

S.B. No. 1309

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INTRODUCED BY: SENATOR EMMANUEL D. PACQUIAO

RECEIVED BY: 

AN ACT
MANDATING THE ESTABLISHMENT, MAINTENANCE AND MANAGEMENT
OF RAIN WATER HARVESTING SYSTEMS IN THE COUNTRY

EXPLANATORY NOTE

Rainwater as a natural resource is abundant in the Philippines. The country receives an average annual rainfall of 2,400 mm that varies over time and space; “too much” during rainy season that may result to flooding and “too little” during the dry season that may cause prolong dry spell. Despite the abundant rainfall, the utilization of the country's rainwater resources for beneficial uses either for domestic, industrial and agricultural is not optimize.

Rainwater harvesting and storage facility that collects rainfall and surface runoff during rainy season is a proactive response, appropriate and provide sustainable solution to the country's water scarcity problem. The water scarcity problem is due to rapid urbanization, increasing population, indiscriminate use and management of waste, and water pollution. As such, all sectors are under threat of water stress and scarcity due to rapid development, population pressure and the changing rainfall pattern due to climate change that have caused increase occurrence of flood and drought.

Harvested and stored rainwater can be utilized for irrigation and other agricultural use, ground water recharge, firefighting, and non-potable water supply source such as watering plants, flushing of toilet, and washing of cars and floor yards, among others. The harvested rainwater is expected to address the issues on water scarcity and shortage stated above.

Although there are various government agencies such as the Department of Public Works and Highways (DPWH), Department of Agriculture (DA) and the Local Government Units, by virtue of their respective mandates under RA No. 6716, RA No. 8435, RA No. 7607 that undertakes the implementation of rain water harvesting facilities, their efforts need to be strengthened, institutionalized and provided with adequate funding support.

In view of the foregoing, the approval of the bill is earnestly sought.



EMMANUEL D. PACQUIAO

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AN ACT
MANDATING THE ESTABLISHMENT, MAINTENANCE AND MANAGEMENT
OF RAIN WATER HARVESTING SYSTEMS IN THE COUNTRY

1 SECTION 1. *Short Title.* This Act shall be known as the "Rain Water Harvesting Act."
2

3 ARTICLE I

4 DECLARATION OF POLICY AND DEFINITION OF TERMS

5
6 SEC. 2. *Declaration of Policy.* - It is the declared policy of the State to promote and ensure the
7 health, welfare and food security of its citizens, and exercise sufficient powers to preserve the
8 natural ecology within its territory. Further, it is the policy of the State to provide adequate
9 supply of clean and unpolluted water for domestic, industrial, irrigation, agriculture production
10 and for other useful purposes. Thus, the State shall adopt practical measures that will efficiently
11 conserve water through rain water harvesting and storage system and help in addressing the
12 deficient water supply in the country.
13

14 SEC. 3. *Definition of Terms.* - As used in this Act, the following terms shall mean:

- 15
16 a) Rainwater refers to precipitation on any public or private parcel that has not entered
17 an offsite storm drain system or channel, a channel, or any other stream channel, and
18 has not previously been put to beneficial use;
19
20 b) Rainwater harvesting facilities refers to a structure that stored rainwater such as a
21 vertical detention tank, horizontal water tank, open retarding basin, and multi-use
22 water catchment area such as small water impounding projects (SWIPs) and small
23 farm reservoirs, , or an on-site regulation pond used to capture, retain, and store
24 rainwater flowing off a building, parking lot, watershed, or any other manmade,
25 impervious surface consequently preventing or delaying the release of rainwater into
26 the public drainage system;
27
28 c) Rainwater harvesting system is also a water harvesting facilities that comprises of
29 several physical components (e.g. SWIPs having a watershed, reservoir, dam
30 embankment, spillway, outlet works, service areas, and access road) and institutional
31 components (establishment of beneficiaries association).

- 1 d) Groundwater recharge refers to the process of surface water (from rain or reservoirs)
2 joining the ground water aquifer.
3
- 4 e) Rainwater runoff refers to water flow both on surface of the ground and sub-surface
5 resulting to ground water recharge;
6
- 7 f) Small Farm Reservoir (SFR) refers to rainwater harvesting facility which is much
8 smaller to SWIP with height of less than 5 meters, of different types to suit specific
9 farms, intended for individual farmer and generally constructed within their own
10 farms.
11
- 12 g) Small Water Impounding Project (SWIP) refers to rainwater harvesting facility and
13 run-off management strategy which is characterized by an earth dam constructed
14 across a narrow depression or valley to hold back water and develop a reservoir that
15 will store rainfall and run-off during the rainy season for immediate or future use,
16 and is intended for group of at least 15 farmers and is community-managed.
17
18

19 ARTICLE II

20 RAIN WATER HARVESTING SYSTEMS IN NEW COMMERCIAL, INDUSTRIAL, 21 INSTITUTIONAL, AND RESIDENTIAL INFRASTRUCTURE PROJECTS IN 22 METRO MANILA AND MAJOR CITIES IN THE PHILIPPINES 23

24 **SEC. 4. *Mandatory Installation*** - An owner or developer of a new commercial, institutional
25 and residential development project in Metro Manila and other major cities, with an area of at
26 least one thousand five hundred (1,500) square meters and requiring the issuance of building
27 permit shall reserve, develop, and maintain at least three (3%) of the total area, exclusive roads,
28 service streets and alleys, as a rainwater harvesting facility.
29

30 The owner or developer of an ongoing commercial, institutional, and residential development
31 project in Metro Manila and other major cities that has no existing provision for a rainwater
32 facility shall build the facility within a period of three (3) years from the effectivity of this Act,
33 or suffer the penalty imposed in Section 9 hereof.
34

35 To conserve potable water, rainwater collected by a harvesting facility maybe used for non-
36 potable and suitable purposes, such as gardening and air-cooling processes.
37

38 It is the intent of the Act that the use of rainwater for non-potable uses should not be constrained
39 by standards for drinking water or recycled water but shall fully comply with water quality
40 requirements.
41

42 **SEC. 5. *Design Approval*** - The provision for a rainwater harvesting facility shall be required
43 by the Department of Human Settlements and Urban Development (DHSUD) and local
44 government units (LGUs) to be incorporated in the design of all new commercial, institutional,
45 and residential development projects in Metro Manila and other major cities, and project design
46 shall be approved for construction unless it includes such facility. The DHSUD and the LGUs
47 shall ensure that these facilities are built during the construction phase of the projects.
48

1 **SEC. 6. *Design Requirements*** - The rainwater harvesting facility must be designed to cope
2 with a pre-determined flood and rain return period and must have a storage capacity prescribed
3 by the Department of Public Works and Highways (DPWH). The design of the rainwater
4 harvesting facility includes the following:

- 5
6 a) Size, shape and physical characteristics of available space;
7
8 b) Construction plans with specified material type including lining and coating
9 requirements;
10
11 c) Detailed drawing on how the installation will drain into an outfall structure as a drywell
12 or a percolation chamber, storm drain system, drainage channel, or natural wash; and
13
14 d) Mechanism to exclude mosquitoes and not permit mosquito production.
15

16 **SEC. 7. *Building Permits*** - If the design of a new commercial, institutional, and residential
17 project in Metro Manila and other major cities with an area of at least one thousand five
18 hundred (1,500) square meters does not provide for a rainwater harvesting facility, the LGU
19 concerned shall deny the request for issuance of a building permit for such project.
20

21 **SEC. 8. *Reportorial Requirements*** - The DPWH shall require the owner or developer of all
22 new commercial, institutional, and residential development projects covered under this Act to
23 submit a compliance report within 12 months from the date of the completion of the project.
24 The DPWH shall henceforth require the building owners to submit an annual report of the
25 performance o f such rainwater retention facility which may include, but is not limited to
26 information on the total volume of retained rainwater and its utilization.
27

28 **SEC. 9. *Penalties*** - The owner or developer of all new commercial, institutional, and residential
29 development projects in Metro Manila and other major cities who fails to construct a rainwater
30 harvesting facility in violation of Section 4 of this Act shall suffer the penalty of a fine of not
31 less than Five hundred thousand pesos (Php500,000.00), but not more than Two million pesos
32 (Php2,000,000.00) for every year of non-compliance. In the case of a partnership, association,
33 corporation or any juridical person, the fine shall be imposed upon the president, treasurer, or
34 any officer or person responsible for the violation.
35

36 If the offender is a foreigner, the foreigner shall be deported immediately without further
37 proceedings after payment of fine. The head of the government institution who violates Section
38 4 of this Act, or government officials, employees, and agents who issue licenses or permits in
39 violation of Section 8 of this Act, shall suffer the penalty of suspension o f not less than ten
40 (10) days, but not more than one hundred eighty (180) days after due notice and hearing in an
41 appropriate administrative proceeding.
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46 **ARTICLE III**
47 **RAIN WATER HARVESTING SYSTEMS PROGRAM**
48 **FOR AGRICULTURE**
49

1 **SEC. 10. National Program** - There is hereby created a Rain Water Harvesting Systems
2 Program for Agriculture known as National Program to be formulated and implemented by the
3 Department of Agriculture (DA) thru the Bureau of Soils and Water Management (BSWM),
4 Bureau of Agricultural and Fisheries Engineering (BAFE) and DA- Regional Field Offices
5 (RFOs) jointly with the Local Government Units (LGUs), and in coordination with other
6 national government agencies and stakeholders. The program shall construct, operate, maintain
7 and manage SWIPs, SFRs, Groundwater Recharge Structures (GRS) and other rain water
8 harvesting facilities all over the country which will be utilized for irrigation, agriculture,
9 livestock and fishery production, recharging of aquifer and other economic and environment
10 uses.

11
12 **SEC. 11. Development of Master Plan for Rain Water Harvesting (RWH) systems** - All LGUs
13 through their Agricultural and Biosystems Engineering Offices/Units, with the technical
14 assistance of BSWM, BAFE and the Regional Agricultural Engineering Divisions (RAEDs) of
15 DA-RFOs shall identify and proposed suitable sites for SWIPs, SFRs, GRS and other RWH
16 facilities in every barangay within their respective jurisdiction for inclusion in the RWH
17 Plan.

18
19 **SEC. 12. Designing, Planning and Implementation-** The DA-RAEDs jointly with the
20 Agricultural and Biosystems Engineering Office/Units of the LGUs shall carry-out the
21 preparation of feasibility studies (FS), Detailed Engineering Design (DED) and Program of
22 Work (POW) of feasible sites of SWIPs, SFRs, GRS and other RWH facilities based on the
23 criteria and guidelines to be issued by DA.

24
25 **SEC. 13. Right-of- Way Acquisition for SWIP-** The reservoir and dam site should be free from
26 Right-of-Way (ROW) problem prior to implementation. The extent of the area requiring ROW
27 could only be determined after the conduct of detailed parcellary mapping of the affected area
28 which would be available after the completion of DED. In case there will be a ROW problem,
29 the concerned LGU shall facilitate the acquisition of the affected land/real property either thru
30 negotiated sale, expropriation, or any other mode of acquisition pursuant to R.A. No. 10752
31 and other existing laws. The cost of ROW shall form part of the project cost.

32
33 **SEC. 14. Design and Construction Standards-** The implementation procedures for SWIP,
34 SFR, GRF and other RWH facilities for agriculture use shall comply with the requirements of
35 the Philippine Agricultural and Biosystems Engineering Standards (PABES) for irrigation,
36 Environmental Clearance Certificate from the Department of Environment and Natural
37 Resources (DENR) and other pertinent standards or regulations of the government. The
38 Bureau of Agricultural and Fisheries Engineering (BAFE) and (BAFS) in coordination and
39 collaboration with BSWM and DA-RAEDs shall develop, review, update and enforce design,
40 construction and implementation standards and guidelines for SWIPs, SFRs, GRS and other
41 RWH facilities for agriculture use.

42
43 **SEC. 15. Institutional Development, Training and Extension** - The DA through the Agricultural
44 Training Institute (ATI) in coordination and collaboration with BSWM, BAFE, Technical
45 Education and Skills Development Authority (TESDA), Department of Agrarian Reform
46 (DAR), LGUs and Higher Education Institutions (HEIs) shall undertake institutional
47 strengthening of farmers-beneficiaries to viably operate and manage the RWH systems
48 including the provision of trainings and extension support on water management, proper
49 irrigation, mechanized farming and good agricultural practices and capability building program
50 for agricultural and bio-systems engineers of LGUs, DA, HEIs and other concerned

1 government agencies. The TESDA shall provide scholarships to RWH construction workers,
2 farmers, farm workers and trainers including the development of appropriate training
3 regulations.

4
5 **SEC. 16. *Operation and Maintenance*** - Each RWH system shall be officially turned-over to
6 farmer beneficiaries who are responsible for the operation and maintenance of the system. The
7 DA-RAEDs and BSWM shall provide assistance in the institutional development activities
8 such as formation of farmers association into Small Water Irrigation System Association
9 (SWISA), registration to the Securities and Exchange Commission (SEC) or the Department
10 of Labor and Employment (DOLE) and conduct of institutional development trainings such as
11 Basic Leadership Skills Training (BLST) and Technical Skills Training (TST).

12
13 **SEC. 17. *Watershed Development and Management*** - The DA-RAEDs, BAFE, BSWM in
14 coordination with DENR shall provide assistance to concerned LGUs on the development and
15 management of RWH watershed. A watershed management plan shall be prepared by the
16 concerned LGUs and shall consist of soil and water conservation measures appropriate to
17 biophysical and socio-economic condition of RWH sites.

18
19 **SEC. 18. *Management Information System (MIS)*** – The BSWM in collaboration with BAFE
20 and RFOs shall develop and maintain MIS for this program. It will consist of a computer system
21 of hardware and software that will serve as the backbone of the program aim to store, analyse
22 and transmit generated data and information to aid in management decision-making.

23
24
25 **ARTICLE IV**
26 **FINAL PROVISIONS**

27
28 **SEC. 19. *Funding*** - The funding necessary for the establishment, construction, operation,
29 maintenance and management of RWH which include the cost of feasibility studies, detailed
30 engineering, administrative and other implementation costs shall be incorporated in annual
31 funding appropriations of DA, DPWH, LGUs and other concerned government agencies

32
33 **SEC. 20. *Implementing Rules and Regulations (IRR)*** - Within ninety (90) days from the
34 effectivity of this Act, the DPWH and DA shall, in coordination with relevant government
35 agencies and other stakeholders, promulgate the rules and regulations for the effective
36 implementation of this Act.

37
38 **SEC. 21. *Separability Clause*** - If any portion of this Act is declared unconstitutional or invalid,
39 the other portions which are not affected thereby shall continue in full force and effect.

40 **SEC. 22. *Repealing Clause*** - All existing laws, decrees, executive orders, and rules and
41 regulations or parts thereof that are inconsistent with this Act, are hereby repealed.

42 **SEC. 23. *Effectivity Clause*** - This Act shall take effect fifteen (15) days after its publication in
43 the Official Gazette or in two (2) newspapers of general circulation.

Approved,