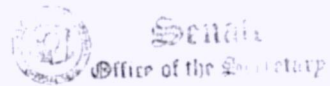


EIGHTEENTH CONGRESS OF THE)
SENATE OF THE PHILIPPINES)
First Regular Session)



'19 JUL 11 A11 :05

SENATE

S. No. 336

RECEIVED BY

Introduced by **SENATOR CYNTHIA A. VILLAR**

AN ACT
REQUIRING NEW COMMERCIAL, INSTITUTIONAL, AND RESIDENTIAL
INFRASTRUCTURE PROJECTS IN METRO MANILA AND MAJOR CITIES IN
THE PHILIPPINES TO INSTALL RAINWATER HARVESTING OR RETENTION
FACILITIES, PROVIDING PENALTIES FOR VIOLATIONS, AND FOR OTHER
PURPOSES

EXPLANATORY NOTE

Being an archipelago, the Philippines is abundant in water resources. And while the country, on account of its geographical location at the Pacific typhoon belt, is frequented by numerous typhoons that oftentimes wreak havoc to its residents, the same phenomena all together bring in torrential rainfall that continuously replenish our water resources.

And so, the dwindling water supply we experience nowadays, particularly in Metro Manila and neighboring areas, is an ironic predicament given that heaps of rainwater are poured into the Philippine territory year in and year out, even commonly resulting to flooding. While a lot have surmised that the blame belongs to the government regulators and the concessionaires for the apparent lack of

planning, foresight and infrastructures, resulting to the current deficient water supply; to my mind, I'd rather see the wisdom of considering the current predicament as an opportunity for us to rethink our current water conservation practices and to start with resourceful ways of conserving water, such as rainwater harvesting.

Rainwater harvesting as a way of conserving water is not a new concept or technology. Researches show that it was practiced during the ancient times as evidenced by the discovery of waterproof receptacles or cisterns to collect rain, which is traced back to the period of Neolithic Age (or around 10,000 BC to 4500 BC)¹. In India, a technique that has been used for hundreds of years is the building of water harvesting systems on top of the roofs of houses; it is a simple technology that has been replicated in countries, such as Brazil and China.² In the Philippines, early use of rainwater harvesting is indicated by the presence of the Banaue rice terraces, believed to be built some two thousand (2,000) years ago by the Ifugao people.³ Thus, rainwater harvesting may be considered an ancient practice but it still finds relevance and practicality even in the present times, particularly given the increased extreme weather events (i.e. extreme heat, long periods of drought) brought by climate change.

There is so much potential to be gained in mainstreaming anew rainwater harvesting in the country. According to Dr. William Dar (a former agriculture secretary), the Philippines receives around 2,400 mm of rainwater annually, which is considered one of the highest level of rainfall; and yet, despite the abundant rainfall, the country's rainwater harvest is only about four percent (4%).⁴ This is measly compared to India's sixty percent (60%) rainwater harvest rate. The

¹ <https://rotoplasusa.com/old-rainwater-harvesting-history-human-innovation/>

² <https://www.renewableenergyhub.co.uk/main/rainwater-harvesting-information/history-of-rainwater-harvesting/>

³ <http://wgbis.ces.iisc.ernet.in/energy/water/paper/drinkingwater/rainwater/introduction.html>

⁴ <https://www.pna.gov.ph/articles/1065432>

water that will be collected via rainwater harvesting is a welcome addition to our scarce water supply and could be very well used for household and other practical purposes.

The attached bill requires new commercial, institutional, and residential infrastructure projects, with an area of at least 1,500 square meters, in Metro Manila and major cities in the Philippines to install rainwater harvesting or retention facilities that will bring about an efficient conservation of water, which may be used for household, or other practical purposes and thereby help in addressing the shortage of water supply as well as in mitigating the flooding problem in affected areas in Metro Manila and major cities in the Philippines. It is a bill originally filed by Representative Luis Raymund "LRay" F. Villafuerte Jr. of the Second District of Camarines Sur during the 17th Congress, and I am pleased to file its counterpart bill in the Senate this 18th Congress.

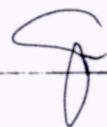
In view of the foregoing, I recommend the immediate approval of this bill.


CYNTHIA A. VILLAR

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Be it enacted by the Senate and House of Representatives of the Philippines in Congress assembled:

1 Section 1. *Short Title.* – This Act shall be known as the "Rainwater Harvesting
2 Facility Act".

3 Sec. 2. *Declaration of Policy.* – It is the declared policy of the State to
4 promote the health and welfare of its citizens, and exercise sufficient powers to
5 preserve the natural ecology within its territory. Further, it is the policy of the State to
6 provide adequate supply of clean and unpolluted water for domestic and for other useful
7 purposes. Thus, the State shall adopt practical measures that will efficiently conserve
8 water and help in addressing the deficient water supply in Metro Manila and other
9 major cities in the country.

1 Sec. 3. *Definition of Terms.* – As used in this Act, the following terms shall be
2 defined as:

- 3 a) *Department* refers to the Department of Public Works and Highways
4 (DPWH);
- 5 b) *Green infrastructure* means any storm water management technique or
6 practice employed with the primary goal of preserving, restoring, or
7 mimicking natural hydrology;
- 8 c) *Rainwater* means precipitation on any public or private parcel that has
9 not entered an offsite storm drain system or channel, a flood control
10 channel, or any other stream channel, and has not previously been put
11 to beneficial use;
- 12 d) *Rainwater harvesting facility* refers to a flood control structure such as
13 a vertical detention tank, horizontal water tank, open retarding basin,
14 and multi-use water catchment area, or an on-site regulation pond
15 used to capture, retain, and store rainwater flowing off a building,
16 parking lot, or any other manmade, impervious surface consequently
17 preventing or delaying the release of rainwater into the public drainage
18 system; and
- 19 e) *Return period* refers to the average length of time in years for a rain-
20 related natural disaster of given magnitude be equaled or exceeded by
21 the length of time that a rainwater-related disaster may probably recur.

22 Sec. 4. *Rainwater Harvesting Facility Requirement.* – An owner or developer
23 of a new commercial, institutional and residential development project in Metro
24 Manila and other major cities, with an area of at least one thousand five hundred
25 (1,500) square meters and requiring the issuance of building permit shall reserve,
26 develop, and maintain at least three (3%) of the total area, exclusive roads, service
27 streets and alleys, as a rainwater harvesting facility.

1 The owner or developer of an ongoing commercial, institutional, and
2 residential development project in Metro Manila and other major cities that has no
3 existing provision for a rainwater facility shall build the facility within a period of
4 three (3) years from the effectivity of this Act, or suffer the penalty imposed in
5 Section 8 hereof.

6 To conserve potable water, rainwater collected by a harvesting facility may
7 be used for non-potable and suitable purposes, such as gardening and air-cooling
8 processes.

9 It is the intent of the Act that the use of rainwater for non-potable uses
10 should not be constrained by standards for drinking water or recycled water but shall
11 fully comply with water quality requirements.

12 Sec. 5. *Design Approval.* – The provision for a rainwater harvesting facility
13 shall be required by the Department of Human Settlements and Urban Development
14 (DHSUD) and local government units (LGUs) to be incorporated in the design of all
15 new commercial, institutional, and residential development projects in Metro Manila
16 and other major cities, and project design shall be approved for construction unless
17 it includes such facility. The DHSUD and the LGUs shall ensure that these facilities
18 are built during the construction phase of the projects.

19 Sec. 6. *Design Requirements.* – The rainwater harvesting facility must be
20 designed to cope with a pre-determined flood and rain return period and must have
21 a storage capacity prescribed by the Department of Public Works and Highways
22 (DPWH). The design of the rainwater harvesting facility includes the following:

- 23 a) Size, shape and physical characteristics of available space;
- 24 b) Construction plans with specified material type including lining and
25 coating requirements;

- c) Detailed drawing on how the installation will drain into an outfall structure as a drywell or a percolation chamber, storm drain system, drainage channel, or natural wash; and
- d) Mechanism to exclude mosquitoes and not permit mosquito production.

Sec. 7. *Building Permits.* – If the design of a new commercial, institutional, and residential project in Metro Manila and other major cities with an area of at least one thousand five hundred (1,500) square meters does not provide for a rainwater harvesting facility, the LGU concerned shall deny the request for issuance of a building permit for such project.

Sec. 8. *Reportorial Requirements.* – The DPWH shall require the owner or developer of all new commercials, institutional, and residential development projects covered under this Act to submit a compliance report within 12 months from the date of the completion of the project.

The DPWH shall henceforth require the building owners to submit an annual report of the performance of such rainwater retention facility which may include, but is not limited to information on the total volume of retained rainwater and its utilization.

Sec. 9. *Penalties.* – The owner or developer of all new commercial, institutional, and residential development projects in Metro Manila and other major cities who fails to construct a rainwater harvesting facility in violation of Section 4 of this Act shall suffer the penalty of a fine of not less than Five hundred thousand pesos (Php500,000.00), but not more than Two million pesos (Php2,000,000.00) for every year of non-compliance.

In the case of a partnership, association, corporation or any juridical person, the fine shall be imposed upon the president, treasurer, or any officer or person responsible for the violation.

1 If the offender is a foreigner, the foreigner shall be deported immediately
2 without further proceedings after payment of fine.

3 The head of the government institution who violates Section 4 of this Act, or
4 government officials, employees, and agents who issue licenses or permits in
5 violation of Section 8 of this Act, shall suffer the penalty of suspension of not less
6 than ten (10) days, but not more than one hundred eighty (180) days after due
7 notice and hearing in an appropriate administrative proceeding.

8 Sec. 10. *Implementing Rules and Regulations (IRR)*. – Within sixty (60) days
9 from the effectivity of this Act, the Department shall, in coordination with relevant
10 government agencies and other stakeholders, promulgate the rules and regulations
11 for the effective implementation of this Act. The implementing rules and regulations
12 shall include the standards and guidelines for the design, construction, installation,
13 materials, site selection and planning, site-specific considerations, and maintenance
14 of the rainwater harvesting facility.

15 Sec. 11. *Separability Clause*. – If any portion or provision of this Act is
16 declared unconstitutional or invalid, the remainder of this Act or any provisions
17 hereof not affected thereby shall continue to be in force and effect.

18 Sec. 12. *Repealing Clause*. – Any law, presidential decree or issuance,
19 executive order, letter of instruction, rule or regulation inconsistent or contrary to
20 the provisions of this Act is hereby repealed or modified accordingly.

21 Sec. 13. *Effectivity Clause*. – This Act shall take effect after fifteen (15) days
22 following its complete publication in the Official Gazette or a newspaper of general
23 circulation.

24 Approved,