STATE OF NEW YORK

7104

2023-2024 Regular Sessions

IN SENATE

May 18, 2023

Introduced by Sen. MATTERA -- read twice and ordered printed, and when printed to be committed to the Committee on Environmental Conservation

AN ACT to amend the environmental conservation law, in relation to rainwater harvesting

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Article 15 of the environmental conservation law is amended by adding a new title 35 to read as follows:

TITLE 35

RAINWATER HARVESTING

Section 15-3501. Purpose.
15-3503. Rainwater harvesting feasibility.
15-3505. Rainwater harvesting conveyance.
15-3507. Rainwater harvesting pretreatment.
15-3509. Rainwater harvesting treatment.
15-3511. Rainwater harvesting landscaping and vegetation.
15-3513. Rules and regulations.

§ 15-3501. Purpose.

Rainwater harvesting practices, when designed to temporarily store stormwater runoff for detention or re-use through retention, may assist in meeting stormwater runoff reduction goals.

Rainwater harvesting is the capture, conveyance, and storage of precipitation from impervious surfaces, typically rooftops, primarily for re-use, rather than infiltration or release into a waterway. Rainwater harvesting has minimal site requirements compared to other stormwater management practices and may be used in residential and industrial settings for any volume of rooftop runoff, if sized appropriately. Rainwater harvesting may be used on sites where dense development, pollutant hotspots, or soil conditions preclude the use of infiltration or other stormwater management practices. The use of rainwater harvesting reduces the amount of stormwater runoff entering the drainage system

EXPLANATION--Matter in *italics* (underscored) is new; matter in brackets [-] is old law to be omitted.

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and local receiving waters as well as reducing or delaying peak flow rates. It is important to have well-defined operation and maintenance procedures for any rainwater harvesting system, in order to provide adequate storage capacity for subsequent storm events.

Storage tanks for harvested rainwater may be sited above- or below-ground, indoors or outdoors, or on rooftops of buildings that have been designed to bear the load of rainwater storage. The main components of a rainwater harvesting system include: a contributing rooftop surface; a conveyance system of gutters, downspouts, and pipes; screening or pre-treatment filter and clean-out; a watertight storage container; an over-flow pipe; an access hatch; and an extraction system, such as a spout or pump. Additional components may include a first flush diverter, pres-sure tank, and backflow prevention device.

Rain barrels are commonly used to store harvested rainwater in small-scale residential settings, while above- or below-ground cisterns are more commonly used in larger-scale industrial settings. Rain barrels are above ground storage tanks generally holding fifty to eighty gallons, but may hold up to two hundred gallons. Cisterns are sealed tanks, which may be above or below ground and generally hold two hundred to ten thou-sand gallons. While carefully managed rain barrels can be a viable means of stormwater runoff volume reduction for very small volumes of rainwa-ter, this standard is intended to be applied to the larger storage volumes and more robust management strategies that are possible only with cisterns.

Harvested rainwater is often well-suited for reuse in landscape irri-gation and other non-potable uses, including in toilets and urinals, as well as HVAC make-up water, topping off swimming pools, and washing cars. In the state, reuse of harvested rainwater for purposes other than irrigation is largely unaddressed by current state regulations or local codes. Because of this lack of specific rainwater harvesting guidance, some jurisdictions have regulated harvested rainwater as reclaimed water, resulting in stringent requirements that make reusing harvested rainwater challenging. The practicality of rainwater reuse will need to be evaluated on a case-by-case basis.

§ 15-3503. Rainwater harvesting feasibility.

The following design elements are required when implementing rainwater harvesting practices to capture and re-use stormwater runoff:

1. Rainwater harvesting shall be limited to rooftop runoff.

2. Rainwater storage shall be designed to capture at least 0.2 inches of rainfall from the contributing rooftop.

3. An application area or water reuse shall be identified that is sufficient to reuse the stormwater volume stored within a week at an application rate of one inch per week over the irrigation period from May through September.

4. For underground storage tanks, the bottom of the tank shall be above groundwater level, and the top of the tank shall be below the frost line. Storage tanks that are above ground or not able to be buried below the frost line shall be appropriately insulated or discon-nected during the winter months to protect the system from freezing.

§ 15-3505. Rainwater harvesting conveyance.

1. Gutters shall be hung at a minimum of one-half percent for two-thirds of the length and at one percent for the remaining one-third of the length, and shall be set and sized to properly capture, contain, and convey the one inch storm event at a rate of one inch per hour.

2. Overflow runoff shall be safely conveyed to a suitable, down-gradient location such as a buffer area, open yard, grass swale, or secondary treatment practice, as applicable.

3. Overflow conveyance and tank siting shall be designed to prevent ponding or soil saturation within ten feet of building foundations, and underground cisterns shall be sited at least ten feet from building foundations.

4. Systems shall be designed around a water budget analysis that identifies how water will be used to ensure that storage capacity in the system will be available for subsequent runoff events.

§ 15-3507. Rainwater harvesting pretreatment.

1. Pretreatment of rainwater shall be provided in the form of a filter or screen to prevent leaf litter, sediment, and other debris from entering the storage tank. First flush diverters, vortex filters, roof washers, and leaf screens are acceptable forms of pretreatment. The pretreatment shall be installed either in the gutter or downspout or at the inlet to the storage tank, with proper design for clean-out. Depending on the desired use for the rainwater, additional filtration may be needed or desired.

2. Mosquito screening with a one millimeter mesh size shall be installed at openings to prevent mosquitos from entering the storage tank.

§ 15-3509. Rainwater harvesting treatment.

1. A water budget analysis shall be provided to the department that identifies how water will be used, to ensure that the system will be available for subsequent runoff events.

2. Storage tanks shall be watertight and shall be composed of and sealed with water safe, non-toxic substances.

3. Rainwater shall not be harvested from the following roof types: tar and gravel, asbestos shingle, and treated cedar shakes. In addition, rainwater shall not be collected from roofs with metal flashing that contains lead.

§ 15-3511. Rainwater harvesting landscaping and vegetation.

Stormwater shall not be diverted to a rainwater harvesting system until the overflow conveyance and application areas have been stabilized with vegetation.

§ 15-3513. Rules and regulations.

The commissioner shall promulgate all rules and regulations necessary for the implementation of this title.

§ 2. This act shall take effect on the ninetieth day after it shall have become a law. Effective immediately, the addition, amendment and/or repeal of any rule or regulation necessary for the implementation of this act on its effective date are authorized to be made and completed on or before such effective date.