



# STATUS OF WASTEWATER MANAGEMENT IN THE PHILIPPINES:

The Philippines' Compliance with Effluent and Environmental Benchmarks

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## PRESENTATION OUTLINE

**Introduction to Wastewater Management in the Philippines: The Whys and Hows**

**Legal Basis and Framework**

**Current Status of Wastewater Management in the Philippines**

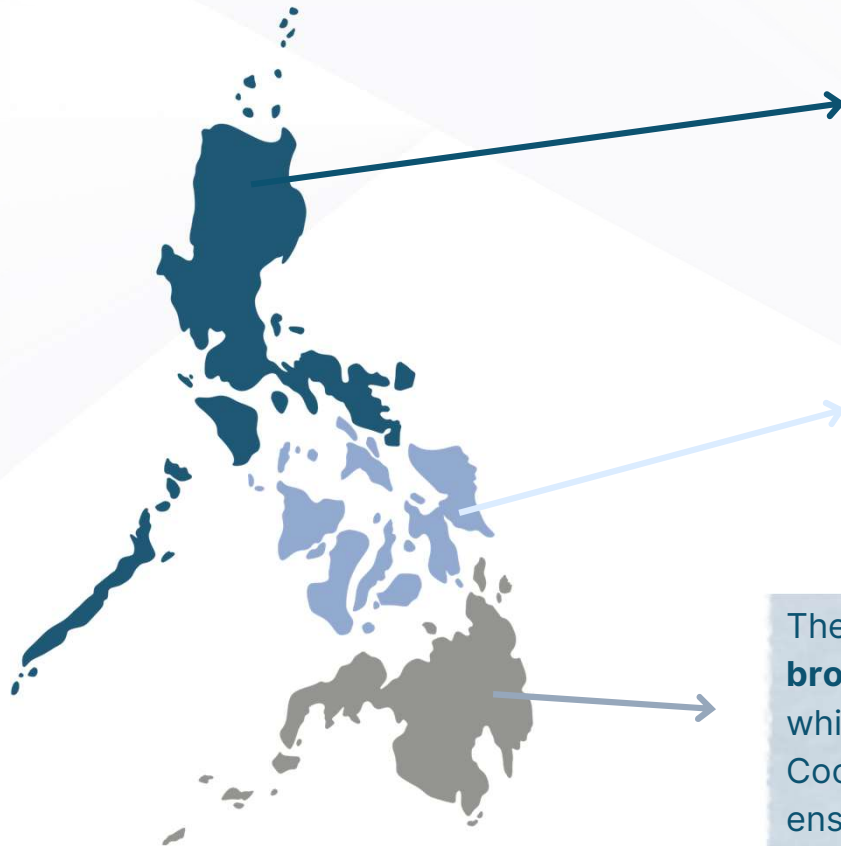
**Initiatives and Best Practices**

**Ways Forward**





## INTRODUCTION TO WASTEWATER MANAGEMENT IN THE PHILIPPINES: THE WHYS AND HOWS



The Philippines, as an archipelago, currently has 7,600 islands and highly dependent on water resources and utilized for various purposes: **domestic, commercial, industrial, agricultural and recreational**

Wastewater management is crucial **for safeguarding health, ecosystems, and water resources**. Untreated discharges cause diseases, harm biodiversity, worsen flooding, and degrade water quality, making action under RA 9275 and SDG 6 urgent.

The Philippines addresses wastewater through **policies, technologies, and broad stakeholder participation**. The DENR-EMB enforces regulations while promoting treatment systems and nature-based solutions. Cooperation among households, LGUs, industries, and service providers ensures protection of health, ecosystems, and water resources.

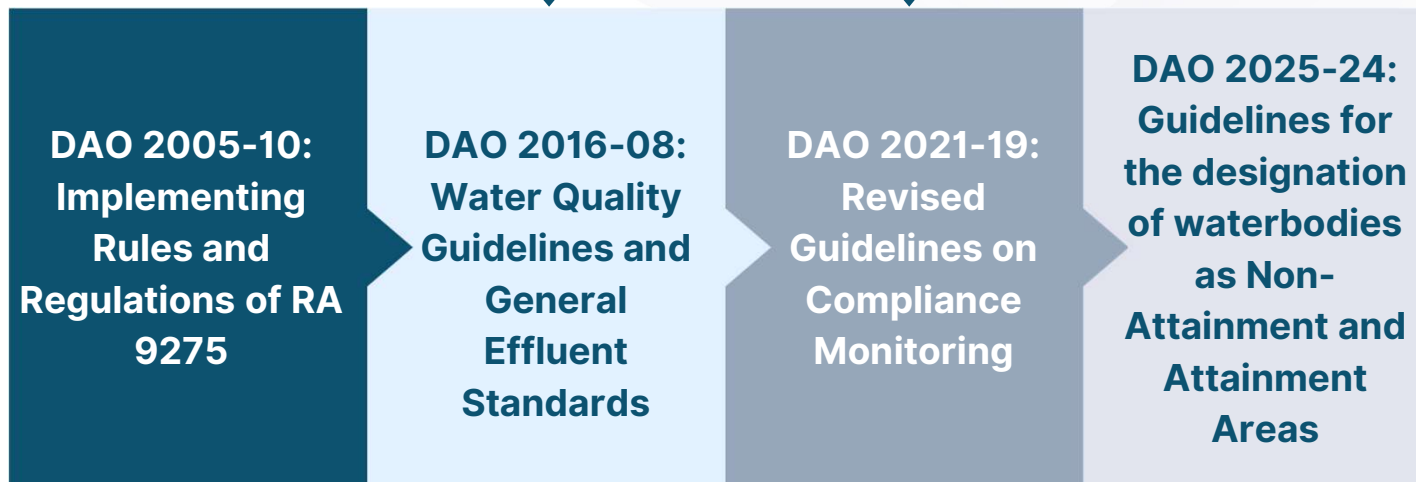
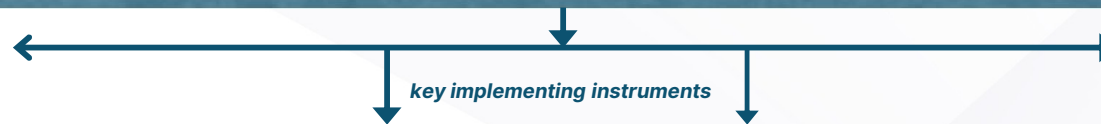




## LEGAL BASIS AND FRAMEWORK

### Philippine Clean Water Act of 2004 (RA 9275)

Implementing Agency: Department of Environment and Natural Resources (DENR) through the Environmental Management Bureau (EMB).





## CURRENT STATUS OF WASTEWATER MANAGEMENT IN THE PHILIPPINES

### General Effluent Standards

Prescribed under DENR Administrative Order (DAO) No. 2016-08, or the **“Water Quality Guidelines and General Effluent Standards” of 2016**

These standards establish the **maximum allowable concentrations** of specific **pollutants** in wastewater that can be discharged to water bodies or land. They apply to **all point sources** of pollution, **new or existing, regardless of industry category**, unless **industry-specific standards** are provided.

Parameter	Unit	Water Body Classification								
		AA	A	B	C	D	SA	SB	SC	SD
<b>Ammonia as NH<sub>3</sub>-N</b>	<b>mg/L</b>	<b>NDA</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>9</b>	<b>NDA</b>	<b>3</b>	<b>4</b>	<b>9</b>
BOD	mg/L	NDA	20	30	50	120	NDA	30	100	150
<b>Boron</b>	<b>mg/L</b>	<b>NDA</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>12</b>	<b>NDA</b>	<b>4</b>	<b>25</b>	<b>100</b>
Chloride	mg/L	NDA	350	350	450	500	NDA	n/a	n/a	n/a
COD	mg/L	NDA	60	60	100	200	NDA	60	200	300
Color	TCU	NDA	100	100	150	300	NDA	100	150	300
Cyanide as Free Cyanide	mg/L	NDA	0.14	0.14	0.2	0.2	NDA	0.04	0.2	0.4
Fluoride	mg/L	NDA	2	2	2	4	NDA	3	3	6
Nitrate as NO <sub>3</sub> -N	mg/L	NDA	14	14	14	30	NDA	20	20	30
pH (Range)		NDA	6.0-9.0	6.0-9.0	6.0-9.4	5.5-9.5	NDA	6.5-9.0	6.0-9.0	5.5-9.5
<b>Phosphate</b>	<b>mg/L</b>	<b>NDA</b>	<b>1</b>	<b>1.5</b>	<b>4</b>	<b>10</b>	<b>NDA</b>	<b>2</b>	<b>4</b>	<b>10</b>
Selenium	mg/L	NDA	0.02	0.02	0.04	0.08	NDA	0.02	0.2	0.4
<b>Sulfate</b>	<b>mg/L</b>	<b>NDA</b>	<b>500</b>	<b>500</b>	<b>550</b>	<b>1000</b>	-	-	-	-
Surfactants (MBAS)	mg/L	NDA	2	3	15	30	NDA	3	15	30





# GOVERNMENT-TO-GOVERNMENT SEMINAR ON DECENTRALIZED WASTEWATER TREATMENT



SUBJECT TO REGULATION	
Types of Industries	All Industries Selected Industries
Applicable Effluent Volume	No limit, but DAO 2005-10 (Rule 14.5) outlines a tiered structure for annual permit fees based on the volume of effluent discharged per day.
How are the standard values set?	Uniform Depends on sectors Others (specify:)
Possibilities of setting more stringent standards	Yes No
Transition periods, provisional standards or others (to give industries time to adapt to emission standards)	Transition period (grace period as per DAO 2016-08 Provisional Standards Others (specify:)
Relevant laws to regulate effluent qualities from industries	<ul style="list-style-type: none"> <li>• Republic Act No. 9275 (The Philippine Clean Water Act of 2004)</li> <li>• DENR Administrative Order (DAO) No. 2005-10</li> <li>• DENR Administrative Order (DAO) No. 2016-08</li> <li>• DENR Administrative Order (DAO) No. 2021-19</li> </ul>

MONITORING AND INSPECTION	
Monitoring Method	Self (automated) Gov. or 3rd Party
Monitoring Parameter(s)	DAO 2016-08 specifies that the significant effluent quality parameters that industries must monitor
Frequency	Self-Monitoring Reports (SMRs) - quarterly submission
Inspecting Agency	Department of Environment and Natural Resources - Environmental Management Bureau (EMB) or Laguna Lake Development Authority (LLDA)
Inspection	Traditional on-site inspection, then if violations are identified, EMB can issue a Notice of Violation to the establishment
Reporting Obligation	Yes, through Self-Monitoring Report (SMR) system
Reporting to (whom)	EMB or LLDA
Number of Regulated Facilities	22,000 Valid Discharge Permit
How to Identify the Facility Number	Through Wastewater Discharge Permit, or DENR ID Number or Company Registration System (CRS)



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## CURRENT STATUS OF WASTEWATER MANAGEMENT IN THE PHILIPPINES

Influent BOD (mg/L)	Unit	Class C	Class D	Class SC	Class SD
3,000 to <6,500	mg/L	100	150	100	150
6,500 to <10,000	mg/L	200	300	200	300
10,000 to 30,000	mg/L	600	1,000	600	1,000
>30,000	mg/L	900	1,500	900	1,500

### For Strong Wastewater

Applicable only if the establishment provides proof:

- Influent values for twelve (12) months are within Table 10 of DAO 2016-08
- Laboratory results must be from a DENR-recognized laboratory





## CURRENT STATUS OF WASTEWATER MANAGEMENT IN THE PHILIPPINES

### Basis for the Standards

GES applies to all establishments discharging wastewater to receiving bodies of water or land

<b>CLASS AA: Public Water Supply I</b>	<b>CLASS SA: Protected Areas</b>
<b>CLASS A: Public Water Supply II</b>	<b>CLASS SB: Recreational Waters</b>
<b>CLASS B: Recreational Waters</b>	<b>CLASS SC: Fisheries</b>
<b>CLASS C: Agriculture</b>	<b>CLASS SD: Navigational Waters</b>
<b>CLASS D: Navigable Waters</b>	

BASIS	DESCRIPTION
<b>Water Quality Guidelines</b>	To preserve classification of receiving water bodies
<b>Toxicological Data</b>	Protection of human and ecological health
<b>Stakeholder Input</b>	Consultations with affected sectors
<b>Risk-Based Approach</b>	Adjusted per use/class of receiving water
<b>OTHER CONSIDERATION</b>	
<b>Technology-Based</b>	Based on achievable treatment performance
<b>International Benchmarks</b>	Adapted from global practices esp ASEAN





## CURRENT STATUS OF WASTEWATER MANAGEMENT IN THE PHILIPPINES

### Measures taken to Improve the Compliance of Industries



Securing a valid Wastewater Discharge Permit



Compliance with Wastewater Discharge Permit Conditions and Applicable Effluent Standards

*Note: Should be based on effluent analysis through EMB-recognized Laboratory*



Submission of the Completely Filled-out Module 3 of the Self-Monitoring Report (SMR)






## CURRENT STATUS OF WASTEWATER MANAGEMENT IN THE PHILIPPINES

### WASTEWATER DISCHARGE PERMIT

#### Sec 14 RA 9275 - Rule 14 of DAO 2005-10 IRR

- A **legal authorization** granted to the owners or operators of facilities by the DENR to discharge wastewater
- It shall specify, among others, the quantity and quality of effluent of the said facilities allowed to be discharged into a specific water body
- The annual fee is from Php 2,000 to Php 3,900, depending on the volumetric rate of discharge
- **Validity: Up to five (5) years**

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Republic of the Philippines  
Department of Environmental and Natural Resources  
**ENVIRONMENTAL MANAGEMENT BUREAU**  
Region XII  
Regional Government Center, Brgy. Carpenter Hill Koronadal City  
Tel No. (083) 228-10-71

Date: May 16, 2019 | Permit No.: DP-R12-19-01194

**WASTEWATER DISCHARGE PERMIT**

Pursuant to Section 14, Article 2, of the RA 9275 otherwise known as the "Philippine Clean Water Act of 2004", this permit is hereby granted to **LGU-Alabel** with office address at Alabel Municipal Hall, C.P. Garcia, Nat'l Secondary Road, Poblacion (Alabel), Alabel (Capital), Sarangani for its establishment:

<b>Alabel Septage Treatment Facility</b>	Silbo Mahayahay Bagacay ALABEL (Capital)
TIN No. 001-694-044-0000	

*\* Reference for effluent parameters: DAO 2016-06: PSIC Code - 2700?*


- The permit holder shall not be allowed to discharge effluent to any receiving body of water or land.
- Shall submit Self-Monitoring (SMR) based on the following schedule:


Quarter	Coverage	Submission	Quarter	Coverage	Submission
First	Jan-Mar	1-15 Apr.	Third	Jul-Sep.	1-15 Oct.
Second	Apr-Jun.	1-15 Jul.	Fourth	Oct-Dec.	1-15 Jan.

- Shall have a regular Pollution Control Officer (PCO) duly accredited by the Office and comply with the requirements of DAO 2014-02.
- Shall allow the entry of our duly authorized representative(s) to conduct inspection within your premises.
- This permit, together with the corresponding Official Receipts of Payment, shall be adequately framed and posted in a conspicuous place at the plant/establishment.
- This permit shall be renewed thirty (30) days prior to its expiration.


**This permit is valid up to May 16, 2024, unless revoked or suspended by this Office in writing.**

Non-compliance with the above conditions and/or any pertinent provisions of RA 9275 otherwise known as "Philippine Clean Water Act of 2004", a corresponding penalty in the amount of P10,000-P200,000 per violation shall be imposed.

Recommended by:  Engr. LEONARDO MALINA  
Chief, Chemical and Wastewater Division

Approved by:  Engr. FELIX JIMENEZ  
Chief, Regional Office

FBMP Fee	: Php 50.00	O.R. No.:	285882	Date:	March 1, 2019
PSI Fee	: Php 10.00	O.R. No.:	285882	Date:	March 1, 2019
Documentary Stamp Tax	: Php 26.00	O.R. No.:	285882	Date:	March 1, 2019
Permit Fee	: Php 10000.00	O.R. No.:	2853079	Date:	April 12, 2019



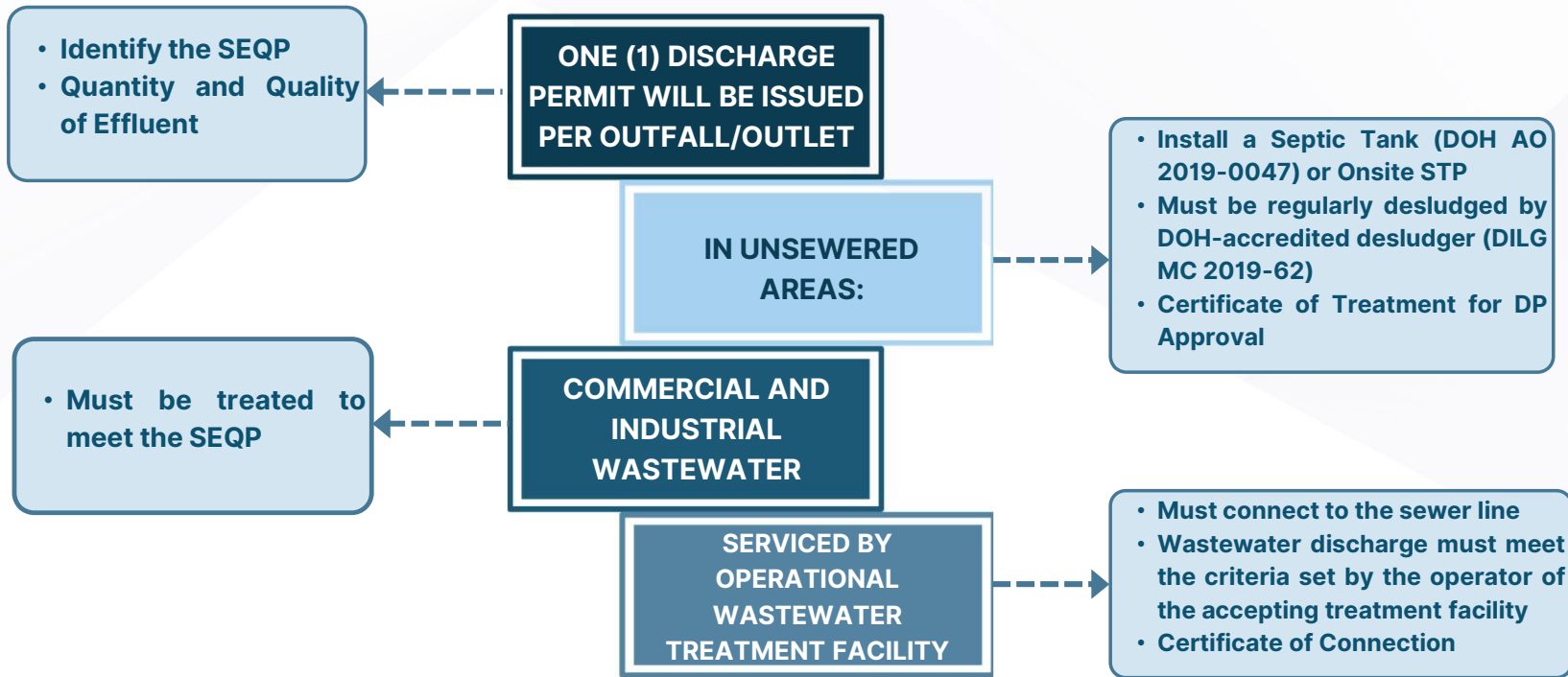
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*Protect the environment... Protect life...*





CLARIFICATION IN THE ISSUANCE OF DISCHARGE PERMIT FOR ESTABLISHMENTS/INDUSTRIES  
19 APRIL 2021 MEMORANDUM



MEMORANDUM

TO : ALL REGIONAL DIRECTORS  
 FROM : THE DIRECTOR  
 SUBJECT : CLARIFICATION IN THE ISSUANCE OF DISCHARGE PERMIT FOR ESTABLISHMENTS/INDUSTRIES  
 DATE : 19 APRIL 2021

In line with the implementation of Discharge Permitting System under RA 9275, otherwise known as the Philippine Clean Water Act of 2004, the following are the clarifications in the issuance of discharge permit for multiple outfalls:

- One (1) Discharge Permit shall be issued per outfall/outlet to identify the Significant Effluent Quality Parameters (SEQP) per Philippine Standard Industrial Classification (PSIC) Code under the Water Quality Guidelines and General Effluent Standards.
- For unsewered areas, establishments/industries are required to install a septic tank or an onsite sewage treatment facility.
  - Establishments/industries generating domestic wastewater shall be regularly desludged by an accredited desludger of the Department of Health (DOH). A certificate of treatment or receipt from the desludger must be secured from the desludger for the approval of Discharge Permit.
  - Establishments/industries generating commercial and industrial wastewater shall be treated and shall conform with the general and significant effluent quality parameters per sector as listed in Table 8 of DENR DAO 2016-08.
- Establishments/industries located in areas serviced by an operational wastewater treatment facility shall be required to connect to the sewer line. Wastewater to be discharged into the sewer line must be treated in accordance with the criteria set by the operator of accepting wastewater treatment facility. A certificate of interconnection/connection shall be the conditional requirement in the issuance of a Discharge Permit.

In addition, all EMB- Regional Offices shall be guided on the EMB Memorandum Circular 2020-005 on the Clarification in the Implementation of Rules 13.8 (Wastewater Charges in ECOZONE) and 14.18 (Pollution Sources connected to sewerage systems).

For your information and guidance.

ENOK WILLIAM F. CUÑADO

Protect the environment... Protect life...





## CURRENT STATUS OF WASTEWATER MANAGEMENT IN THE PHILIPPINES

### CERTIFICATE OF INTERCONNECTION

- Establishments/industries located in areas serviced by an operational wastewater treatment facility shall be required to connect to the sewer line.
- Wastewater to be discharged into the sewer line must be treated in accordance with the criteria set by the operator of the accepting wastewater treatment facility.
- A Certificate of Interconnection/Connection shall be conditional requirement in the issuance of a Discharge Permit

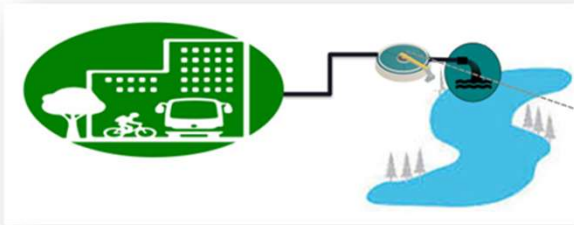




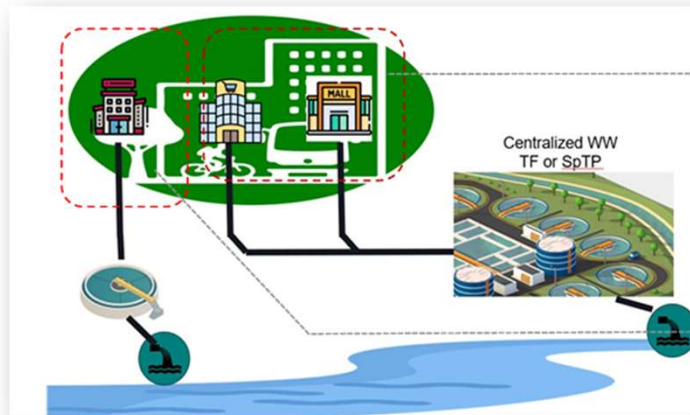
# GOVERNMENT-TO-GOVERNMENT SEMINAR ON DECENTRALIZED WASTEWATER TREATMENT



## CURRENT STATUS OF WASTEWATER MANAGEMENT IN THE PHILIPPINES

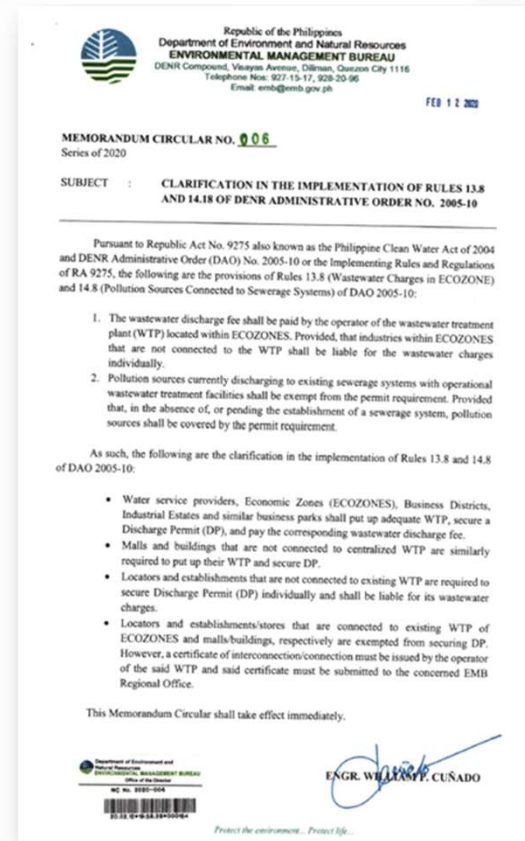


Business District  
/ECOZONE:  
DP FEE &  
Wastewater  
Charge



Connected  
Locator:  
DP FEE

DP FEE &  
Wastewater  
Charge



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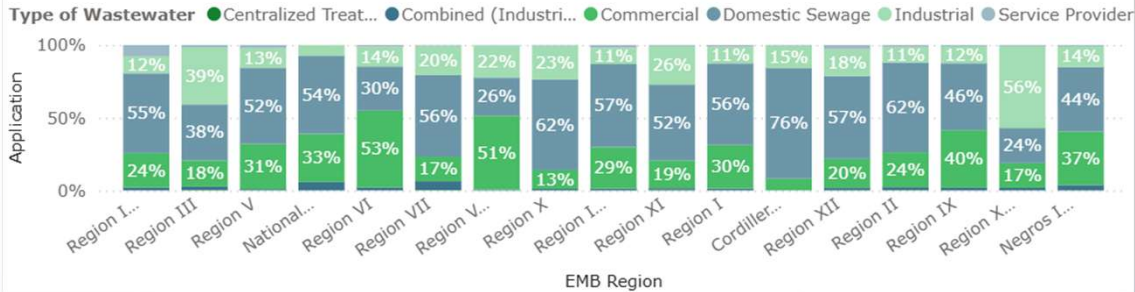


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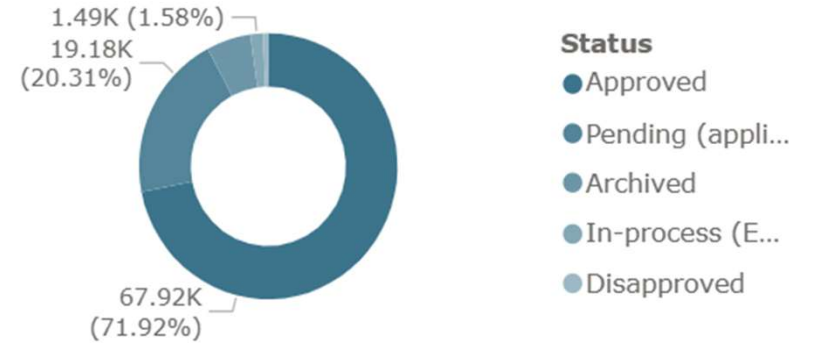


## WASTEWATER DISCHARGE PERMIT - OPMS

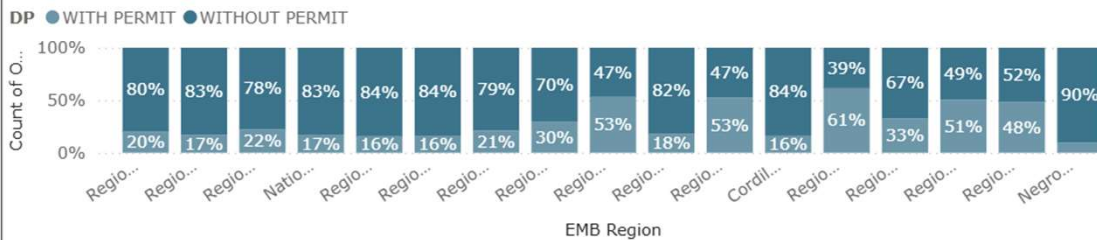
### Type of Wastewater by Region



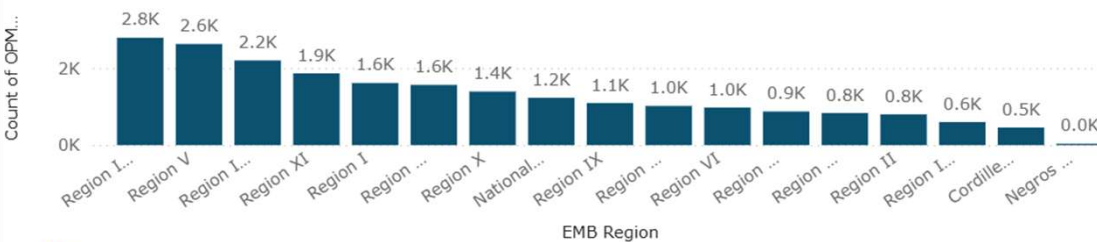
### Application by Status



### Percentage of WWDP Applications from Establishments by Region



### Count of valid WWDP by Region



### Date Approved

11/17/2017

9/11/2025

### EMB Region

All

### Office Name

Search

22K  
Valid Permit

### Applications by Region



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## CURRENT STATUS OF WASTEWATER MANAGEMENT IN THE PHILIPPINES





## INITIATIVES AND BEST PRACTICES



### DENR-EMB PROGRAMS

- Implementation of the Philippine Clean Water Act (RA 9275)
- Establishment of Water Quality Management Areas (WQMAs)
- Adopt-an-Estero/Waterbody Program (partnerships with LGUs, industries, and NGOs)
- Monitoring and compliance programs for industrial and commercial establishments



### PUBLIC-PRIVATE PARTNERSHIP PROJECTS IN WASTEWATER MANAGEMENT

- Collaboration with private water concessionaires (e.g., Maynilad, Manila Water) for sewerage and septage management systems
- BOT (Build-Operate-Transfer) schemes for wastewater treatment facilities
- Partnerships with industries for shared treatment plants and innovative financing mechanisms



### INNOVATIVE AND MULTI-FACETED APPROACHES OF SANITATION PROGRAMS

- Philippine Sustainable Sanitation Roadmap (DOH-led with DENR & partners)
- NSSMP – supports LGUs in wastewater and septage planning
- Community campaigns and LGU-driven on septic tank maintenance and desludging
- Alignment with SDG 6 and the Philippine Development Plan (PDP)





## WAYS FORWARD





GOVERNMENT-TO-GOVERNMENT SEMINAR ON DECENTRALIZED WASTEWATER TREATMENT



# MARAMING SALAMAT PO!



**DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES**  
**ENVIRONMENTAL MANAGEMENT BUREAU - CENTRAL OFFICE**  
Visayas Ave., Diliman, Quezon City



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