

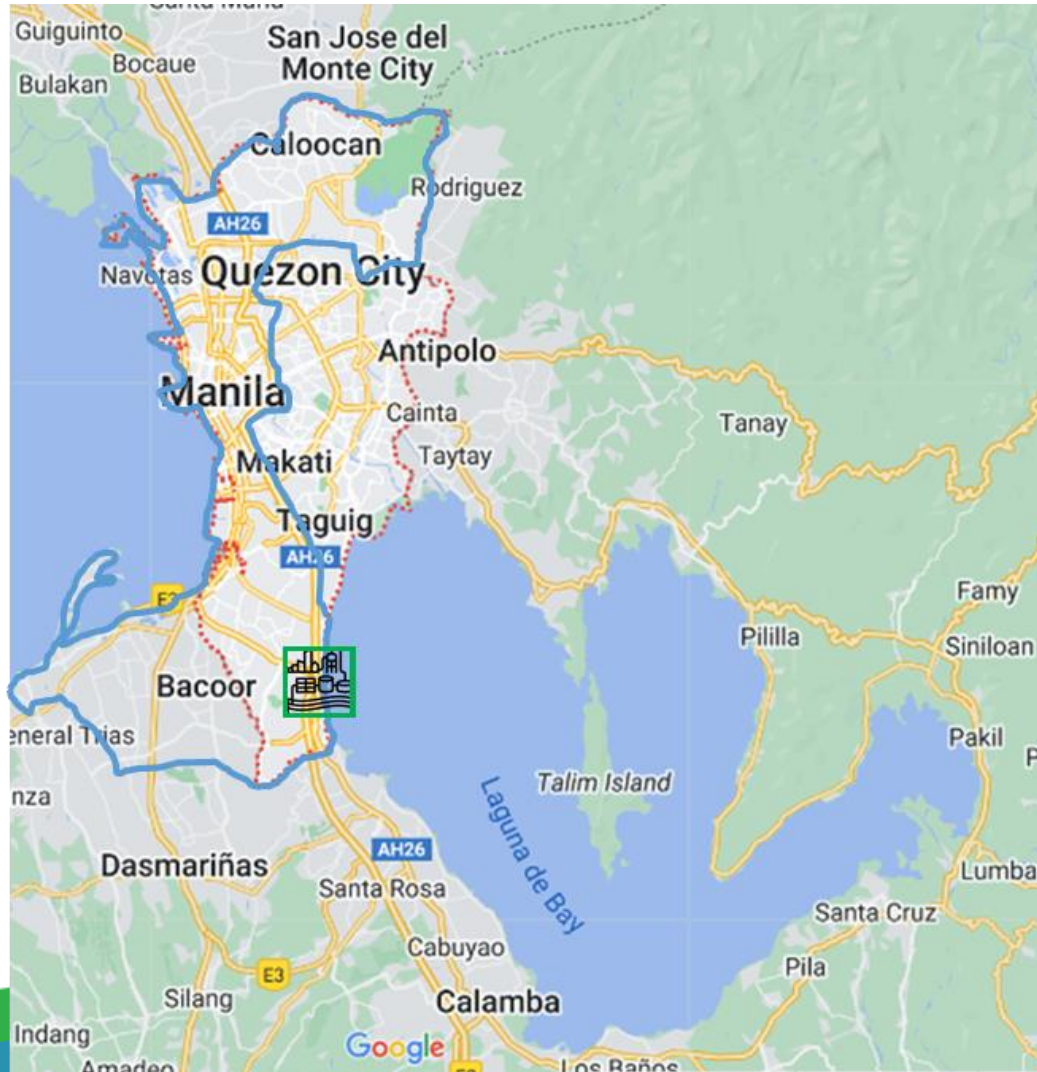
# Maynilad Approach to Circular Economy: Enhancing Reliability through Water Reuse



**Elmer Brent Cauton**  
Water Supply Operations

*WaterLinks Knowledge Sharing*  
*May 22, 2025*

# Maynilad as a Water Utility



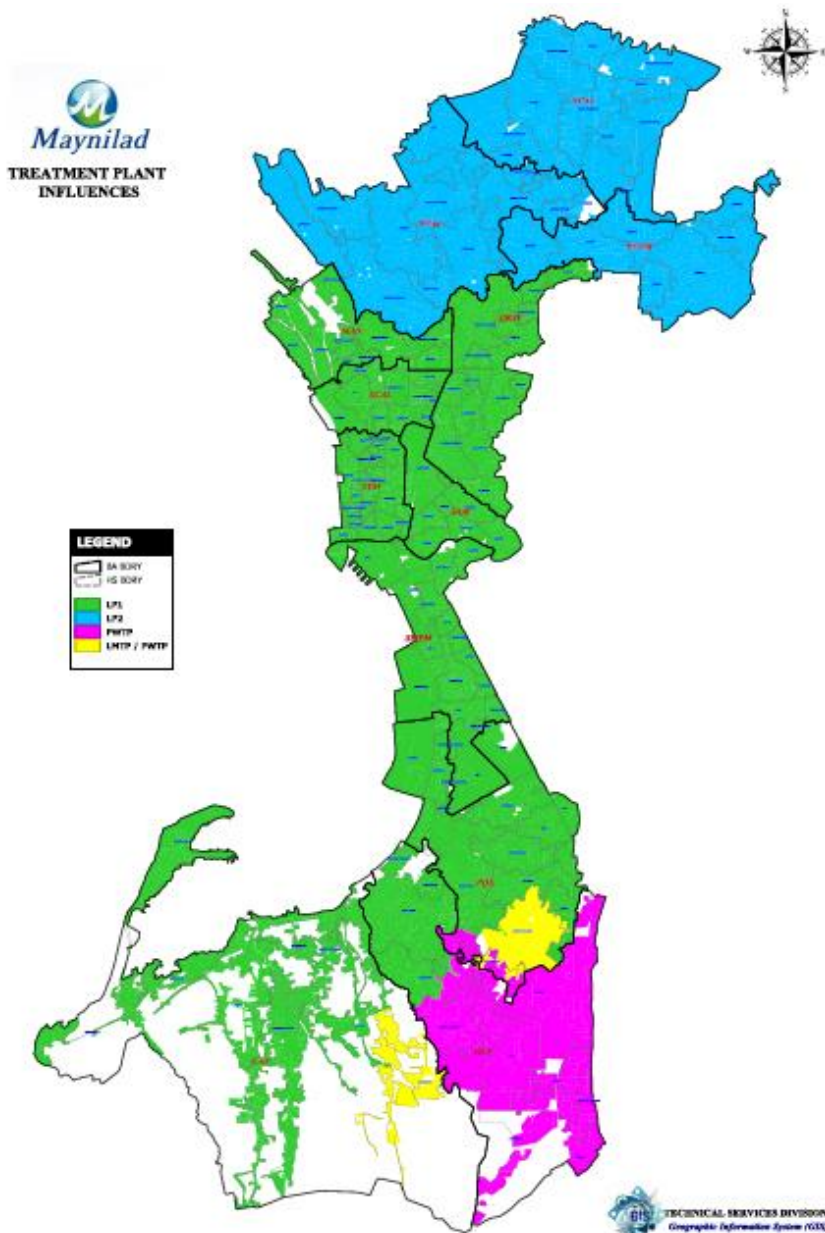
- Water & Wastewater service provider in Metro Manila, Philippines
- Regulated by Metropolitan Waterworks and Sewerage System (MWSS)
- Caters to 17 cities and municipalities (West Zone)
- 2500 MLD → from Angat
- 450 MLD → from Laguna Lake



# WATER AND WASTEWATER NETWORK OVERVIEW

ASSETS	WATER SYSTEM	WASTEWATER SYSTEM
Population Served	10.3 M	
Service area	540 km <sup>2</sup>	
Treatment facilities	8	23
Combined treatment capacity	2,777 MLD	684,707 CMD
Pipelines (in Km)	7,830	643
Pumping/Lift Stations	39	129
Reservoirs	39	N/A
Reservoirs capacity	779 ML	N/A

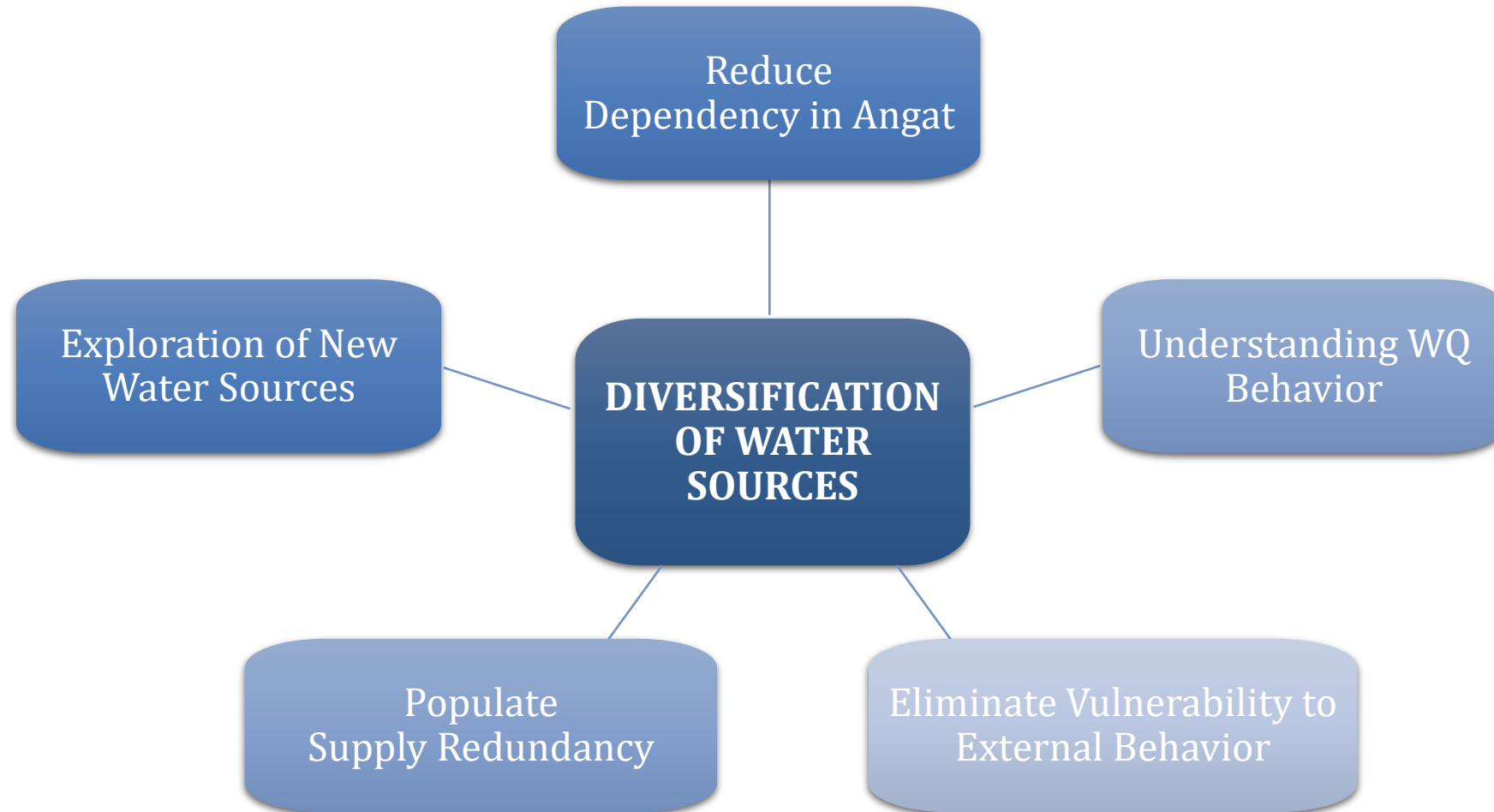
# Maynilad as a Water Utility



- Remaining underserved areas are located furthest from Angat Dam (Cavite)
- Possible Sources: Manila Bay & Laguna Lake
- Kaliwa Dam is still underway

**DIVERSIFY WATER SOURCES**

# IDENTIFIED PROGRAMS





# POTENTIAL SOLUTIONS & SOURCES

PUBLIC



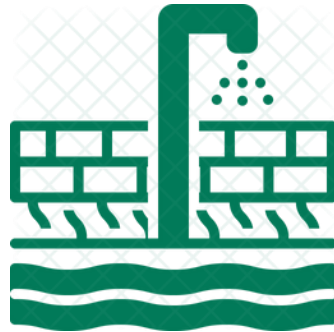
*Non-Revenue Water Reduction*



*Rivers/ Creeks*



*Seawater*



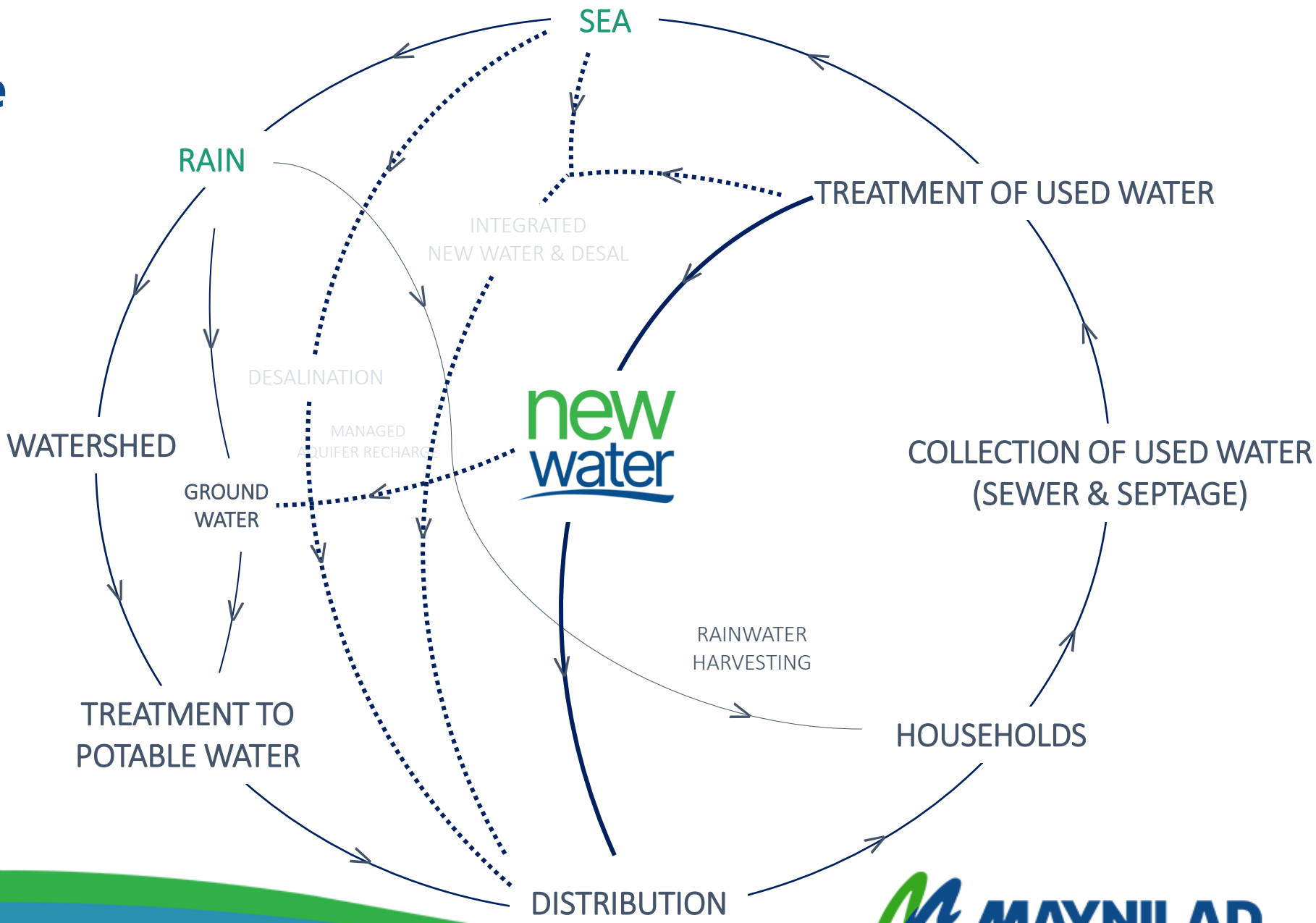
*Groundwater*



***Treated used water or "effluent"***  
*A climate-change proof source\**

*\*Climate change independent. Controlled Water Quality and Quantity. Sustainable.*

# Maynilad Water Cycle





● Mexico City, Mexico



● Essex and Suffolk  
Langford, UK

● Toreele Reuse Plant  
Wulpen, Belgium

● Sulaiabiya Wastewater Treatment & Reclamation Plant  
Sulaiabiya, Kuwait

● Vrishabhavathi Valley Project  
Bangalore, India  
(studied)



● NEWater  
Singapore

● Sao Paulo, Brazil  
(studied)

● Goreangab  
Water Reclamation Plant  
Windhoek, Namibia

● Beaufort West  
South Africa

● eMalahleni Municipality  
South Africa

● eThekweni Municipality  
South Africa  
(studied and put on hold)

● Beenyup Advanced  
Water Recycling Plant  
Perth, Australia

● Western Corridor Project  
SE Queensland, Australia  
(offline)

- Indirect Potable Reuse
- Direct Potable Reuse



# COLLABORATION WITH DIFFERENT AGENCIES

PUBLIC



REPUBLIC OF THE PHILIPPINES  
METROPOLITAN WATERWORKS AND SEWERAGE SYSTEM  
CORPORATE OFFICE



METROPOLITAN WATERWORKS & SEWERAGE SYSTEM  
REGULATORY OFFICE



# ESTABLISHING ACCEPTANCE AMONG CONSUMERS

Maynilad has conducted a series of social acceptability tests and public consultations.



# Plant Profile

**1<sup>ST</sup> DIRECT POTABLE  
WATER RE-USE IN ASIA**

**PNSDW 2017 Compliant:**  
*(Philippine National Standards  
of Drinking Water)*

**Capacity** 10,000 m<sup>3</sup>/day

**Raw Water  
Source** PQE WRF  
Effluent

**Treatment  
Technology** Filtration  
Process

**Population  
Served** 38,700

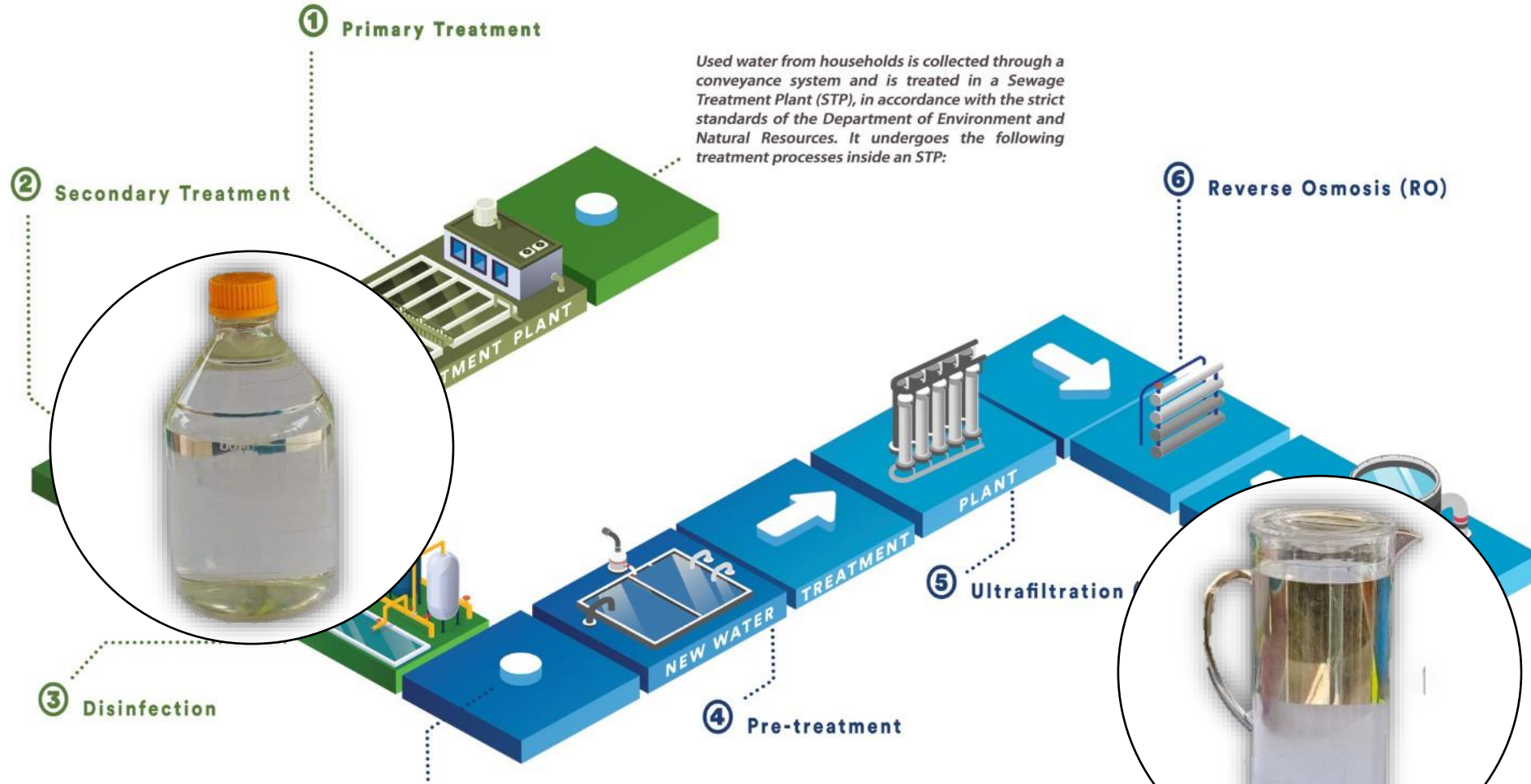
**Customers** San Dionisio  
and San Isidro

**Start of  
Operation** October 26, 2022

## Public Acceptance Milestones



# HOW USED WATER BECOMES POTABLE WATER

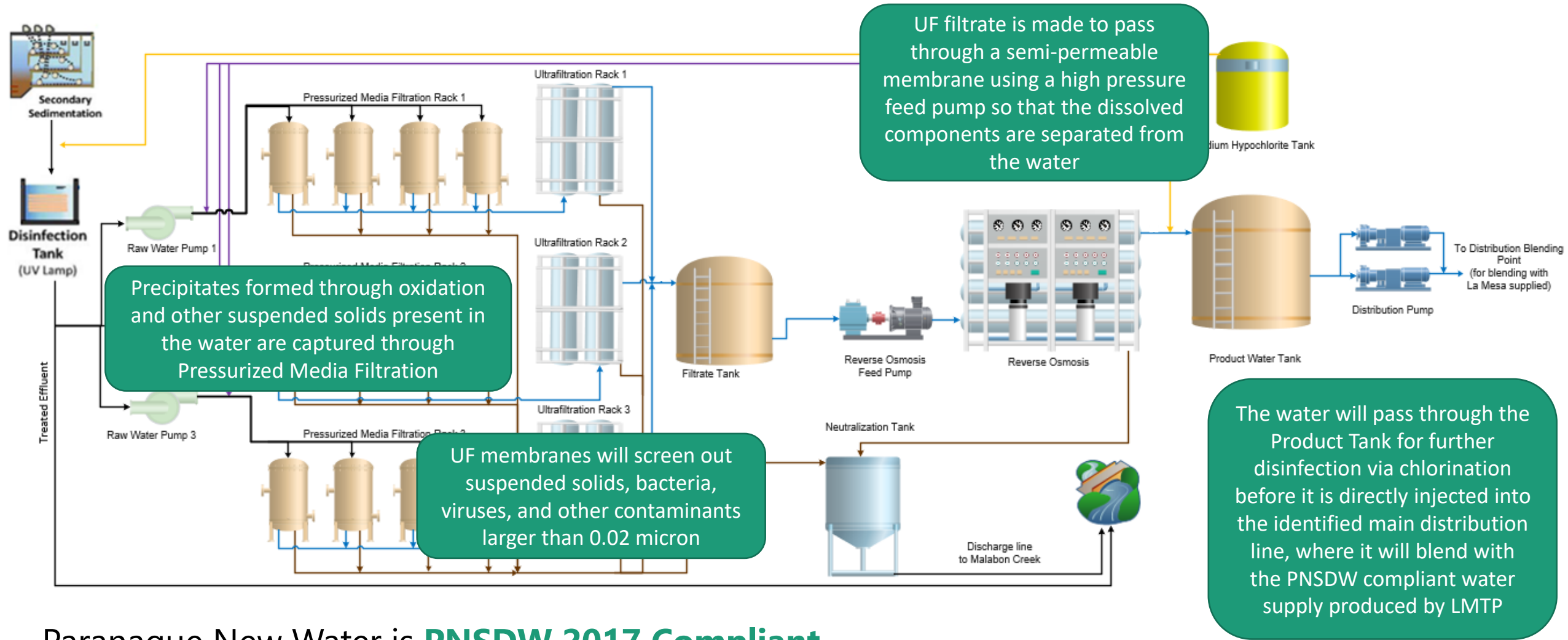


Used water from households is collected through a conveyance system and is treated in a Sewage Treatment Plant (STP), in accordance with the strict standards of the Department of Environment and Natural Resources. It undergoes the following treatment processes inside an STP:

Instead of releasing the treated used water from the STP to the receiving body of water, it is stored in an effluent tank that is connected to a NEW WATER Treatment Plant. The following processes will further purify the treated used water to become potable supply called NEW WATER:

The NEW WATER is **PNSDW 2017 Compliant**

# PARANAQUE NEW WATER TREATMENT PROCESS



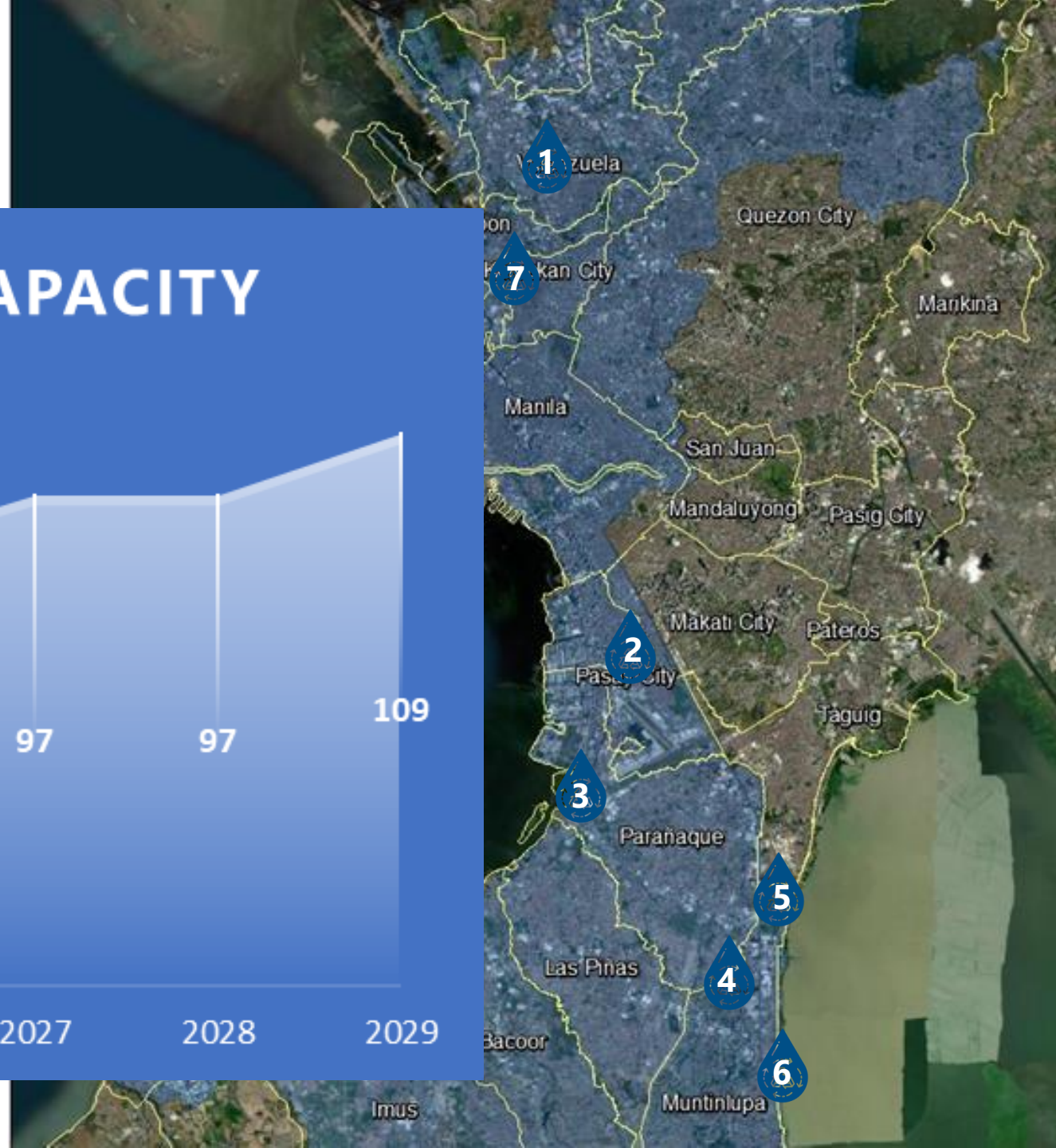
Paranaque New Water is **PNSDW 2017 Compliant**.

On-site laboratory available for hourly control & monitoring of each process & product water.

# NEW WATER PLANS

## NEW WATER TOTAL CAPACITY

**600,000** customers  
will be benefited.



# NEW WATER PLANS 2029

PLANT	CAPACITY
PARANAQUE NEW WATER	10 MLD + 10 MLD
PASAY NEW WATER	12 MLD
VALENZUELA NEW WATER PHASE 1	1 MLD
VALENZUELA NEW WATER PHASE 2	21 MLD
CAMANA NEW WATER	55 MLD
<b>TOTAL</b>	<b>109 MLD</b>

# Future Maynilad Sources

**Deepwells**

**North Rivers**

*Marilao, Marikina, Tullahan*

**Manila Bay**

*ASEANA, Bacoor Bay*

**Cavite Dams**

**Cross-border**

**Angat-Umiray-Ipo**

**East Sources**

*Wawa/Calawis, Kaliwa Low,  
Upper Kaliwa/Laiban*

**New Water**

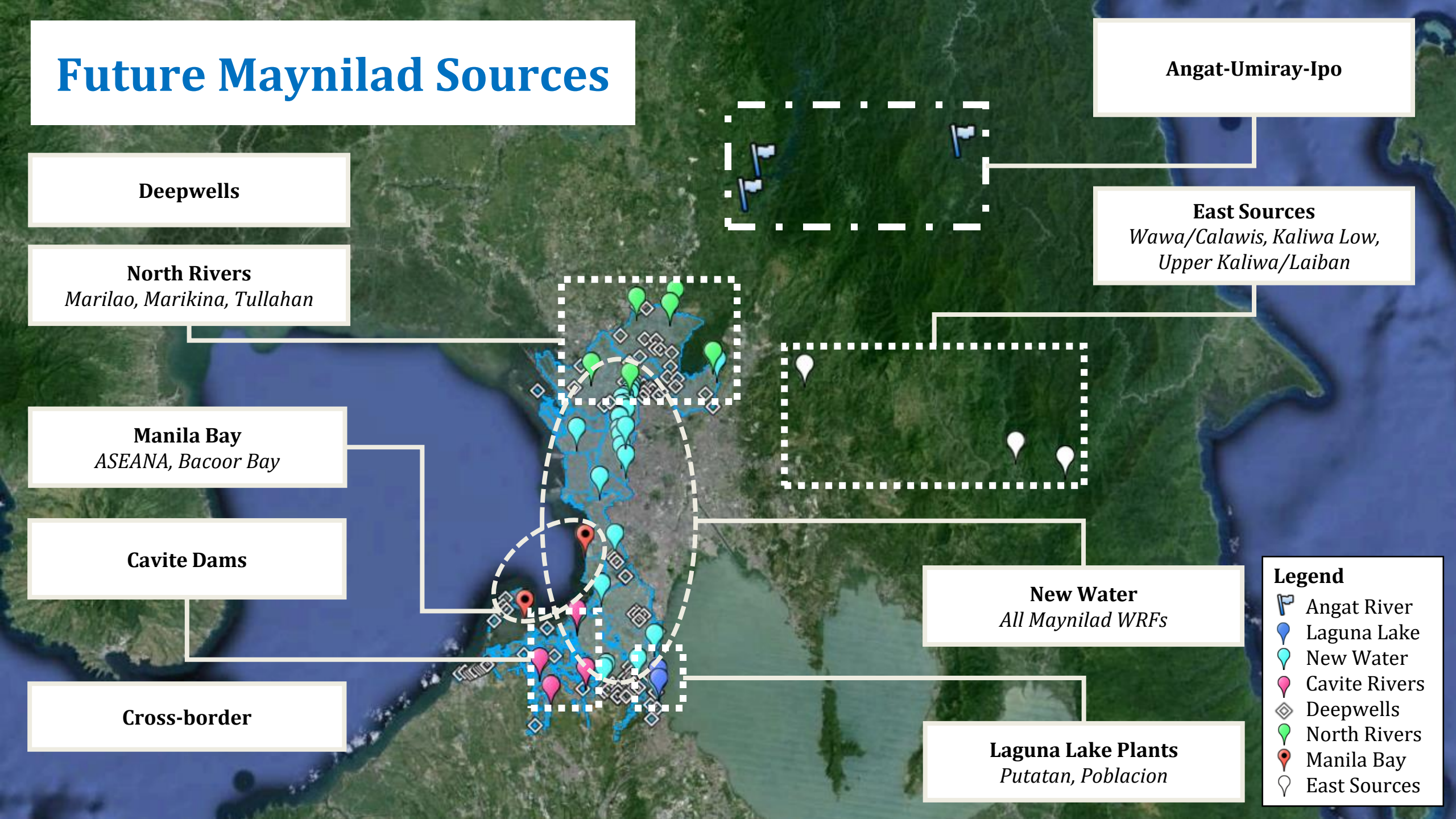
*All Maynilad WRFs*

**Laguna Lake Plants**

*Putatan, Poblacion*

## Legend

-  Angat River
-  Laguna Lake
-  New Water
-  Cavite Rivers
-  Deepwells
-  North Rivers
-  Manila Bay
-  East Sources





# Water Reuse Project of the Year 2023





# THE INTERNATIONAL BUSINESS AWARDS<sup>®</sup>



*NEW WATER: Maynilad's Foray into Potable Water Reuse*

**Category:** Achievement in Product Innovation

**Status:** **Gold** Stevie Winner

*Ceremonial Launch of Maynilad's NEW WATER*

**Category:** Communications or PR Campaign of the Year - Integration of Traditional and New Media

**Status:** **Silver** Stevie Winner

Awards	Entry	Event	Date	Category
Silver Award for PR Tools	Sagot ni Kuya Dong: Maynilad NEW WATER Facebook Videos	58 <sup>th</sup> Anvil Awards	March 8, 2023	Local
Water Reuse Project of the Year	Paranaque NEW WATER	2023 Global Water Awards	May 9, 2023	International
Silver Stevie under Achievement in Product Innovation	Maynilad's Foray into Potable Water Reuse	2023 Asia-Pacific Stevie Award	June 27, 2023	International
Gold Stevie under Achievement in Product Innovation	NEW WATER: Maynilad's Foray into Potable Water Reuse	The 2023 International Business Awards	October 13, 2023	International
Silver Stevie under Communications or PR Campaign of the Year – Integration of Traditional and New Media	Ceremonial Launch of Maynilad's NEW WATER			



**MAYNILAD**

**Thank you.**

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