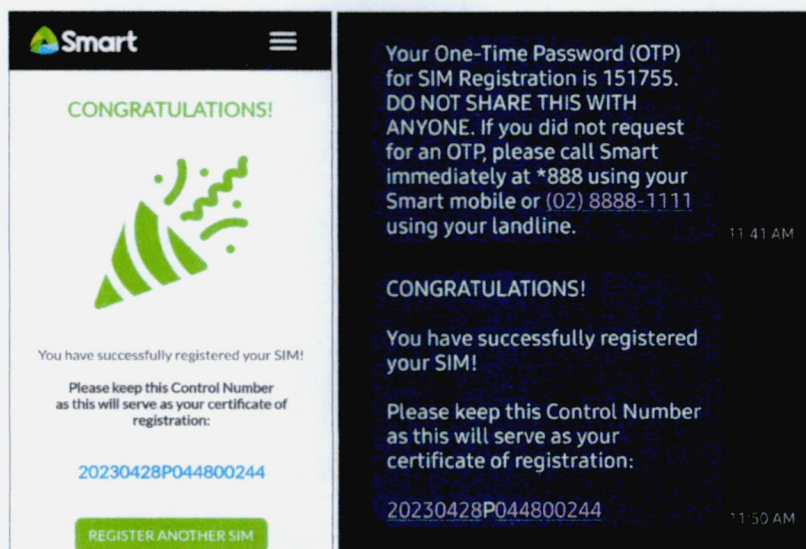


Figure 1. Registration of AWLS SIM card (SMART Bro 09470922200) on April 28, 2023.

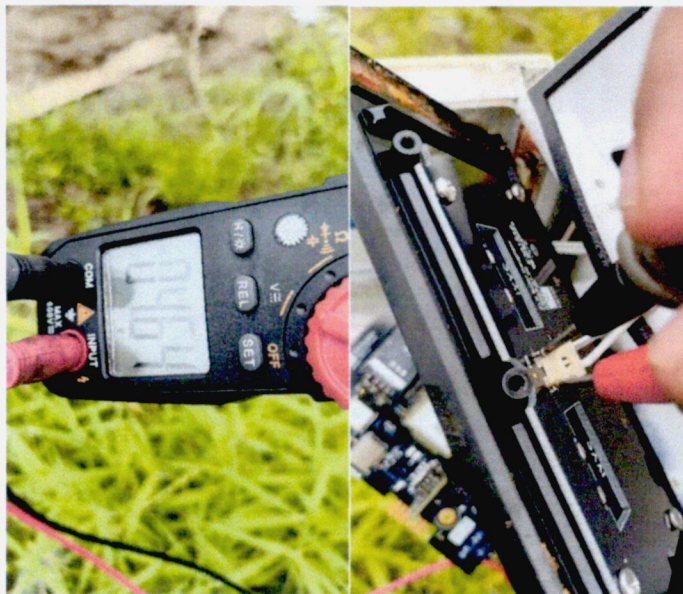


Figure 2. The DA-AWS station troubleshooting of power supply problem, May 4, 2023.



Figure 3. The Bongabong-AWS station vicinity cleaning on May 4 and 5, 2023.

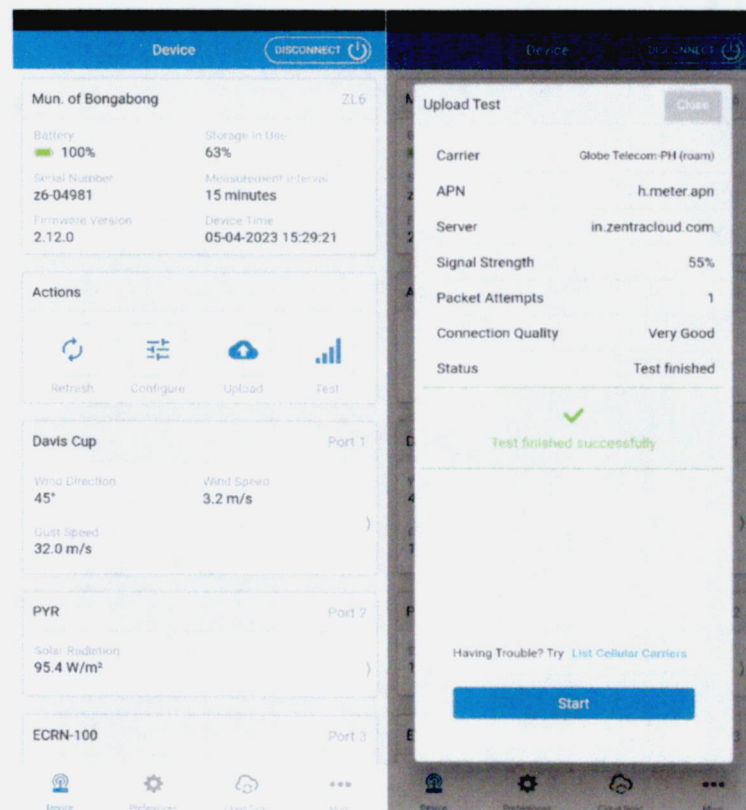


Figure 4. The Bongabong-AWS station monitoring using the Zentra Utility application, the datalogger is intact and can connect to the cellular network.



Figure 5. The MinSU-CTD (GWMS) station cleaning of CTD sensor and site monitoring on May 11, 2023.

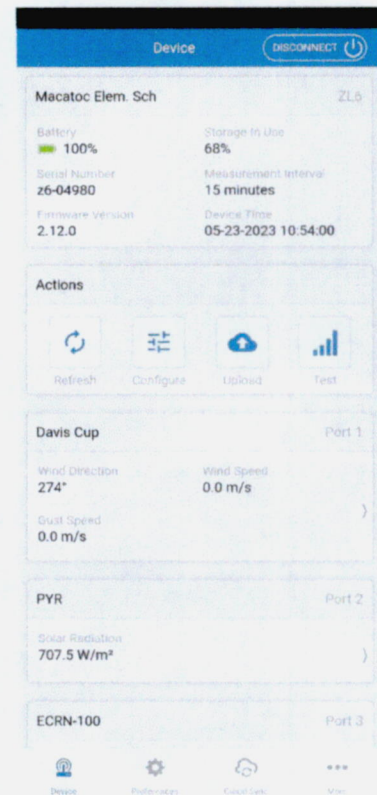


Figure 6. The Macatoc-AWS station monitoring on May 23, 2023.



Figure 7. The Abaton-AWLS station monitoring on May 23, 2023.