

Environmental Monitoring Forms for EMoP
(October to December 2023)

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)		

[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

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

2.2 Monitoring Results

Summary Table of Monitoring Results

Monitoring Item	Monitoring Results during the Report Period
<p>During this period (from October to December 2023), the following environmental parameters were monitored:</p> <ul style="list-style-type: none"> • Middle Marikina River: noise, air quality, water quality (all parameters), and aquatic biota, and tree cutting and relocation. • Disposal Site (in Taytay, Rizal): noise, air quality, and groundwater quality. 	<ul style="list-style-type: none"> • Middle Marikina River: <p>Monitoring results of noise level are summarized as follows:</p> <ul style="list-style-type: none"> • All the monitored noise levels at B-1 and B-3 partially conformed to the standard, • All the monitored noise levels at B-2 and B-4 exceeded the standard. <p>Monitoring results of air quality were consistent with the National Ambient Air Quality Guideline Values (NAAQGV) at all the monitoring stations.</p> <p>Monitoring results of the river water quality (all parameters) are summarized as follows:</p> <ul style="list-style-type: none"> • The following five (5) parameters exceeded the standard at all the monitoring stations or partially: <ul style="list-style-type: none"> - BOD - DO - Fecal Coliform - Phosphate - Ammonia as NH₃N - Iron (Fe) - Manganese (Mn) <p>Regarding the Aquatic Biota, Macro Benthos, Plankton and Fish were surveyed at four (4) stations along the Middle Marikina River. Monitoring results are summarized as follows:</p> <ul style="list-style-type: none"> • There were 7 macro-benthic species with a total of 149 individuals observed. None of the observed species requires recommendation for conservation effort since the macro benthos observed are native and widely distributed across Southeast Asia. • There was a total of 30 plankton species identified at four stations divided into 28 phytoplankton and two (2) zooplankton. Due to the widespread distribution of plankton, it is not evaluated under IUCN (2012) concerning its conservation status. • There is a total of 53 fish individuals observed and classified into 2 fish species. The two fish species observed are categorized as “Least Concern” in terms of conservation effort (IUCN, 2012).

	<p>As for Tree-Cutting and Relocation, during this period, four (4) TCEB permits were newly granted for CP-3 while the CP-2 obtained another one (1) permit from the DENR-NCR for additional trees affected along right bank (Quezon City side) of the Middle Marikina River. Permits obtained for this monitoring period are as follows:</p> <p><u>Contract Package No. 2:</u></p> <ul style="list-style-type: none"> • <i>Permit No. 2023-08-346 TCBP-367 from the DENR-NCR (updated)</i> <p><u>Contract Package No. 3:</u></p> <ul style="list-style-type: none"> • <i>Permit No. 2023-07-321 TCBP-339 (updated)</i> • <i>Permit No. 2023-08-340 TCBP-356 (updated)</i> • <i>Permit No. 2023-08-391 TCBP-425 (updated)</i> • <i>Permit No. 2023-10-461 TCBP-479</i> <p>• Disposal Site:</p> <p>Monitoring results of noise level are summarized as follows:</p> <ul style="list-style-type: none"> • All the monitored noise levels at B-5 and B-6 exceeded the standard for all time regimes, • All the monitored noise levels at B-7 exceeded the standard except for nighttime. <p>Monitoring results of air quality (TSP and Lead (Pb)) were consistent with the National Ambient Air Quality Guideline Values (NAAQGV) at all the monitoring stations.</p> <p>Monitoring results of the groundwater quality (all parameters) are summarized as follows:</p> <ul style="list-style-type: none"> • The following nine (9) parameters exceeded the standard at both (two locations) or one location: <ul style="list-style-type: none"> - BOD - Chloride (Cl⁻) - DO - Fecal Coliform - Phosphate - Ammonia as NH₃-N - Iron (Fe) - Manganese - Surfactants (MBAS)
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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 was conducted during the period from November 14 to 18. The result is shown below:

Monitoring Results of Ambient Noise Level for Middle Marikina River

Station/ Location	Time Regime	Baseline Dec. 2021	November 14 - 18, 2023	DENR Standards (Class A)
B-1	Morning	51	50	50
	Daytime	53	55	55
	Evening	51	50	50
	Nighttime	50	48	45
B-2	Morning	53	51	50
	Daytime	58	60	55
	Evening	58	61	50
	Nighttime	55	51	45
B-3	Morning	54	49	50
	Daytime	54	51	55
	Evening	52	51	50
	Nighttime	51	50	45
B-4	Morning	56	54	50
	Daytime	54	58	55
	Evening	58	57	50
	Nighttime	56	58	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			
	$\mu\text{g}/\text{m}^3$	ppm	Averaging time	Remarks
SO ₂	180	0.07	24 hours	-
NO ₂	150	0.08	24 hours	-
TSP	230	-	24 hours	-

Monitoring Results:

Monitoring was conducted during the period from November 14 to 18. The result is shown below:

Ambient Air Quality Results for Middle Marikina RiverUnit: $\mu\text{g}/\text{Nm}^3$

Station/ Location	Monitoring Parameter	Baseline Dec. 2021	November 14 – 18, 2023	NAAQGV*
B-5	TSP	12.9	64.6	230
	NO ₂	<0.4	3.8	150
	SO ₂	<4	<4	180
B-6	TSP	14.5	67.6	230
	NO ₂	<0.4	4.6	150
	SO ₂	<4	<4	180
B-7	TSP	10.5	27.3	230
	NO ₂	2.4	3.8	150
	SO ₂	<4	<4	180
B-4	TSP	10.7	86.1	230
	NO ₂	<0.4	3.6	150
	SO ₂	<4	<4	180

Note: *: National Ambient Air Quality Guideline Values - Section 12 of Republic Act No. 8749, Monitoring location is shown in the figures attached on last pages of this document.

2.2.1.4. River Water Quality:

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

Monitoring Results:

Location: A-1

Date and time during this monitoring period: November 21, 2023 (All Parameters)

Item	Unit	Standard (Class C)	Baseline	Measured Value
			December 2021	November 2023
Primary Parameters				
BOD	mg/l	7	15	14
Chloride	mg/l	350	59.4	34.6
Color	TCU	75	10	10
DO (Minimum)	mg/l	5	6.56	2.08
Fecal Coliform*	MPN/ 100ml	200	240	79,000
Nitrate as NO ₃ -N	mg/l	7	0.13	0.14
pH (Range)	-	6.5 – 9.0	7.4	7.0
Phosphate as Phosphorus*	mg/l	0.025	0.52	0.45
Temperature	°C	25 – 31	26.7	28.24
TSS	mg/l	80	33	12
Secondary Parameters				
Inorganics				
Ammonia as NH ₃ -N*	mg/l	0.06	4.41	3.32

Item	Unit	Standard (Class C)	Baseline	Measured Value
			December 2021	November 2023
Boron*	mg/l	0.75	<1.00	<1.00
Fluoride	mg/l	1	0.13	0.16
Selenium	mg/l	0.02	<0.0002	<0.0002
Sulfate*	mg/l	275	16	25
Metals				
As	mg/l	0.02	0.001	<0.010
Ba	mg/l	3	<0.20	0.027
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	1.628
Pb	mg/l	0.05	<0.01	<0.007
Mn	mg/l	0.2	0.25	0.155
Hg	mg/l	0.002	<0.0004	<0.0004
Ni	mg/l	0.2	<0.02	<0.004***
Zn	mg/l	2	<0.003	0.017
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	<0.0003
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	<0.01
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	<0.05
Phenol & Phenolic Substances	mg/l	0.05	<0.00006	<0.00006
Surfactants (MBAS)	mg/l	1.5	<0.10	0.65
Trichloroethylene	mg/l	0.9	<0.0003	<0.0003
Total Organochlorine 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.

**: 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: November 21, 2023 (All Parameters)

Item	Unit	Standard (Class C)	Baseline	Measured Value
			December 2021	November 2023
Primary Parameters				
BOD	mg/l	7	76	38
Chloride	mg/l	350	28.2	31.9
Color	TCU	75	10	15
DO (Minimum)	mg/l	5	2.43	2.04
Fecal Coliform*	MPN/ 100ml	200	1,600	170,000
Nitrate as NO ₃ -N	mg/l	7	0.11	0.18
pH (Range)	-	6.5 – 9.0	7.8	7.0
Phosphate as Phosphorus*	mg/l	0.025	0.61	0.78
Temperature	°C	25 – 31	26.76	28.17

Item	Unit	Standard (Class C)	Baseline	Measured Value
			December 2021	November 2023
TSS	mg/l	80	8	46
Secondary Parameters				
Inorganics				
Ammonia as NH ₃ -N*	mg/l	0.06	7.96	6.15
Boron*	mg/l	0.75	<1.00	<1.00
Fluoride	mg/l	1	0.11	0.14
Selenium	mg/l	0.02	<0.0002	<0.0002
Sulfate*	mg/l	275	14	22
Metals				
As	mg/l	0.02	0.0011	<0.010
Ba	mg/l	3	<0.20	0.029
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	0.336
Pb	mg/l	0.05	<0.01	<0.007
Mn	mg/l	0.2	0.33	0.064
Hg	mg/l	0.002	<0.0004	<0.0004
Ni	mg/l	0.2	<0.02	<0.004***
Zn	mg/l	2	<0.003	0.046
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	<0.0003
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	<0.01
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	<0.05
Phenol & Phenolic Substances	mg/l	0.05	<0.00006	0.00036
Surfactants (MBAS)	mg/l	1.5	<0.10	0.11
Trichloroethylene	mg/l	0.9	<0.0003	<0.0003
Total Organochlorine 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: November 21, 2023 (All Parameters)

Item	Unit	Standard (Class C)	Baseline	Measured Value
			December 2021	November 2023
Primary Parameters				
BOD	mg/l	7	101	18
Chloride	mg/l	350	26.2	35.2
Color	TCU	75	10	20
DO (Minimum)	mg/l	5	6.59	2.82

Item	Unit	Standard (Class C)	Baseline	Measured Value
			December 2021	November 2023
Fecal Coliform*	MPN/ 100ml	200	240	54,000
Nitrate as NO ₃ -N	mg/l	7	0.12	0.18
pH (Range)	-	6.5 – 9.0	7.6	7.1
Phosphate as Phosphorus*	mg/l	0.025	0.63	0.68
Temperature	°C	25 – 31	27.1	27.09
TSS	mg/l	80	30	18
Secondary Parameters				
Inorganics				
Ammonia as NH ₃ -N*	mg/l	0.06	6.78	7.11
Boron*	mg/l	0.75	<1.00	<1.00
Fluoride	mg/l	1	0.1	0.14
Selenium	mg/l	0.02	<0.0002	<0.0002
Sulfate*	mg/l	275	16	21
Metals				
As	mg/l	0.02	0.0008	<0.010
Ba	mg/l	3	<0.20	0.024
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	0.007
Fe	mg/l	1.5	4.53	0.345
Pb	mg/l	0.05	<0.01	<0.007
Mn	mg/l	0.2	0.33	0.057
Hg	mg/l	0.002	<0.0004	<0.0004
Ni	mg/l	0.2	<0.02	<0.004***
Zn	mg/l	2	<0.003	0.039
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	<0.0003
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	<0.01
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	<0.05
Phenol & Phenolic Substances	mg/l	0.05	<0.00006	<0.00006
Surfactants (MBAS)	mg/l	1.5	<0.10	0.16
Trichloroethylene	mg/l	0.9	<0.0003	<0.0003
Total Organochlorine 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.

**: 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: November 21, 2023 (All Parameters)

Item	Unit	Standard (Class C)	Baseline	Measured Value
			December 2021	November 2023
Primary Parameters				

Item	Unit	Standard (Class C)	Baseline	Measured Value
			December 2021	November 2023
BOD	mg/l	7	134	13
Chloride	mg/l	350	24.2	26.3
Color	TCU	75	10	10
DO (Minimum)	mg/l	5	8.56	6.15
Fecal Coliform*	MPN/ 100ml	200	350	54,000
Nitrate as NO ₃ -N	mg/l	7	0.16	0.26
pH (Range)	-	6.5 – 9.0	7.7	7.0
Phosphate as Phosphorus*	mg/l	0.025	0.75	0.63
Temperature	°C	25 – 31	28	27.64
TSS	mg/l	80	122	44
Secondary Parameters				
Inorganics				
Ammonia as NH ₃ -N*	mg/l	0.06	6.01	4.66
Boron*	mg/l	0.75	<1.00	<1.00
Fluoride	mg/l	1	0.1	0.13
Selenium	mg/l	0.02	<0.0002	<0.0002
Sulfate*	mg/l	275	6	19
Metals				
As	mg/l	0.02	0.0013	<0.010
Ba	mg/l	3	<0.20	0.025
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	0.003
Fe	mg/l	1.5	15.71	1.427
Pb	mg/l	0.05	<0.01	<0.007
Mn	mg/l	0.2	0.68	0.335
Hg	mg/l	0.002	<0.0004	<0.0004
Ni	mg/l	0.2	<0.02	<0.004***
Zn	mg/l	2	0.017	0.055
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	<0.01
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	<0.05
Phenol & Phenolic Substances	mg/l	0.05	<0.00006	<0.00006
Surfactants (MBAS)	mg/l	1.5	<0.10	<0.10
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): There is no newly consolidated / updated during this monitoring period.

2.2.1.6 Aquatic Biota

Monitoring of Aquatic Biota is scheduled one time during the construction stage. The monitoring was conducted on November 18 to 19, 2023.

Monitoring Location: Monitoring was conducted at the following four (4) stations along the Middle Marikina River: (1) Bridge Town, (2) Manalo Bridge, (3) Marcos Bridge, and (4) Marikina Bridge.

Monitoring Parameters: Monitoring was conducted targeting for (1) Macro Benthos, (2) Plankton, and (3) Fish.

Monitoring Results:

(1) Macro Benthos

There were 7 macro-benthic species with a total of 149 individuals observed and resolved to 3 Phyla, 4 Classes, 7 Families and 7 Genera as shown in the table below.

PHYLUM	CLASS	FAMILY	SCIENTIFIC NAME	COMMON NAME
Mollusca	Gastropoda	Lymnaeidae	<i>Lymnaea sp.</i>	Gilled snail
Mollusca	Gastropoda	Ampullariidae	<i>Pomacea sp.</i>	Golden apple snail
Arthropoda	Malacostraca	Atyidae	<i>Atyoida sp.</i>	Freshwater shrimp
Arthropoda	Insecta	Belostomatidae	<i>Belostoma sp.</i>	Giant water bug
Arthropoda	Insecta	Phoridae	<i>Phorid fly larva</i>	<i>Phorid fly larva</i>
Arthropoda	Insecta	Tipulidae	<i>Tipuloidea sp.</i>	Crane fly
Annelida	Oligochaeta	Lumbriculidae	<i>Oligochaete</i>	freshwater worm

Macro benthos species identified were categorized according to 4 groups in terms of pollution sensitivity and tolerance: Group 1 are sensitive to pollutants; Group 2 are semi-sensitive to pollutants. Group 3 are the semi-tolerant to pollutants, and Group 4 are pollution tolerant. It was noted that most macro benthic species' pollution sensitivity ranges from semi-sensitive to pollutant tolerant, indicating a fair to poor condition of its aquatic habitat. None of the macro-benthic organisms observed requires recommendation for conservation effort since most of the macro benthos observed are native and widely distributed across Southeast Asia (IUCN, 2012).

(2) Plankton

There was a total of 30 plankton species identified at four stations divided into 28 phytoplankton and two (2) zooplankton. All four stations have moderate to high organic pollution load as indicated by the presence of pollution tolerant algae genera. Due to the widespread distribution of plankton in various types of aquatic habitat, plankton is not evaluated under IUCN (2012) concerning its conservation status. Plankton serves the base of food chain in any aquatic habitat and an important indicator of health of any aquatic environment.

(3) Fish

There is a total of 53 fish individuals observed and classified into 2 fish species across the 4 sampling stations. These include the Janitor fish (*Pterygoplichthys pardalis*) and Gurami (*Trichopodus trichopterus*). Janitor fish poses a great risk in terms of ecological balance, being known to be successful in thriving in aquatic environment with poor water quality and even with limited dissolved oxygen (DO). The species serves as threat also to native fish species in the Philippines.

Gourami (*T.trichopterus*) is another Alien and Invasive Species (AIS) that was introduced to the Philippines. This fish is known to be a dominant fish and compete aggressively against other local fish species. Its presence in highly polluted river suggests that these species are pollution tolerant and can withstand water bodies with high organic deposits and low dissolved oxygen (DO).

These fish species observed in Marikina River are categorized as “Least Concern” in terms of conservation effort (IUCN, 2012) and all are well distributed in the Asia-Pacific Region.

Species Name	Bridgetown (AQB1)	Manalo Bridge (AQB2)	Marcos Bridge AQB3)	Marikina Bridge (AQB4)	Total Abundance	Relative Abundance (%)
<i>Pterygoplichthys pardalis</i>	3	5	6	38	52	98.1
<i>Trichopodus trichopterus</i>	0	0	1	0	1	1.9
Total	3	5	7	38	53	100.0

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)

A. Permit No. 2023-08-346 TCBP-367 from the DENR-NCR (updated)

To date, a new TCEB permit was issued by the DENR-NCR for the additional thirty (30) trees affected by the Project located at Brgy. Bagumbayan, Quezon City. These additional trees were not included in the initial permit issued by the DENR-NCR due to several factors such as unease of access to some trees due to ISFs and some newly planted trees may be done by the residents nearby. However, upon the assessment of DENR-NCR Forest Utilization Section, a total of 38 trees were inventoried to be affected by the Project. Shown in the following tables (official results) are the status of the TCEB permits for:

A. No. 2023-08-346 TCBP-367 from the DENR

Official ID / No.:	No. 2023-08-346 TCBP-367
Date of Issuance:	August 7, 2023
Name of Permittee:	Mr. Grecille Christopher R. Damo, Project Manager I
Number of Targeted Trees:	38 trees
Sta. of the Target Area where the Trees are Located:	Contract Package No. 2, Sta. 6+700 – Sta. 9+300, Right Bank, Brgy. Bagumbayan Quezon City
Replacement Ratio for Cut or Relocated Trees*	1:50 for planted trees 1:100 for naturally growing trees
Instruction in the Permit: Tree Cutting or Earth-Balling for Relocation	Cutting: 35 Earth-Balling: 3 3,050 saplings were already delivered to the DENR-NCR Technical Services Office, of which 70% are hardened indigenous-type saplings and 30% are ornamental.
Status of Permit as of this Monitoring Period:	Completed.

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

II. Contract Package No. 3

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

- A. Permit No. 2023-07-321 TCBP-339 (updated)
- B. Permit No. 2023-08-340 TCBP-356 (updated)
- C. Permit No. 2023-08-391 TCBP-425 (updated)
- D. Permit No. 2023-10-461 TCBP-479

For this monitoring period, refer to the tables presented below for the updated status of the four (4) additional TCEB permits obtained by the CP-3 Contractor in the previous quarters from the DENR-NCR for the removal of affected by the Project.

A. No. 2023-07-321 TCBP-339 from DENR-NCR

Official ID / No.:	No. 2023-07-321 TCBP-339
Date of Issuance:	July 25, 2023
Name of Permittee:	Mr. Grecille Christopher R. Damo, Project Manager I
Number of Targeted Trees:	206 trees
Sta. of the Target Area where the Trees are Located:	Contract Package No. 3, L17 to L18, Sta. 12+130 to Sta. 12+520, Barangay San Roque, Marikina City
Replacement Ratio for Cut or Relocated Trees*	1:50 for planted trees 1:100 for naturally growing trees
Instruction in the Permit: Tree Cutting or Earth-Balling for Relocation	Cutting: 59 Earth-Balling: 147 3,350 saplings were already delivered to DENR-NCR La Mesa Nursery and DENR-NCR Technical Services Office, of which 70% are hardened type saplings and 30% are ornamental.
Status of Permit as of this Monitoring Period:	Ongoing cutting and balling of affected trees.

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

B. No. 2023-08-340 TCBP-356 from DENR-NCR

Official ID / No.:	No. 2023-08-340 TCBP-356
Date of Issuance:	August 2, 2023
Name of Permittee:	Mr. Grecille Christopher R. Damo, Project Manager I
Number of Targeted Trees:	251 trees
Sta. of the Target Area where the Trees are Located:	Contract Package No. 3, R2-R3, Sta. 9+340 to Sta. 9+660, Barangay Industrial Valley Compound (IVC), Marikina City
Replacement Ratio for Cut or Relocated Trees*	1:50 for planted trees 1:100 for naturally growing trees
Instruction in the Permit: Tree Cutting or Earth-Balling for Relocation	Cutting: 180 Earth-Balling: 71 9,850 saplings were already delivered to DENR-NCR La Mesa Nursery and DENR-NCR Technical Services Office, of which 70% are hardened type saplings and 30% are ornamental.
Status of Permit as of this Monitoring Period:	Completed.

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

C. No. 2023-08-391 TCBP-425 from DENR-NCR

Official ID / No.:	No. 2023-08-391 TCBP-425
Date of Issuance:	August 31, 2023
Name of Permittee:	Mr. Grecille Christopher R. Damo, Project Manager I
Number of Targeted Trees:	246 trees
Sta. of the Target Area where the Trees are Located:	Contract Package No. 3, R16 to R21, Sta. 12+220 to 13+020 Brgy. Jesus Dela Peña, Marikina City
Replacement Ratio for Cut or Relocated Trees*	1:50 for planted trees 1:100 for naturally growing trees
Instruction in the Permit: Tree Cutting or Earth-Balling for Relocation	Cutting: 59 Earth-Balling: 187

	2,150 saplings were already delivered to DENR-NCR La Mesa Nursery and DENR-NCR Technical Services Office, of which 70% are hardened indigenous type saplings and 30% are ornamental.
Status of Permit as of this Monitoring Period:	Ongoing cutting and balling of affected trees.

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

D. No. 2023-10-461 TCBP-479 from DENR-NCR

Official ID / No.:	No. 2023-10-461 TCBP-479
Date of Issuance:	October 3, 2023
Name of Permittee:	Mr. Grecille Christopher R. Damo, Project Manager I
Number of Targeted Trees:	103 trees
Sta. of the Target Area where the Trees are Located:	Contract Package No. 2, Sta. 9+200 to Sta. 9+300, Barangay Industrial Valley Complex, Marikina City Contract Package No. 3, Sta. 9+300 to Sta. 9+340, Barangay Industrial Valley Complex, Marikina City
Replacement Ratio for Cut or Relocated Trees*	1:50 for planted trees 1:100 for naturally growing trees
Instruction in the Permit: Tree Cutting or Earth-Balling for Relocation	Cutting: 59 Earth-Balling: 147 4,300 saplings were already delivered to DENR-NCR La Mesa Nursery and DENR-NCR Technical Services Office, of which 70% are hardened type saplings and 30% are ornamental.
Status of Permit as of this Monitoring Period:	Ongoing cutting and balling of affected trees.

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 was monitored.

2.2.2.1. Excavated/Dredged Material

Monitoring was not conducted during this period (during October to December 2023)

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 November 20 – 23, 2023. The result is shown below:

Monitoring Results of Ambient Noise Level for Disposal Site

Station/ Location	Time Regime	Baseline Dec. 2021	November 20 – 23, 2023	DENR Standards (Class A)
B-5	Morning	69	70	55
	Daytime	72	71	60
	Evening	70	70	55
	Nighttime	68	62	50
B-6	Morning	70	71	55
	Daytime	69	71	60
	Evening	68	71	55
	Nighttime	68	62	50
B-7	Morning	65	52	50
	Daytime	53	56	55
	Evening	52	53	50
	Nighttime	48	44	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.

2.2.3.2 Air Quality

Republic Act No.8749 is applied for evaluation.

Pollutants	Short Term			
	$\mu\text{g}/\text{m}^3$	ppm	Averaging time	Remarks
TSP	230	-	24 hours	-
Pb	1.5	-	24 hours	-

Monitoring Results: Monitoring was conducted November 20 - 23, 2023. The result is shown below:

Ambient Air Quality Results for Disposal Site

Station/ Location	Monitoring Parameter	Baseline Dec. 2021	November 20 – 23, 2023	Unit: $\mu\text{g}/\text{Nm}^3$
				NAAQGV*
B-5	TSP	60	109.9	230
	Lead (Pb)	0.0322	<0.0006	1.5
B-6	TSP	32.6	102.9	230
	Lead (Pb)	0.0068	<0.0006	1.5
B-7	TSP	32.6	145.1	230
	Lead (Pb)	0.0068	<0.0006	1.5

Note: *: National Ambient Air Quality Guideline Values - Section 12 of Republic Act No. 8749,
 Monitoring location is shown in the figures attached on last pages of this document.

2.2.3.3 Groundwater

DAO 2016-08/ are applied for evaluation.

Monitoring Results: Monitoring was conducted on November 20, 2023. The result is shown below:

Parameters	Unit	GW-1		GW-2		DAO 2016-08/ DAO 2021-19 (Class A)
		Baseline Dec. 2021	November 20, 2023	Baseline Dec. 2021	November 20, 2023	
PRIMARY						
Biochemical Oxygen Demand (BOD)	mg/L	<1	22	<1	27	3
Chloride (Cl ⁻)	mg/L	175.9	56.4	331.9	68.0	250
Color (True)	CU	25	20	15	50	50
Dissolved Oxygen (DO)	mg/L	7.76	4.31	6.97	6.18	5(min)
Fecal Coliform*	MPN/100mL	9.200	33	5,400	49	50
Nitrate as NO ₃ -N	mg/L	4.5	0.38	3.23	0.39	7
pH	-	7.1	7.0	7.5	7.3	6.5-8.5
Phosphate*	mg/L	0.31	1.03	0.11	1.73	0.025
Temperature	°C	26.94	28.28	28.02	28.06	26-30
Total Suspended Solids (TSS)	mg/L	16	12	8	16	50
SECONDARY						
Inorganics						
Ammonia as NH ₃ -N*	mg/L	16.92	0.34	0.56	1.14	0.06
Boron (B)*	mg/L	<1.00	<1.00	<1.00	<1.00	0.75
Fluoride (F ⁻)	mg/L	0.14	0.21	0.13	0.2	1
Selenium (Se)	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	0.01
Sulfate (SO ₄)*	mg/L	25	9	160	22	250
Metal						
Arsenic (As)	mg/L	<0.0007	<0.010	<0.0007	<0.010	0.01
Barium (Ba)	mg/L	<0.20	0.094	<0.20	0.049	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	2.188	0.1	0.371	1
Lead (Pb)	mg/L	<0.01	<0.007	<0.01	<0.007	0.01
Manganese (Mn)	mg/L	2.5	2.441	3.478	0.696	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	0.041	<0.003	0.054	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	<0.04**	<0.5	<0.04**	1
Oil and Grease	mg/L	<1.0	<1.0	<1.0	<1.0	1
Polychlorinated Biphenyls (PCB)	µg/L	<0.05	<0.05	<0.05	<0.05	<0.1
Phenol and Phenolic Substances	mg/L	<0.00006	<0.00006	<0.00006	<0.00006	<0.001
Surfactants (MBAS)	mg/L	<0.10	0.53	<0.10	0.72	0.2
Trichloroethylene	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	0.07
Organochlorine Pesticide		n/a	n/a	n/a	n/a	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
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

Parameters	Unit	GW-1		GW-2		DAO 2016-08/ DAO 2021-19 (Class A)
		Baseline Dec. 2021	November 20, 2023	Baseline Dec. 2021	November 20, 2023	
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

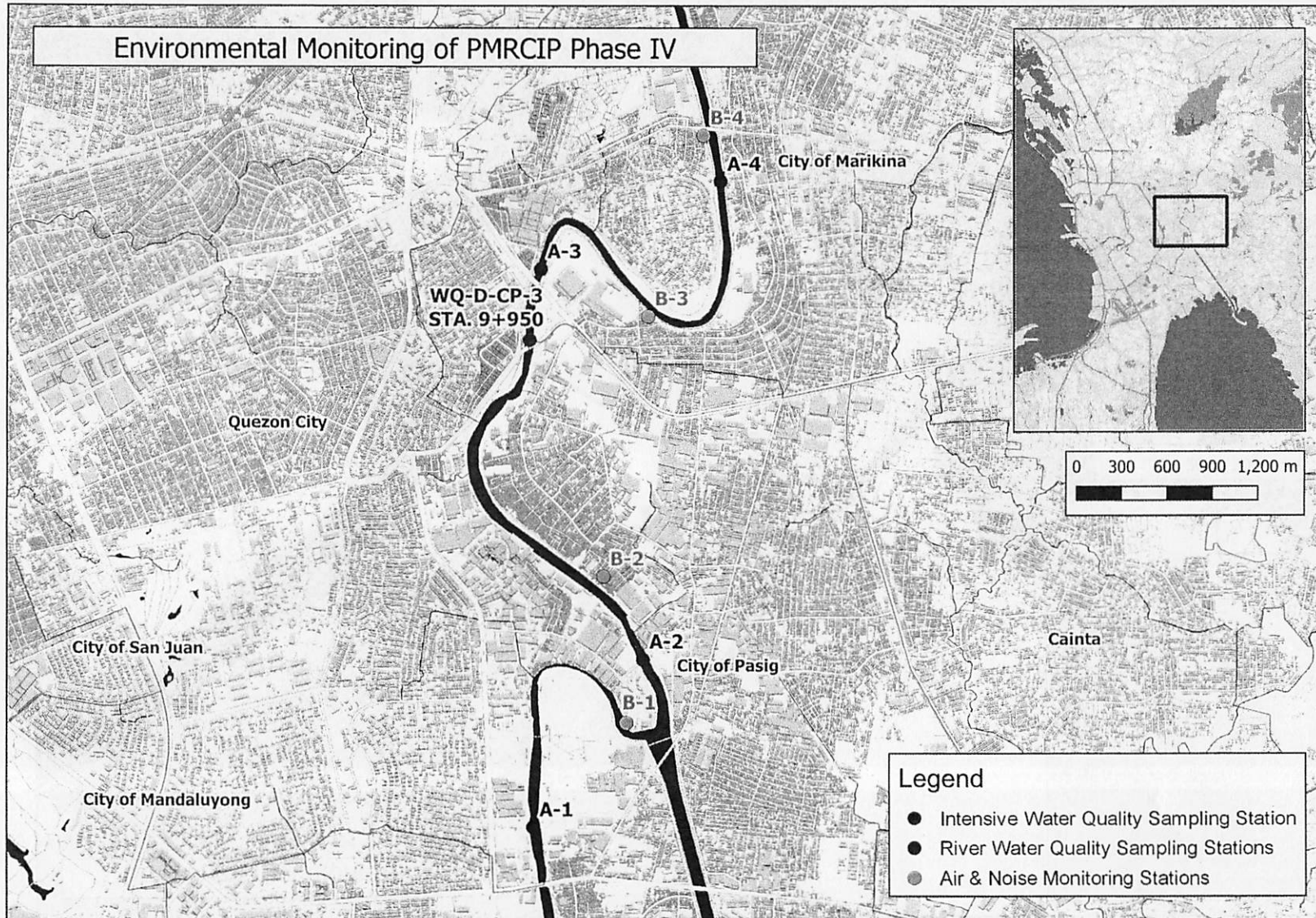


Figure 1 Location Map of Monitoring Station (Middle Marikina River)

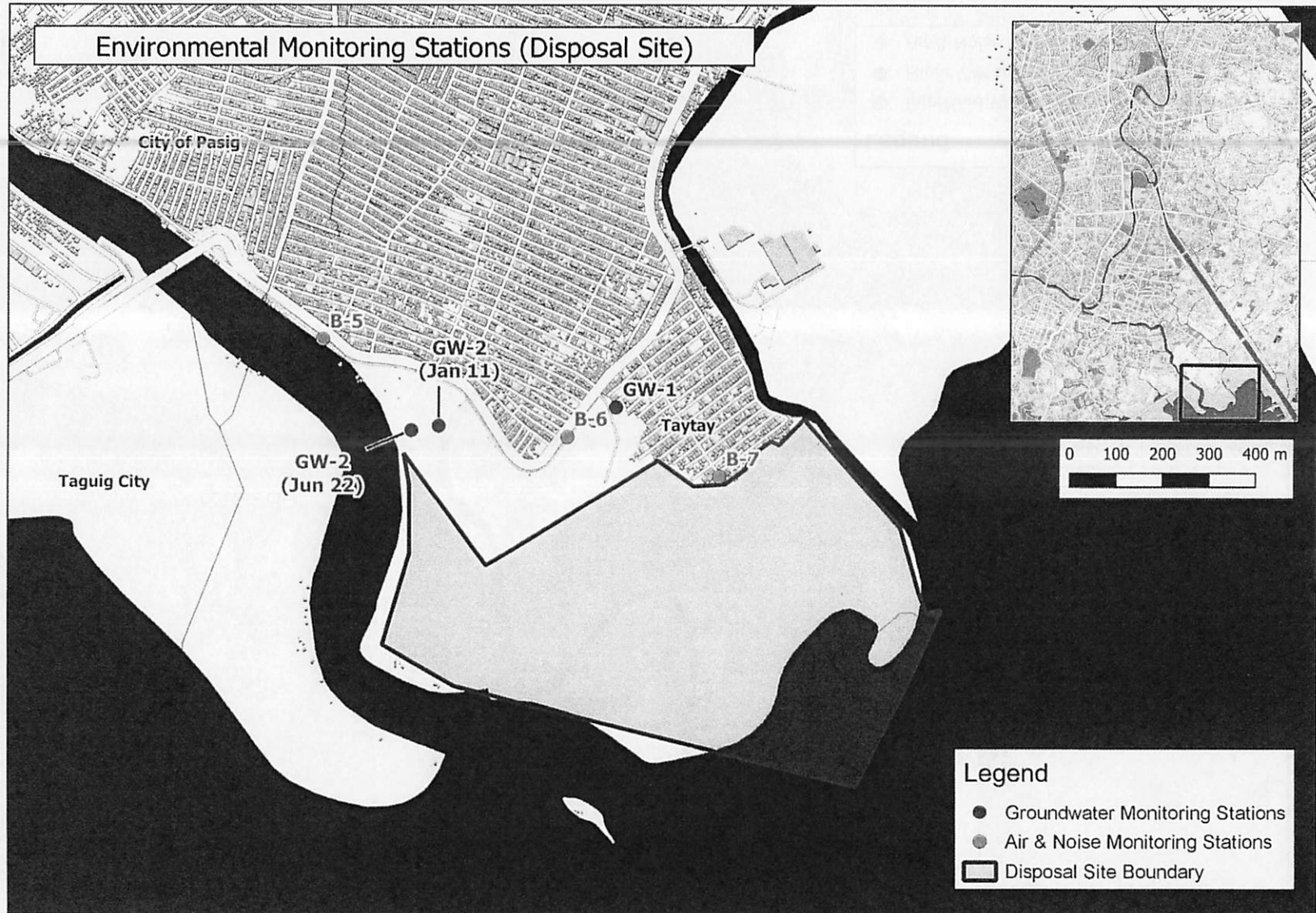


Figure 2. Location Map of Monitoring Station (Disposal Site)

Attachment IV-10

RAP Monitoring Forms for December 2023

RAP Monitoring Form: Pasig-Marikina River

RAP Monitoring Form: Pasig-Marikina River
(As of January 2024: the period from September to December 2023)

1. Public Consultations

No.	Date	Place/ No. of Participants	Contents of the Consultation	Concerns from Participants	Correspondences
1	1 Jun '21 3 Jun '21	• 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"> • [REDACTED] have submitted Documents regarding on his claims to DPWH, these documents have been forwarded to the Departments legal office verification. • Since the submitted documents cannot 	Under resolving process

			validate the claims of ██████████ 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	██████████ requested compensation for the area inside the river (river-side of the existing dike in front of their land)	DPWH have already compensated ██████████ 100% for the affected structure, while only 50% for the affected land area	Under resolving process
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 submitter 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"> • Under resolving process • 161 HH have permanent connection and the rest are still in process • The cases regarding the healthcare of the relocates was brought to the attention of the Brgy. Bagumbayan for immediate course. Still under resolving. • 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 in 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

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 Agency (EMA)	1	Set	<p>██████████ signed the contract for the PMRCIP-IV as the External Monitoring Agency of the project last June 1, 2022.</p>			<p>Baseline survey for Bagumbayan was conducted and completed on June 27-28, for the ISFs in Pasig city, this was completed on August 15, while for the disposal site in Taytay was completed on August 16.</p> <p>Final Inception Report was submitted to DPWH-UPMO-FCMC on October 10, 2022.</p> <p>The 1st Monitoring report was submitted to DPWH on May 2023</p> <p>The 2nd Monitoring period started on October 2023, Site Visit, individual interviews of the relocatees and FGDs where conducted during this period.</p>		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)		
						The Draft 2 nd Monitoring report was forwarded to the Consultants last December 2023 for review before submitting to DPWH.			
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	21	46	3	65.7%	95.7%	In 2024	Quezon City / NHA / DPWH
ISFs Relocation (by Pasig City)	266 (65 Priority)	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.	ISFs of the project among 35 cases which was relocated during the 1st batch participated the course.	The relocation site in Baras
Orientation of the Baras LGUs regarding on 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 commence at 1AM and lasted until 4PM.	NHA Relocation Site in Baras, Rizal

5. Restoration of Income and Living Standard

The external monitoring agency (EMA) will implement the baseline survey to understand socio-economic situation of ISFs in Baras in July.

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

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RAP Monitoring Form: Manggahan Floodway

RAP Monitoring Form: Manggahan Floodway
(As of January 2024: the period September to December 2023)

1. Public Consultations:

No.	Date	Place / No. of Participants	Contents of the Consultation	Concerns from Participants	Correspondences
1	<ul style="list-style-type: none"> • January 31, 2023 • February 2, 2023 • February 8, 2023 • February 10, 2023 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • DPWH explained regarding the time line of the construction activity in the 1st 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

During the Quarter	No. of grievance redress procedures filed		No. of the conflicts resolved		
	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	N/A	N/A	N/A	N/A

No.	Date of Receipt of Complaints	Contents of the Complaints	Correspondences	Resolved / Not yet resolved
1	N/A	-	-	-

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 John J. Carrols Institute on Social Issues (ICSI) as the EMA shall be prepared.			N/A		In January 2024	DPWH
1st Priority ISFs Relocation (in Cainta City)	1,013 * in March 2023 validation of Census Survey	HHs	0		117	11.5%	0%	In 2024	Cainta / NHA / DPWH
1st Priority ISFs Relocation (in Taytay City)	379 * in April 2023 validation of Census Survey	HHs	0	0	0	0%	0%	In 2024	Taytay / NHA
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	34 * in ARAP	HHs	0	0	0	0%	0%	In 2024	Cainta / NHA / 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)		
Gate									

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