

***GREENHOUSE
GASES AND AIR
POLLUTANT
EMISSIONS REPORT
2021***



Maynilad

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EXECUTIVE SUMMARY

Maynilad Water Services, Inc. (Maynilad) is the water and wastewater services provider for 17 cities and municipalities that comprise the West Zone of the Metropolitan Manila area. The West zone, which covers a total land area of around 540 square kilometers, includes the cities of Caloocan, Las Piñas, Malabon, Muntinlupa, Navotas, Pasay, Parañaque, Valenzuela, parts of Manila, Quezon City and Makati, the city of Cavite and the municipalities of Rosario, Imus, Noveleta, Bacoor, and Kawit in Cavite. In 1997, Maynilad signed a 25-year Concession Agreement (CA) with the Metropolitan Waterworks and Sewerage System (MWSS) to manage, operate, maintain and improve the water and wastewater treatment facilities in West zone. In 2021, the revised contract was signed which extends the concession agreement until 2037. The contract mandates Maynilad to expand its water and wastewater services up to 100% in its service area.

As the company gears toward the long-term goal of carbon neutrality, Maynilad take on the GHG and Air Pollutant Emissions Inventory with an objective of demonstrating its commitment and best practices with regards to the accounting of greenhouse gas and air pollutant emissions. The report preparation is led by the “Maynilad Green Team” which was first organized through a memorandum from the company President.

The GHG inventory and report has been prepared in accordance with ISO 14064:2018. External verification has been conducted for all GHG inventory reports of Maynilad since 2009.

The emission factor approach is used to estimate the GHG and air pollutant emissions of Maynilad. Published emission factors from globally accepted emissions quantification tools and guidance materials are used while actual activity data are used whenever possible.

Overall, there is a 12% increase in the total carbon dioxide (CO₂) equivalents emitted in 2021 compared to the emissions in 2020. For Scope 1 emissions, an increase of approximately 47% was noted compared to the previous year. This increase can be attributed to the addition of refrigerants to the calculation of the company's total emission. Of the emissions under Scope 1, the emissions from refrigerants comprised 37% of the total. For Scope 2 emissions, an increase of 9% was noted which can be attributed in the increase of utilization of some facilities (particularly the offices) due to increasing number of employees returning to office in light of the easing lockdown restrictions.

As part of the company's efforts to reduce its emissions, Maynilad constructed an additional 1MW Solar Farm on top of the La Mesa Treatment Plant 1. This is an addition to the existing 1MW Solar Farm on top of the Angat Water Supply Optimization Project (AWSOP) Reservoir and Pump Station. The new solar farm in La Mesa Treatment Plant 1 is expected to reduce the facility's purchased electricity consumption by approximately 90,000 kWh once fully operational or a reduction of 21 tonnes per month of carbon emissions.

This 2021, Maynilad released a total of 117,665.98 tonnes of CO₂ equivalent for Scope 1 and Scope 2. This signifies that for every liter of water and wastewater treated by the company, 0.1152 grams of CO₂ equivalent was emitted. Despite the observed year on year increase of the company's total emissions, efforts to reduce these emissions are still one of the top priorities of the company as it journeys towards its goal of carbon neutrality.

1. INTRODUCTION

Maynilad Water Services, Inc. (Maynilad) is the water and wastewater services provider for 17 cities and municipalities that comprise the West Zone of the Metropolitan Manila area. The West zone, which covers a total land area of around 540 square kilometers, includes the cities of Caloocan, Las Piñas, Malabon, Muntinlupa, Navotas, Pasay, Parañaque, Valenzuela, parts of Manila, Quezon City and Makati, the city of Cavite and the municipalities of Rosario, Imus, Noveleta, Bacoor, and Kawit in Cavite.

In 1997, Maynilad was granted a 25-year exclusive concession by the Philippine Government to operate, maintain, and invest in the water and sewerage systems in the West Zone. On September 10, 2009, the MWSS Board of Trustees approved the extension of the expiry of its Concession Agreement with Maynilad by an additional 15 years, or up to May 2037. On May 18, 2021, a Revised Concession Agreement was executed and confirmed the continuation of the concession until July 31, 2037. Republic Act (RA) No. 11600 was signed into law last December 10, 2021 which grants Maynilad a 25-year franchise to establish, operate and maintain a waterworks system and sewerage and sanitation services in the West Zone service area of Metro Manila and the province of Cavite

Maynilad is managed by Maynilad Water Holdings Company, Inc. —a joint venture between Metro Pacific Investments Corporation (MPIC), DMCI Holdings, Inc. (DMCI) and Marubeni Corporation.

This document provides Maynilad's greenhouse gas (GHG) and air pollutant emissions inventory for calendar year 2021. It is intended for all Maynilad stakeholders interested in its emissions inventory and the associated reporting structure, notation and explanations. It is provided publicly on Maynilad's website.

Maynilad's reporting processes and emissions classifications are consistent with international protocols and standards. This report has been prepared in accordance with the ISO 14064-1:2018 Standard. The information provided follows the requirements outlined in Clause 9.3.1 and where applicable, Clause 9.3.2 of the standard.

1.1 RATIONALE

Maynilad's objective in undertaking the GHG and Air Pollutant Emissions Inventory is to demonstrate commitment and best practices with respect to the accounting of greenhouse gas and air pollutant emissions as the company gears toward the long-term goal of carbon neutrality. It reflects the company's commitment to better understanding and ultimately improving operational performance with respect to emissions.

This report endeavors to use primary data wherever possible but especially surrounding all major emissions sources. Where primary data is not available, a consistent and conservative approach to calculation will be applied.

1.2 PROJECT TEAM

The process for preparing this report is led by the "Maynilad Green Team". This team was first organized through a memorandum from the President dated March 10, 2010. The latest update as of July 2021 was issued by the Head of Quality, Sustainability and Resiliency (QSR).

The key contacts are:

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The team is composed of representatives from the following operational units and departments:

Table 1. Maynilad Green Team

Division / Department	Name
Quality, Sustainability, and Resiliency – Sustainability	Sarah Lynn S. Duroy
Quality, Sustainability, and Resiliency – Sustainability	Rose Ann E. Eugenio
Quality, Sustainability, and Resiliency – IMS	Merliza P. Masiglat
Quality, Sustainability, and Resiliency – Resiliency	Rogelio V. Mendoza Jr.
Customer Experience and Retail Operations	Flordeliza Z. Carpiz
Customer Experience and Retail Operations	Gracelyn F. Dinglasan
Customer Experience and Retail Operations	Vilma T. Villacarillo
Central Non-Revenue Water	Mary Dominique R. Calanoc
Central Non-Revenue Water	Severino Catabijan
Finance Division	Lolita M. Lota
Human Resources	Alissa Daniella D. Nepomuceno
Human Resources	Emma A. Argote
Supply Chain Management – Administration	Grace A. Laguardia
Supply Chain Management – Administration	Glenneth S. Magtalas
Supply Chain Management – Administration	Samuel Gerald T. Saludez II
Supply Chain Management – Administration	Roselle Ann L. Navarro
Wastewater Management Division	Benerly D. S. Ampo
Wastewater Management Division	Dirk Jan Dinno B. Coligado
Wastewater Management Division	Kharren Mae C. Rosario
Wastewater Management Division	Jamille Kriza V. Miranda
Wastewater Management Division	Dennis Ventilacion
Wastewater Management Division	Chris Anthony Javier
Wastewater Management Division	Joshua Bas
Water Supply Operations – Water Network	Ginny Vivien T. Calaycay
Water Supply Operations – La Mesa Treatment Plant 1	Dalejan C. Simoy
Water Supply Operations – La Mesa Treatment Plant 1	Raymart Jason V. Desales
Water Supply Operations – La Mesa Treatment Plant 2	Anna Angelica dela Cruz
Water Supply Operations – La Mesa Treatment Plant 2	Francis Richard P. Sotto
Water Supply Operations – TPM	Fher Bryan H. Binuya
Water Supply Operations – Putatan Water Treatment Plant 1	Rommel D.C. Sarsonas
Water Supply Operations – Putatan Water Treatment Plant 1	Donn Aldren L. Lapitan
Water Supply Operations – Putatan Water Treatment Plant 2	Mark Vincent Q. Talosig
Water Supply Operations – Putatan Water Treatment Plant 2	Edgardo D. Borja
Water Supply Operations – Water Sources	Marvin M. Villanueva
Water Supply Operations – Water Sources	Alvin L. Sarita
Water Supply Operations – Water Sources	Shirley L. Rubante

Members of the Green Team are given an Appreciation Course on Greenhouse Gas Management System based on ISO 14064-1:2018 and ISO 14064-3:2019 Standard to gain better understanding on the principles and requirements of the standard.

They are also provided with the GHG calculation tool and orientation on how to use the tool including instructions on data collection in line with the requirements of the standard.

1.3 REPORTING STANDARDS, APPROACH, AND VERIFICATION

1.3.1 COMPLIANCE WITH ISO 14064:2018

The GHG report for the year ending 31st December 2021 has been prepared in accordance with ISO 14064-1:2018. A reporting index has been provided in Appendix 1.

1.3.2 AUDIT OF GHG INVENTORY

The GHG inventory reports of Maynilad have been externally verified since 2009 and have met the requirements of ISO 14064-1 standard. The 2021 GHG Inventory report will also be verified to reasonable assurance by a reputable verifier.

2. ORGANIZATIONAL BOUNDARIES

Maynilad accounts for emissions of facilities over which it has full operational control as well as for shared facilities (i.e., office buildings, treatment plants, reservoirs, common purpose facilities, etc.). Emissions from contracted-out activities are included in cases where reliable data are available.

The initial list of facilities that are considered for the inventory can be found in Appendix 2. For purposes of operation and emissions accounting, these are categorized into the following groups:

Table 2. Categorization of Facilities

Category	Details
Central Non-Revenue Water (CNRW)	covers the CNRW offices in Quezon City and Manila, and the Integrated Meter Management Office and Meter Laboratory in Pasay City
Corporate	covers the Maynilad Head Office* in Quezon City which includes the following divisions: 1. Office of the President 2. Office of the Chief Operating Officer 3. Quality, Sustainability and Resiliency (QSR) 4. Information Technology Services (ITS) 5. Human Resources 6. Finance 7. Program Management 8. Supply Chain Management 9. Technical Services 10. Corporate Affairs and Communications 11. Legal and Regulatory Affairs 12. Enterprise Risk Management and Internal Audit 13. Integrated Asset Management In addition, Central Material Depot and Cordillera Material Depot in Quezon City and Arroceros Material Depot in Manila are also included. For the GHG/AP inventory, it also considers the Water Laboratory and Safety Center in Quezon City
Business Areas	covers the ten (10) business area offices of Maynilad. For the GHG and air pollutant accounting, satellite warehouses are included in the corresponding business areas
Water Network	covers thirty-eight (38) Pump Stations, Reservoirs, Mini Boosters, Deep Well Stations, In-line Boosters and other special equipment, Maintenance Shop (within La Mesa Compound), Water Network training facility and Water Network Office in Manila
Water Production	covers the four (4) water treatment plants: 1. La Mesa Treatment Plant 1 2. La Mesa Treatment Plant 2 3. Putatan Water Treatment Plant 1 4. Putatan Water Treatment Plant 2
Water Source Management*	covers the Common Purpose Facilities (CPF) Office, Ipo Office Building, and Bicti Desilting Basin
Wastewater Management	covers a total of one hundred eleven (111) Water Reclamation Facilities, Sewage and Septage Treatment Plants, and Lift Stations

* shares with other companies

3. REPORTING BOUNDARIES

3.1 EMISSIONS CATEGORIES AND CLASSIFICATIONS

Greenhouse gas emissions sources have been identified and grouped in accordance with the Greenhouse Gas Protocol's Scopes 1 through 3 and further categorized following the ISO 14064-1:2018 Standard.

Table 3. Emission Categories

Scope 1	Direct Sources
Category 1	Direct GHG emissions and removal
Scope 2	Indirect Sources
Category 2	Indirect GHG emissions from imported energy
Scope 3	Other Indirect Sources
Category 3	Indirect GHG emissions from transportation
Category 4	Indirect GHG emissions from products used by the organization
Category 5	Indirect GHG emissions associated with the use of products from organization
Category 6	Indirect GHG emissions from other sources

3.2 SIGNIFICANCE AND MATERIALITY

Factors for consideration in assessing significance and materiality include:

- size of the emissions
- Maynilad's influence on the emission source
- difficulty in obtaining data
- poor validity in available estimation approaches

While all the above would be considered in materiality assessments, the criteria that would mandate disclosure of emission sources as significant are:

- a. Where there is a single source with estimated emissions likely to be at least 1% of Maynilad's total emissions. In this case, that emission source must be included.
- b. Where the total of 'insignificant' sources has estimated emissions likely to be at least 5% of Maynilad's total emissions. In this case, 'insignificant' emissions must be included until the estimate of excluded emissions is below 5%.

Based on these criteria, the summary of emission sources inclusions is presented in Table 4.

Table 4. Emission Source Inclusions

Scope	Category	Emission Source	Data Source	Methodology & Materiality
1	1	Fuel used by Company-owned Vehicles	Fuel billing	Fuel use (liters)
1	1	Fuel used by Internal Combustion Engines	Monitoring Reports of facility	Fuel use (liters)
1	1	Fuel used by Company managers and executives through employee car plan	Fuel billing/ HR monitoring	Fuel use (liters)
1	1	Fugitive emissions from wastewater treatment	Monitoring Reports of facility	Volume (m ³)
1	1	Fugitive emissions from biosolids production	Monitoring Reports of facility	Volume (m ³)
1	1	Fugitive emissions from air conditioning units	Maintenance Report of service provider	Charge in Capacity (kgs)

1	1	Fugitive emissions from fire extinguishers	Purchase Request data from Procurement	Charge in Capacity (kgs)
2	2	Purchased Electricity from Grid	Electricity billing	kWh
3	3	Business Travel by Air	Airline Ticket (Distance traveled)	Emissions/ km

Using the same criteria, the following are emission sources that have been identified but excluded from the emissions inventory. These sources are not considered significant or material to stakeholders, the context of inventory, and/ or are not feasible or practical to calculate at the current point of time.

Table 5. Emission Source Exclusions

Scope	Category	Emission Source	Data Source	Methodology & Materiality
3	4	Solid Wastes	Self-Monitoring Report (SMR)	Tons of general waste, yet to establish baseline data, estimated to be <1% at 441 Tonnes CO ₂ e
3	4	Emissions from use of consumables	Supply Chain Management	Difficult to obtain, estimated to be <1%
3	6	Accommodation	Human Resources Division	Night stayed, estimated to be <1%

4. QUANTIFIED GHG INVENTORY OF EMISSIONS

4.1 CONSOLIDATED STATEMENT OF GHG EMISSIONS

Table 6 presents the total of GHG emissions for 2021.

Table 6. Total GHG Emissions for 2021

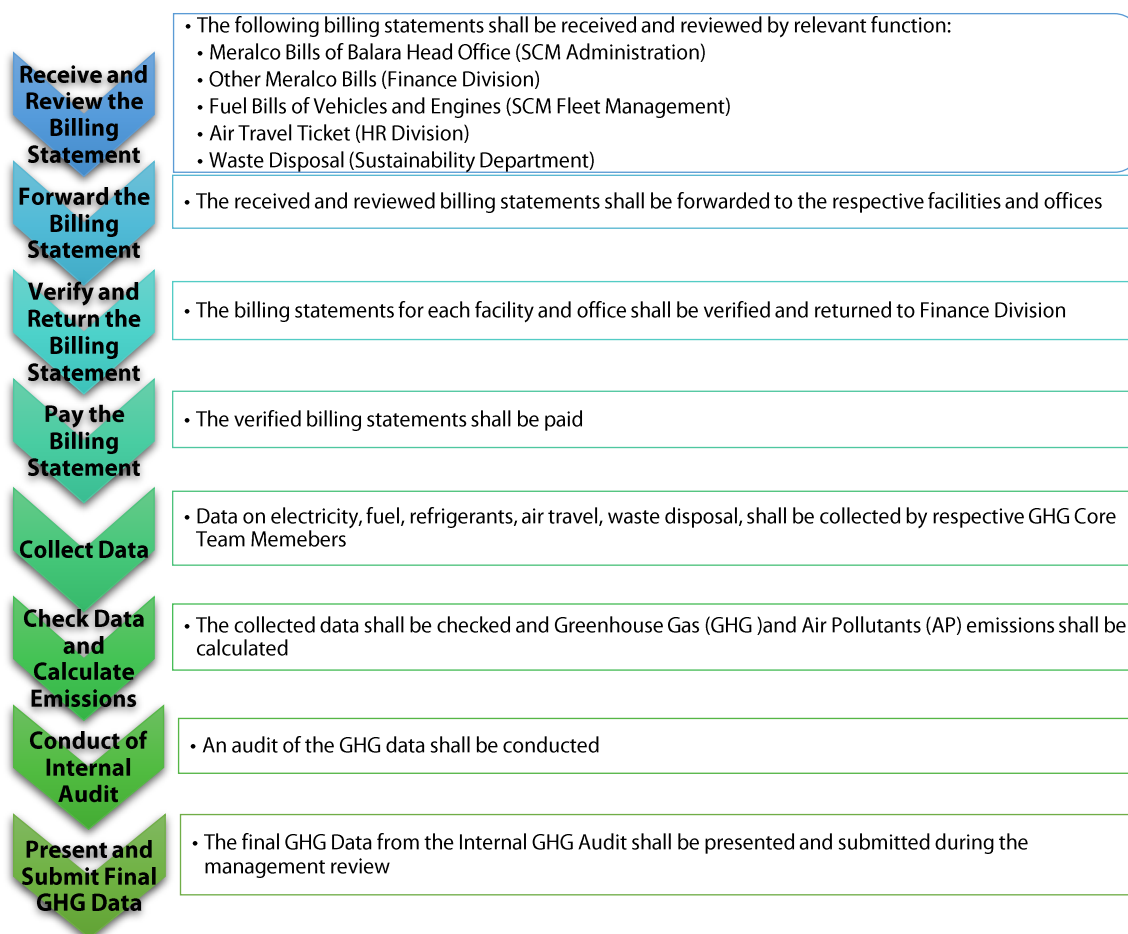
EMISSIONS		Notes	CO ₂ e TOTAL	Carbon Dioxide (CO ₂)	Methane (CH ₄)	Nitrous Oxide (N ₂ O)	Fluorinated Gases
		1	GWP	1	27.9	273	
S1	Category 1: Direct GHG emissions and removals in tonnes CO ₂ e	2	12,802.22	8,804.77	2,999.26	998.19	
	Direct emissions from stationary combustion		1,786.5	1,786.49	0.0021	0.0041	
	Direct emissions from mobile combustion		3,157.97	3,058.98	3.95	95.04	
	Direct process and removals from industrial processes	NS					
	Direct fugitive emissions from the release of GHGs in anthropogenic systems		4,191.33	292.87	2,995.31	903.15	
	Direct fugitive emissions from refrigerants		3,666.43	3,666.43	0	0	
	Direct emissions and removals from land use and forest change	NS					
	Direct emissions in tonnes from biomass	3					
	Indirect emissions in tonnes CO ₂ e	4	103,151.02	102,797.46	34.99	318.57	
S2	Category 2: Indirect GHG emissions from imported energy		103,151.02	102,797.46	34.99	318.57	
	Indirect emissions from imported electricity		103,151.02	102,797.46	34.99	318.57	
	Indirect emissions from imported energy	NS					
S3	Category 3: Indirect GHG Emissions from Transportation		0	0	0	0	
	Emissions from upstream transportation and distribution of goods	NS					
	Emissions from downstream transportation and distribution of goods	NS					
	Emissions from employee commuting	NS					
	Emissions from client and visitor transport	NS					
	Emissions from business travels		0	0	0	0	
S3	Category 4: Indirect GHG emissions associated with the use of products by the organization						
	Emissions from purchased goods and services	NS					
	Emissions from capital goods	NS					
	Emissions from the disposal of solid and liquid waste	NS					
	Emissions from the use of assets	NS					
	Emissions from other services not described above						
S3	Category 5: Indirect GHG emissions associated with the use of products from the organization						
	Emissions or removals from the usage of product	NS					
	Emissions from downstream leased assets	NS					
	Emissions from end-of-life stage of the product	NS					
	Emissions from investments	NS					
S3	Category 6: Other indirect GHG emissions sources						
	Emissions from accommodation	NS					
	TOTAL EMISSIONS CATEGORIES 1-6		115,953.24	111,602.23	3,034.25	1,316.76	
	REMOVALS	5	18,514				
	Direct removals in tonnes CO ₂ e (Mangrove)		9,305				
	Direct removals in tonnes CO ₂ e (Ipo Tree Planting)		9,209				
	STORAGE	6					
	Total storage as of year-end in tonnes CO ₂ e						
[*] Significant [NS] Non-significant [S#] Scope							

Notes to Consolidated Statement of GHG Emissions:

1. Direct and indirect emissions have been prepared in accordance with the recommendations of Annex B. Gas types CO₂, CH₄ and N₂O have been included as those relevant to direct emissions.
2. Fluorinated gases have a very high Global Warming Potential (GWP). Although we have none to disclose over this period, we do hold significant amounts as refrigerants, gathering of baseline data is ongoing for possible inclusion in the next reporting period.
3. Biomass emissions relate to the use of biofuels, while not significant in scale they are a key area of interest and as such are included here. As per the ISO 14064-1: 2018 Standard the CO₂ emissions are recorded against biomass whereas the other gases (CH₄, N₂O etc. are grouped within Category 1).
4. This includes the emissions of purchased electricity from grid.
5. This includes the carbon sequestered of Maynilad's Mangrove Rehabilitation Sites in Cavite Province (2013-2019) and tree planting at IPO watershed in Norzagaray, Bulacan (2012-2017).
6. Storage is not addressed in this document as we have none to disclose.

4.2 METHODOLOGIES FOR THE COLLECTION AND QUANTIFICATION OF DATA

The GHG measurement and reporting process has been developed to ensure conformance to the principles of the ISO 14064-1:2018 Standard and to be consistent with the intended use of the GHG inventory. Below is the Information Management Procedure for data collection.



4.2.1 APPROACH TO EMISSION FACTORS

The GHG and air pollutant emissions of Maynilad are estimated using the emission factor approach. Published emission factors from globally accepted emissions quantification tools and guidance materials are used while

actual activity data (e.g., electricity consumption, fuel consumption, etc.) are used whenever possible. The basic formula used in the emission factor approach is:

$$A \times EF \times (1-ER/100) = E$$

Wherein:

A = activity data
EF = emission factor
ER = emission reduction efficiency
E = emissions

The calculation methodologies and emission factors are derived from various notable sources such as Greenhouse Gas Protocol, World Business Council for Sustainable Development, World Resources Institutes, Anthesis, Clean Air Initiative for Asian Cities, Intergovernmental Panel for Climate Change (IPCC), U.S. Environmental Protection Agency (EPA), UK Department for Environment, Food and Rural Affairs (DEFRA), United Nations Environment Programme (UNEP), and Department of Energy (DOE). The GHG calculations in the developed tools are consistent with those of the tools of the GHG protocol. Moreover, these tools were developed to calculate GHGs as well as criteria air pollutants, which are currently not covered by the GHG Protocol.

4.2.2 CHANGES IN METHODOLOGIES ON PRIOR YEAR / BASE YEAR

The base year is the year that will be used in assessing the direction of the emissions of Maynilad in the future. The year 2009 was selected as the base year to account for the transition and re-organization, which took place in 2008. The following represent changes in methodology with respect to the base year and our commitment to improve the accuracy and breadth of reporting year on year:

- Emission factor updates
- Calculation tool
- Improvements identified from our review, across data sourcing, quality, completeness and consistency

4.2.3 GLOBAL WARMING POTENTIAL (GWP) CALCULATION AND SOURCE

Quantities of GHG emissions are expressed as tonnes of CO₂e (Carbon Dioxide Equivalents) using the global warming potentials (GWP). The time horizon is 100 years. Direct emissions sources (Category 1) are expressed as both CO₂e and their detailed GHG breakdown, including the GWP value. The most notable GHGs include:

Table 7. GHG and their GWP

GHG	Chemical Formula	GWP
Carbon dioxide	CO ₂	1.0
Methane	CH ₄	27.9
Nitrous Oxide	N ₂ O	273.0

Source: IPCC Sixth Assessment Report (AR6) published in 2021

4.2.4 REVIEW, INTERNAL AUDIT, AND IMPROVEMENT

Review, internal audit and improvement of primary data have been sought for all significant emissions sources. Where data is unavailable or not comparable, conservative estimation methods have been applied such that incentives lie in continually improving the ratio of primary data to estimation approaches. Preparation of the inventory is done iteratively with several internal draft, check and resubmission stages in the lead up to verification.

Following 2018-2021 reporting years, a post audit review was done. Some improvements identified and to be possibly enacted for the 2022 reporting are the following:

- Extended timeline for compiling data
- Better data quality and completeness
- More comprehensive and better organized source data
- Transition to better units of measure
- Addition of GHG emissions from Accommodation (hotel stay)
- Addition of GHG emissions from Waste dispose to landfill
- Addition of GHG removal sources

4.3 ASSESSMENT OF UNCERTAINTY

For this report, a qualitative rather than quantitative assessment of uncertainty has been applied. With the current tools and variety of emission sources, our view is that a quantitative assessment would be complex, time consuming, and offer little validity in respect to statistical uncertainty. For example, many direct and indirect factors related with global warming potentials (GWP) values that are used to combine emission estimates for various GHG involve significant scientific uncertainty. Analyzing and quantifying such uncertainty is likely to be beyond the capacity of most company inventory programs. Moreover, it is also believed that all emissions or removal quantification are associated with estimation uncertainty. The applicability of these quantitative assessments will be reviewed in each reporting period.

4.4 CHANGES TO BASE YEAR

There is no change to the base year calculation in this reporting period. Recalculation of the base year will only be applied where it is necessary to maintain an effective base year comparison. Reasons for this might include:

- If the emission factors used change significantly and are relevant to prior years
- If a significant estimation method has been changed/improved
- If a significant data sourcing strategy has been changed/improved
- If the scope of the inventory is changed

Recalculation of the base year will also consider whether the historical data has the required details to perform recalculation or whether it is in the right form (i.e., unit of measure) to apply a different emission factor.

4.5 REMOVALS AND REDUCTIONS/ INCREASES

4.5.1 REMOVALS

A Survival Rate and Carbon Stock Assessment of Maynilad's Mangrove Rehabilitation Sites in Cavite (2013-2019) was conducted. The four (4) mangrove rehabilitation sites of Maynilad in Cavite Province are located at Kawit, Noveleta, Bacoor and Cavite City. The study reported a total carbon stock of 2,535 tonnes, resulting to a total GHG removal of 9,305 tonnes CO₂e from 36.6 hectares of mangrove plantation.

In addition, another study was conducted (2012-2017) for the Survival Rate and Carbon Stock Assessment for the tree species planted in the IPO Watershed located in Norzagaray Bulacan. The study reported a total carbon stock of 2,509 tonnes, resulting to a total GHG removal of 9,209 tonnes CO₂e covering an area of 272 hectares of plantation.

4.5.2 EMISSION REDUCTIONS / INCREASES

Year on year, we have recorded an increase in carbon dioxide equivalents across our operations in gross greenhouse gas emissions. This year, the direct GHG emissions increased by 47% arising from the addition of emission from refrigerants in the calculation as well as some changes in the assumptions used in calculating for the emissions from wastewater treatment process. There was also a 9% increase in scope 2 emissions that can be

attributed in the increase of utilization of some facilities (specially the offices) due to increasing number of employees returning to office in light of the easing lockdown restrictions. Overall, there is a 12% increase in the total carbon dioxide equivalents from 2020.

The effect of the COVID-19 pandemic and subsequent rolling countrywide lockdowns can still be seen in no business travel by air (Scope 3) recorded for the year of 2021, which subsequently resulted in a decrease of 100% from 2020. While any reduction in impact is positive, we would caution that the decrease in Scope 3 emissions likely doesn't convey an accurate picture of year-on-year trend. We do expect and strive to continuously reduce the emissions intensity of our operations.

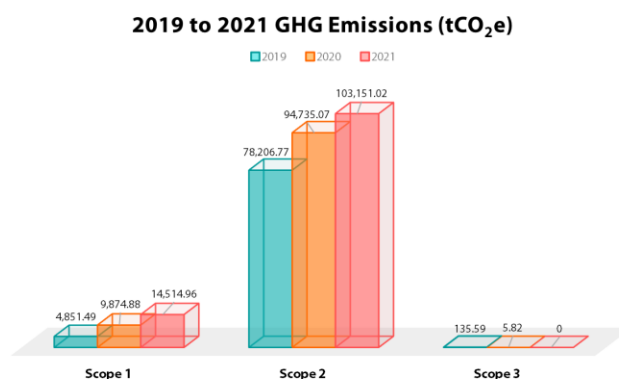


Figure 1. 2019-2021 GHG Emissions

Table 8. Trend of GHG Emissions from 2019 to 2021

	Tonnes of CO ₂ e		
	2019 (<i>adjusted</i>)	2020	2021
Scope 1	4,851.49	9,874.88	14,514.96
Scope 2	78,206.77	94,735.07	103,151.02
Scope 3	135.59	5.82	0
TOTAL	83,193.85	104,615.77	117,665.98

4.5.3 OTHER INITIATIVES

4.5.3.1 PLANT FOR LIFE PROGRAM

Maynilad's Plant for Life Campaign is an ongoing program since 2007 that is dedicated to the adoption of planting areas within identified watersheds. The program involves planting saplings and seedlings as well as mangrove propagules with the hope of rehabilitating the watersheds and their surrounding natural spaces

Ensuring environmental conservation, the Plant for Life campaign was conceptualized to adopt, establish, monitor, maintain, and protect the watersheds within Maynilad's concession area. The campaign covers the four critical watersheds for freshwater supply, namely the La Mesa, Angat, Ipo, and Manila Bay watersheds.

For almost 15 years since the Plant for Life campaign was conceptualized, Maynilad has planted approximately 706,200 indigenous trees in the Ipo Watershed. These trees include, but not limited to, Cupang, Narra, Acacia, and Amisan. Maynilad also successfully planted 207,570 mangrove propagules in the coastal areas around Manila Bay since 2013.

4.5.3.2 LA MESA SOLAR FARM

As part of Maynilad's efforts to reduce its energy consumption, the 1MW Maynilad Solar Power Farm was constructed on top of the Angat Water Supply Optimization Project (AWSOP) Reservoir and Pump Stations. The solar farm was partially energized on May 2021 and was fully energized on December 2021. Currently, the solar farm generates electricity at an average of 79% of its full capacity. During its operation from May 2021 to December 2021, the solar farm already contributed to reductions in emissions of 84.41 tons of carbon dioxide equivalent.



Figure 2. Photo of 1MW Solar Farm

An additional Solar Power Farm was constructed in La Mesa Treatment Plant 1 to further strengthen the energy consumption reduction efforts of Maynilad. This solar power farm also has a capacity of 1MW which covers approximately a land area of 12,157.30 square meters. This solar farm will augment the power requirements of La Mesa Treatment Plant 1 and other pump station inside the La Mesa Compound.

This solar farm was partially energized on April 2022. With its current operation of 97%, the solar farm generates electricity at an average of 36% of its full capacity. The La Mesa Treatment Plant 1 solar farm is expected to reduce the purchased electricity consumption of the facilities inside La Mesa Compound by approximately 90,000 kWh once fully operational resulting to a projected annual cost savings of around ₱7 million to ₱10 million from purchased electricity. A reduction of 21 tons per month of carbon emissions was also expected from the utilization of the solar farm.



Figure 3. Photo of the 1MW Solar Farm on La Mesa Treatment Plant 1

5. INTERNAL REPORTING AND PERFORMANCE

5.1 EMISSIONS BY CATEGORY, GHG TYPE, AND AIR POLLUTANT TYPE

A big part of the total GHG emissions was from the purchased electricity which is classified as Category 2 or indirect emissions. This composes 88% of the total emitted carbon dioxide equivalent. The remaining 12% of the total GHG emissions was from the fuel consumption of vehicles and engines which are classified as Category 1 or direct emissions. The GHG emissions from the other categories are negligible.

Emissions by Category



14,514.96

tons of carbon
dioxide equivalent
emissions from
Category 1
sources

103,151.02

tons of carbon
dioxide equivalent
emissions from
Category 2
sources

For the year 2021, carbon dioxide (CO₂) is the top greenhouse gas emitted by Maynilad. Total emitted CO₂ was 113,314.97 tons or 96% of the overall GHG emissions. This is followed by methane (CH₄) with a total of 3,034.25 tons emitted or 3% of the overall emissions. The least emitted greenhouse gas for the year is nitrous oxide (N₂O) with a total of 1,316.76 tons or 1% of the overall GHG emissions.

Emissions by Greenhouse Gases



113,314.97

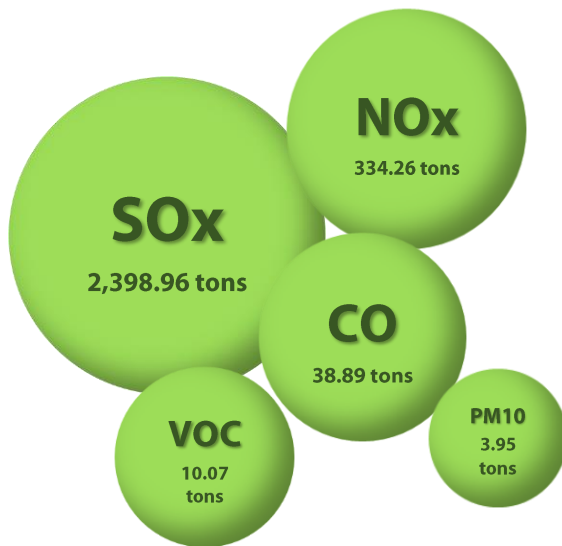
tons of carbon dioxide
(CO₂) emissions

3,034.25

tons of methane (CH₄)
emissions

1,316.76

tons of nitrous oxide
(N₂O) emissions



With regards to air pollutants, Sulfur Oxides (SOx) still represents the highest number of air pollutants emitted from the operations of the company. Quantity of the SOx emitted increased by approximately 9% compared to the quantity emitted in the previous year. PM10, while still the air pollutant with the least quantity emitted, have decreased by approximately 21% compared to last year's emission. Purchased electricity and direct emissions from stationary and mobile combustions are still the significant sources of these air pollutants.

5.2 EMISSIONS BY BUSINESS UNIT (SCOPE 1: CATEGORY 1)



total emissions for Scope1:Category1

- 704,124.36 L total of Fuel of Engines consumed
- 1,182,733.12 L total of Fuel of Vehicles consumed

55.73 tCO₂e

Water Source Management
 - Fuel of Engines: 10,673.97 L
 - Fuel of Vehicles: 12,559.35 L

1,347.27 tCO₂e

Water Network
 - Fuel of Engines: 443,649.52 L
 - Fuel of Vehicles: 80,447.07 L

2,388.90 tCO₂e

Corporate
 - Fuel of Engines: 17,044.33 L
 - Fuel of Vehicles: 213,518.98 L

1,682.36 tCO₂e

Business Area
 - Fuel of Engines: 12,907.58 L
 - Fuel of Vehicles: 616,316.96 L

55.73 tCO₂e

Water Production
 - Fuel of Engines: 86,065.55 L
 - Fuel of Vehicles: 15,092.34 L

646.90 tCO₂e

Wastewater Management
 - Fuel of Engines: 133,623.46 L
 - Fuel of Vehicles: 112,529.88 L

350.27 tCO₂e

Central non-Revenue Water
 - Fuel of Engines: 159.95 L
 - Fuel of Vehicles: 132,268.54 L



5.3 EMISSIONS BY BUSINESS UNIT (SCOPE 2: CATEGORY 2)

26.14 tCO₂e

Water Source Management
- Electricity: 43,292.00 kWh

72,015.92 tCO₂e

Water Network
- Electricity: 43,292.00 kWh

1,032.08 tCO₂e

Corporate
- Electricity: 1,709,482.34 kWh

634.99 tCO₂e

Business Area
- Electricity: 1,051,757.00 kWh

21,498.40 tCO₂e

Water Production
- Electricity: 35,608,695.14 kWh

7,863.93 tCO₂e

Wastewater Management
- Electricity: 13,025,362.00 kWh

79.56 tCO₂e

Central non-Revenue Water
- Electricity: 131,771.00 kWh



103,151.02
tCO₂e

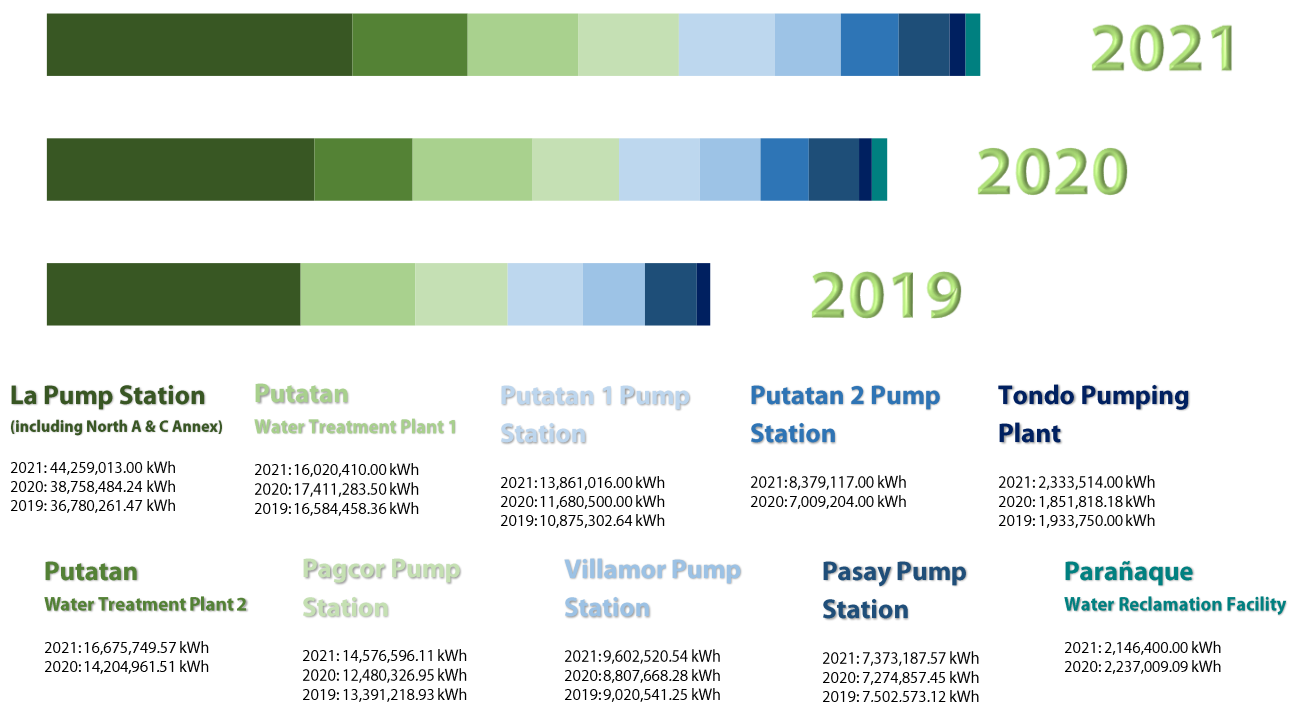
total emissions for Scope2:Category2

- 170,853,330.84 kWh total of Electricity consumed

5.4 PERFORMANCE MEASURES, TARGETS, AND BENCHMARKS

Performance against fixed emissions targets is not currently practical to determine especially given Maynilad's rate of growth. We do however aim to continuously reduce the emissions intensity of our activities year on year and will assess the relevance of new measures and targets in each reporting period.

5.5 TOP 10 FACILITIES WITH HIGHEST POWER CONSUMPTION (2019-2021)



5.6 GHG EMISSION INTENSITY

Table 9. GHG Intensity (tCO₂e/ML) for 2019 to 2021

In tonnes CO ₂ e	2019 (Adjusted)	2020	2021
Scope 1	4,851.49	9,874.88	14,514.96
Scope 2	78,206.77	94,735.07	103,151.02
Total Annual Gross Emissions	83,058.25	104,609.95	117,665.98
Water Produced + Treated Wastewater	955,854.09	989,659.00	1,021,042
GHG Emission Intensity in Tonnes CO₂e per Million Liters (ML) of water produced and water treated	0.0869	0.1057	0.1152

Note: The 2019 data in the adjusted column is the result of recalculation using the new tool.

Internal audits are conducted wherein the results are submitted for verification by an international certification body as part of our GHG accounting and reporting practice. Every three (3) years, a GHG verification audit was conducted by a third-party service provider for the three (3) reporting years.

Scope 1 emissions increased by approximately 47% compared to the previous year which can be attributed to the addition of refrigerants to the calculation of the company's total emission as well as an increase in the calculated emission from wastewater treatment process. The emissions from refrigerants comprised 37% of the total emissions under Scope 1. While for the emissions from the wastewater treatment process, an increase of almost 68% was calculated compared to the previous year (2020).

Due to Maynilad's continued expansion of its services and coverage area, it is expected that the GHG emissions of the company will still continue to somehow increase. Rest assured that efforts to minimize and further reduce these emissions remains as one of the top priorities of the company in the succeeding years.

*117,665.98 tonnes of CO₂ was released by Maynilad
equivalent for Scope 1 and 2. Maynilad emitted 0.1152 grams
of CO₂ for every liter of water and wastewater treated.*



ANNEX A – ISO 14064-1:2018 REPORTING INDEX

ISO Reporting	Section in this Report	ISO Reporting	Section in this Report
9.3.1 (a)	1.3	9.3.2 (a)	1.3
9.3.1 (b)	1.4	9.3.2 (b)	4.6
9.3.1 (c)	1.6	9.3.2 (c)	NA
9.3.1 (d)	2	9.3.2 (d)	NA
9.3.1 (e)	3	9.3.2 (e)	4.6
9.3.1 (f)	4.1	9.3.2 (f)	4.1
9.3.1 (g)	4.1	9.3.2 (g)	NA
9.3.1 (h)	4.6	9.3.2 (h)	5.5
9.3.1 (i)	3.3	9.3.2 (i)	4.3
9.3.1 (j)	4.1	9.3.2 (j)	4.6
9.3.1 (k)	4.5	9.3.2 (k)	4.6
9.3.1 (l)	4.5		
9.3.1 (m)	4.2	9.3.3	NA
9.3.1 (n)	4.2		
9.3.1 (o)	4.2		
9.3.1 (p)	4.4		
9.3.1 (q)	4.4		
9.3.1 (r)	1.7		
9.3.1 (s)	1.7		
9.3.1 (t)	4.2		

ANNEX B – LIST OF FACILITIES

	Facility	Excluded?	Reasons for Exclusion
Corporate	Arroceros Warehouse	No	
Corporate	Central Laboratory (WATERLab)	No	
Corporate	Central Materials Depot (Socea Bonna)	No	
Corporate	Head Office (Balara)	No	
Corporate	Quirino-Rosevelt Warehouse	No	
Corporate	Safety Center	No	
Corporate	Arroceros (Logistics, Clinic, PMD)	No	
Business Areas	Cavite Warehouse	No	
Business Areas	East Cavite/ West Cavite Business Area	No	
Business Areas	North Quezon City Business Area	No	
Business Areas	Malabon-Valenzuela Business Area	No	
Business Areas	Muntinlupa-Las Piñas Business Area	No	
Business Areas	Muntinlupa Warehouse	No	
Business Areas	North Caloocan Business Area	No	
Business Areas	Novaliches/Valenzuela Warehouse	No	
Business Areas	Parañaque-Pasay-Makati Business Area	No	
Business Areas	Parañaque Warehouse	No	
Business Areas	South Quezon City Business Area	No	
Business Areas	Manila Business Area	No	
Business Areas	Navotas-South Caloocan Business Area	No	
Central NRW	Arroceros Office (LDM Office)	No	
Central NRW	Gauging Points	Yes	battery operated
Central NRW	IMM Office (old Pasay Business Area)	No	
Central NRW	Meter Lab (La Mesa Compound)	No	with power consumption due to renovation
Wastewater Management	Alabang Water Reclamation Facility and Lift Station D	No	
Wastewater Management	Alabang Lift Station A (ATC)	No	
Wastewater Management	Alabang Lift Station B (Santiago)	No	
Wastewater Management	Alabang Lift Station C (Avocado)	No	
Wastewater Management	Alabang-Zapote Septage Treatment Plant	No	
Wastewater Management	Baesa Water Reclamation Facility	No	
Wastewater Management	Bagbag Water Reclamation Facility	No	
Wastewater Management	Bagbag Pump Station (PS)	No	
Wastewater Management	Bahay Toro Water Reclamation Facility	No	
Wastewater Management	Bahay Toro Lift Station (LS)	No	
Wastewater Management	Bahay Toro Pump Station (PS-1)	No	

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Wastewater Management	Bahay Toro Pump Station (PS-2)	No	
Wastewater Management	Bahay Toro Pump Station (PS-3)	No	
Wastewater Management	Bahay Toro Pump Station (PS-4)	No	
Wastewater Management	Bahay Toro Pump Station (PS-5)	No	
Wastewater Management	Bahay Toro Pump Station (PS-6)	No	
Wastewater Management	Bahay Toro Pump Station (PS-8)	No	
Wastewater Management	Bahay Toro Pump Station (PS-9)	No	
Wastewater Management	Bahay Toro Pump Station (PS-10)	No	
Wastewater Management	Bahay Toro Pump Station (PS-11)	No	
Wastewater Management	Bahay Toro Pump Station (PS-12)	No	
Wastewater Management	Bahay Toro Pump Station (PS-13)	No	
Wastewater Management	Bahay Toro Pump Station (PS-14)	No	
Wastewater Management	Bahay Toro Pump Station (PS-15)	No	
Wastewater Management	Bahay Toro Weir	No	
Wastewater Management	Congressional Water Reclamation Facility	No	
Wastewater Management	Dagat-dagatan Water Reclamation Facility	No	
Wastewater Management	Dagat-dagatan Pump Station	Yes	for decommissioning
Wastewater Management	Del Monte Water Reclamation Facility and PS-3	No	
Wastewater Management	Del Monte Lift Station (LS-1)	No	
Wastewater Management	Del Monte Pump Station (PS-1)	No	
Wastewater Management	Del Monte Pump Station (PS-2)	Yes	Decommissioned
Wastewater Management	Del Monte Pump Station (PS-4)	No	
Wastewater Management	Grant Water Reclamation Facility	No	
Wastewater Management	Kapiligan Water Reclamation Facility	No	
Wastewater Management	Kapiligan Lift Station (LS-1)	No	
Wastewater Management	Kapiligan Pump Station (PS-1)	Yes	Decommissioned
Wastewater Management	Kapiligan Pump Station (PS-2)	No	
Wastewater Management	Legal Water Reclamation Facility	No	
Wastewater Management	Legarda Lift Station	No	
Wastewater Management	Luneta Lift Station	No	
Wastewater Management	Malate Lift Station	No	
Wastewater Management	Paco Lift Station	No	
Wastewater Management	Paco Lift Station (LS-1)	No	
Wastewater Management	Paco-Quirino Lift Station	No	
Wastewater Management	Paco Pump Station (PS-1)	No	
Wastewater Management	Paco Water Reclamation Facility	No	
Wastewater Management	Paltok Water Reclamation Facility	No	
Wastewater Management	Paltok Pump Station (PS-1)	No	
Wastewater Management	Paltok Pump Station (PS-2 and PS-4)	No	

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Wastewater Management	Paltok Pump Station (PS-3)	No	
Wastewater Management	Paranaque Water Reclamation Facility	No	Under contractor's in 2019
Wastewater Management	Paranaque MHP A03	No	
Wastewater Management	Paranaque PS-13	No	
Wastewater Management	Paranaque PS-14	No	
Wastewater Management	Paranaque PS-16	No	
Wastewater Management	Paranaque PS-17	No	
Wastewater Management	Paranaque PS-18	No	
Wastewater Management	Paranaque PS-21	No	
Wastewater Management	Paranaque PS-22	No	
Wastewater Management	Paranaque PS-25	No	
Wastewater Management	Paranaque PS-29	No	
Wastewater Management	Paranaque PS-30	No	
Wastewater Management	Paranaque PS-34	No	
Wastewater Management	Paranaque PS-35	No	
Wastewater Management	Paranaque PS-36	No	
Wastewater Management	Paranaque PS-38	No	
Wastewater Management	Paranaque PS-39	No	
Wastewater Management	Paranaque PS-40	No	
Wastewater Management	Paranaque PS-41	No	
Wastewater Management	Paranaque PS-43	No	
Wastewater Management	Paranaque PS-44	No	
Wastewater Management	Paranaque PS-45	No	
Wastewater Management	Paranaque PS-47	No	
Wastewater Management	Paranaque PS-48	No	
Wastewater Management	Paranaque PS-51	No	
Wastewater Management	Paranaque PS-52	No	
Wastewater Management	Paranaque PS-53	No	
Wastewater Management	Paranaque PS-54	No	
Wastewater Management	Paranaque PS-58	No	
Wastewater Management	Paranaque PS-59	No	
Wastewater Management	Paranaque PS-61	No	
Wastewater Management	Paranaque PS-81	No	
Wastewater Management	Paranaque PS-82	No	
Wastewater Management	Paranaque PS-84	No	
Wastewater Management	Paranaque PS-86	No	
Wastewater Management	Pasay Water Reclamation Facility	No	
Wastewater Management	Pasay PS-1	No	
Wastewater Management	Pasay PS-2	No	

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Wastewater Management	Pasay PS-3	No	
Wastewater Management	PhilamLife Imhoff	No	
Wastewater Management	Port Area Lift Station	No	
Wastewater Management	Project 7 (Veterans) Water Reclamation Facility	No	
Wastewater Management	Project 7 (Veterans) Pump Station (PS)	No	
Wastewater Management	Samson Water Reclamation Facility	No	
Wastewater Management	San Antonio Water Reclamation Facility	No	
Wastewater Management	San Antonio Pump Station (PS-1)	No	
Wastewater Management	Sewer Network Maintenance Office	Yes	included in Bahay Toro WRF SID
Wastewater Management	Sta. Cruz Lift Station	No	
Wastewater Management	Talayan Water Reclamation Facility	No	
Wastewater Management	Talayan Lift Station (LS-1)	No	
Wastewater Management	Talayan Lift Station (LS-2)	No	
Wastewater Management	Talayan Pump Station (PS-1)	No	
Wastewater Management	Talayan Pump Station (PS-2)	No	
Wastewater Management	Talayan Pump Station (PS-3)	No	
Wastewater Management	Talayan Weir	No	
Wastewater Management	Tandang Sora Water Reclamation Facility and Pump Station (PS-2)	No	
Wastewater Management	Tandang Sora Pump Station (PS-1)	No	
Wastewater Management	Tandang Sora Pump Station (PS-3)	No	
Wastewater Management	Tandang Sora Pump Station (PS-4)	No	
Wastewater Management	Tatalon Water Reclamation Facility	No	
Wastewater Management	Tatalon Pump Station (PS-1)	No	
Wastewater Management	Tatalon Pump Station (PS-2)	No	
Wastewater Management	Tatalon Lift Station (LS-2)	No	
Wastewater Management	Tatalon Lift Station (LS-3)	No	
Wastewater Management	Tondo Sewage Pumping Plant	No	
Wastewater Management	Vitas Barge Loading Facility	No	
Water Production	La Mesa Treatment Plant 1 (including guest house)	No	
Water Production	La Mesa Treatment Plant 2 (SCAA)	No	
Water Production	Putatan Water Treatment Plant 1	No	
Water Production	Putatan Water Treatment Plant 2	No	
Water Source	CPF Office	No	
Water Source	Bicti Desilting Basin	Yes	transferred to Manila Water
Water Source	Ipo – Office Building	No	
Water Source	Ipo – Military Barracks	No	
Water Source	Ipo – Security Barracks	No	
Water Network	Acacia Pump	Yes	Decommissioned

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Water Network	Acacia-Adelfa Pump	Yes	Decommissioned
Water Network	Aguinaldo Pump Station and Reservoir	No	
Water Network	Alabang Junction PS	Yes	Inactive
Water Network	Alazap Pump Station	No	
Water Network	Algeciras Pumping Station and Reservoir	No	
Water Network	Amlac In-line Booster	No	
Water Network	Antonio	Yes	Decommissioned
Water Network	Apitong Pump	Yes	Decommissioned
Water Network	Assistant 1 In-line Booster	Yes	Standby
Water Network	Assistant 2 In-line Booster	No	
Water Network	ASV DW# 4 (St. Jude)	No	
Water Network	ASV DW#3 (Southvale)	No	
Water Network	Ayala Alabang Reservoir 1	No	
Water Network	Ayala Alabang Reservoir 2	No	
Water Network	Ayala Southvale Pump Station and Reservoir	No	
Water Network	Bacoor Central	Yes	Decommissioned
Water Network	Bacoor Pump Station and Reservoir	No	
Water Network	Baesa on-line	Yes	for decommissioning
Water Network	Baesa Pump Station and Reservoir	No	
Water Network	Bagbag Reservoir & Pumping Station	No	
Water Network	Bagong Pook	Yes	Decommissioned
Water Network	Bagong Silang Phase 10 DW	No	
Water Network	Bagong Silang Phase 4 DW	Yes	Decommissioned
Water Network	Bagong Silang Phase 9 DW	No	
Water Network	Baler In-line Booster	No	
Water Network	Balsahan	Yes	Decommissioned
Water Network	Binuksuk Reservoir	No	
Water Network	Bliss	Yes	Decommissioned
Water Network	Bonifacio In-line Booster	No	
Water Network	Bougainvilla pump	Yes	Decommissioned
Water Network	Brittany DW	Yes	Decommissioned
Water Network	Buendia	Yes	Decommissioned
Water Network	Buensuceso	Yes	Decommissioned
Water Network	Caloocan Pumping Station and Reservoir	No	
Water Network	Castle Spring	Yes	Decommissioned
Water Network	Champaca	Yes	Decommissioned
Water Network	Cherry In-line Booster w/ Reservoir	No	
Water Network	Christina DW	Yes	Decommissioned
Water Network	Commonwealth Pump Station	No	

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Water Network	Coral	Yes	Decommissioned
Water Network	Country Club Pump	Yes	Decommissioned
Water Network	D. Tuazon Pump Station and Reservoir	No	
Water Network	Daang Bukid	Yes	Decommissioned
Water Network	Daang Hari Pump Station	No	
Water Network	Dangay In-line Booster	No	
Water Network	Dampalit Mini Booster	Yes	Decommissioned
Water Network	Del Rey III DW	Yes	Standby
Water Network	DMMA In-line Booster	No	
Water Network	Don Aguedo DW	Yes	Standby
Water Network	Don Jesus In-line Booster	No	
Water Network	Don Jose	Yes	Decommissioned
Water Network	Don Vicente In-line Booster	No	
Water Network	Dona Juana	Yes	Decommissioned
Water Network	Dulong Bayan	Yes	Decommissioned
Water Network	Ermita Pump Station and Reservoir	No	
Water Network	Esmeralda DW	Yes	Standby
Water Network	Espiritu Pump Station and Reservoir	No	
Water Network	Fairview # 3 Pumping and Reservoir	Yes	Inactive
Water Network	Fairview # 4 Pumping and Reservoir	Yes	Inactive
Water Network	Fairview Ruby Booster Station	Yes	Inactive
Water Network	Fatima In-line Booster	No	
Water Network	France-Germany In-line Booster	No	
Water Network	Filinvest 1 Deepwell 1	No	with power consumption for 2021
Water Network	Filinvest 2 Deepwell 3	Yes	Inactive
Water Network	Filinvest 2 Deepwell 4	Yes	Inactive
Water Network	Filinvest 2 Deepwell 5	Yes	Inactive
Water Network	Filinvest 2 Deepwell 6	Yes	Inactive
Water Network	Filinvest 2 Deepwell 7	Yes	Inactive/Standby
Water Network	Filinvest 2 Deepwell 8	Yes	Inactive; with ongoing project
Water Network	Fuel Depot (Sangley) PSR	No	
Water Network	Garcia Extension	Yes	Decommissioned
Water Network	Georosville	Yes	Decommissioned
Water Network	Good Harvest DW	Yes	Inactive/Standby; with ongoing project
Water Network	Goodwill DW	No	
Water Network	Greenfields #1	Yes	Decommissioned
Water Network	Greenfields #3	Yes	Decommissioned
Water Network	Greenview # 1 DW	Yes	Decommissioned
Water Network	Greenview #2 DW	Yes	with ongoing project

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Water Network	Greenview #3 DW	Yes	with ongoing project
Water Network	Hemlock Mini Booster	Yes	Decommissioned
Water Network	IBP Deepwell	Yes	Decommissioned
Water Network	Imus Sector DW	Yes	Inactive/Standby
Water Network	J. Felipe DW	No	
Water Network	Jordan Park Homes	Yes	Decommissioned
Water Network	Josephine	Yes	Decommissioned
Water Network	JPA Subdivision	Yes	Decommissioned
Water Network	JP Ramoy Reservoir	No	
Water Network	Karuhatan In-line Booster	No	
Water Network	Kingstown Deepwell 1	Yes	for decommissioning
Water Network	Kingstown Deepwell 2	Yes	for decommissioning
Water Network	La Mesa North A Annex	No	
Water Network	La Mesa North C Annex	No	
Water Network	La Mesa Pump Station	No	
Water Network	La Salle Mini Booster Ayala Alabang	Yes	Decommissioned
Water Network	Lagro Deepwell 1	Yes	Decommissioned
Water Network	Lakeview	Yes	Decommissioned
Water Network	Lebanon In-line Booster with Reservoir	No	
Water Network	Litex Pump Station and Reservoir	No	
Water Network	Luzon Pump	Yes	Decommissioned
Water Network	Ma. Cristina Pump	Yes	Inactive/Standby
Water Network	Madrigal pump	Yes	Inactive/Standby
Water Network	Magallanes In-line Booster	No	
Water Network	Magasalang 2A DW	Yes	Inactive/Standby
Water Network	Magasalang 2D DW	No	Inactive/Standby
Water Network	Magcauas	Yes	Decommissioned
Water Network	Magdalo	Yes	Decommissioned
Water Network	Magdiwang Pump Station and Reservoir	No	
Water Network	Maharlika PS	No	
Water Network	Maligaya In-line Booster	No	
Water Network	Malamok	Yes	Decommissioned
Water Network	Manalac	Yes	Decommissioned
Water Network	Manga Mini Booster	Yes	Decommissioned
Water Network	Marcos Alavrez Pump Station	No	
Water Network	Maricaban 1	Yes	Decommissioned
Water Network	Maricaban 2	Yes	Decommissioned
Water Network	Maricaban 3	Yes	Decommissioned
Water Network	Mc Donalds Pump	Yes	Decommissioned

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Water Network	Militar	Yes	Decommissioned
Water Network	Mindanao In-line Booster	No	
Water Network	Molino-Paliparan Pump Station and Reservoir	No	
Water Network	Molino DW	No	
Water Network	Molino IB	No	
Water Network	Mutual Homes 1 In-line Booster	No	
Water Network	Naga	Yes	Decommissioned
Water Network	Natividad 1 (Deparo)	Yes	Decommissioned
Water Network	Natividad 2 (Deparo)	Yes	Decommissioned
Water Network	Natividad 4 (Deparo)	Yes	Decommissioned
Water Network	Nelsonville	Yes	Decommissioned
Water Network	New Crescini DW	No	
Water Network	New Mutual DW	Yes	Inactive/Standby
Water Network	New Noveleta 4 DW	Yes	Inactive/Standby
Water Network	New Noveleta Central Deepwell	Yes	Decommissioned
Water Network	New Pio online booster	No	
Water Network	New Reparo In-line Booster	No	
Water Network	New Well Field 1	Yes	Decommissioned
Water Network	New Well Field 2	Yes	Decommissioned
Water Network	New Well Field 3	Yes	Decommissioned
Water Network	New Well Field 5	Yes	Decommissioned
Water Network	New Well Field 6	Yes	Decommissioned
Water Network	New Well Field 7	Yes	Decommissioned
Water Network	New Well Field 8	Yes	Decommissioned
Water Network	Niog	Yes	Decommissioned
Water Network	North Point	Yes	Decommissioned
Water Network	Northridge Park	Yes	Decommissioned
Water Network	Novaliches Pumping Station and Reservoir	No	
Water Network	Noveleta Pump Station and Reservoir	No	
Water Network	Old Villamor Booster Station	Yes	Decommissioned
Water Network	Pag-asa Mini Booster	Yes	Decommissioned
Water Network	Pagcor Pump Station and Reservoir	No	
Water Network	Pamahay Homes DW	Yes	Inactive/Standby
Water Network	Pandawan DW	No	
Water Network	Parkland In-line Booster	No	
Water Network	Pasay Pumping Station and Reservoir	No	
Water Network	Patindig Araw Pump Station	No	
Water Network	Pedro Diaz	Yes	Decommissioned
Water Network	Phase 10 Mini Booster	Yes	Decommissioned

**GREENHOUSE GASES AND AIR POLLUTANT EMISSIONS REPORT
2021**

Water Network	Philtrade Mini Booster Plant	Yes	Decommissioned
Water Network	Plaza Garcia	Yes	Decommissioned
Water Network	Poblacion DW	Yes	for decommissioning, no power consumption for 2021
Water Network	Port San Felipe In-line booster w/ Reservoir	No	
Water Network	President In-line Booster	No	
Water Network	Primary Network (old maintenance office in LMTP)	No	
Water Network	Putatan 1 PSR (Booster 1-6, 9)	No	
Water Network	Putatan 2 PSR (Booster 7, 8, 10)	No	
Water Network	Putatan Deepwell # 2	Yes	Decommissioned
Water Network	Putatan Deepwell # 3	Yes	Decommissioned
Water Network	Putatan Deepwell # 6	Yes	Decommissioned
Water Network	R. Valenzuela In-line Booster	No	
Water Network	Rainbow	Yes	for decommissioning
Water Network	Remarville In-line Booster	No	
Water Network	Reparo In-line Booster	No	
Water Network	Richland 1	Yes	Decommissioned
Water Network	Rivero DW	No	Standby
Water Network	Rockville 2 DW	No	
Water Network	Rolling Meadows 1	Yes	Decommissioned
Water Network	Rolling Meadows 2	Yes	Decommissioned
Water Network	Rosal Pump	Yes	Decommissioned
Water Network	Sacred Heart Pump Station and Reservoir	No	
Water Network	Sacred Heart Reservoir	No	
Water Network	Samonte Park	Yes	Decommissioned
Water Network	Sampaguita In-line Booster	No	
Water Network	San Juanico Pump	Yes	Decommissioned
Water Network	San Nicolas	Yes	Decommissioned
Water Network	San Pedro 7	Yes	Decommissioned
Water Network	Saranay In-line Booster	No	Inactive
Water Network	Severina In-line Booster	No	
Water Network	Silverio	Yes	Decommissioned
Water Network	Smile Citihomes	Yes	Decommissioned
Water Network	South Greenheights In-line Booster	No	
Water Network	Southvale Deepwell 3	Yes	Inactive
Water Network	Southvale Deepwell 4	Yes	Inactive
Water Network	Sta. Quiteria In-line Booster	No	
Water Network	Sucat	Yes	Decommissioned
Water Network	Sugartowne	Yes	Decommissioned

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Water Network	Sunriser In-line Booster	No	
Water Network	Talaba	Yes	Decommissioned
Water Network	Talisay Pump	Yes	Decommissioned
Water Network	Tamaraw In-line Booster	No	
Water Network	Tanada DW	No	
Water Network	Tandang Sora In-line Booster	No	
Water Network	Taysan Pump	Yes	Decommissioned
Water Network	Tirona (Toclong Pump Station and Reservoir)	Yes	no operations in 2021
Water Network	Tondo Pumping Station and Reservoir	No	
Water Network	Torresville In-line Booster	No	
Water Network	Tunasan	Yes	Decommissioned
Water Network	University In-line Booster	No	
Water Network	Versailles PSR	No	
Water Network	Victoria Homes Pump Station and Reservoir	No	
Water Network	Villa Carolina	Yes	Decommissioned
Water Network	Villa Gracia	Yes	for decommissioning
Water Network	Villamor Pump Station and Reservoir	No	
Water Network	Vitale	Yes	Decommissioned
Water Network	Vitas 1 Mini Booster	No	no power consumption
Water Network	Vitas 2 Mini Booster	No	no power consumption
Water Network	WNET Office	No	
Water Network	Yengco Street	Yes	Decommissioned
Water Network	Zapote Mini Booster	Yes	Decommissioned