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I. PURPOSE

The purpose of this policy is to streamline the building standards applied by Mapua University to minimise water use by construction of rainwater harvesting system and water station backwash collection system.

II. SCOPE

This policy is applicable to CDMO & ILMO Department.

III. DEFINITIONS

Water re-use	Method of recycling treated wastewater for beneficial purposes, such as landscape and plant irrigation, hand washing and other non-potable use.
Rainwater harvesting	Process of collecting rainwater from surfaces on which rain falls, filtering it and storing it for multiple uses. Rainwater harvesting helps put the supply of water back to normal levels or merely conserve water coming from water providers such as Maynilad and MWSS. It is the collection and storage of water from surfaces that rain has fallen upon. Taking most advantage of the climate and weather condition of a location.
Back Washing Method	Cleaning the filter system by reversing the flow of water to remove any debris, build-up, and contaminants and vice versa to clean the pipeline towards the product/treated tank. Before conduct of water station normal operation.

IV. RESPONSIBILITY AND AUTHORITY

Water Station Personnel	Responsible for collection of discharged water coming from the backwash collection system at Mineral Water Station.
Housekeeping Supervisor	Responsible in recording the amount of recycled water collected from rainwater harvesting system and backwash collection system. Assign housekeeping personnel to water landscape areas using collected recycled water. Report work activity and accomplishment to CDMO Head.



CDM Head

Responsible in the preparation and updating of monthly monitoring worksheet on re-use water collected from rainwater harvesting system and backwash collection system.

V. DETAILS OF POLICY

1. Rain Water Harvesting System

The way of harvesting rainwater we constructed at Mapua University is the Rooftop Rainwater Harvesting, wherein we installed a Bestank Polyethylene Water Storage Tank (with a total volume capacity of 1 cubic meter or 1,000 liters) as Collection Tank, and used ½” PVC Pipe as water line connection, with supply faucet provided at the end.

Rain Water Harvesting System process involves harvesting the rain from the roof. Then rainwater is filtered with a screen to prevent any contaminant such as leaves to enter the drain pipe. Rainwater passes thru the pipe and enters the collection tank where it will be stored and treated if needed. Finally, the rain water passes through the supply faucet. The rainwater collected from the Harvesting System is used for irrigating the landscape and plants at YIC and South Building by the housekeeping personnel.

Housekeeping Supervisor assigned at Main Building checks and record the volume of water collected at the Rain Water Collection Tank every last working day of the week, and submit data to CDMO Head for updating of monthly monitoring worksheet on re-use water collected.

2. Water Station Backwash Collection System

The Backwash Collection System is constructed at the exterior side of the existing Mineral Water Station at the Ground Floor West Building, using a Bestank Polyethylene Water Storage Tank (with a total volume capacity of 1 cubic meter or 1,000 liters) as collection tank, and ½” PVC Pipe as water line connection, with supply faucet at the end.

The operation of the Mineral Water Station starts with a pre-operation procedure called back-wash treatment. It removes sediments and contaminants gathered in the filtration system before proceeding to normal run of treating raw water to be potable and safe to drink. This is done 2 to 3 times to make sure that water coming out of the system is free from contaminant.

Before performing back-wash procedure make sure that initial rinsing of the collection drain pipe shall be performed first before closing the valve located outside the water station and proceeding with the back wash waste water collection.



The backwash treatment is scheduled every Monday, Wednesday and Friday before start of each operation. This may vary for best practice depending on the production rate at a basis of for every 150 jugs (5 gallons or 19 liters per jug) or every 750 gallons.

Backwash Collection System process involves bleeding of water going out of the mineral water system and feeding of water through the filtering system and letting it flow for 5 minutes. Then, backwash bleeding is diverted to the collection drain pipe to the collection tank outside the water station and then accessed for use through the supply faucet. The water collected from the Backwash Collection System is used for irrigating the landscape and plants at North Building and near Gymnasium.

Housekeeping Supervisor assigned at West Building checks and record the volume of water collected at the Backwash Collection Tank every last working day of the week, and submit data to CDMO Head for updating of monthly monitoring worksheet on re-use water collected.

VI. PERFORMANCE INDICATOR

To ensure that the monitoring sheet on re-use water collected from rainwater harvesting system and water station backwash collection system are prepared and updated on-time by CDMO Head.

Timely submission of volume of water collected from rainwater harvesting system and water station backwash collection system by housekeeping supervisors.

VII. REACTION PLAN

Continue applying building standards in Mapua University by creating more projects to help minimize water use.

VIII. REPORTORIAL REQUIREMENTS

Report Title	Frequency of Update	Responsible Personnel
Monitoring of Re-Use Water Collected.	Monthly	Housekeeping Supervisors / CDMO Head

IX. REFERENCE DOCUMENTS

None