

Attachment IV-4

Environmental Monitoring Forms
for EMoP (September 2024)

Environmental Monitoring Forms for EMoP
(July to September 2024)

1. Responses/Actions to Comments and Guidance from Government Authorities and the Public

Monitoring Item	Monitoring Results during Report Period
None during this monitoring period	None during this monitoring period

2. Monitoring in Pre-Construction Stage & Construction Stage

The Monitoring plans in the pre-construction stage and construction stage are shown below.

2.1 Monitoring Program

[Marikina River, Manggahan Floodway]

Item	Parameter	Frequency and Duration	Locations (Minimum quantity)
Noise	Noise level	One time before construction and semi-annually during construction (24 hours/time)	4 Points (Marikina River) and 2 Points (Manggahan Floodway)
Vibration	Displacement Velocity, Acceleration	At least 4 times during piling works	4 Points (Marikina River) 1 Point at Cainta Floodgate and 1 Point at Taytay Sluiceway
Air Quality	SO ₂ , NO ₂ , TSP	One time before construction and semi-annually during construction (24hours/time)	4 Points (Marikina River) and 2 Points (Manggahan Floodway)
River Water Quality (all parameters and intensive)	DAO 2016-08 (All the parameters in Table 3 to Table 6 (Class C))	Regular sampling :2 times/year, and Intensive monitoring upon the first dredging (2 times)	4 Points (Marikina River) and 2 Points (Manggahan Floodway)
River Water Flow	River Water Flow (m ³ /s)	Secondary data collection from EFCOS, throughout the monitoring period	5 Points (Marikina River)
River Water Quality (BOD, TSS, DO)	BOD, TSS, DO	One time before construction and quarterly (4 times/year) * during construction	4 Points (Marikina River) and 2 Points (Manggahan Floodway)
Aquatic Biota	-Density and Diversity of phytoplankton and zooplankton - Density and Diversity of macrobenthic organisms -Nekton(fish) -Aquatic flora	One time before construction and once during construction	4 Points (Marikina River) and 2 Points (Manggahan Floodway)

Tree Cutting and Replanting (Project-Affected Trees)	-Species -Size (diameter) -Location	One time before construction and one time after replanting	Along both banks of Marikina River and Manggahan Floodway
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Note) *: This monitoring shall be done combined with River Water Quality Monitoring (all parameters)

**: Monitoring location is shown in Figure 1 to Figure 3 attached.

[Dredged Material Temporary Yard]

Dredged materials temporary yard is not to be established and monitoring of noise, air quality, or effluent is not conducted.

Item	Parameter	Frequency and Duration	Locations (Minimum quantity)
Noise	Noise level	One time before construction and semi-annually during construction (24 hours/time)	3 Points
Air Quality	TSP Hydrogen Sulfide Lead Ammonia	One time before construction and semi-annually during construction (24hours/time)	3 Points
Effluent	DAO 2016-08 Parameters in Table 9 (Class A)	Once/month during construction	Discharge Point(s)
Excavated/Dredged Material* (Before treatment)	Amount of Excavated/Dredged Material	One sample for every 5,000m ³ Excavated/Dredged Material	All the Excavated/Dredged Material
	Items in DAO 2016-08 (See the form)		
	Items in DAO 2013-22 (See the form)		
Disposal/Re-use of Excavated/Dredged Material* (After treatment if treatment is necessary)	Items in DAO 2016-08 (See the form)	One sample for every 5,000m ³ Disposal/Re-use of Excavated/Dredged Material	All the Excavated/Dredged Material
	Items in DAO 2013-22 (See the form)		

(Note) *: Excavated/Dredged Material is checked by the Contractor.

[Disposal site]

Item	Parameter	Frequency and Duration	Locations (Minimum quantity)
Noise	Noise level	One time before construction and semi-annually during construction (24 hours/time)	3 Points
Air Quality	TSP, Lead	One time before construction and semi-annually during construction (24hours/time)	3 Points
Groundwater	Items in DAO 2016-08 (see the form)	One time before construction and semi-annually during construction	At least 2 points

2.2 Monitoring Results

Summary Table of Monitoring Results

Monitoring Item	Monitoring Results during the Report Period
<p>During this period (from July to September 2024), the following environmental parameters were monitored:</p> <ul style="list-style-type: none"> • Middle Marikina River: water quality (limited parameters), river water flow, and tree cutting and relocation. • Disposal Site: no monitoring was conducted during this period following the implementation schedule of environmental monitoring. <p>In addition to the above, monitoring results of previous period for the following parameters were incorporated due to the delayed laboratory analysis or incorrect data during the previous period:</p> <ul style="list-style-type: none"> • Middle Marikina River: noise level and water quality (all parameters). • Disposal Site: groundwater quality. 	<p>(1) Middle Marikina River</p> <p>Monitoring results (previous period) of noise level are summarized as follows:</p> <ul style="list-style-type: none"> • Monitored noise levels at B-1 and B-3 partially confirmed to the quality standard. • All the monitored noise levels at B-2 and B-4 exceeded the quality standard. <p>Monitoring results of the river water quality (limited parameters) are summarized as follows:</p> <ul style="list-style-type: none"> • All the monitored parameters (BOD, DO and TSS) conformed to the guideline value at all locations except for DO at A-2. <p>Monitoring results (previous period) of the river water quality (all parameters) are summarized as follows:</p> <ul style="list-style-type: none"> • The following five (7) parameters exceeded the standard at all the monitoring stations or partially: <ul style="list-style-type: none"> - BOD - DO - Fecal Coliform - Phosphate - Ammonia as $\text{NH}_3\text{-N}$ - Iron (Fe) - Manganese (Mn) <p>Regarding the river water flow, the obtained river water flow data from the Effective Flood Control Operational System (EFCOS) were used for the analysis of monitoring results of river water quality. There are no discernible impacts on river water flow during the construction of the project.</p> <p>During the monitoring period from July to September 2024, there has been no tree-cutting, earth-balling activity, or acquisition of new permits for CP-2. While CP-3 was granted a 150-day extension for Permit No. 2024-03-171 STCEP-171, effective from September 11, 2024.</p> <p>(2) Disposal Site</p> <p>Monitoring results (previous period) of the groundwater quality (all parameters) are summarized as follows:</p> <ul style="list-style-type: none"> • The following nine (6) parameters exceeded the standard at both (two locations) or one location: <ul style="list-style-type: none"> - DO

	<ul style="list-style-type: none">- Fecal Coliform- Ammonia as NH_3N- Iron (Fe)- Manganese- Oil and Grease
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2.2.1 Middle Marikina River

2.2.1.1 Noise:

DENR Standards for Noise (NPCC Memorandum Circular No. 002, 1980) is applied.

Unit: (dBA)

Time	Class				
	AA	A	B	C	D
Daytime (0900-1800Hr)	50	55	65	70	75
Evening (1800-2200Hr)	45	50	60	65	70
Nighttime (2200-0500Hr)	40	45	55	60	65
Morning (0500-0900Hr)	45	50	60	65	70
Class AA – a section of contiguous area which requires quietness, such as areas within 100 meters from school sites, nursery schools, hospitals and special homes for the aged. Class A – a section or contiguous area which is primarily used for residential purposes. Class B – a section or contiguous area which is primarily a commercial area. Class C – a section primarily zoned or used as light industrial area. Class D – a section which is primarily reserved, zoned or used as a heavy industrial area					

Monitoring Results: Monitoring results of previous period (April to June 2024) were shown in the previous report. However, it was found out that the data was not the correct due to wrong data consolidation. The corrected data was shown as below:

Monitoring Results of Noise Level for Middle Marikina River

Unit: dBA

Station/ Location	Time Regime	Baseline Dec. 2021	June 3 – 7, 2024	DENR Standards (Class A)
B-1	Morning	51	50	50
	Daytime	53	55	55
	Evening	51	55	50
	Nighttime	50	46	45
B-2	Morning	53	57	50
	Daytime	58	59	55
	Evening	58	56	50
	Nighttime	55	47	45
B-3	Morning	54	51	50
	Daytime	54	56	55
	Evening	52	50	50
	Nighttime	51	49	45
B-4	Morning	56	59	50
	Daytime	54	58	55
	Evening	58	57	50
	Nighttime	56	56	45

Notes: Red mark means failure to comply with the DENR Standard of NPCC, 1980

Monitoring location is shown in the figures attached on last pages of this document.

2.2.1.2 Vibration:

The maximum allowable peak vibration level (displacement velocity) is 2.5 mm/s, which is the level not to cause adverse effects on residential buildings.

Monitoring Results: Vibration monitoring was not conducted in this period.

2.2.1.3 Air quality:

Republic Act No.8749 is applied for evaluation.

Unit: ($\mu\text{g}/\text{Nm}^3$)

Pollutants	Short Term			Remarks
	$\mu\text{g}/\text{m}^3$	ppm	Averaging time	
SO ₂	180	0.07	24 hours	-
NO ₂	150	0.08	24 hours	-
TSP	230	-	24 hours	-

Monitoring Results: Monitoring of air quality was not conducted in this period following the implementation schedule of impact monitoring of the Project.

2.2.1.4. River Water Quality:

DAO 2016-08 / DAO 2021-19 are applied for evaluation.

Monitoring Results: Water sampling was conducted along the Middle Marikina River on September 24. Monitoring results are shown in the table below:

River Water Quality Results for Middle Marikina River (Limited Parameters)

Parameters	Unit	A-1		A-2		A-3		A-4		DAO 2016-08/ DAO 2021-19 (Class C)
		Baseline Dec. 2021	Sep. 24, 2024	Baseline Dec. 2021	Sep. 24, 2024	Baseline Dec. 2021	Sep. 24, 2024	Baseline Dec. 2021	Sep. 24, 2024	
PRIMARY										
Biochemical Oxygen Demand (BOD)	mg/L	15	7	76	4	101	6	134	4	7
Dissolved Oxygen (DO)	mg/L	6.56	5.34	2.43	3.84	6.59	8.49	8.56	5.98	5(min)
Total Suspended Solids (TSS)	mg/L	33	40	8	30	30	28	122	36	80

Notes: **Red Mark** means failure to comply with Water Quality Guideline as per DAO 2016-08/DAO 2021-19. Monitoring location is shown in the figures attached on last pages of this document.

Also, the monitoring results of June 18 (previous quarter) are shown in the table below. It is because the results of previous period were not incorporated in the previous report since the laboratory analysis was delayed.

Location: A-1

Date and time during this monitoring period: June 8, 2024 (All Parameters)

Item	Unit	Standard (Class C)	Baseline	Measured Value
			December 2021	June 18, 2024
Primary Parameters				
BOD	mg/l	7	15	8
Chloride	mg/l	350	59.4	29.8
Color	TCU	75	10	20
DO (Minimum)	mg/l	5	6.56	2.18
Fecal Coliform*	MPN/ 100ml	200	240	9,200,000
Nitrate as NO ₃ -N	mg/l	7	0.13	0.68
pH (Range)	-	6.5 – 9.0	7.4	7.8
Phosphate as Phosphorus*	mg/l	0.025	0.52	1.08
Temperature	°C	25 – 31	26.7	29.7
TSS	mg/l	80	33	47
Secondary Parameters				
Inorganics				
Ammonia as NH ₃ -N*	mg/l	0.06	4.41	5.17

Item	Unit	Standard (Class C)	Baseline	Measured Value
			December 2021	June 18, 2024
Boron*	mg/l	0.75	<1.00	<1.00
Fluoride	mg/l	1	0.13	0.1
Selenium	mg/l	0.02	<0.0002	<0.0002
Sulfate*	mg/l	275	16	36
Metals				
As	mg/l	0.02	0.001	<0.010
Ba	mg/l	3	<0.20	0.036
Cd	mg/l	0.005	<0.003	<0.002
Cr ⁶⁺	mg/l	0.01	<0.01	<0.01
Cu as Dissolved Copper*	mg/l	0.2	<0.005	<0.002
Fe	mg/l	1.5	2.66	3.301
Pb	mg/l	0.05	<0.01	<0.007
Mn	mg/l	0.2	0.25	0.556
Hg	mg/l	0.002	<0.0004	<0.0004
Ni	mg/l	0.2	<0.02	<0.004
Zn	mg/l	2	<0.003	0.041
Organics				
Benzo(a)pyrene	mg/l	1.5	<0.3	<0.3
BTEX				
Benzene	mg/l	0.05	<0.0003	<0.0003
Toluene	mg/l	4	<0.0003	0.003
Ethylbenzene	mg/l	1.5	<0.0002	<0.0002
Xylenes	mg/l	1.5	<0.0002	0.0016
Cyanide as Free Cyanide	mg/l	0.1	<0.01	0.06
Organophosphate	µg/l	3	<0.5	<0.04
Oil and Grease	mg/l	2	<1.0	<1.0
PCBs	µg/l	0.5	<0.05	<0.01
Phenol & Phenolic Substances	mg/l	0.05	<0.00006	<0.00006
Surfactants (MBAS)	mg/l	1.5	<0.10	1.45
Trichloroethylene	mg/l	0.9	<0.0003	<0.0003
Total Organochlorine Pesticides	µg/l	50	<0.73	<0.08

Note: Red Mark means failure to comply with Water Quality Guideline as per DAO 2016-08/DAO 2021-19.

*: Parameters that have updated Water Quality Guidelines and General Effluent Standards as stipulated in DAO 2021-19. Parameters without * are stipulated in DAO 2016-08.

**: The highest detection limit (DL), toxaphene, was reflected as value for the total organochlorine pesticides because the values of analytes detected for total organochlorine pesticides were less than the DL.

***: The detection limit (DL) has been changed due to the adoption of a different analysis method.

Location: A-2

Date and time during this monitoring period: June 8, 2024 (All Parameters)

Item	Unit	Standard (Class C)	Baseline	Measured Value
			December 2021	June 18, 2024
Primary Parameters				
BOD	mg/l	7	76	21
Chloride	mg/l	350	28.2	27.8
Color	TCU	75	10	10
DO (Minimum)	mg/l	5	2.43	2.68
Fecal Coliform*	MPN/ 100ml	200	1,600	2,400,000
Nitrate as NO ₃ -N	mg/l	7	0.11	0.76
pH (Range)	-	6.5 – 9.0	7.8	7.3
Phosphate as Phosphorus*	mg/l	0.025	0.61	0.6
Temperature	°C	25 – 31	26.76	30.3
TSS	mg/l	80	8	61

Item	Unit	Standard (Class C)	Baseline	Measured Value
			December 2021	June 18, 2024
Secondary Parameters				
Inorganics				
Ammonia as NH ₃ -N*	mg/l	0.06	7.96	3.83
Boron*	mg/l	0.75	<1.00	<1.00
Fluoride	mg/l	1	0.11	0.1
Selenium	mg/l	0.02	<0.0002	<0.0002
Sulfate*	mg/l	275	14	34
Metals				
As	mg/l	0.02	0.0011	<0.010
Ba	mg/l	3	<0.20	0.034
Cd	mg/l	0.005	<0.003	<0.002
Cr ⁶⁺	mg/l	0.01	<0.01	<0.01
Cu as Dissolved Copper*	mg/l	0.2	<0.005	<0.002
Fe	mg/l	1.5	2.06	1.864
Pb	mg/l	0.05	<0.01	<0.007
Mn	mg/l	0.2	0.33	0.597
Hg	mg/l	0.002	<0.0004	<0.0004
Ni	mg/l	0.2	<0.02	<0.004
Zn	mg/l	2	<0.003	0.033
Organics				
Benzo(a)pyrene	mg/l	1.5	<0.3	<0.3
BTEX				
Benzene	mg/l	0.05	<0.0003	<0.0003
Toluene	mg/l	4	0.0005	0.003
Ethylbenzene	mg/l	1.5	<0.0002	<0.0002
Xylenes	mg/l	1.5	0.0005	<0.0002
Cyanide as Free Cyanide	mg/l	0.1	<0.01	0.05
Organophosphate	µg/l	3	<0.5	<0.04
Oil and Grease	mg/l	2	<1.0	<1.0
PCBs	µg/l	0.5	<0.05	<0.01
Phenol & Phonolic Substances	mg/l	0.05	<0.00006	<0.00006
Surfactants (MBAS)	mg/l	1.5	<0.10	1.35
Trichloroethylene	mg/l	0.9	<0.0003	<0.0003
Total Organochorine Pesticiders	µg/l	50	<0.73	<0.08

Note: Red Mark means failure to comply with Water Quality Guideline as per DAO 2016-08/DAO 2021-19.

*: Parameters that have updated Water Quality Guidelines and General Effluent Standards as stipulated in DAO 2021-19. Parameters without * are stipulated in DAO 2016-08.

**: Parameters which "-" is put are those under laboratory analysis. The monitoring results will be incorporated in the next monitoring report covering July to September, 2023.

***: The highest detection limit (DL), toxaphene, was reflected as value for the total organochlorine pesticides because the values of analytes detected for total organochlorine pesticides were less than the DL.

****: The detection limit (DL) has been changed due to the adoption of a different analysis method.

Location: A-3

Date and time during this monitoring period: June 8, 2024 (All Parameters)

Item	Unit	Standard (Class C)	Baseline	Measured Value
			December 2021	June 18, 2024
Primary Parameters				
BOD	mg/l	7	101	27
Chloride	mg/l	350	26.2	33.8
Color	TCU	75	10	25
DO (Minimum)	mg/l	5	6.59	2.05
Fecal Coliform*	MPN/ 100ml	200	240	5,400,000

Item	Unit	Standard (Class C)	Baseline	Measured Value
			December 2021	June 18, 2024
Nitrate as NO ₃ -N	mg/l	7	0.12	0.77
pH (Range)	-	6.5 – 9.0	7.6	7.5
Phosphate as Phosphorus*	mg/l	0.025	0.63	0.67
Temperature	°C	25 – 31	27.1	30.4
TSS	mg/l	80	30	58
Secondary Parameters				
Inorganics				
Ammonia as NH ₃ -N*	mg/l	0.06	6.78	6.02
Boron*	mg/l	0.75	<1.00	<1.00
Fluoride	mg/l	1	0.1	0.12
Selenium	mg/l	0.02	<0.0002	<0.0002
Sulfate*	mg/l	275	16	40
Metals				
As	mg/l	0.02	0.0008	<0.010
Ba	mg/l	3	<0.20	0.033
Cd	mg/l	0.005	<0.003	<0.002
Cr ⁶⁺	mg/l	0.01	<0.01	<0.01
Cu as Dissolved Copper*	mg/l	0.2	<0.005	<0.002
Fe	mg/l	1.5	4.53	1.671
Pb	mg/l	0.05	<0.01	<0.007
Mn	mg/l	0.2	0.33	0.753
Hg	mg/l	0.002	<0.0004	<0.0004
Ni	mg/l	0.2	<0.02	<0.004
Zn	mg/l	2	<0.003	0.022
Organics				
Benzo(a)pyrene	mg/l	1.5	<0.3	<0.3
BTEX				
Benzene	mg/l	0.05	<0.0003	<0.0003
Toluene	mg/l	4	<0.0003	0.0051
Ethylbenzene	mg/l	1.5	<0.0002	<0.0002
Xylenes	mg/l	1.5	<0.0002	<0.0002
Cyanide as Free Cyanide	mg/l	0.1	<0.01	0.06
Organophosphate	µg/l	3	<0.5	<0.04
Oil and Grease	mg/l	2	<1.0	1.2
PCBs	µg/l	0.5	<0.05	<0.01
Phenol & Phenolic Substances	mg/l	0.05	<0.00006	<0.00006
Surfactants (MBAS)	mg/l	1.5	<0.10	1.27
Trichloroethylene	mg/l	0.9	<0.0003	<0.0003
Total Organochlorine Pesticides	µg/l	50	<0.73	<0.08

Note: Red Mark means failure to comply with Water Quality Guideline as per DAO 2016-08/DAO 2021-19.

*: Parameters that have updated Water Quality Guidelines and General Effluent Standards as stipulated in DAO 2021-19. Parameters without * are stipulated in DAO 2016-08.

**: The highest detection limit (DL), toxaphene, was reflected as value for the total organochlorine pesticides because the values of analytes detected for total organochlorine pesticides were less than the DL.

***: The detection limit (DL) has been changed due to the adoption of a different analysis method.

Location: A-4

Date and time during this monitoring period: June 8, 2024 (All Parameters)

Date and time during this monitoring period: June 8, 2024 (All Parameters)				
Item	Unit	Standard (Class C)	Baseline	Measured Value
			December 2021	June 18, 2024
Primary Parameters				
BOD	mg/l	7	134	19
Chloride	mg/l	350	24.2	48.3
Color	TCU	75	10	50

Item	Unit	Standard (Class C)	Baseline	Measured Value
			December 2021	June 18, 2024
DO (Minimum)	mg/l	5	8.56	1.98
Fecal Coliform*	MPN/ 100ml	200	350	5,400,000
Nitrate as NO ₃ -N	mg/l	7	0.16	0.84
pH (Range)	-	6.5 – 9.0	7.7	7.7
Phosphate as Phosphorus*	mg/l	0.025	0.75	0.66
Temperature	°C	25 – 31	28	30.4
TSS	mg/l	80	122	49
Secondary Parameters				
Inorganics				
Ammonia as NH ₃ -N*	mg/l	0.06	6.01	9.38
Boron*	mg/l	0.75	<1.00	<1.00
Fluoride	mg/l	1	0.1	0.12
Selenium	mg/l	0.02	<0.0002	<0.0002
Sulfate*	mg/l	275	6	38
Metals				
As	mg/l	0.02	0.0013	<0.010
Ba	mg/l	3	<0.20	0.037
Cd	mg/l	0.005	<0.003	<0.002
Cr ⁶⁺	mg/l	0.01	<0.01	<0.01
Cu as Dissolved Copper*	mg/l	0.2	0.018	<0.002
Fe	mg/l	1.5	15.71	1.289
Pb	mg/l	0.05	<0.01	<0.007
Mn	mg/l	0.2	0.68	0.708
Hg	mg/l	0.002	<0.0004	<0.0004
Ni	mg/l	0.2	<0.02	<0.004
Zn	mg/l	2	0.017	0.052
Organics				
Benzo(a)pyrene	mg/l	1.5	<0.3	<0.3
BTEX				
Benzene	mg/l	0.05	<0.0003	<0.0003
Toluene	mg/l	4	0.0016	<0.0003
Ethylbenzene	mg/l	1.5	<0.0002	<0.0002
Xylenes	mg/l	1.5	0.0003	<0.0002
Cyanide as Free Cyanide	mg/l	0.1	<0.01	0.05
Organophosphate	µg/l	3	<0.5	<0.04
Oil and Grease	mg/l	2	<1.0	1.3
PCBs	µg/l	0.5	<0.05	<0.01
Phenol & Phenolic Substances	mg/l	0.05	<0.00006	<0.00006
Surfactants (MBAS)	mg/l	1.5	<0.10	1
Trichloroethylene	mg/l	0.9	<0.0003	<0.0003
Total Organochlorine Pesticides	µg/l	50	<0.73	<0.08

Note: Red Mark means failure to comply with Water Quality Guideline as per DAO 2016-08/DAO 2021-19.

*: Parameters that have updated Water Quality Guidelines and General Effluent Standards as stipulated in DAO 2021-19. Parameters without * are stipulated in DAO 2016-08.

**: The highest detection limit (DL), toxaphene, was reflected as value for the total organochlorine pesticides because the values of analytes detected for total organochlorine pesticides were less than the DL.

***: The detection limit (DL) has been changed due to the adoption of a different analysis method.

2.2.1.5. River Water Flow (Secondary Data)

Data from Effective Flood Control Operational System (EFCOS): Consolidated / updated river water flow (until June 2024) is shown in the following table:

Monthly Average Discharge and Water Level along Marikina River

Station	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rodriguez	2021	51.81	51.36	51.03	44.25	42.7	30.1	54.6	44.39	44	40.78	35.75	36.47
		21.85	21.84	21.83	21.82	21.73	21.37	22.03	21.76	21.78	21.61	21.49	21.51
	2022	36.39	34.67	34.32	35.91	27.1	26.88	29.22	48.61	48.8	41.52	32.76	29.61
		21.5	21.46	21.45	21.48	21.21	21.21	21.37	21.78	21.79	21.63	21.4	21.3
	2023	32.43	29.59	29.57	29.34	29.31	31.52	51.77	59.14	64.27	41.81	33.15	22.9
		21.39	21.3	21.3	21.29	21.29	21.36	21.85	21.98	22.06	21.64	21.41	21.05
	2024	37.95	38.19	N/A	37.77	36.04	25.23	N/A	N/A	N/A	N/A	N/A	N/A
		21.54	21.55	N/A	21.54	21.49	21.15	N/A	N/A	N/A	N/A	N/A	N/A
Nangka	2021	65.84	46.81	46.81	46.38	45.83	46.59	63.74	55.11	54.77	51.96	50.38	50.02
		16.14	15.81	15.81	15.8	15.81	15.81	16.15	15.97	16	15.91	15.88	15.87
	2022	49.42	49.27	48.93	49.32	48.78	49.69	50.14	53.99	58.37	59.82	51.88	49.97
		15.86	15.86	15.85	15.85	15.85	15.87	15.88	15.95	16.03	16.05	15.91	15.87
	2023	50.22	49.49	49.78	49.74	50.39	51.01	66.56	62.41	90.03	50.98	47.86	35.99
		15.88	15.86	15.87	15.87	15.88	15.89	16.15	16.09	16.45	15.89	15.83	15.55
	2024	52.84	52.93	52.93	52.94	52.93	53.16	N/A	N/A	N/A	N/A	N/A	N/A
		15.93	15.93	15.93	15.93	15.93	15.93	N/A	N/A	N/A	N/A	N/A	N/A
Sto. Nino	2021	86.52	51.89	47.25	46.02	25.98	42.33	92.59	67.94	86.43	65.92	66.57	58.75
		12.66	12.17	12.07	12.05	11.5	12.02	12.76	12.42	12.68	12.42	12.41	12.32
	2022	45.74	42.55	41.74	37.83	39.83	23.81	32.51	61.35	74.46	71.21	91.33	65.88
		12.04	11.97	11.95	11.86	11.91	11.4	11.71	12.33	12.52	12.47	12.72	12.4
	2023	60.89	51.4	47.35	43.82	41.57	39.27	76.87	91.62	129.45	56.94	44.13	35.13
		12.32	12.16	12.08	12	11.95	11.89	12.55	12.72	13.06	12.26	12.01	11.78
	2024	46.8	36.62	17.43	17.43	21.16	32.84	N/A	N/A	N/A	N/A	N/A	N/A
		12.06	11.82	11.10	11.10	11.29	11.72	N/A	N/A	N/A	N/A	N/A	N/A
Rosario	2021	138.71	76.29	42.18	28.23	21.33	25.98	47.5	71.89	90.84	97.6	70.97	50.68
		12.43	11.85	11.27	10.88	10.65	10.8	11.43	11.79	12.04	12.09	11.78	11.49
	2022	37.2	26.86	24.68	32.36	36.17	46.12	59.6	85.32	76.07	86.11	130.64	89.06
		11.14	10.83	10.75	11.02	11.12	11.36	11.61	11.96	11.85	11.97	12.38	12
	2023	71.21	38.56	28.82	30.78	29.94	37.25	56.55	98.25	152.11	144.82	109.31	109.31
		11.78	11.19	10.9	10.97	10.94	11.15	11.56	12.1	12.52	12.48	12.2	12.2
	2024	43.55	33.01	28.7	17.83	26.18	39.83	N/A	N/A	N/A	N/A	N/A	N/A
		11.30	11.03	10.90	10.43	10.81	11.22	N/A	N/A	N/A	N/A	N/A	N/A
Angono	2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		12.49	12.04	11.6	11.2	10.99	11.02	11.42	11.87	12.12	12.11	11.83	11.56
	2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		11.38	11.12	11	11.01	11.02	11.16	11.31	11.66	11.8	12	12.58	12.32
	2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		12.15	11.74	11.33	11.08	11.02	11.22	11.63	11.9	12.08	11.98	11.63	11.34
	2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		11.46	11.16	11.00	10.95	11.00	11.31	N/A	N/A	N/A	N/A	N/A	N/A

Source: Effective Flood Control Operation System (EFCOS), MMDA
 Note: White: flow discharge (in m³/s), Blue: water table elevation (in m)

2.2.1.6 Aquatic Biota

Monitoring of Aquatic Biota was not conducted in this period following the implementation schedule of impact monitoring of the Project.

2.2.1.7 Tree Cutting and Relocation (for Project-Affected Trees)

I. Contract Package No. 2

Status of Existing Tree-Cutting / Earth-Balling Permits (TCEB) from DENR-NCR (for Project-Affected Trees at Quezon City) and Pasig CENRO (for Project-Affected Trees at Pasig City)

During the monitoring period from July to September 2024, no new or extended TCEB permits were issued for CP-2. No tree-cutting, earth-balling, or relocation activities were conducted, either.

II. Contract Package No. 3

Tree-Cutting / Earth-Balling Permits (TCEB) and Special Tree-Cutting and Earth-Balling Permits (STCEP) Issued by DENR-NCR

During the monitoring period from July to September 2024, the following permit was extended for 150 days from September 11, 2024

- Permit No. 2024-03-171 STCEP-171

This permit authorizes the removal of trees affected by the Project. Furthermore, the DENR-NCR approved the request to earth-ball all affected trees covered by the abovementioned permit. The updated status of this permit, along with relevant details from the CP-3 Contractor, is summarized in the table below.

A. No. 2024-03-171 STCEP-171 from the DENR-NCR

Official ID/No.:	No. 2024-03-171 STCEP-171 from the DENR-NCR
Date of Issuance:	April 03, 2024
Name of Permittee:	
Number of Targeted Trees:	72 trees (Indicated in the permit), 76 trees (After DENR-NCR-FUS tree inventory)
Sta. of the Target Area where the Trees are Located:	Contract Package No. 3, R10 to R15 from Sta. 11+140 to 12+100 Right Bank of the Marikina River, Barangay Tañong, R16 to R20 from Sta. 12+460 to 12+980 Right Bank of the Marikina River, Barangay Jesusa Dela Peña, Marikina City
Replacement Ratio for Cut or Relocated Trees*	1:50 for planted trees. 1:100 for naturally grown trees
Instruction in the Permit: Tree Cutting or Earth-Balling for Relocation	Earth-Balling: 76 Trees (All 76 trees are planted ones) Replacement: The transplanted tree will be assessed by a CDD-DENR-NCR representative six months after its relocation. If the tree does not survive, it will be replaced at a ratio of 1:100, as per DENR M.O No. 2012-02. - Note: All 76 trees are granted by the DENR-NCR to be transplanted
Current Status:	As of September 30, 2024, a total of 13 trees have been pruned. This work is ongoing. - Note: Pruning of trees is needed prior to earth-balling. - Note: DENR Extension Permit valid for 150 days from September 11, 2024

Note: *Based on DENR Memorandum Order No. 2012-02 "Uniform Replacement Ratio for Cut or Relocated Trees"

2.2.2. Dredged Material Temporary Yard

Dredged Materials Temporary Yard is not established in this monitoring period according to the Construction Contractors. Therefore, the following Parameters (noise, air quality, and effluent) are not monitored. Only Excavated/Dredged Material quality is monitored and all the results were incorporated until the previous period.

2.2.2.1. Excavated/Dredged Material

(1) Heavy Metal Concentration (Elutriate test)

DAO 2016-08 / 2021-19 (Effluent) is applied.

Monitoring Results: Monitoring of Excavated/Dredged Materials was completed by the previous monitoring period and not conducted in this period.

2.2.2.2. Disposal/Re-use of Excavated/Dredged Material (after treatment if treatment is necessary)

There are no treated materials after dredging/excavation.

2.2.3 Disposal site

2.2.3.1 Noise:

DENR Standards for Noise (NPCC Memorandum Circular No. 002, 1980) is applied.

Unit: dBA

Time	Class				
	AA	A	B	C	D
Daytime (0900-1800Hr)	50	60	65	70	75
Evening (1800-22100Hr)	45	50	60	65	70
Nighttime (2200-0500Hr)	40	45	55	60	65
Morning (0500-0900Hr)	45	50	60	65	70
Class AA – a section of a contiguous area that requires quietness, such as areas within 100 meters from school sites, nursery schools, hospitals, and special homes for the aged.					
Class A – a section or contiguous area which is primarily used for residential purposes.					
Class B – a section or contiguous area which is primarily a commercial area.					
Class C – a section primarily zoned or used as a light industrial area.					
Class D – a section that is primarily reserved, zoned, or used as a heavy industrial area					

Monitoring Results: Monitoring was conducted not conducted in this period following the implementation schedule of impact monitoring of the Project.

2.2.3.2 Air Quality

Republic Act No.8749 is applied for evaluation.

Pollutants	Short Term			
	µg/m ³	ppm	Averaging time	Remarks
TSP	230	-	24 hours	-
Pb	1.5	-	24 hours	-

Monitoring Results: Monitoring was conducted not conducted in this period following the implementation schedule of impact monitoring of the Project.

2.2.3.3 Groundwater

DAO 2016-08/ are applied for evaluation.

Monitoring Results: Monitoring was not conducted in this period following the implementation schedule of impact monitoring of the Project.

However, the monitoring results of June 18 (previous quarter) are shown in the table below, because the same were not incorporated in the previous report due to the delayed analysis results at the laboratory.

Monitoring Results:

Parameters	Unit	GW-1		GW-2		DAO 2016-08/ DAO 2021-19 (Class A)
		Baseline Dec. 2021	June 18, 2024	Baseline Dec. 2021	June 18, 2024	
PRIMARY						
Biochemical Oxygen Demand (BOD)	mg/L	<1	<1	<1	3	3
Chloride (Cl ⁻)	mg/L	175.9	206.9	331.9	124.6	250
Color (True)	CU	25	20	15	25	50
Dissolved Oxygen (DO)	mg/L	7.76	3.3	6.97	3.2	5(min)
Fecal Coliform*	MPN/100mL	9,200	2,400	5,400	1,300	50
Nitrate as NO ₃ -N	mg/L	4.5	3.36	3.23	1.02	7
pH	-	7.1	7.6	7.5	8	6.5-8.5
Phosphate*	mg/L	0.31	0.23	0.11	0.68	0.025
Temperature	°C	26.94	29.5	28.02	29.8	26-30
Total Suspended Solids (TSS)	mg/L	16	6	8	18	50
SECONDARY						
Inorganics						
Ammonia as NH ₃ -N*	mg/L	16.92	0.71	0.56	5.98	0.06
Boron (B)*	mg/L	<1.00	<1.00	<1.00	<1.00	0.75
Fluoride (F ⁻)	mg/L	0.14	0.17	0.13	0.19	1
Selenium (Se)	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	0.01
Sulfate (SO ₄)*	mg/L	25	154	160	6	250
Metal						
Arsenic (As)	mg/L	<0.0007	<0.010	<0.0007	<0.010	0.01
Barium (Ba)	mg/L	<0.20	0.152	<0.20	0.155	0.7
Cadmium (Cd)	mg/L	<0.003	<0.002	<0.003	<0.002	0.003
Hexavalent Chromium (Cr ⁶⁺)	mg/L	<0.01	<0.01	<0.01	<0.01	0.01
Copper (Cu)*	mg/L	<0.005	<0.002	<0.005	<0.002	0.2
Iron (Fe)	mg/L	0.21	0.317	0.1	1.221	1
Lead (Pb)	mg/L	<0.01	<0.007	<0.01	<0.007	0.01
Manganese (Mn)	mg/L	2.5	3.651	3.478	4.574	0.2
Mercury (Hg)	mg/L	<0.0004	<0.0004	<0.0004	<0.0004	0.001
Nickel (Ni)	mg/L	<0.02	<0.004	<0.02	<0.004	0.02
Zinc (Zn)	mg/L	<0.003	0.061	<0.003	0.031	2
Organics						
Benzo(a)pyrene	µg/L	<0.3	<0.3	<0.3	<0.3	0.7
BTEX						
Benzene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	0.01
Toluene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	0.7
Ethyl Benzene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	0.3
Xylene	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	0.5
Free Cyanide (CN ⁻)	mg/L	<0.01	<0.01	<0.01	<0.01	0.07
Organophosphate as Malathion	µg/L	<0.5	<0.00004	<0.5	<0.00004	1
Oil and Grease	mg/L	<1.0	<1.0	<1.0	1.9	1
Polychlorinated Biphenyls (PCB)	µg/L	<0.05	<0.01	<0.05	<0.01	<0.1
Phenol and Phenolic Substances	mg/L	<0.00006	<0.00006	<0.00006	<0.00006	<0.001
Surfactants (MBAS)	mg/L	<0.10	<0.10	<0.10	<0.10	0.2
Trichloroethylene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	0.07
Organochlorine Pesticide		n/a	<0.08	n/a	<0.08	n/a
Aldrin	µg/L	<0.02	<0.02	<0.02	<0.02	0.03
Chlordane	µg/L	<0.02	<0.02	<0.02	<0.02	0.2

Parameters	Unit	GW-1		GW-2		DAO 2016-08/ DAO 2021-19 (Class A)
		Baseline Dec. 2021	June 18, 2024	Baseline Dec. 2021	June 18, 2024	
4,4'-DDT	µg/L	<0.03	<0.03	<0.03	<0.03	1
Dieldrin	µg/L	<0.01	<0.01	<0.01	<0.01	0.03
Endrin	µg/L	<0.02	<0.02	<0.02	<0.02	0.6
Heptachlor	µg/L	<0.01	<0.01	<0.01	<0.01	0.03
Lindane	µg/L	<0.02	<0.02	<0.02	<0.02	2
Methoxychlor	µg/L	<0.02	<0.02	<0.02	<0.02	50
Toxaphene	µg/L	<0.73	<0.02	<0.73	<0.02	4

Notes: **Red Mark** means failure to comply with Water Quality Guideline as per DAO 2016-08/DAO 2021-19.

*: Parameters that have an updated Water Quality Guidelines and General Effluent Standards as stipulated in DAO 2021-19. Parameters without * are stipulated in DAO 2016-08.

**: The detection limit (DL) has been changed due to the adoption of a different analysis method

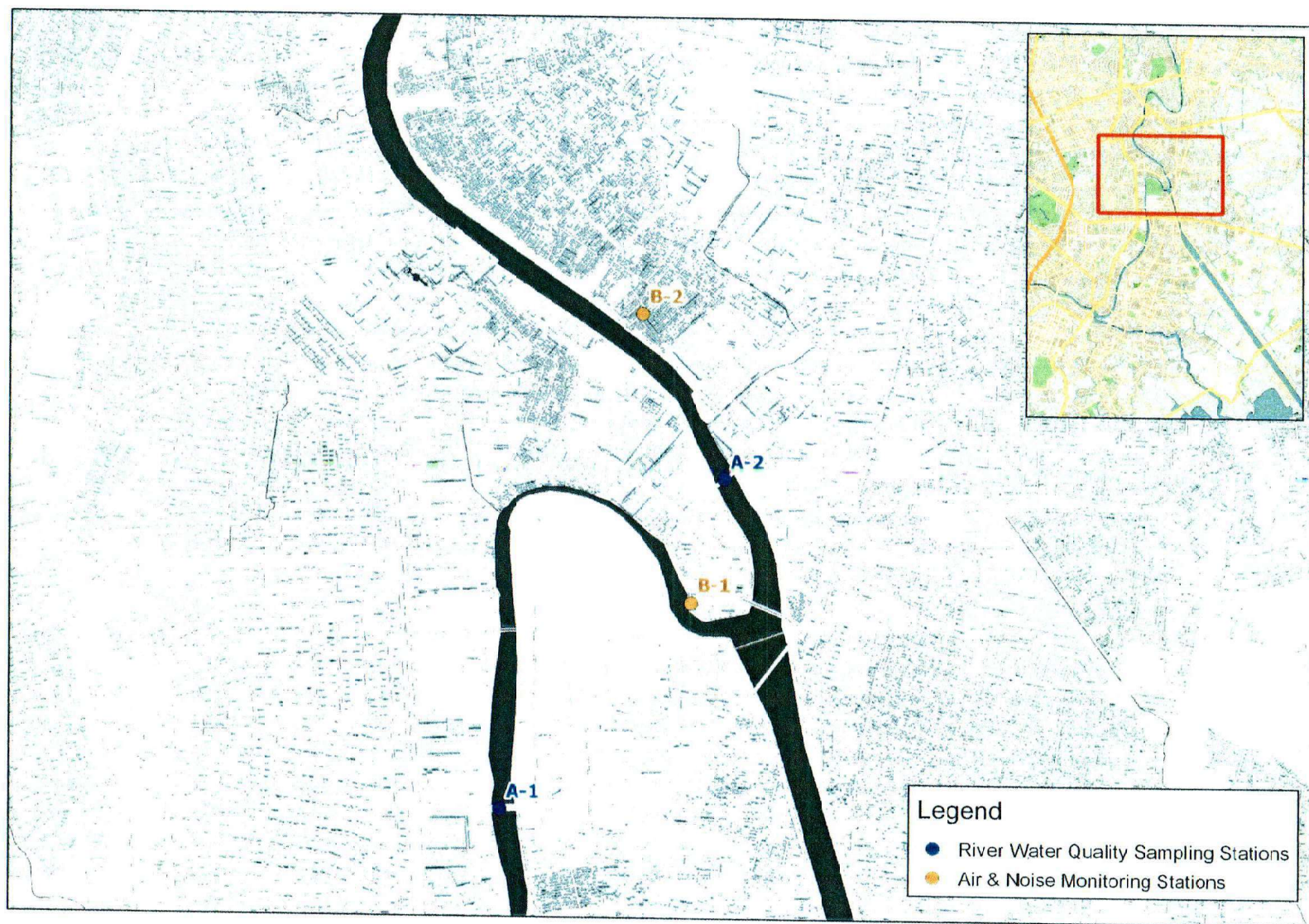


Figure 1 Location Map of Monitoring Station (Middle Marikina River, CP2 Area)



Figure 2 Location Map of Monitoring Station (Middle Marikina River, CP3 Area)

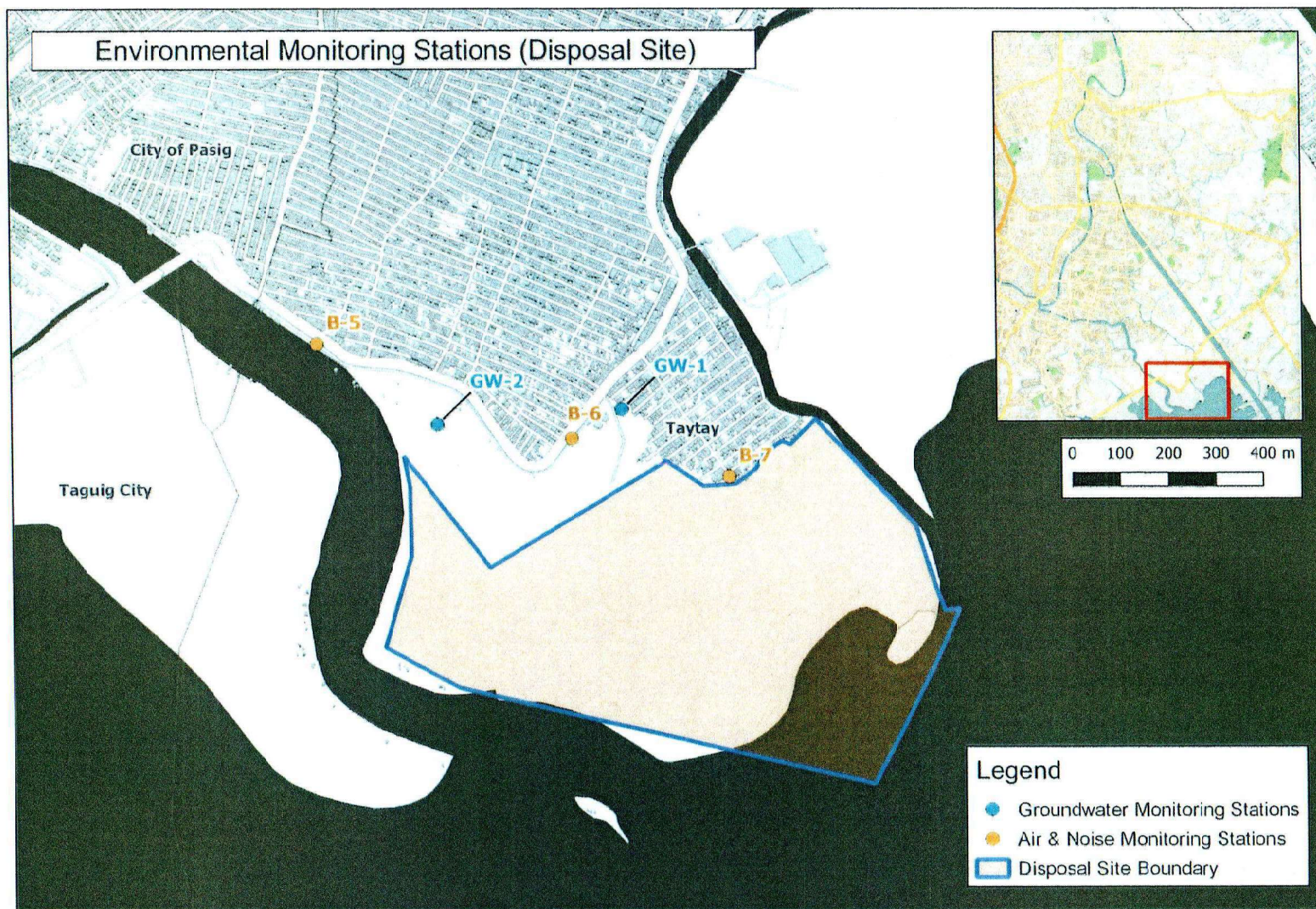


Figure 3 Location Map of Monitoring Station for Disposal Site

Attachment IV-10

RAP Monitoring Forms
for September 2024

RAP Monitoring Form: Pasig-Marikina River

RAP Monitoring Form: Pasig-Marikina River
(As of October 2024: the period from July 2024 to September 2024)

1. Public Consultations

No.	Date	Place / No. of Participants	Contents of the Consultation	Concerns from Participants	Correspondences
1	1 Jun '21 3 Jun '21	<ul style="list-style-type: none"> Barangay Hall- Bagumbayan (19 persons) Barangay Hall- Bagumbayan (35 persons) 	<ul style="list-style-type: none"> Validation of ISFs Reasons why the ISFs must be relocated Procedures for submitting required documents Who can pre-qualify 	Concerns why the ISFs failed to pre-quality: <ul style="list-style-type: none"> Not included in the census in 2015 House registered in the name of husband Husband died / Husband left (live-in) Two families living in one roof but cooked separately – one is renting the room so not covered in the census, etc. 	Most of the participants understand and agreed with explanations from NHA and the barangay.
2	14 Jul '21	Bagumbayan Elementary School Basketball Court – total (294 ISFs)			
3	3 Nov '21	Private-Public owners of property [land and structures] in Quezon City.		<ul style="list-style-type: none"> Process and procedures Valuation of property Schedules of activities 	Follow-up were done through personal visits and social media.

2. Grievance Redress

No. of grievance redress procedures filed			No. of the conflicts resolved		
During the Quarter	Till the Last Quarter	Up to the Quarter (in total)	During the Quarter	Till the Last Quarter	Up to the Quarter (in total)
0 case	2 cases	2 cases	N/A	N/A	N/A

No.	Date of Receipt of Complaints	Contents of the Complaints	Correspondences	Resolved / Not yet resolved
1	11 March 2022	Request to avoid two structures in Olandes (9km+300, right-bank).	<ul style="list-style-type: none"> ██████████ has submitted Documents regarding his claims to DPWH. These documents have been forwarded to the Departments legal office for verification. 	Being resolved

			<ul style="list-style-type: none"> Since the submitted documents cannot validate the claims of [REDACTED] Marikina LGU, DPWH, and other relevant Government agencies will schedule a clearing operation and to secure the area in Olandes (9km+300, right-bank). 	
2	July 2022	[REDACTED] requested compensation for the area inside the river (river-side of the existing dike in front of their land)	DPWH have already compensated [REDACTED] 100% for the affected structure, while only 50% for the affected land area	Being resolved
3	11 January 2023	<ul style="list-style-type: none"> Drainage system in the resettlement site Permanent Connection of basic Utilities in the Resettlement Site Access to Health care in the Resettlement Site 	<ul style="list-style-type: none"> Small flooding was observed during heavy rain, rain water accumulated in the lowest elevation on the road but will quickly subside after the rain. No permanent connection to the electric company, some ISFs are still connected to a submeter from a local resident. Not all houses have permanent water connection. Community access to ambulance and health care workers/Doctors are limited. Around 6 individuals got infected by dengue from August to November last year. This can be considered an outbreak and no fogging activity from the Brgy to control the Virus. 	<ul style="list-style-type: none"> Being resolved Families have now permanent connection to the electric company while water connection has yet to be established The cases regarding the healthcare of the 3 elocates were brought to the attention of the Brgy. Bagumbayan for immediate course. Still to be resolved. No new cases of infection have been reported
4	March 9, 2023	<ul style="list-style-type: none"> Identified 11 Kangkong Farmers and 1 Boat Ferry Service at Sta. 9+240 to Sta. 9+260 	<ul style="list-style-type: none"> A follow up meeting on March 29, 2023 together with the Philippine Coast Guard, DPWH, Toyo is scheduled to further discuss and resolve the issue 	<ul style="list-style-type: none"> On April 28, 2023, Barangay Santolan provided cash compensation amounting to 10,000 pesos each to the 11 affected Kangkong Farmers and 1 Boat ferry operator to vacate the area. Resolved

5	August 12, 2024	<ul style="list-style-type: none"> After the flooding incident caused by typhoon Carina and the South west Monsoon, Barangay Santolan reported that seven houses were damaged by the project contractor's barges. 	<ul style="list-style-type: none"> On August 21, 2024, it was revealed that only three households claimed direct damage to their dwellings from the barges. The remaining four houses incurred damage from the currents of the river. TOYO subcontractor, [REDACTED] is currently formulating a plan to compensate or provide assistance to the affected households. 	<ul style="list-style-type: none"> On September 13, 2024, Rayman decided to assist three families with 10,000 pesos each. The situation of the four other families is still being resolved due to lack of evidence supporting their claim of being affected by the barges during the typhoon.
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3. Progress of Land Acquisition and Resettlement

Resettlement Activities	Planned Total	Unit	Progress in Quantity			Progress in %		Expected Date of Completion	Responsible Organization
			During the Quarter	Till the Last Quarter	Up to the Quarter (Total Progress)	Till the Last Quarter	Up to the Quarter (Total Progress)		
Implementation of Census Survey	1	Set	Completed	Completed	Completed	100 %	100 %	Done in 2015 (Quezon)	Quezon City
Updates of RAP	1	Set	Abbreviated Resettlement Action Plan was prepared for the dumping site in Taytay Municipality and the additional areas of the Cainta Flood Gate in Cainta Municipality (Finalized in August 2021)					ARAP was prepared in August 2021	DPWH (UPMO and ESSD)
Approval of updated RAP	1	Time	RAP validation / updating shall be done including ARAP after the detailed alignment and relocation sites are determined. Existing approved RAP, however, is still effective for RAP implementation.					In 2024	DPWH (UPMO and ESSD)
Deployment of External Monitoring Agent (EMA)	1	Set	[REDACTED] signed the contract for the PMRCIP-IV as the External Monitoring Agent of the Project last June 1, 2022.			Baseline survey for Bagumbayan was conducted and completed on June 27-28, for the ISFs in Pasig City, this was completed on August 15, 2022 while for the disposal site in Taytay was completed on August 16, 2022.		June 2025	DPWH

Resettlement Activities	Planned Total	Unit	Progress in Quantity			Progress in %		Expected Date of Completion	Responsible Organization
			During the Quarter	Till the Last Quarter	Up to the Quarter (Total Progress)	Till the Last Quarter	Up to the Quarter (Total Progress)		
						<p>Final Inception Report was submitted to DPWH-UPMO-FCMC on October 10, 2022.</p> <p>The 1st Monitoring report was submitted to DPWH in May 2023</p> <p>The 2nd Monitoring period started in October 2023. Site Visit and individual interviews of the relocatees and FGDs were conducted during this period.</p> <p>The Draft 2nd Monitoring report was forwarded to the Consultant last December 2023 for review before submitting to DPWH.</p>			
Land Acquisition	104 * in RAP	Case	0	0	0	0%	0%	In 2024	Quezon City / NHA / DPWH
ISFs Relocation (in Quezon City)	70 (actual) * 71 in RAP	HHs	1	73	74	98.6%	100.0%	In 2024	Quezon City / NHA / DPWH
ISFs Relocation (by Pasig City)	195 *Based on 2024 validation of Census Survey	HHs	*0	0	0	0%	0%	In 2024	Pasig City / NHA

4. Implementation of Livelihood Restoration Assistance

DPWH proposed early commencement of livelihood restoration program (LRP) to LGUs of Quezon City and Baras. In the attachment of Minutes of Agreement (MOA) signed in January 2022 between Quezon City and Municipality of Baras, Housing, Community Development and Resettlement Department (HCDRD), former Urban Poor Affairs Office (UPAO), of Quezon City secured the Five Years Work and Financial Plan (WFP) for resettlement site services including health sector, security sector and environmental sector. As a part of the WFP, relevant LGUs shall start the LRP soon after ISF's living status becomes stable in the resettlement site in Baras.

Brief Description of the Implemented Livelihood Restoration Program (LRP)	Results during Report Period (No. of trainings implemented, No. of Participants, etc.)	Location
Small Business and Cooperatives Development and Promotions Office (SBCDPO) of Quezon City with relevant institutions organized an occupational training course between 7-8 June 2022.	ISFs of the project among 35 cases which was relocated during the 1st batch participated the course.	The relocation site in Baras, Rizal
Orientation of the Baras LGUs regarding the Social and basic Services available in the Municipality of Baras that the relocatees from Bagumbayan can avail, was held on September 19, 2022.	The Orientation was attended by the 269 relocatees from Brgy. Bagumbayan. They were divided into two, the morning session started at 8AM to 12PM and the afternoon commenced at 1AM and lasted until 4PM.	NHA Relocation Site in Baras, Rizal

5. Others

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RAP Monitoring Form: Manggahan Floodway

RAP Monitoring Form: Manggahan Floodway
(As of June 2024: the period March 2024 to June 2024)

1. Public Consultations:

No.	Date	Place / No. of Participants	Contents of the Consultation	Concerns from Participants	Correspondences
1	January 31, 2023 • February 2, 2023 • February 8, 2023 • February 10, 2023	• Covered court of Brgy. San Andres Cainta Rizal/80 ISFs participated in the Pubcon • Covered Court San Juan Cainta Rizal/800 participated in the Pubcon • Covered Court, San Juan Taytay Rizal/40 ISFs participated in the Pubcon • Open Court, Santa Ana Taytay Rizal/300 ISF participated in the PubCon	• Resettlement Action Plan of the project and change from In-city to off-City Relocation site • NHA relocation process • Presentation of Hermosa Ville as the relocation site of the Project	• Schedule and Timeline of the relocation • Documentation and procedures to avail of the relocation program from NHA • Livelihood and source of income from the resettlement site	• DPWH explained regarding the time line of the construction activity in the 1 st priority area • NHA explained the procedures and documents that the ISF needs to prepare and submit top NHA • The Consultants and DPWH discussed the options livelihood programs the ISFs may avail.

2. Grievance Redress

No. of grievance redress procedures filed			No. of the conflicts resolved		
During the Quarter	Till the Last Quarter	Up to the Quarter (in total)	During the Quarter	Till the Last Quarter	Up to the Quarter (in total)
N/A	N/A	1 case	N/A	N/A	N/A

No.	Date of Receipt of Complaints	Contents of the Complaints	Correspondences	Resolved / Not yet resolved
1	June 21, 2024	- Rampant incidents of theft have been reported at the Hermosa Ville relocation site.	-LGU of Cainta	-Resolved : Sending Barangay has established additional security, Roving patrols are regularly conducted

3. Progress of Land Acquisition and Resettlement

Resettlement Activities	Planned Total	Unit	Progress in Quantity			Progress in %		Expected Date of Completion	Responsible Organization
			During the Quarter	Till the Last Quarter	Up to the Quarter (Total Progress)	Till the Last Quarter	Up to the Quarter (Total Progress)		
Implementation of Census Survey	1	Set	0	0	1	100 %	100 %	Completed	DPWH
Updates of RAP	1	Set	Abbreviated Resettlement Action Plan (ARAP) was prepared for the additional areas of the Cainta Flood Gate in Cainta Municipality (Finalized in August 2021)					ARAP was prepared in August 2021	DPWH (UPMO and ESSD)
Approval of updated RAP	1	Time	Existing approved RAP is still effective for implementation. Schedule and priority of relocation is under discussion along with revised MOA. RAP shall be updated depending on the changes of relocation policy from in-city to off-city.					In 2024	DPWH (UPMO and ESSD)
Deployment of External Monitoring Agency (EMA)	1	Set	After the RAP reviewing process, Contract of [REDACTED] have been prepared and signed by EMA on February 2024			N/A		Completed	DPWH
1st Priority ISFs Relocation (in Cainta City)	1,365 * in March 2023 validation of Census Survey	HHs	39	289	328	21.2%	24.0%	In 2024	Cainta / NHA / DPWH
1st Priority ISFs Relocation (in Taytay City)	508 * in April 2023 validation of Census Survey	HHs	0	0	0	0%	0%	In 2024	Taytay / NHA

Resettlement Activities	Planned Total	Unit	Progress in Quantity			Progress in %		Expected Date of Completion	Responsible Organization
			During the Quarter	Till the Last Quarter	Up to the Quarter (Total Progress)	Till the Last Quarter	Up to the Quarter (Total Progress)		
Remaining ISFs in both Cainta and Taytay	10,865 * Based on RAP	HHs	0	0	0	0%	0%	In 2028	Cainta / Taytay / NHA
ISFs Relocation (by Pasig City)	2,798	HHs	0	0	1,076	38.4%	38.4%	In 2028	Pasig City / NHA
Land Acquisition and ISF Relocation at the land-side of Cainta Gate	121 * Based on 2024 validation of Census Survey	HHs	0	0	0	0%	0%	In 2024	Cainta / NHA / DPWH

4. Implementation of Livelihood Restoration Assistance

DPWH will monitor the changes of the living standard of the PAFs before the resettlement. When the PAF are found that their living standard worsen, or whose present means of livelihood became not-viable, DPWH, in coordination with other appropriate institutions, will provide assistances, such as skills and livelihood trainings. **In the revised MOA between the DPWH and the NHA, it was stated that NHA must plan and implement livelihood restoration program (LRP) for the ISFs**

Brief Description of the Implemented Livelihood Restoration Program	Results during Report Period (No. of trainings implemented, No. of Participants, etc.)	Location
LRP is described in RAP for Manggahan and ARAP for Cainta Flood Gate	N/A	N/A

5. Restoration of Income and Living Standard

Date of Survey:

No.	Description about Surveyed Area	No. of Surveyed HHs	No. of HHs with Increased Incomes	No. of HHs with Decreased Incomes	No. of HHs with Unchanged Incomes	Types of Problems Encountered	Perceived Need for Additional Assistance
1	N/A	N/A	N/A	N/A	N/A	N/A	N/A

6. Others