



PHILIPPINES SESSIONS

WEDNESDAY | 4 AUGUST 2021

03.00pm - 04.00pm

Moderator



Ms. Alma L. Abrasaldo

General Manager - Bayawan Water District
Director - Philippine Water Works
Association (PWWA)

Speakers



Engr. Virgilio L. Bombeta

Manager
Wells Construction Division
Local Water Utilities Administration (LWUA)



Atty. Patrick Lester N. Ty

Chief Regulator
Metropolitan Waterworks and Sewerage System
Regulatory Office (MWSS RO)



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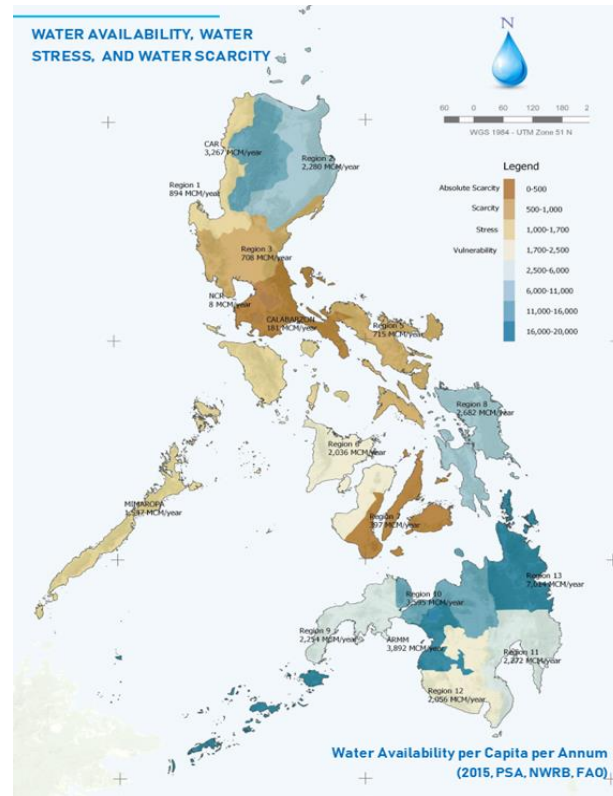
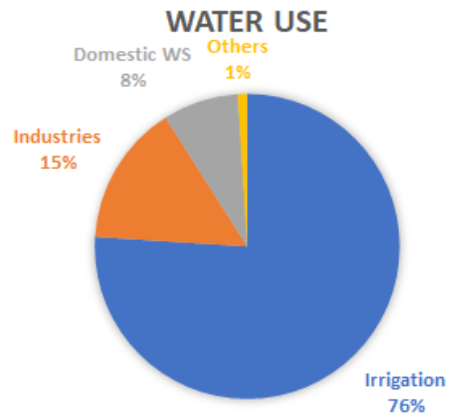
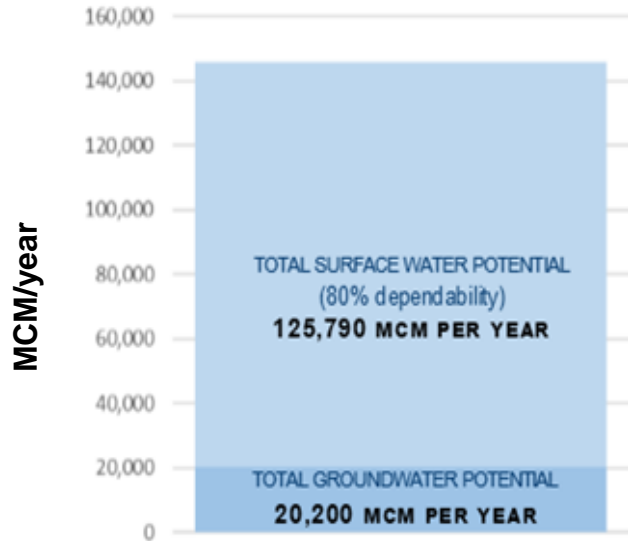
Topic

Sustainability of Water Resources in Philippines



WATER RESOURCES POTENTIAL*

The Philippines' total water resources potential is estimated at 145,990 MCM per year

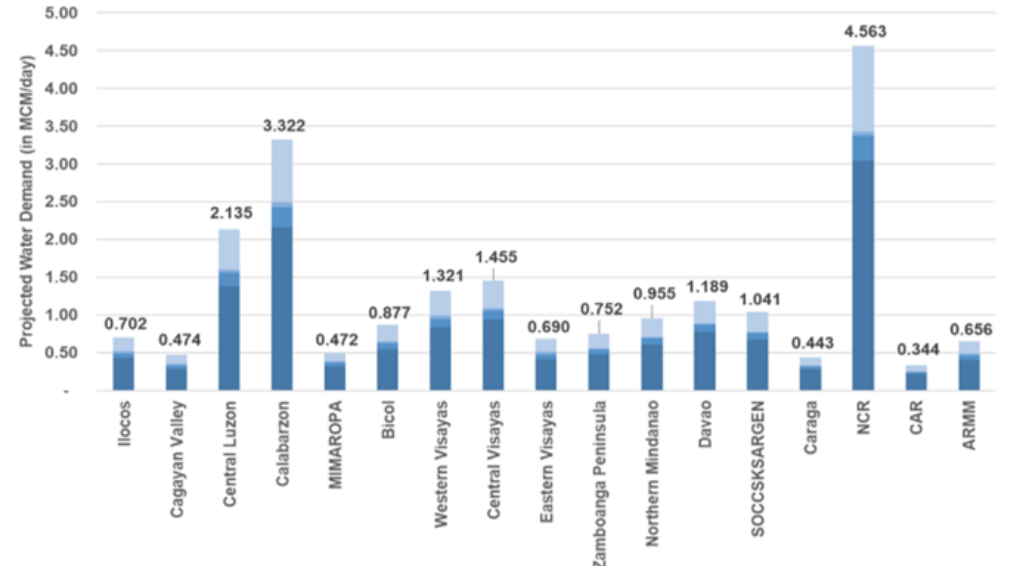


Based on 2015 population, water availability in the Philippines is only **1,446 m³/person/year**, and even reduced to **1,339 m³/person/year** based on 2020 census, revealing that the country is experiencing water stress*



WATER DEMAND PROJECTIONS

By 2040, the country's total water demand is projected to be approximately **21.4 MCM per day**.



Water Demand Projection, 2040

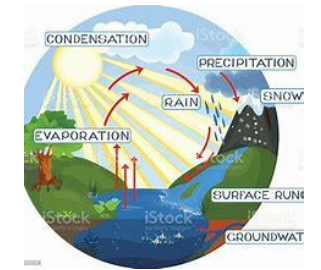
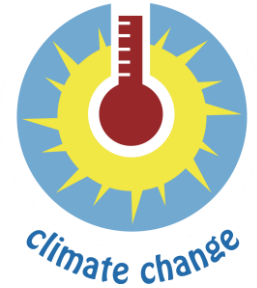
Note: Projected water demand does not include industrial demand and agricultural demand, which accounts for the biggest share in water use in the country.

	Annual Water Supply
Water Stress	below 1,700 m ³ /preson/year
Water Scarcity	below 1,000 m ³ /person/year
Absolute Scarcity	below 500 m ³ /person/year



Obstacles to Sustainable Water Management

- Climate change and the hydrological variability of water's distribution and occurrence
- Pressures from economic growth and major population change
- Roles and interdependencies of the different components of the hydrological cycle are often not fully appreciated resulting in the difficulty to set up adequate protection and prevention strategies
- Poor quality water and unsustainable supplies limit its utility and can lead to adverse conditions

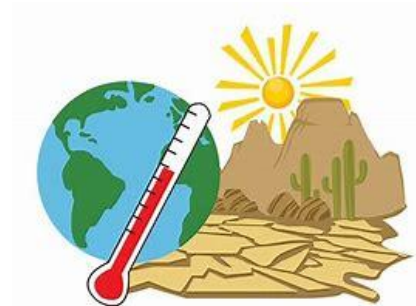




Human actions that seriously affect water resources



- **Inadequately managed human activities**
- **Pollution**
- **Over-extraction from surface waters and groundwater**
- **Climate change**





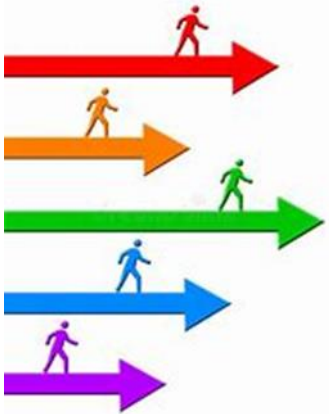
Meeting the growing demand for water

- Rainwater collection, surface water diversion, dams and reservoir, basin transfer
- Wastewater reuse
- Desalination





MOVING FORWARD



Using water efficiently and sustainably

- **Prevention strategies and new technologies that augment existing natural water resources,**
- **Reduce demand, and**
- **Achieve higher efficiency**



Demand management . . . the other side of the equation

Conservation

- Voluntary domestic conservation and use-reduction measures
- Increase in system efficiency to reduces losses and NRW

Recycling and Reuse

Pricing

Re-engineering and other innovative interventions





It becomes evident that . . .

- **Changes in climate are affecting water availability**
- **Pollution, water diversions and uncertainties about the abundance of water are threatening economic growth, environment, and health**
- **Groundwater is often being over-exploited and polluted**
- **To augment water supply, traditional techniques – such as rainwater collection – are now being supplemented by newer technologies like desalination and water reuse**
- **Political support is needed to improve information collection that can in turn enable better decision making about the management and use of water.**



Republic of the Philippines

LOCAL WATER UTILITIES ADMINISTRATION

INTEGRITY - DEDICATION - EXCELLENCE - PROFESSIONALISM

Thank you . . .



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Chief Regulator
Metropolitan Waterworks and Sewerage System
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Topic

Water Security of Metro Manila



MWSS
RO

Water Security of Metro Manila

ATTY. PATRICK LESTER N. TY
Chief Regulator
MWSS Regulatory Office

04 August 2021



MWSS REGULATORY OFFICE (RO)

- Water and sanitation services in Metro Manila were provided by Metropolitan Waterworks and Sewerage System (MWSS), until 1997.



MANDATE

- Monitors the **Concession Agreement**
- Reviews, monitors, and enforces **rates and service standards**
- Arranges and reports regular independent audits of the **performance of the Concessionaires**
- Monitors the **infrastructure assets**

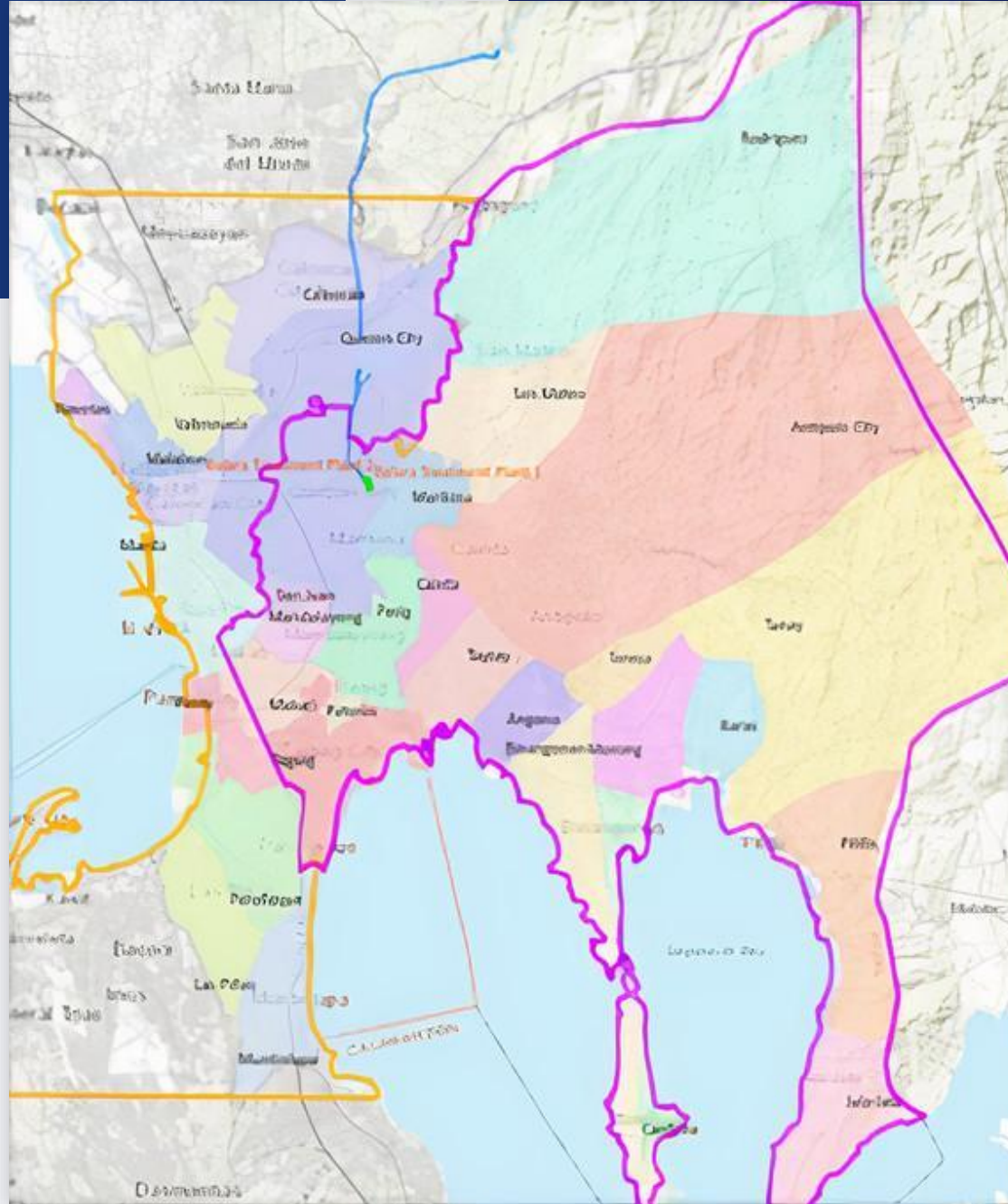




Maynilad

WEST ZONE

North Quezon City
North Caloocan
Valenzuela
Malabon
South Caloocan
Manila
Pasay
Makati
Paranaque
Parts of Cavite
Las Pinas
Muntinlupa



MANILA WATER
CARE IN EVERY DROP

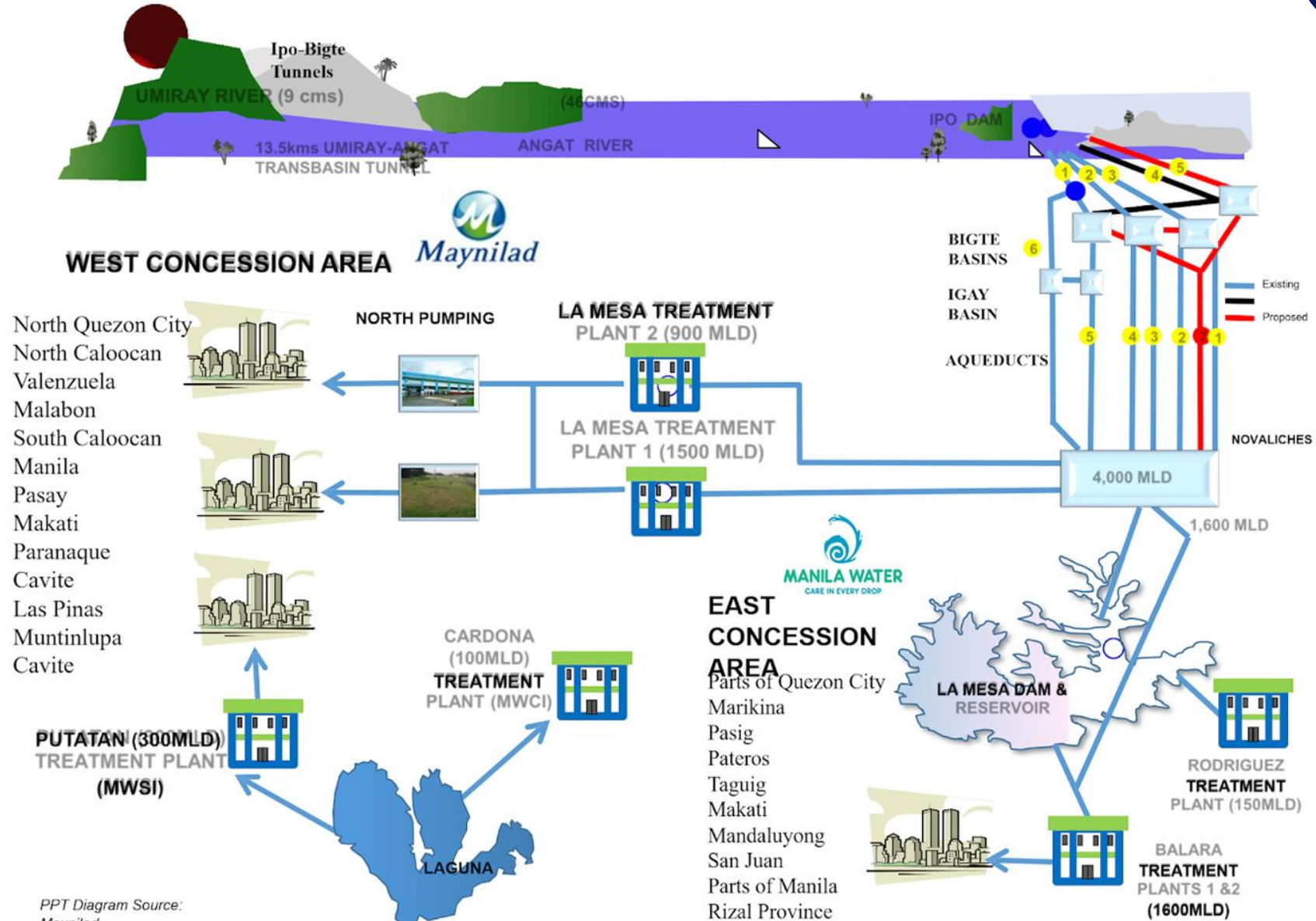
EAST ZONE

Parts of Quezon City
Marikina
Pasig
Pateros
Taguig
Makati
Mandaluyong
San Juan
Parts of Manila
Rizal Province

PRE-PRIVATIZATION vs CURRENT CONDITION

DESCRIPTION	PRE-PRIVATIZATION	CURRENT CONDITION (as of 2020)
POPULATION SERVED	5.82 M	17 M
WATER SUPPLY COVERAGE	48%	94%
SEWER COVERAGE	9%	25%
SANITATION COVERAGE	1%	62%
NON-REVENUE WATER	61%	30%

EXISTING MWSS WATER SOURCES



MAYNILAD TREATMENT PLANTS



La Mesa Treatment Plant 1 (1500 MLD)
Quezon City

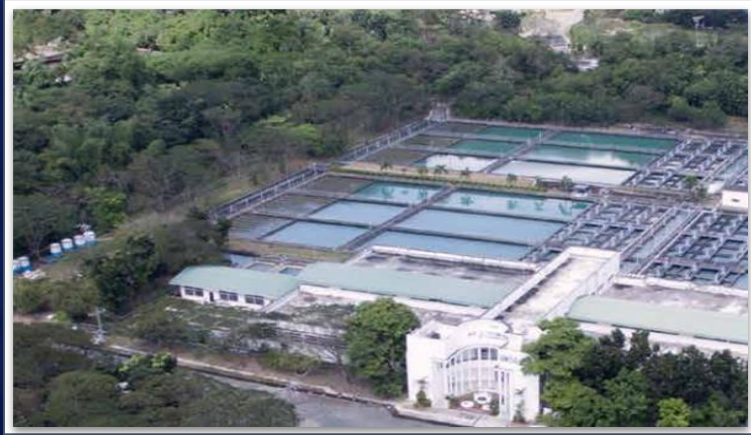


La Mesa Treatment Plant 2 (900 MLD)
Quezon City



Putatan Treatment Plant (300 MLD)
Muntinlupa

MANILA WATER TREATMENT PLANTS



Balara Treatment Plant (1600 MLD)
Quezon City



Cardona Treatment Plant (100 MLD)
Rizal



East La Mesa Treatment Plant (150 MLD)
Rizal

WATER CRISIS IN 2019

- Increased water demand due to Metro Manila's constantly growing population
- Lack of infrastructures and water sources to provide for the growing demand



East Zone Water Source Demand Projection



West Zone Water Source Demand Projection



NEW CENTENNIAL WATER SOURCES

- 600 MLD Kaliwa Dam
- 1800 MLD Kanan Dam

NEW APPROVED WATER SOURCES

- **80 MLD** Calawis Antipolo Source System (Y2021 Phase 1)
- **438 MLD** Wawa Dam (Y2025 Phase 2)
- **50 MLD** East Bay Water Supply (Phase 1)
- **200 MLD** East Bay Water Supply (Phase 2)
- **150 MLD** Poblacion Water Supply

WATER CONSERVATION

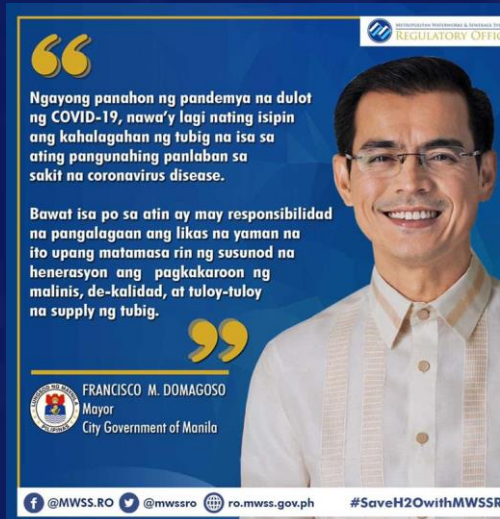
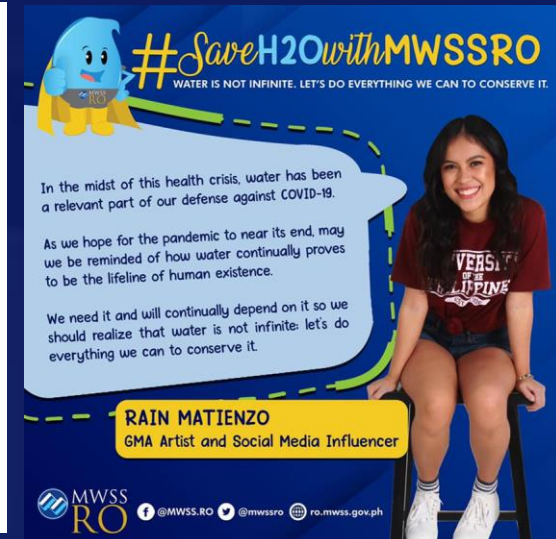
SIMPLE WAYS TO CONSERVE WATER CAN MAKE A MASSIVE DIFFERENCE

#SaveH2OwithMWSSRO



ATTY. PATRICK LESTER N. TY

CHIEF REGULATOR, MWSS RO



WATER CONSERVATION

- Less expensive than developing new water sources
- Reduces stress on the environment (environmentally responsible practice)
- Easier to implement
- Saves consumers' money
- Helps stretch water supply throughout the dry season
- Reduces severity of potential water shortages

Water conservation starts with you!



#SaveH2OwithMWSSRO

WATER CONSERVATION TIPS

- Reduce shower time
- Turn off shower or faucet while soaping, shampooing, brushing teeth, or shaving; turn on to rinse
- Check for water leaks and immediately call for repair
- Collect and reuse rainwater, or bath and laundry water for cleaning
- Wash dishes in a water basin
- Install aerators on faucets to reduce water flow
- Use the half flush of dual flush toilets to reduce water consumption
- Reduce the use of water hoses for cleaning or watering the plants

Water conservation starts with you!



#SaveH2OwithMWSSRO



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Thank you!



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Questions & Answers



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**Thank You and See you
Tomorrow!**



Water Philippines Expo

www.waterphilippinesexpo.com