



25 July 2017

Republic of the Philippines  
**LAGUNA LAKE DEVELOPMENT AUTHORITY**

National Ecology Center, East Avenue, Diliman, Quezon City  
Tel. Nos.: 332-2346, 376-4039, 376-4072, 376-4049, 376-4061



Certificate Number: AJA15-0015

**MEMORANDUM CIRCULAR NO. 2017- 03**

**SUBJECT: REVISED GUIDELINES IN IMPLEMENTING THE ZONING OF AQUACULTURE STRUCTURES IN SAMPALOC LAKE BY AMENDING CERTAIN PROVISIONS OF MEMORANDUM ORDER NO. 43, SERIES OF 2005 AND INCLUSION OF OTHER RULES AND REGULATIONS**

**SECTION 1. BACKGROUND**

The following guidelines are amendments of LLDA Memorandum Order No. 43 which is the implementing rules and regulations of LLDA Board Resolution No. 70, series of 1998 (*Policy Framework on the Use of the Seven Crater Lakes of San Pablo City*) for the zoning of aquaculture structures in Sampaloc Lake.

These guidelines were proposed by the City Government of San Pablo in consideration of the emerging development needs of the stakeholders with the enactment of Republic Act No. 9593 otherwise known as the Tourism Act of 2009. The revision of zoning of aquaculture structures in Sampaloc Lake is anchored on the City Tourism Master Plan that envisions the transformation of the city as a premier eco-adventure cum historical tourist destination in the CALABARZON Region that will capitalize on the inherent and recognized potentials of the seven lakes for tourism purposes, particularly Sampaloc Lake, being the biggest and most accessible.

With the target aquaculture structure reduction scheme for Sampaloc Lake already achieved, from the baseline data of 19.86 hectares or 19% of the total surface area of the lake in 2004 to 10.44 hectares or 10% of the total lake area in 2011, the Physical Plan of Memorandum Order No. 43 is ready for implementation. However, some of the provisions of the Physical Plan is no longer in concurrence with the present condition of the lake and the development needs of the stakeholders which prompted the City Government of San Pablo in consultation with the Laguna Lake Development Authority (LLDA), the Fishery and Aquatic Resources Management Council (FARMC) and other stakeholders to review and revise the zoning of aquaculture structures in Sampaloc Lake.

The consequent revised zoning of aquaculture structures in Sampaloc Lake (**Annex A**), which considers the legal, social, scientific and technical requirements of LLDA and has undergone series of consultations with the stakeholders of Sampaloc Lake, is an integration of the zoning proposals of the City Government of San Pablo and the Sampaloc Lake Fishery and Aquatic Resources Management Council.

## **SECTION 2. OBJECTIVES**

The general objective of the revised zoning of aquaculture structure is to protect and sustain the ecological health of Sampaloc Lake which can be achieved through the following specific objectives: (a) Improve the water quality of the lake by regulating the aquaculture operation and other activities in the lake and its immediate vicinity, (b) Control and manage all sources of pollution (both solid and liquid) and silt from the lake's watershed through strict implementation of applicable laws, rules and regulations and c) Enhance lake protection efforts while providing livelihood to sustain the well-being of the community particularly the fisherfolks.

## **SECTION 3. SCOPE OF APPLICATION**

These guidelines shall specifically apply to the operation of legitimate and pre-qualified fishcage operators in Sampaloc Lake based on the criteria for area allocation defined under the legitimization scheme of Memorandum Order No. 43, series of 2005 as well as the other activities around the lake that have direct impact on its water quality.

## **SECTION 4. SOCIAL AND LEGAL CONSIDERATIONS**

To be given priority are all fishcages covered during the inventory conducted on 27-31 October 2014 owned by legitimate operators and those whose structures are not existing at the time of inventory, but are pre-qualified for area allocation, provided that the total area for aquaculture shall not exceed 10.44 hectares which is equivalent to ten percent (10%) of the surface area of the lake.

## **SECTION 5. PERMIT TO OPERATE**

Assignments or conveyances of rights or permits to operate fishcages shall be regulated and authorized only by LLDA through the General Manager. The requirements to operate fishcage shall include: 1). Barangay Clearance; 2) Mayor's Permit; 3). Valid Identification Card; and 4) Regulatory Fee. A Repair Permit shall also be issued by LLDA whenever necessary upon verification of the application for repair and payment of the corresponding fee.

## **SECTION 6. ACCESS LANES**

Access lanes from the existing road to the lake shall be established in Barangays V-A, San Lucas I, Concepcion and IV-A. The access lane shall have a maximum width of 10 meters.

## **SECTION 7. NAVIGATIONAL LANE**

The navigational lane within the fishcage belt zone shall be maintained at a distance of 50 meters from the shoreline to facilitate mobility of non-motorized banca or bamboo raft used in transporting feeds and fishcage materials. No structures shall be allowed to be constructed in this lane.

## **SECTION 8. FISHCAGE BELT ZONE**

The fishcage belt zone shall be located in the northern and eastern sides of the lake and shall cover four (4) barangays, namely: Barangays V-A, San Lucas I, Concepcion and IV-A. The fishcage modules shall be arranged perpendicular from the navigational lane and each cage shall be assigned corresponding reference number. The total number of cages is 160 with an area of 600 m<sup>2</sup> (20 m X 30 m) each. The fishcages shall be grouped into modules of four (4) cages and the modules will be grouped into ten (10) to form four (4) clusters.

The spaces between cages shall be between 5 to 10 meters depending on the specific locations of the cages that are situated perpendicular to the curve or contour of the lake's shoreline. Distance between clusters shall be from 30 meters to 50 meters.

No aquaculture structure shall be allowed near the shore such that, the area designated as fishpen belt shall be removed and the fishpens shall be integrated in the fishcage belt zone. This is regardless whether the fishpen exists or not as long as the same is registered and included in the list of pre-qualified operators for area allocation.

## **SECTION 9. MATERIALS TO BE USED FOR FISHCAGES**

Uniformity in the construction of fishcages shall be observed to ensure the protection of the lake ecosystem and preservation of the aesthetic appearance of the lake and as such the following shall be allowed to be used:

- a. Bamboo shall be the primary frame and floatation material of the cages. Each cage should not exceed 20 meters wide and 30 meters long.

- b. Only fish net mesh that is allowed in RA No. 8550, as amended by RA No. 10654, and by the Bureau of Fisheries and Aquatic Resources (BFAR) shall be used in the construction of each cage.
- c. Only environment-friendly materials shall be allowed in general. In case of materials other than those mentioned above, a permit from LLDA shall be required.

**SECTION 10. CONSTRUCTION OF GUARD HOUSE**

Only two (2) partially enclosed guard houses with size of 1.5 m X 1.5 m shall be allowed to be built per cluster. This shall be allowed until such time that the City Government of San Pablo is able to organize the necessary Security Force for Sampaloc Lake which shall not be beyond the period of two (2) months from the time of actual implementation of the revised zoning of aquaculture structures. Areas for the storage of feeds and other materials for aquaculture operation shall be identified and established by the City Government along the lake shoreline for the common and exclusive use of the fishers in Sampaloc Lake.

**SECTION 11. STOCKING DENSITY AND FEEDING REQUIREMENTS**

In the absence of a carrying capacity study that determines the stocking density and feed requirements per fish cage, self-monitoring will be imposed on the allowable stocking density and feed requirements until a conclusive study has been conducted. Only floating type fish feeds shall be allowed. As such, the Feeding Formula suggested by BFAR shall be used and implemented, to wit:

$$DFR = \frac{\text{Average Body Weight} \times \text{Total Number of Stock} \times \% \text{ Feeding Rate}}{1,000}$$

DFR = Daily Feeding Rate

Total Number of Stock = No. of Square Meters x Depth x No. of Fingerlings  
per square meters

% Feeding Rate shall be as follows:

10% during the starter stage

7% during the grower stage

5% during the fattening stage

## **SECTION 12. LEVEL OF DISSOLVED OXYGEN**

To prevent the occurrence of fishkill, the right level of dissolved oxygen will be maintained with the provision of aerators and installation of bioremediation measures that will be implemented by the City Government. Each of the 4 Barangays in Sampaloc Lake will be provided with a dissolved oxygen meter for the operators to monitor the level of dissolved oxygen in the fish cage area.

## **SECTION 13. ALTERNATIVE LIVELIHOOD FOR THE FISHERS AND COMMUNITY**

The open space in the lake as a result of the transfer and realignment of all qualified fishcages in the designated fishcage belt zone shall be devoted to environment-friendly tourism activities such as open fishing, boating and rafting. No motorized vehicles/boats will be allowed to navigate the lake.

Non-lake livelihood activities shall also be opened to the local fishers and people in the community such as tour guiding, operation of food stalls for local delicacies, selling of local crafts and souvenirs, offering of home-stay, and other related undertakings.

Safeguards for ecotourism activities that will be introduced in the lake and its immediate vicinity shall be formulated for review of the LLDA and for strict implementation of the City Government to ensure that the ecological health of the lake is maintained and sustained, and the safety of the tourists and visitors is guaranteed.

## **SECTION 14. REALIGNMENT OF FISHCAGES**

The LLDA shall lead the realignment of fishcages according to the agreed zoning of aquaculture structures that will be undertaken by the fishcage operators with assistance from the City Government of San Pablo.

## **SECTION 15. MONITORING OF THE IMPLEMENTATION OF THE ZONING OF AQUACULTURE STRUCTURES**

Compliance to the transfer and realignment of all qualified fishcages inside the fishcage belt zone shall be monitored by the LLDA on quarterly basis and/or as need arises which shall be based on the quarterly report that the City Government of San Pablo will submit to LLDA that include but not limited to the following:

- Location and area occupied;
- Stocking density;
- Method and amount of feeding;

- Water Quality particularly the level of Dissolved Oxygen;
- Transport of fishcage materials; and
- Transport/stocking of fingerlings to avoid culture of exotic/invasive species.

The City Government of San Pablo shall monitor land and lake-based tourism activities particularly in terms of cleanliness, orderliness and improvement in the socio-economic condition of the beneficiaries of additional livelihood activities in Sampaloc Lake area.

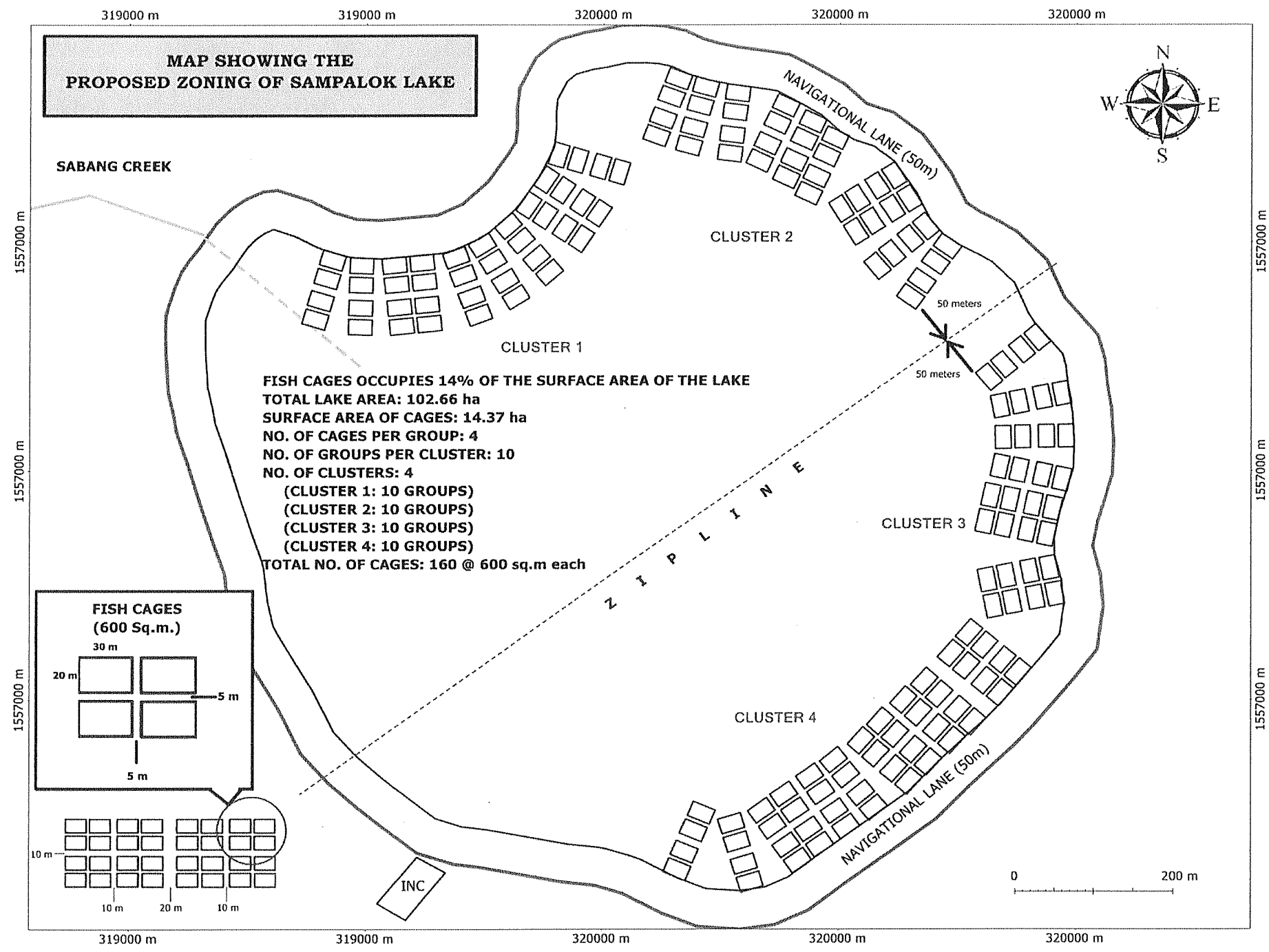
The City Government of San Pablo shall assist and at the same time make sure that all the required LLDA clearances are complied with.

#### ***SECTION 16. EFFECTIVITY***

This Circular shall take effect thirty (30) days after publication in a newspaper of general circulation and upon registration to the Office of National Administrative Register (ONAR), UP Law Center, Diliman, Quezon City.



**JAIME C. MEDINA**  
General Manager



LAGUNA LAKE DEVELOPMENT AUTHORITY

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  PROCEDURES   
  JOB DESCRIPTION   
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NATURE OF DOCUMENT CREATION / MODIFICATION:

- NEW   
  REVISION   
  DELETION   
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DETAILS OF CREATION / MODIFICATION : (Please use extra sheet if necessary)

*on MC No. 43*

*The proposed revisions were approved by the LADA Board of Directors on 20 April 2016. It was then referred to the members of the Board for signature but was pending at the meeting with the Chief of Administration as a result of May 2016 election.*

*To fast track the process PD MED sought guidance from legal as advised by CM Jaime Medina to transform it into an MC and it would take some time again for it to be signed by new representatives of agency-members. This would need another presentation to the Board.*

*CM Medina met with Mayor Socorro Bronte of San Pablo City on 25 May 2017 to discuss and agree the way forward to jointly implement the pricing of aquaculture structures in San Pablo City. As an agreement, she will now a resolution formally requesting LADA to approve the revisions thru an MC.*

*For details, please refer attached documents.*

Page No.	Effectivity Date	Issue No.	Submitted by /Date	Reviewed by/Date
			<i>09 JUL 2017</i> ENGR. JUN PAUL U. MISTICA <i>Division Chief II, PD MED</i>	<i>9/14</i> ADELINA C. SANTOS BORJA <i>DM III, BMDD</i>

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**MODIFICATIONS CERTIFIED CORRECT**

*9/14*  
ADELINA C. SANTOS BORJA  
*DM III, BMDD*

*9/19*  
QMR

Approving Authority to fill-up this portion after receipt of final revised document

- Approved  
 Disapproved  
 For revision

*JAIME C. MEDINA*  
General Manager  
*(Signature over printed name / Date)*