



MAY 15 2015

Memorandum Circular No. 006
Series of 2015

SUBJECT: Guidelines for Recreational Waters Monitoring Program

The DENR, through EMB, is mandated by Section 2 of Republic Act (RA) 9275 or the Philippine Clean Water Act of 2004 to: 1) streamline processes and procedures in the prevention, control, and abatement of pollution of the country's water resources; 2) promote public information and education; and 3) encourage the participation of an informed and active public in water quality management and monitoring.

Pursuant to RA 9275, this Memorandum Circular is issued to provide clear guidance on the monitoring of recreational waters and subsequent reporting to, but not limited to, the following agencies for the purpose of public notification in order to protect public health:

- Department of Health (DOH)
- Department of Tourism (DOT)
- Local Government Units (LGU)

1.0 SCOPE AND COVERAGE

This Memorandum Circular shall cover all recreational waters pursuant to the following criteria:

- Officially classified Class B or SB waters; or
- Water bodies intended for primary contact recreation; or
- Water bodies identified by the DOT and LGUs as tourist recreational areas

2.0 DEFINITION OF TERMS

For the purposes of this Memorandum Circular, the following terms shall have the following meanings:

“EMB” refers to the Environmental Management Bureau of the DENR.

“Class B” refers to a classification for freshwater bodies intended for primary contact recreation such as bathing, swimming, etc. (Recreational Water Class I).

“Class SB” refers to a classification for marine water bodies with the following intended beneficial uses:

- Tourist Zones – For tourism and recreational activities
- Recreational Water Class I – Intended for primary contact recreation (bathing, swimming, skin diving, etc.)

“DENR” refers the Department of Environment and Natural Resources.

“Geometric Mean” means the n^{th} root of the product of a series of n numbers. It is a calculation to determine an average when the set of numbers covers a wide range.

“Primary Contact Recreation” refers to any form of recreation, where there is intimate contact of the human body with water, such as bathing, swimming, water skiing, skin diving, or other water-related recreational activities.

“Primary Water Quality Parameters” are the required minimum water quality parameters to be monitored.

“Public Notification” refers to the dissemination of information in order to protect public health.

“Secondary Water Quality Parameters” are other water quality parameters to be monitored with known sources of the identified secondary water quality parameters being discharged into the said water body.

3.0 APPLICABLE WATER QUALITY PARAMETERS

For the purposes of this Memorandum Circular, recreational waters shall be monitored using the primary water quality parameters and supplemented by secondary water quality parameters; provided that there are known sources of the identified secondary water quality parameters being discharged into the said water body.

3.1 PRIMARY WATER QUALITY PARAMETERS FOR RECREATIONAL WATERS

All recreational waters shall be monitored using the primary water quality parameters shown in Table 1 and the corresponding allowable limits shall be observed to maintain the intended water quality of the recreational waters.

Table 1. Water Quality Criteria for Primary Water Quality Parameters

Parameter	Unit	Water Quality Criteria	
		Class B	Class SB
Fecal Coliform	MPN/100 mL	200	200
pH (range)	-	6.5 – 8.5	6.0 – 8.5

Notes: (a) MPN/100 mL - Most Probable Number per 100 milliliters

(b) Geometric mean of at least three data sets per quarter for fecal coliform. Further, maximum allowable limit for fecal coliform is twice the water quality guideline per sample.

Frequency of monitoring for primary water quality parameters shall be monthly for at least 10 months per year.

3.2 SECONDARY WATER QUALITY PARAMETERS FOR RECREATIONAL WATERS

Where appropriate, secondary water quality parameters as listed in Table 2 shall be included in monitoring recreational waters in addition to the primary water quality parameters presented in Section 3.1 of this Memorandum Circular. Correspondingly, the allowable limits shall be observed to maintain the intended water quality of the recreational waters.

Table 2. Water Quality Criteria for Secondary Water Quality Parameters

Parameter ^(a)	Unit	Water Quality Criteria	
		Class B	Class SB
Toxic Metal			
Total Mercury	mg/L	0.002	0.002
Organics			
Organophosphate	mg/L	nil	nil
Oil and Grease	mg/L	1.0	2.0
Phenol and Phenolic Substances ^(c)	mg/L	0.005	0.01

Notes: (a) Allowable range for pH

(b) Maximum allowable limit for toxic metals and organics parameters

Frequency of monitoring for secondary water quality parameters shall be at least semi-annual.

4.0 IDENTIFICATION, MONITORING, AND REPORTING

The protocols discussed in this section shall be used in identifying and monitoring recreational waters and in reporting to concerned agencies for the purpose of public notification in order to protect public health.

4.1 IDENTIFICATION

The EMB Regional Offices (ROs), in collaboration with the regional offices of DOT and DOH as well as concerned LGUs, shall identify recreational waters that meet the criteria specified in Section 1.0 of this Memorandum Circular. These waters shall then be included in the Regional Recreational Waters Monitoring Program.

Recreational waters shall be identified by the name of the water body. The municipality or region can be appended to the name of the water body if recreational waters were identified at various sections of the water body traversing a different municipality or region.

4.2 MONITORING

The EMB ROs shall develop and implement their Regional Recreational Waters Monitoring Program adopting a two-level system. The prescribed system is shown in Table 3.

Table 3. Two-Level System of the Regional Recreational Waters Monitoring Program

Level	Suitability	Monitoring	Reporting
Surveillance	<ul style="list-style-type: none"> All parameters within the allowable limits for all sampling events; or Any primary parameter not within the allowable limit for a single or two consecutive sampling events 	<ul style="list-style-type: none"> Monthly (for at least 10 months per year) sampling for primary parameters; and At least semi-annual sampling for secondary parameters 	<ul style="list-style-type: none"> No reporting required If water body was previously under Alert Level, inform the regional offices of DOH and DOT as well as the concerned LGUs the current condition of the water body^(a)
Alert ^(b)	<ul style="list-style-type: none"> Any primary parameter not within the allowable limit for three consecutive sampling events; and/or Any secondary parameter not within the allowable limit for a single sampling event 	<ul style="list-style-type: none"> Increase sampling frequency to twice a month for primary parameters; and/or Increase sampling frequency to quarterly for secondary parameters 	Immediately report to the regional offices of DOH and DOT as well as the concerned LGUs the condition of the water body. Reports shall be in accordance with Section 4.3 of this Memorandum Circular.

Notes:

(a) Alert level shall be reverted to surveillance level when all allowable limits of the primary parameters have been met for two consecutive sampling events, and the allowable limits for secondary parameters have been met for a single sampling event.

(b) In cases where a primary parameter exceeds its allowable limit for six consecutive sampling events, monitoring frequency can be reverted to monthly in order to conserve resources. For secondary parameters, monitoring frequency can be reverted to semi-annually once a parameter exceeds its allowable limit for two consecutive sampling events.

Monitoring stations and sampling points shall be designated as prescribed in Annex 1 of this Memorandum Circular. On the other hand, the sample containers and protocols for sample collection, sample preservation and handling, and chain-of-custody shall be in accordance with the Ambient Water and Effluent Quality Monitoring Manuals issued through EMB Memorandum Circular 2008-008.

4.3 REPORTING

The EMB ROs shall report the status of their Regional Recreational Waters Monitoring Program to the regional offices of DOH and DOT as well as the concerned LGUs. Reporting schedule shall be based on the results of the monitoring.

Reports shall also be submitted to the EMB Central Office according to the schedule in Table 4.

Table 4. Submission Schedule of the Recreational Waters Monitoring Program Status Report

Period Covered	Submission Schedule
January to June	July of the present year
July to December	January of the following year

All reports shall be in accordance with the prescribed format provided in Annex 2 of this Memorandum Circular.

5.0 INSTITUTIONAL ARRANGEMENTS

For the purposes of this Memorandum Circular, each EMB,RO shall establish a Regional Inter-Agency Technical Committee whose members shall be composed of, but not limited to, the following agencies:

- DOH
- DOT
- LGUs

The Regional Inter-Agency Technical Committee shall have the following functions:

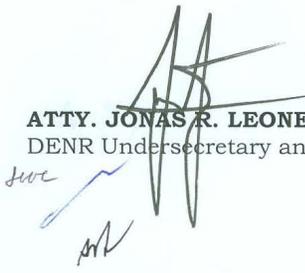
- Identify recreational waters that meet the criteria specified in Section 1.0 of this Memorandum Circular
- Formulate and implement a plan of action for the notification of the public when a water body and/or sections thereof are deemed temporarily unsuitable for recreational use

Annex 3 presents the sample Memorandum of Agreement for the establishment of the Regional Inter-Agency Technical Committee while Annex 4 shows a sample notification and management program incorporated in the Minutes of the Meeting of the Regional Inter-Agency Technical Committee.

6.0 EFFECTIVITY

This Memorandum Circular shall take effect immediately.

ATTY. JONAS R. LEONES
DENR Undersecretary and Concurrent EMB Director



Handwritten signature of Atty. Jonas R. Leones, consisting of a large, stylized 'JRL' monogram.

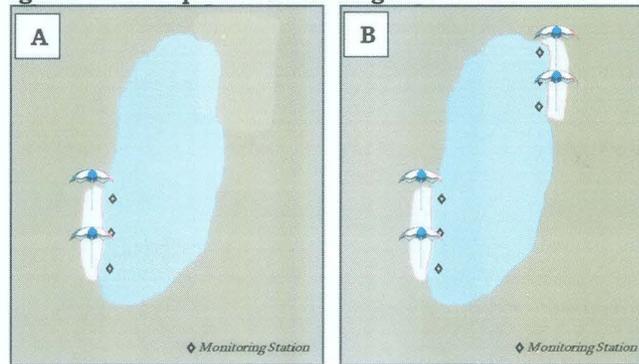
Annex 1. Establishing Monitoring Stations and Sampling Points

1. Recreational Freshwater Bodies

a) Monitoring Stations

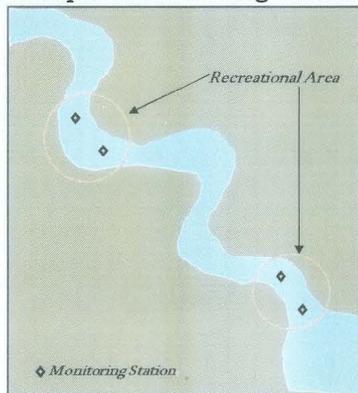
For lakes, at least three monitoring stations should be established at the section designated as recreational area. If there is more than one designated recreational area within the lake, then each area should be treated individually and sampled accordingly. Figures 1A and 1B present illustrations of establishing monitoring stations in a lake with one and two designated recreational areas, respectively.

Figure 1. Example of Monitoring Stations in Lakes



For rivers, a minimum of two monitoring stations (i.e. one upstream station and one downstream station) should be established to a segment of the river used for primary contact recreation. Figure 2 presents an illustration of establishing monitoring stations in rivers.

Figure 2. Example of Monitoring Stations in Rivers



b) Sampling Points and Depth

Samples should be collected where water is one meter deep or knee deep at a minimum. Samples should be taken from a depth of 0.1 meter below

the water surface. If the water is less than one meter, collect the sample at mid-depth.

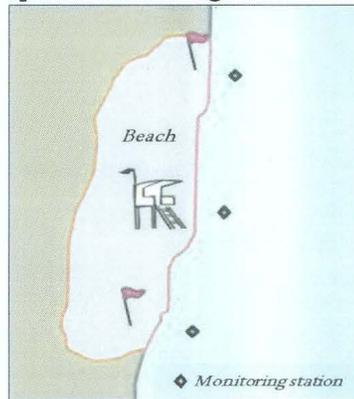
For rivers, sampling at the water's edge and stagnant water should be avoided.

2. Recreational Marine Water Bodies

a) Monitoring Stations

The monitoring stations at recreational marine water bodies should be representative of the beach area. For beaches less than one kilometer long, at least three monitoring stations should be established. On the other hand, for beaches more than one kilometer long; more monitoring stations may be needed. Monitoring stations must be spaced 300 meters apart and fixed throughout the year. Figure 3 presents an illustration of establishing monitoring stations in marine waters.

Figure 3. Example of Monitoring Stations in Marine Waters



b) Sampling Points and Depth

Samples should be collected at designated monitoring stations where water is about one meter deep or knee deep at a minimum. Samples should be taken from a depth of 0.1 meter below the water surface. If the water is less than one meter, collect the sample at mid-depth.

Annex 2. Recreational Waters Monitoring Program Report Format
(To be printed on DENR Letterhead)

**RECREATIONAL WATERS MONITORING PROGRAM
SAMPLE STATUS REPORT**

1.0 RECREATIONAL WATER PROFILE

This section contains an overview of the recreational water bodies that the EMB RO has monitored for the covered period.

Table 1 summarizes the recreational water bodies monitored by EMB Region 4-A from January to June 2014.

Table 1. Recreational Water Bodies of Region 4A

Water Body	Hydrologic Characteristics	Description	Current Use
Freshwater Bodies			
Balanac River – Majayjay	<ul style="list-style-type: none"> ◆ Swimming area – 0.4 sq. km ◆ Average depth – 2 m ◆ Average length – 1 km ◆ Average width – 3 m 	Home to Taytay Falls located in Majayjay, Laguna	Section identified by LGU as tourist recreational area
Caliraya Lake – Lumban, Cavinti, Kalayaan	<ul style="list-style-type: none"> ◆ Surface area – 1,050 ha ◆ Average depth – 15 m ◆ Average width – 3 km 	Man-made lake bordering the towns of Lumban, Cavinti, and Kalayaan, Laguna	Water used for hydroelectric power but has become a popular spot for water sports and outdoor recreation including fishing
Lake Bunot – San Pablo City	<ul style="list-style-type: none"> ◆ Surface area – 0.6 sq. km ◆ Average depth – 1 m ◆ Average width – 1 km 	One of the seven lakes of San Pablo City, Laguna	Section identified by LGU as tourist recreational area
Marine Water Bodies			
Tayabas Bay – Sariaya	<ul style="list-style-type: none"> ◆ Swimming area – 3 sq. km ◆ Average depth – 2 m ◆ Average length – 1 km 	Large bay in the southern part of Luzon. This is a portion of the bay located in Sariaya, Quezon.	Identified by LGU as tourist recreational area
Tayabas Bay – San Juan	<ul style="list-style-type: none"> ◆ Swimming area – 5 sq. km ◆ Average depth – 3 m ◆ Average length – 14 km 	Large bay in the southern part of Luzon. This is a portion of the bay located in San Juan, Batangas	Water body intended for primary contact recreation
Balayan Bay – Calatagan	<ul style="list-style-type: none"> ◆ Swimming area – 2 sq. km ◆ Average depth – 2 m ◆ Average length – 1 km 	Large bay with intertidal flats, mangrove forest, and the coastal wetlands of the Calatagan Peninsula	Identified by LGU and DOT as tourist recreational area

Note: Information provided refers to the segment of the water bodies designated for primary contact recreation.

2.0 RECREATIONAL WATER MONITORING STATIONS

This section summarizes the monitoring stations identified per water body, which includes the location and coordinates of each station.

From the water bodies listed in the previous section, Table 2 presents the monitoring stations established by EMB Region 4-A per water body. The locations and coordinates of each station have also been specified.

Table 2. Monitoring Stations per Water Body

Water Body	Station No.	Station Identification	Coordinates	
			Latitude	Longitude
Freshwater Bodies				
Balanac River – Majayjay	1	Taytay Falls	14°09'N	120°28'E
	2	500 m downstream of Taytay Falls	14°09'05"N	120°28'10"E
	3	1 km downstream of Taytay Falls	14°09'10"N	120°28'22"E
Caliraya Lake – Lumban, Cavinti, Kalayaan	1	Caliraya Re-Creation Center, Brgy. Lewin, Lumban, Laguna	14°17'53"N	121°27'36"E
	2	Mid-point of Caliraya Lake	14°29'N	121°53'E
	3	Caliraya Resort, Brgy. East Talaungan, Cavinti, Laguna	14°15'N	121°31'E
	4	Caliraya Hilltop, Brgy. Caliraya, Lumban, Laguna	14°30'15"N	121°30'E
	5	Brgy. San Juan, Kalayaan, Laguna	14°21'N	121°34'E
Lake Bunot – San Pablo City	1	In front of Hut 1	14°08'03"N	121°34'03"E
	2	In front of Hut 5	14°08'07"N	121°34'06"E
	3	In front of Hut 10	14°08'08"N	121°34'10"E
Marine Water Bodies				
Tayabas Bay – Sariaya	1	Blue Bay Waters	13°57'52"N	121°31'48"E
	2	Villa del Prado Resort	13°57'60"N	121°31'50"E
	3	Marina Azul Beach Resort	13°58'N	121°31'55"E
	4	Dalampasigan Beach Resort	13°58'10"N	121°31'58"E
Tayabas Bay – San Juan	1	Moonlit Beach Resort	13°50'N	121°24'E
	2	Acuatico Beach Resort	13°50'15"N	121°24'08"E
	3	Laiya Coco Grove Beach Resort	13°50'30"N	121°24'22"E
	4	Blue Coral Beach Resort	13°50'50"N	121°24'43"E
	5	Virgin Beach Resort	13°51'N	121°24'55"E
	6	White Cove Resort	13°51'12"N	121°25'E
	7	Palm Beach Resort	13°51'28"N	121°25'12"E
	8	Public Beach	13°51'35"N	121°25'26"E
	9	La Luz Beach	13°51'55"N	121°25'25"E
Balayan Bay – Calatagan	1	Roncho Beach Resort	13°50'N	120°38'E
	2	Playa Calatagan	13°50'20"N	120°34'E
	3	Lago de Oro Resort	13°50'45"N	120°34'E

3.0 WATER SAMPLING PLAN

This section contains the sampling plan implemented by the EMB RO which specifies the monitoring stations, parameters, and sampling frequency.

This section presents the sampling plan implemented by EMB Region 4-A.

Table 3. Recreational Waters Sampling Plan

Water Body	No. of Monitoring Stations	Parameter	Sampling Frequency
Freshwater Bodies			
Balanac River – Majayjay	3	Primary	Monthly
Caliraya Lake – Lumban, Cavinti, Kalayaan	5	Primary	Monthly
		Secondary (Mercury)	Semiannually
Lake Bunot – San Pablo City	3	Primary	Monthly
		Secondary (Oil and Grease)	Semiannually
Marine Water Bodies			
Tayabas Bay – Sariaya	4	Primary	Monthly
		Secondary (Oil & Grease)	Semiannually
Tayabas Bay – San Juan	9	Primary	Monthly
Balayan Bay – Calatagan	3	Primary	Monthly
		Secondary (Oil and Grease)	Semiannually

4.0 RESULTS AND INTERPRETATION

This section contains the monitoring results per water body. Subsequently, each set of data will be interpreted.

This section contains the monitoring results per water body and its interpretation.

4.1 BALANAC RIVER – MAJAYJAY

Table 4. Monitoring Results of Balanac River - Majayjay

Monitoring Station	Fecal Coliform (MPN/100 mL)						pH (range)					
	Jan	Feb	Mar	Apr	May	Jun	Jan	Feb	Mar	Apr	May	Jun
Allowable Limit (Class B)	200						6.5 – 8.5					
1	100	90	110	100	90	110	7.2	7.4	7.1	7.2	7.4	7.1
2	90	90	85	90	90	85	6.9	7.0	6.8	6.9	7.0	6.8
3	85	110	95	85	110	95	7.1	7.1	7.0	7.1	7.1	7.0

Results show that primary parameters monitored from January to June 2014 were all within the allowable limits for Class B waters.

4.2 CALIRAYA LAKE – LUMBAN, CAVINTI, KALAYAAN

Table 5. Monitoring Results of Caliraya Lake

Monitoring Station	Fecal Coliform (MPN/100 mL)	pH (range)	Mercury (mg/L)
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	Jan	Feb	Mar	Apr	May	Jun	Jan	Feb	Mar	Apr	May	Jun	Jun
Allowable Limit (Class B)	200						6.5 – 8.5						0.002
1	100	110	140	210	220	150	7.8	7.6	7.6	8.0	7.8	7.7	0.001
2	135	125	120	150	150	145	7.0	7.0	7.1	7.2	7.2	7.1	0.001
3	140	145	140	220	240	140	7.2	7.0	7.0	6.9	6.8	6.8	0.001
4	100	125	140	240	210	145	7.0	7.0	7.1	7.2	7.2	7.1	ND
5	105	100	115	210	220	135	7.8	7.6	7.6	8.0	7.8	7.7	0.001

Results of analyses for Caliraya Lake from January to June 2014 are as follows:

- Fecal coliform concentrations were within the allowable limit for the months of January, February, March, and June for all monitoring stations
- Except for monitoring station #2, fecal coliform concentrations did not meet the allowable limit for the months of April and May or two consecutive sampling events. Influx of tourists in the area may have resulted to the increase in fecal coliform concentrations.
- pH and mercury concentrations were all within the allowable limits for all monitoring stations.

4.3 LAKE BUNOT – SAN PABLO CITY

Table 6. Monitoring Results of Lake Bunot

Monitoring Station	Fecal Coliform (MPN/100 mL)						pH (range)						Oil and Grease (mg/L)
	Jan	Feb	Mar	Apr	May	Jun	Jan	Feb	Mar	Apr	May	Jun	Jun
Allowable Limit (Class B)	200						6.5 – 8.5						1.0
1	100	110	140	280	260	250	6.8	7.0	7.1	6.8	7.0	7.1	1.7
2	140	145	140	250	275	240	6.9	7.0	7.0	6.9	6.8	6.9	1.6
3	105	100	115	255	260	235	7.0	6.9	7.2	7.0	7.0	7.0	1.8

Results of analyses for Lake Bunot from January to June 2014 are as follows:

- Fecal coliform concentrations did not meet the allowable limit for the months of April, May, and June for all monitoring stations. Influx of domestic wastes from tributaries may have resulted to the increase in the fecal coliform concentrations.
- pH were all within the allowable limits for all monitoring stations.
- Oil and grease concentrations were exceeded for all monitoring stations which may be attributed to the increase in discharge of industrial wastes from tributaries.

4.4 TAYABAS BAY – SARIAYA

Table 7. Monitoring Results of Tayabas Bay - Sariaya

Monitoring Station	Fecal Coliform (MPN/100 mL)						pH (range)						O&G (mg/L)
	Jan	Feb	Mar	Apr	May	Jun	Jan	Feb	Mar	Apr	May	Jun	Jun
Allowable Limit (Class SB)	150						7.0 – 8.5						2
1	140	145	140	130	135	140	7.2	7.0	7.4	8.0	7.2	7.1	1.2
2	110	110	120	105	145	130	7.0	7.0	7.0	7.4	7.4	7.0	1.0
3	135	125	120	140	125	140	7.8	7.6	7.6	8.0	7.8	7.7	1.5
4	100	110	140	140	11	135	7.0	7.0	7.1	7.2	7.2	7.1	0.8

Results show that primary and secondary parameters monitored from January to June 2014 were all within the allowable limits for Class SB waters.

4.5 TAYABAS BAY – SAN JUAN

Table 8. Monitoring Results of Tayabas Bay – San Juan

Monitoring Station	Fecal Coliform (MPN/100 mL)						pH (range)					
	Jan	Feb	Mar	Apr	May	Jun	Jan	Feb	Mar	Apr	May	Jun
Allowable Limit (Class SB)	200						6.0 – 8.5					
1	100	90	110	100	90	110	7.1	7.4	7.1	7.2	7.4	7.1
2	140	145	140	210	220	240	7.0	7.0	5.8	5.9	7.0	7.2
3	105	100	115	220	240	210	7.1	7.1	7.0	7.1	7.1	7.0
4	85	110	95	240	210	220	7.0	7.2	7.0	7.0	7.4	7.1
5	135	125	120	210	220	240	7.4	7.4	7.0	7.2	7.4	7.1
6	100	90	110	100	90	110	7.8	7.7	7.5	7.8	8.0	8.0
7	100	125	140	220	240	210	7.5	7.8	7.6	7.6	7.5	7.4
8	90	90	85	240	210	220	7.0	7.2	7.1	7.2	7.3	7.2
9	100	110	140	210	220	240	7.1	7.1	7.0	7.0	7.0	7.2

Results of analyses for Tayabas Bay – San Juan from January to June 2014 are as follows:

- pH were within the allowable limit set except for station #2 recorded in two consecutive sampling events.
- Fecal coliform concentrations were within the allowable limit for monitoring stations #1 and #6.
- Fecal coliform concentrations did not meet the allowable limit for the months of April, May, and June or three consecutive sampling events for seven monitoring stations. Influx of tourists in the area may have resulted to the increase in fecal coliform concentrations.

4.6 BALAYAN BAY – CALATAGAN

Table 9. Monitoring Results of Balayan Bay - Calatagan

Monitoring Station	Fecal Coliform (MPN/100 mL)						pH (range)						Oil & Grease (mg/L)
	Jan	Feb	Mar	Apr	May	Jun	Jan	Feb	Mar	Apr	May	Jun	Jun
Allowable Limit (Class SB)	150						7.0 – 8.5						2.0
1	100	110	140	150	150	150	7.8	7.6	7.6	8.0	7.8	7.7	2.35
2	135	125	120	150	150	145	7.0	7.0	7.1	7.2	7.2	7.1	2.40
3	140	145	140	130	135	140	7.0	7.0	7.0	7.4	7.4	7.0	2.38

Results of analyses for Balayan Bay – Calatagan for primary parameters from January to June 2014 were all within the allowable limits. However, Oil and grease concentrations did not meet the allowable limit during the monitoring period. A transformer fire near the area may have contributed to the increase in concentration in the water body.

5.0 RECOMMENDED ACTIONS

This section contains the recommended actions to be shared to the regional offices of DOH and DOT as well as the concerned LGUs. The contents of these should be aligned with the prescribed Two-Level System of the Regional Recreational Waters Monitoring Program. Consequently, any changes in the monitoring program as well as the recommended monitoring level shall be reflected in this section.

Table 8 summarizes the recreational waters monitoring program action plan of EMB Region 4-A.

Table 8. Recreational Waters Monitoring Program Action Plan

Water Body	Level	Monitoring	Reporting
Freshwater Bodies			
Balanac River – Majayjay	Surveillance	Continue monthly monitoring of primary parameters	No reporting required
Caliraya Lake – Lumban, Cavinti, Kalayaan	Surveillance	Continue monthly monitoring of primary parameters and semi-annual monitoring of secondary parameter	No reporting required
Lake Bunot – San Pablo City	Alert	<ul style="list-style-type: none"> • Increase sampling frequency to twice a month for primary parameters • Increase sampling frequency to quarterly for oil and grease 	Convene the Inter-Agency Technical Committee
Marine Water Bodies			
Tayabas Bay – Sariaya	Surveillance	Continue monthly monitoring of primary parameters and semi-annual monitoring of oil & grease	No reporting required
Tayabas Bay – San Juan	Alert	Increase sampling frequency to twice a month for primary parameters	Convene the Inter-Agency Technical Committee
Balayan Bay – Calatagan	Alert	<ul style="list-style-type: none"> • Continue monthly monitoring of primary parameters • Increase sampling frequency to quarterly for oil and grease 	Convene the Inter-Agency Technical Committee

The water bodies monitored for this period represent 20 percent of all recreational water bodies of Region 4-A. We are still coordinating with other Local Government Units in identifying water bodies that they have designated as recreational waters.

Prepared by: Technical Staff
 Reviewed by: Division Chief
 Approved by: Regional Director

Annex 3. Template Memorandum of Agreement
(MOA can be entered with concerned parties within the region
or per water body, whichever is more easily implementable)

MEMORANDUM OF AGREEMENT
INTER-AGENCY TECHNICAL COMMITTEE FOR TAYABAS BAY

KNOW ALL MEN BY THESE PRESENTS:

This Memorandum of Agreement (hereinafter referred to as “**Agreement**”) made and entered into by and among:

The **DENR-ENVIRONMENTAL MANAGEMENT BUREAU REGION 4A**, a government agency with office address at 6th Flr. DENR by the Bay Bldg., 1515 Roxas Blvd., Ermita, Manila, represented herein by EMB Regional Director Engr. Carlos J. Magno, and hereinafter referred to as **DENR-EMB R4A**;

and

The **CENTER FOR HEALTH DEVELOPMENT NO. 4A**, the Department of Health (DOH) Regional Field Office for CALABARZON with office address at Quirino Memorial Medical Center (QMMC) Compound, Project 4, Quezon City, represented herein by DOH Regional Director _____, and hereinafter referred to as **CHD 4A**;

and

The **DEPARTMENT OF TOURISM REGION 4 CALABARZON**, a government agency with office address at Dencris Business Center, Halang, National Highway, Calamba City, represented herein by DOT Regional Director Ms. Louella C. Jurilla, and hereinafter referred to as **DOT R4 CALABARZON**;

and

The **MUNICIPAL GOVERNMENT OF SARIAYA, QUEZON**, an LGU with address at Sariaya Municipal Hall, Maharlika Highway, Sariaya, Quezon, represented herein by Honorable Mayor Rosauro “Boyet” V. Masilang, and hereinafter referred to as the **MUNICIPAL GOVERNMENT OF SARIAYA**;

and

The **MUNICIPAL GOVERNMENT OF SAN JUAN, BATANGAS**, an LGU with address at San Juan Municipal Hall, San Juan, Batangas, represented herein by Honorable Mayor Rodolfo H. Manalo, and hereinafter referred to as the **MUNICIPAL GOVERNMENT OF SAN JUAN**.

The **DENR-EMB R4A, CHD 4A, DOT R4 CALABARZON, Municipal Government of Sariaya, and Municipal Government of San Juan** are hereinafter collectively referred to as “**Parties**” and individually as “**Party**.”

W I T N E S S E T H: That

WHEREAS, the **DENR**, through EMB, is mandated by Republic Act 9275 otherwise known as the Philippine Clean Water Act of 2004 to: 1) streamline processes and procedures in the prevention, control, and abatement of pollution

of the country's water resources; 2) promote public information and education; and 3) encourage the participation of an informed and active public in water quality management and monitoring;

WHEREAS, the **DOT** is mandated by Republic Act 9593 otherwise known as Tourism Act of 2009 to: 1) monitor conditions of any community in the Philippines and, in consultation with the local government units (LGUs) and law enforcers, issue timely advisories on the safety or viability of travel to particular places within the Philippines and on patronage of entities engaged in tourism related activities and of tourism products; and 2) ensure the right of the people to a balanced and healthful ecology through the promotion of activities geared towards environmental protection, conservation and restoration;

WHEREAS, the **DOH** is mandated by Executive Order No. 102, Series of 1999 entitled Redirecting the Functions and Operations of the Department of Health to provide assistance to LGUs, people's organization and other members of civic society in effectively implementing programs, projects and services that will promote the health and well-being of every Filipino and prevent and control diseases among populations at risks;

WHEREAS, the **MUNICIPAL GOVERNMENTS OF SARIAYA, QUEZON and SAN JUAN, BATANGAS** by virtue of Section 20 of Republic Act 9275 which stipulates that local government units shall share the responsibility in the management and improvement of water quality within their territorial jurisdictions; and furthermore by RA 7160 otherwise known as the Local Government Code of the Philippines to: 1) enforce laws and regulations relating to pollution control and protection of the environment; 2) execute and enforce all laws, ordinances and regulations relating to public health; and 3) protect the environment and impose appropriate penalties for acts which endanger the environment;

WHEREAS, the DENR-EMB issued Memorandum Circular No. ____, Series of 2014 or the Guidelines for Recreational Waters Monitoring Program, to provide clear guidance on the monitoring of recreational waters and subsequent reporting for the purpose of public notification in order to protect public health;

NOW, THEREFORE, the forgoing premises considered, the **Parties** hereby stipulate and agree as follows:

A. General Agreements

- 1) The Parties shall form part of the Inter-Agency Technical Committee created for the implementation of Region 4A Recreational Waters Monitoring Program for Tayabas Bay;
- 2) The Parties shall designate a focal person/s within their departments to the Inter-Agency Technical Committee for Tayabas Bay;
- 3) The Parties shall convene semi-annually unless a more frequent meeting is warranted;
- 4) The Parties shall create and implement a plan of action for the notification of the public when Tayabas Bay and/or sections thereof are deemed temporarily unsuitable for recreational use based on DENR-EMB R4A Recreational Waters Monitoring Program Report;

- 5) The Parties shall develop and implement a plan of action for the management of Tayabas Bay for primary contact recreation.

B. Party Responsibilities

- 1) The **DENR-EMB R4A** shall:
 - a) Identify within Tayabas Bay:
 - Sections officially classified as Class SB waters; or
 - Sections intended for primary contact recreation; or
 - Sections identified by DOT and LGUs as tourist recreational areas
 - b) Collaborate with **DOT R4 CALABARZON, CHD 4A**, and concerned **LGUs** in identifying sections within Tayabas Bay that are frequently visited by local and foreign tourists;
 - c) Include these waters in the development and implementation of Region 4A Recreational Waters Monitoring Program;
 - d) Monitor Tayabas Bay and/or sections thereof identified as recreational waters using the primary water quality parameters and supplemented by secondary water quality parameters;
 - e) Convene meetings for the Inter-Agency Technical Committee for Tayabas Bay;
 - f) Report to the Inter-Agency Technical Committee for Tayabas Bay, the status of the recreational waters monitoring program.
- 2) The **DOT R4 CALABARZON, CHD 4A, MUNICIPAL GOVERNMENT OF SARIAYA, AND MUNICIPAL GOVERNMENT OF SAN JUAN** shall:
 - a) Collaborate with **DENR-EMB R4A** in identifying sections within Tayabas Bay that are frequently visited by local and foreign tourists;
 - b) Attend the meetings of the Inter-Agency Technical Committee for Tayabas Bay;
 - c) Formulate and implement the plan of action for the notification of the public when Tayabas Bay and/or sections thereof are deemed temporarily unsuitable for recreational use;
 - d) Implement the plan of action for the management of Tayabas Bay and /or sections thereof designated for primary contact recreation.

C. Professionalism/Good Faith/Cooperation

- 1) The Parties shall observe, practice, and apply the standards of professionalism, good faith, and due diligence.
- 2) The Parties agree to cooperate with each other to achieve the objectives of this Agreement and ensure the successful implementation of the Region 4A Recreational Waters Monitoring Program for Tayabas Bay.

- 3) The Parties shall closely coordinate with and/or consult each other within the framework of this Agreement and explore areas of cooperation related to the Program.

D. Termination

- 1) This Agreement may be terminated at anytime by mutual agreement of all Parties in writing.
- 2) Any termination of the Agreement shall be without prejudice to any other right or remedy that the aggrieved Party may avail of under this Agreement or under existing laws.

E. Venue of Actions

Any dispute or action arising from or in connection with this Agreement shall be filed with the proper courts of _____.

F. Other Provisions

This Agreement may be revised, amended, and modified in a written instrument duly executed and signed by the Parties hereto.

G. Duration

This Agreement shall be effective from the date of signing by the Parties.

IN WITNESS WHEREOF, the parties hereby set their hands this ____ day of _____, year ____, at _____.

DENR- ENVIRONMENTAL MANAGEMENT BUREAU R4A

By:

Engr. Carlo J. Magno
Regional Director

CENTER FOR HEALTH DEVELOPMENT NO. 4A

By:

Dr. Nestor F. Santiago, Jr.
Regional Director

DEPARTMENT OF TOURISM R4 CALABARZON

By:

Ms. Louella C. Jurilla
Regional Director

MUNICIPAL GOVERNMENT OF SARIAYA, QUEZON

By:

Honorable Mayor Rosauro "Boyot" V. Masilang
Municipal Mayor

MUNICIPAL GOVERNMENT OF SAN JUAN, BATANGAS

By:

Honorable Mayor Rodolfo H. Manalo
Municipal Mayor

SIGNED IN THE PRESENCE OF:

Representative
DENR-EMB R4A

Representative
DOH CHD 4A

Representative
DOT R4A

Representative
Municipal Government of Sariaya

Barangay Captain
Brgy. Guis-guis, Sariaya, Quezon

Representative
Municipal Government of San Juan

Barangay Captain
Brgy. Laiya Aplaya, San Juan,
Batangas

ACKNOWLEDGMENT

REPUBLIC OF THE PHILIPPINES) S.S.

BEFORE ME on the _____ day of _____, _____
personally appeared:

Name	CTC/Passport No.	Issued On	Issued At

known to me to be the same persons who executed the foregoing undertaking and acknowledging to me that the same is of their own free act and will.

WITNESS MY HAND AND SEAL.

NOTARY PUBLIC

Doc No. _____
Page No. _____
Book No. _____
Series of _____

SAMPLE ONLY

Annex 4. Sample Notification Strategy
(To be printed on DENR Letterhead)

MINUTES OF MEETING
Inter-Agency Technical Committee for Tayabas Bay
Conference Room, 6th Flr. DENR by the Bay Bldg.
515 Roxas Blvd., Ermita, Manila
10 August 2014
(9:00AM-12:00NN)

Participants:

--- See attached attendance sheet ---

Proceedings:

1. The meeting began at around 9:00 AM.
2. DENR-EMB led the prayer.
3. DENR-EMB presided the meeting.
4. DENR-EMB presented the results of the Recreational Waters Monitoring Program of Tayabas Bay. During the monitoring period (January to June 2014), fecal coliform concentrations did not meet the allowable limit for the months of April, May, and June for seven monitoring stations in San Juan, Batangas. The exceedances were attributed to the influx of tourists in the area.
5. DENR-EMB to increase sampling of primary quality parameters to twice a month due to exceedances in fecal coliform.
6. The Tayabas Bay Recreational Waters Notification and Management Strategy was developed by the Committee. These are presented in Table 1.
7. DENR-EMB to convene another meeting in September 2014 if monitoring results of Tayabas Bay-San Juan continuously failed to comply with the allowable limits for fecal coliform.
8. DENR-EMB closed the meeting and thanked all attendees for actively participating in the IATC Meeting.
9. The meeting was adjourned at around 12:00 NN.

Table 1. Tayabas Bay Recreational Waters Notification and Management Strategy

Level	Description	Notification	Management	Implementing Agency
1	Non-compliant for 1 st time (3 months)	For internal information only	None	DENR, DOT, DOH, LGUs
	Non-compliant during summer months	For internal information only	None	DENR, DOT, DOH, LGUs
2	Non-compliant for 5 months	For internal information only	Investigate cause(s) of non-compliance and implement necessary action(s)	DENR, LGUs
3	Non-compliant for 8 months	Notify concerned Barangay	Investigate cause(s) of non-compliance and implement necessary action(s)	DENR, LGUs
4	Non-compliant for 10 months/year	<ul style="list-style-type: none"> • Issue temporary closure letter to concerned Barangay • Posting of closure signs at beach area 	Temporary closure of water body and/or section thereof for recreational purposes	DOH, LGUs
			Investigate cause(s) of non-compliance and implement necessary action(s)	DENR, LGUs
			Revoke permit(s) of concerned tourist establishment (if applicable)	DOT, LGUs

Prepared by: Technical Staff

Reviewed by: Supervisor

Noted by: Division Chief