



Expansion of Used Water Services under a Public Private Partnership (PPP) agreement in Metro Manila

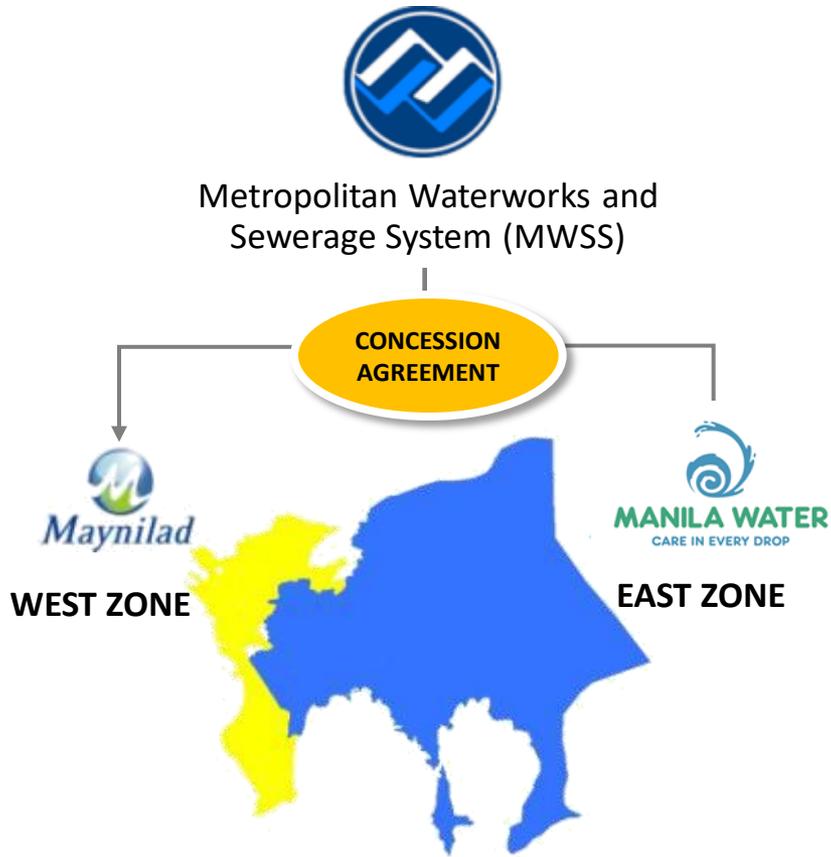
Mark Tom Mulingbayan

11 December 2017

- **Pre-1997, sewer coverage at 3%**
 1. Manila's pre-WW2 sewer network
 2. Dagat-Dagatan sewer network
 3. Makati central business district sewer network
 4. Scattered communal septic tanks in government housing estates
- **More than 80% use septic tanks**
 - Most improperly designed
 - Not regularly maintained
- **The rest, esp the urban poor, had no access to sanitary facilities**



Before 1997



1997 to 2022, extended to 2037

Expand Service Coverage

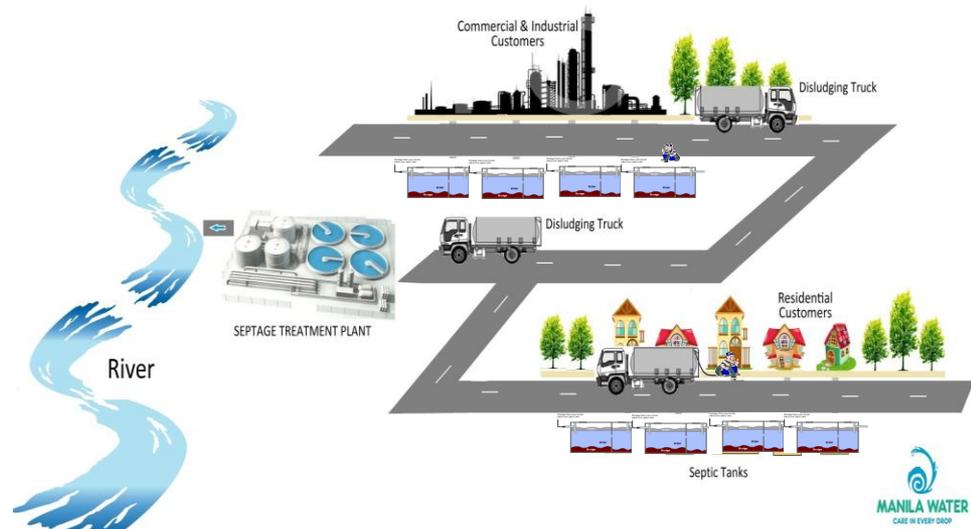


Improve Service Delivery

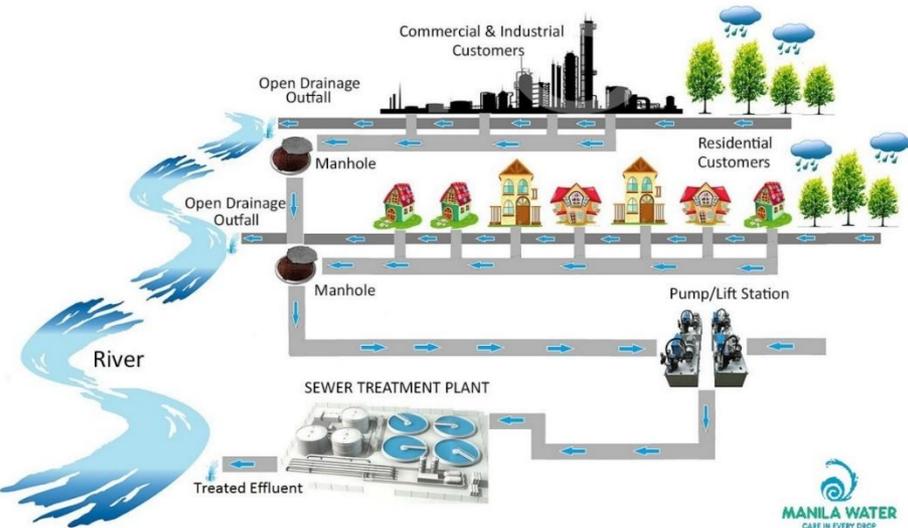


Increase Operating Efficiency





Household Septic Tank Desludging 'quick wins in pollutant removal'

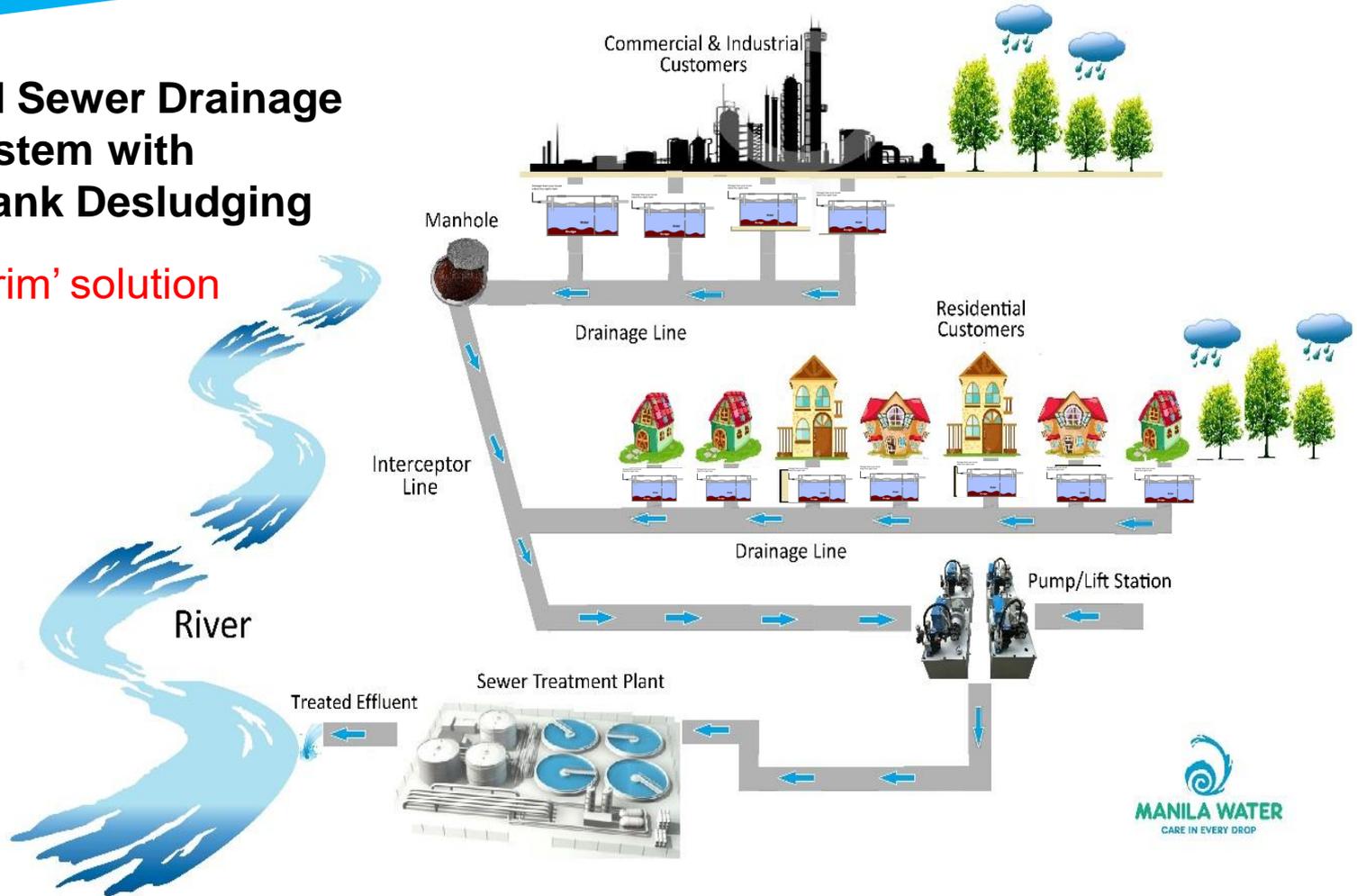


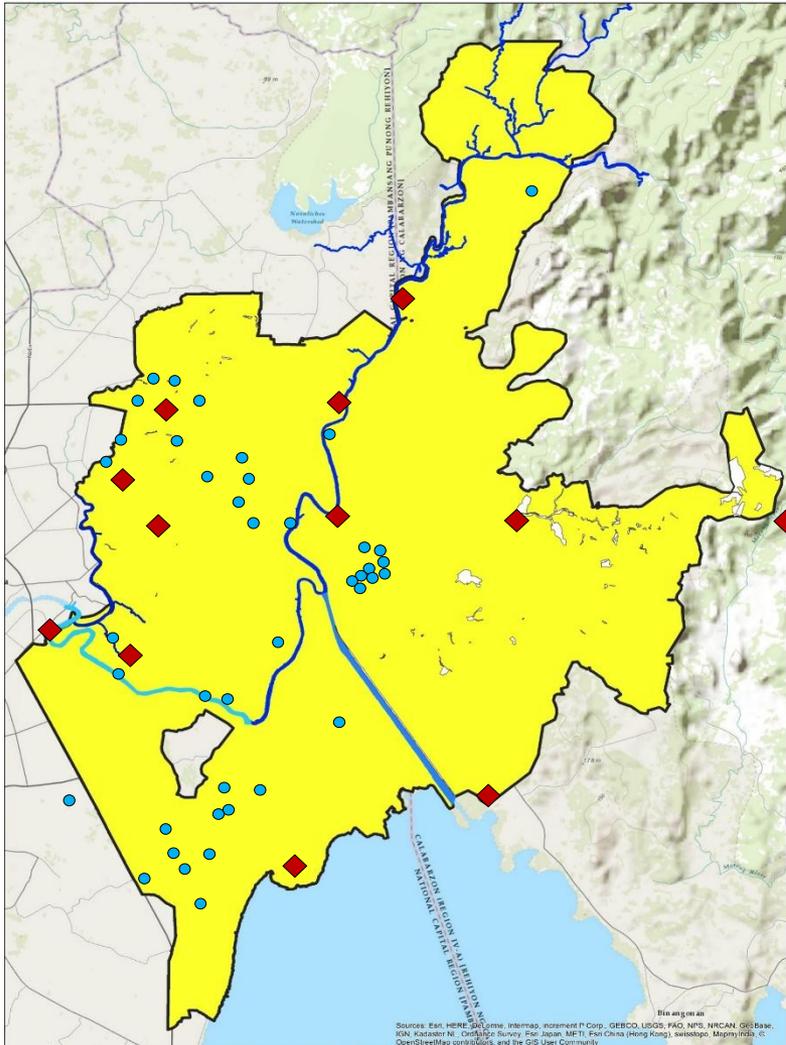
Separate Sewers

'ideal solution'

Combined Sewer Drainage System with Septic Tank Desludging

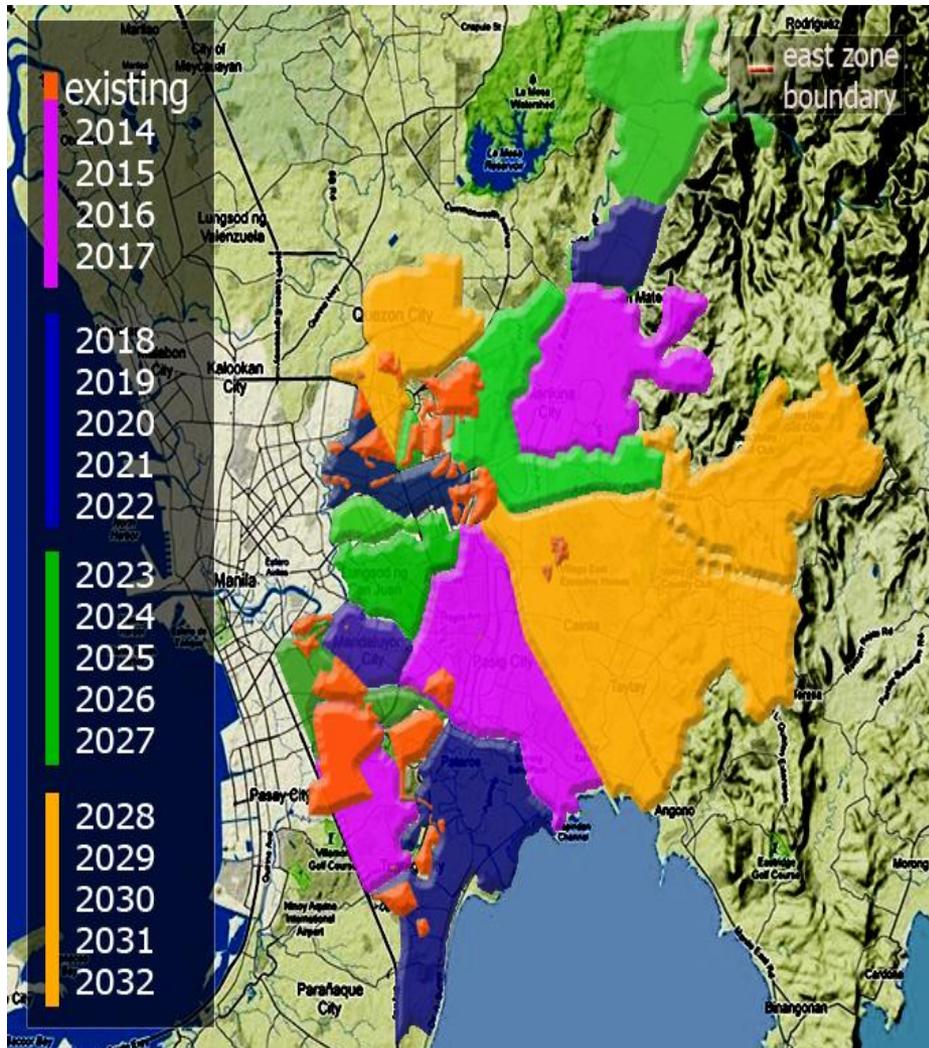
'interim' solution



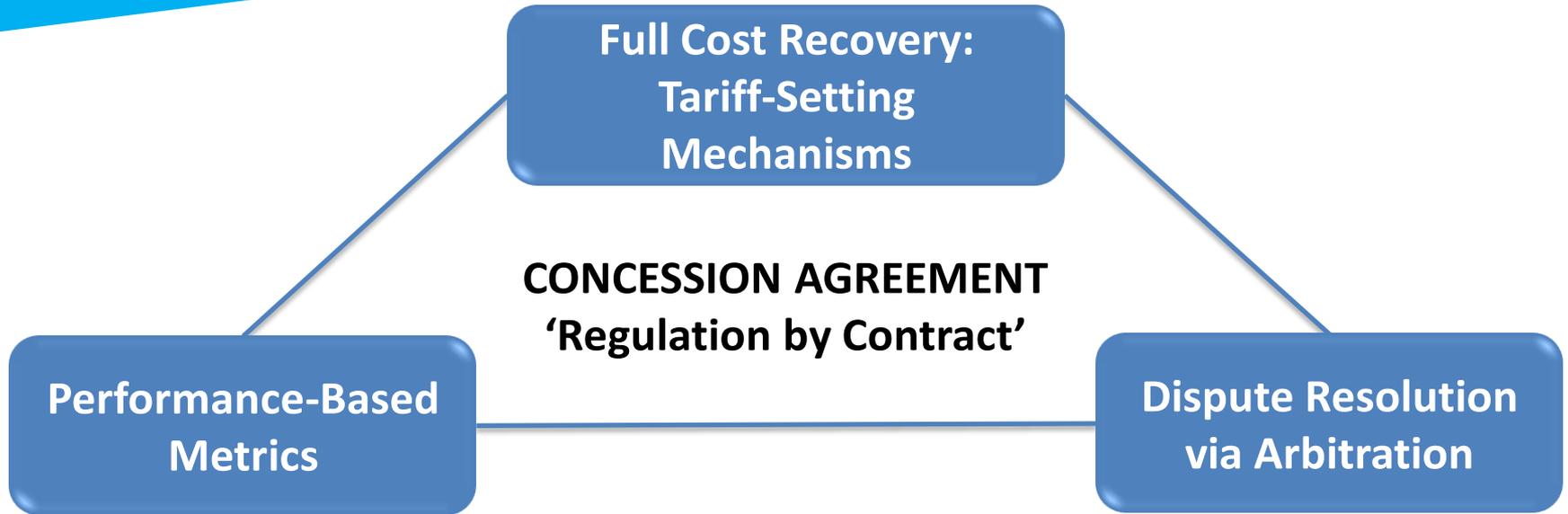


Description	Count	Total Capacity (m ³ /day)
● Operating facilities	39	312,261
★ On-going construction	1	100,000
◆ Future facilities	14	847,050
TOTAL	54	1,259,311

In 2016, Manila Water's used water facilities diverted **6,264 tons of BOD** from the waterways of Metro Manila.



2018 - 2037	Capacity
Makati-Manila	93mld
Mandaluyong West	57mld
San Mateo – Rodriguez	103mld
QC West	62mld
Taguig Central	117mld
QC East	25mld
QC South	15mld
SJ South	36mld
Marikina South	20mld
QC North	90mld
Antipolo	60mld
East of Manggahan	190mld



$$\text{S} = \text{E} = \text{T}$$

S SERVICE OBLIGATIONS **E** EXPENDITURES **T** TARIFFS

1



Availability of land for
treatment plants
and
right of way for
sewer lines

2



Changes and
inconsistency in
environmental
regulation

3



Adequate numbers
of WW experts &
contractors

4



Impact of on water
tariff

5



Public support and
willingness to pay

'Lakbayan' Water Trail Tour



'Toka Toka' Advocacy

- 🌀 IPA-DESLUDGE O IPASIPSIP ANG POSO NEGRO NG BAHAY
- 🌀 IPAKONEKTA ANG BAHAY SA SEWER LINE NG Manila Water
- 🌀 MAGTAPON NG BASURA SA TAMANG PARAAN
- 🌀 SUPORTAHAN ANG MGA PROYEKTO NG Manila Water SA KOMUNIDAD



NAGAMIT NA TUBIG,
GAWING TUBIG NA OKS!

Summary

- **Our Public Private Partnership contracts have clear service obligations and targets, and allow full cost recovery of expenditures through the water tariff.**
- **Approaches for expansion of used water services will evolve in time: from septic tank management, to combined sewers, to separate sewers.**
- **Involvement of key partners such as regulators and community leaders are essential for changing mindsets.**



**Replicating Successes in
Water Supply and Wastewater**



“...a mission to fulfill,
not a business to run...”

Fernando Zobel de Ayala
Chairman
Manila Water Company