

Wastewater Management in East Zone of Metro Manila

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Manila's Wastewater Management Condition

1997

3% sewer coverage

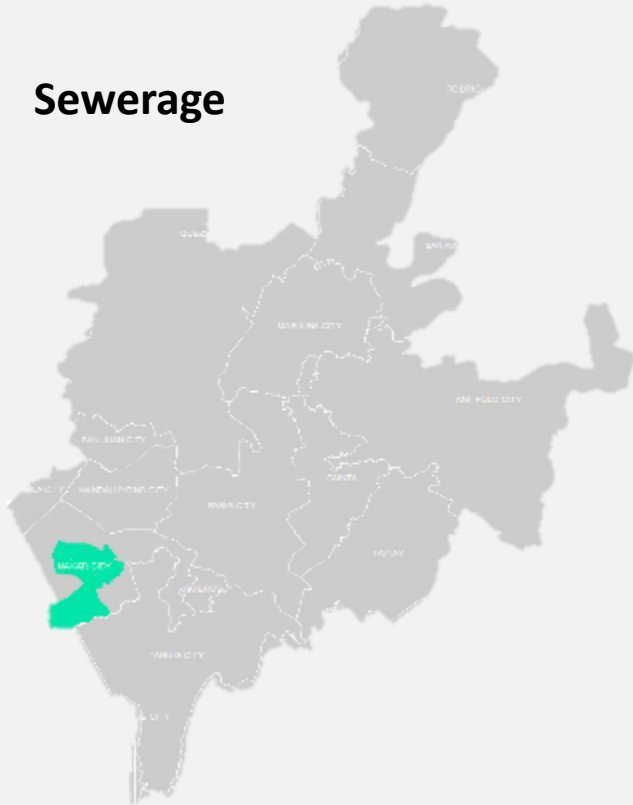
45,000 approx. Population served

1 Wastewater Facility

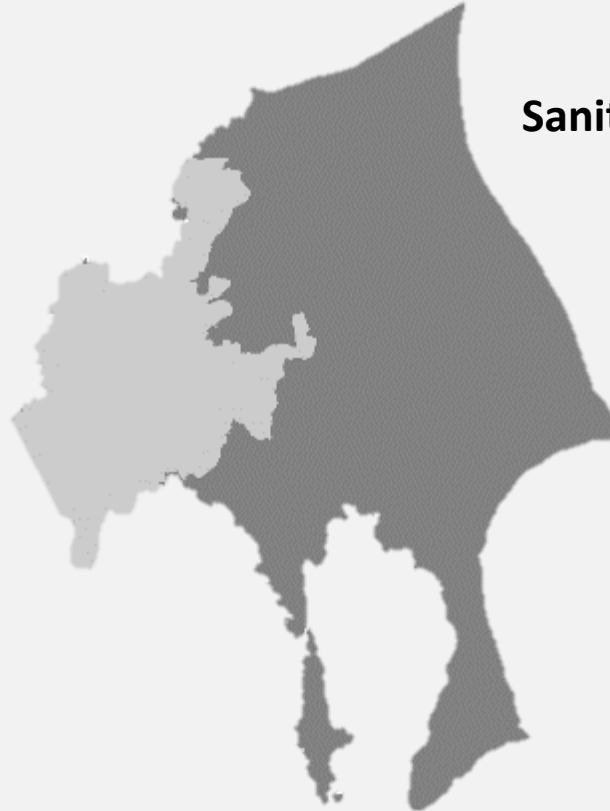
56 Households desludged

269 approx. Population served

Sewerage



Sanitation



Domestic sources were the major pollution source

CURRENT CHALLENGES

- Expropriate/acquire 100 ha of land and 500 km right-of-way for facilities and sewer network
- Delays in acquisition of permits and limited allowable working hours from Local Government Units
- Lack of willingness of customer to avail of desludging services and connection to sewer network
- Homeowners constructed structures on top of septic tanks, making it difficult to locate and desludge
- High volume of solid waste intrusion
- Uncontrollable discharge from residential, commercial and industrial establishments
- Informal settlers' open defecation and obstruction of waterways
- Limitations brought by COVID-19 Pandemic

Wastewater Management Strategies

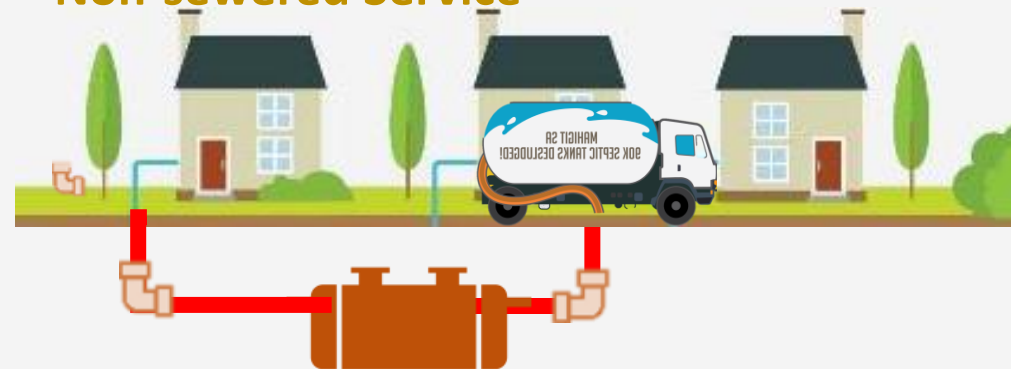
Separate System



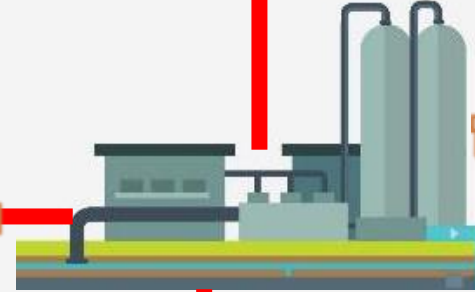
Combined System



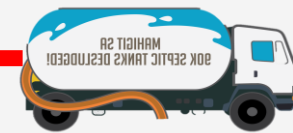
Non-sewered Service



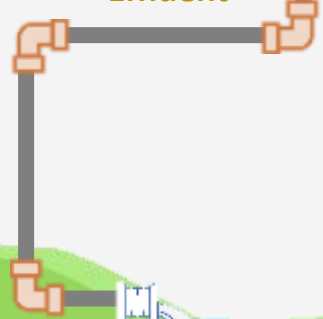
Pump/Lift Station



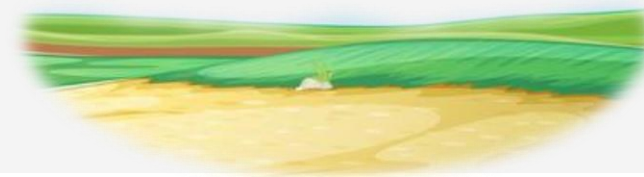
Sewage Treatment Plant



Effluent

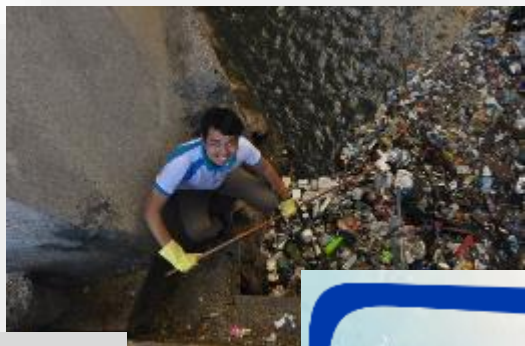


Biosolids



The wastewater management of Manila Water includes the **collection** of sewage and septage from households and establishments, to **conveyance**, **full treatment** and **safe disposal** of by-products.

Wastewater IEC and Advocacy



Clean-up Drives



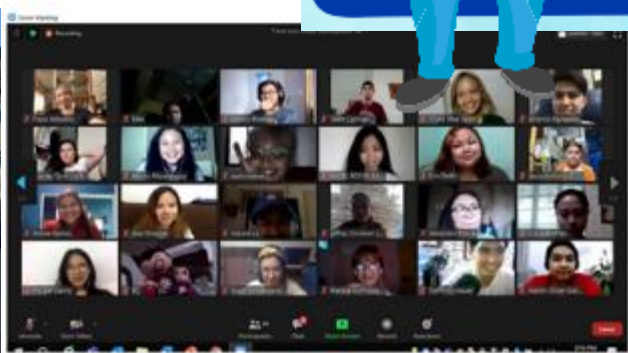
Tree Planting



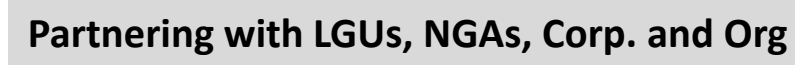
Adopt-an-Estero/Water Body Program



Lakbayan: Water Trail



Information Education Campaigns



Partnering with LGUs, NGAs, Corp. and Org

Wastewater Operations Profile

34

Separate
Sewer
System

5

Combined
Sewer-Drainage
System

2

Septage
Treatment
Plants

30 Outsourced Services

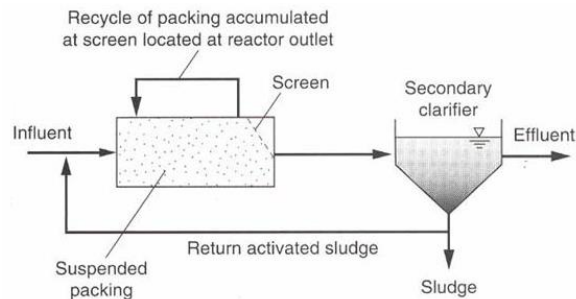
Initiatives Towards Efficiency



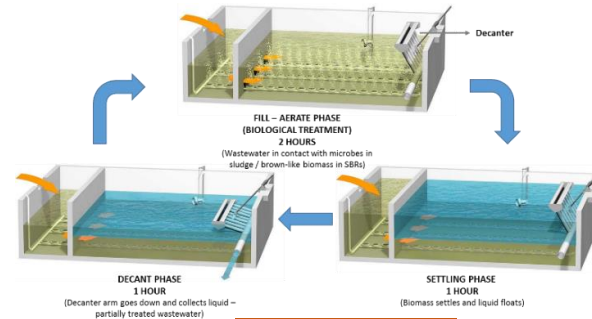
Screw and Turbo Blower



Geotube



CAS + BNR



SBR + BNR



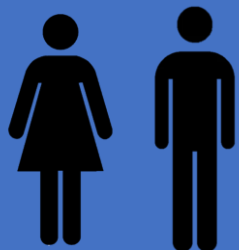
Solar Panels:



Instrumentation



Applications



60%

Millenials

100%

Safe Workplace

15%

Women



Operations Central Monitoring System



New culture of
microorganisms

Wastewater Operations Profile

Marikina North (100 MLD)



FTI SpTP (2.8 MLD)



Taguig North (75 MLD)



Olandes STP (10 MLD)



Ilugin (100 MLD)



1 Ww Facility
45,000 Population Served
40 MLD Total Capacity
83 km Network
511,000 kgBOD Removed

32 Ww Facilities
336,000 Population Served
84 MLD Total Capacity
244 km Network
2,721,281 kgBOD Removed

40 Ww Facilities
932,000 Population Served
310 MLD Total Capacity
359 km Network
6,264,000 kgBOD Removed

2020

Se
39 s
31%
2.14
6,28
Annual

Sa
2 s
70
3.4
1,2
Annual

39 Sewage Treatment Plants

31% Sewer Coverage

2.14M Population served

6,280,440
Annual kg BOD removed

2 Septage Treatment Plants
70% Availment Rate
3.49M Population served*
1,282,692
Annual kg BOD removed

**cumulative 2017-2020; with remaining population to be served until 2021*

Wastewater Management Moving Forward

1997-2016

2017-2021

2022-2026

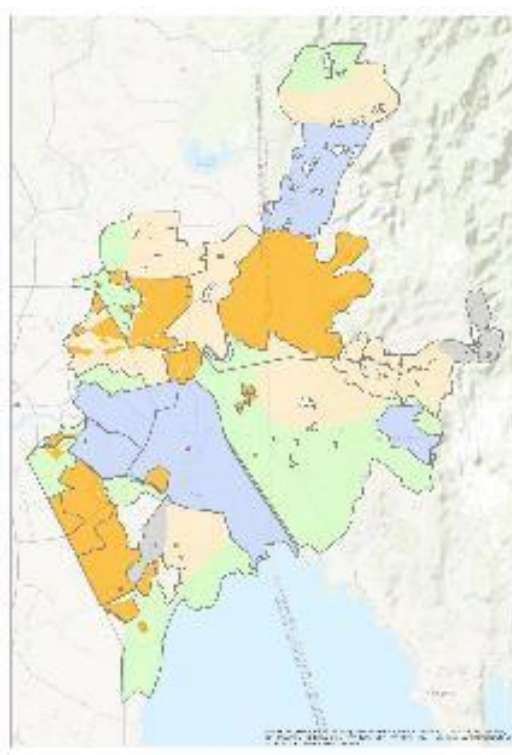
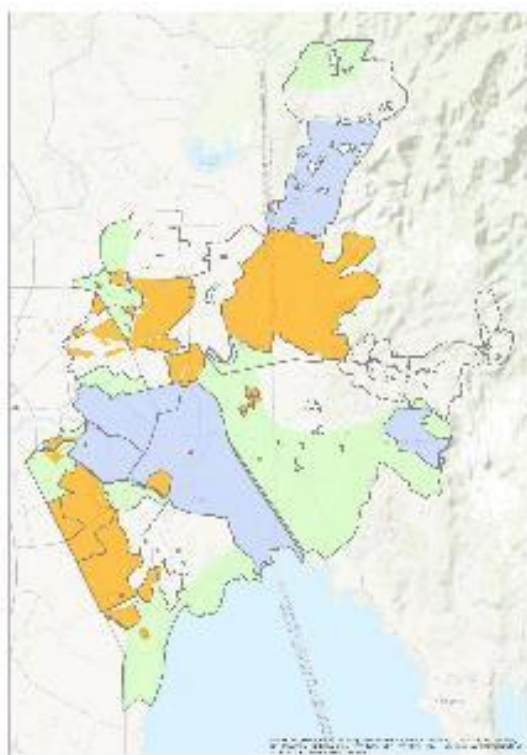
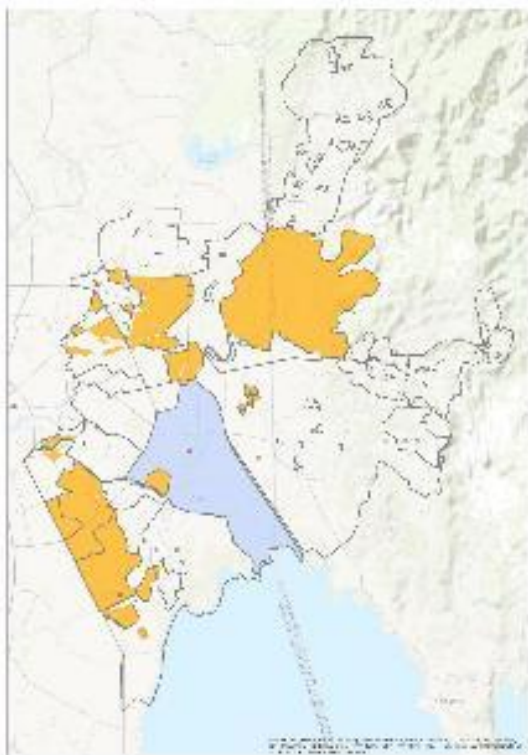
2027-2031

2032-2037

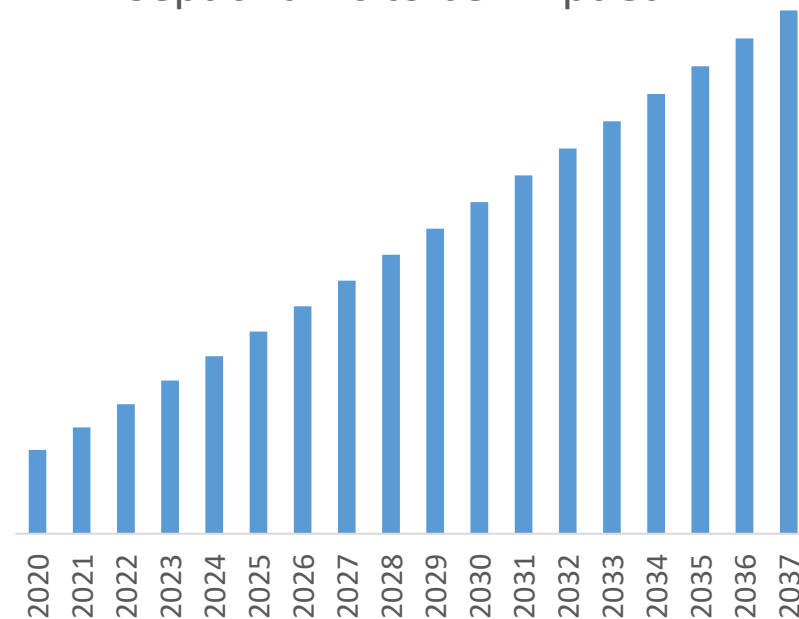
2021

2026

2037



Septic Tanks to be Emptied



41 Wastewater Facility
410 MLD Total Capacity
455 Km sewer network
32% sewer coverage
2.1 M Population served

48 Wastewater Facility
805 MLD Total Capacity
625 Km sewer network
65% sewer coverage
4.5M Population served

51 Wastewater Facility
1,257 MLD Total Capacity
885 Km sewer network
99% sewer coverage
7.5M Population served

3 Septage Treatment Plants
1.4 MLD Total Capacity
99% sewer coverage
475K Septic Tanks Emptied every 5 years

Asset Management Plan

— Key Messages

- 💧 Manila Water remains **committed** to serve the East Zone of Metro Manila with water and sewerage services.
- 💧 Manila Water will undertake necessary **investments** in providing citywide inclusive sanitation to the the entire East Zone.
- 💧 **Partnerships** with local government units, national government agencies, regulators and communities are needed for the successful implementation of programs.



**MARAMING
SALAMAT!**