HOUSE DOCKET, NO. 1414 FILED ON: 1/15/2015

HOUSE . . . . . No. 774

The Commonwealth of Massachusetts

PRESENTED BY:

Chris Walsh

To the Honorable Senate and House of Representatives of the Commonwealth of Massachusetts in General Court assembled:

The undersigned legislators and/or citizens respectfully petition for the adoption of the accompanying bill:

An Act Regulating Greywater Recycling systems in the Commonwealth.

PETITION OF:

NAME:	DISTRICT/ADDRESS:
Chris Walsh	*6th Middlesex*
Carmine L. Gentile	*13th Middlesex*
Denise Provost	*27th Middlesex*

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HOUSE . . . . . No. 774

By Mr. Walsh of Framingham, a petition (accompanied by bill, House, No. 774) of Chris Walsh, Carmine L. Gentile and Denise Provost for legislation to further regulate greywater recycling systems in the Commonwealth. Environment, Natural Resources and Agriculture.

The Commonwealth of Massachusetts

In the One Hundred and Eighty-Ninth General Court
(2015-2016)

An Act Regulating Greywater Recycling systems in the Commonwealth.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:

SECTION 1. Chapter 142 of the General Laws is hereby amended by inserting after section 22 the following section:

Section 23. Regulating single family greywater recycling systems and mandating greywater recycling in new multifamily construction projects in the commonwealth.

A. Purpose

a. The purpose of this section is to establish regulations that provide building owners with guidelines for simple, cost-effective options for reusing greywater for toilet flushing and subsurface irrigation.

b. This section is intended to encourage water conservation, and re-use in communities across the commonwealth, save money, increase the effective water supply, and protect public health and water quality.

B. Applicability

a. This section applies to multi-family buildings utilizing less than 3,000 gallons of water per day.

b. This section applies to the reuse of greywater inside buildings regulated by the Uniform State Plumbing Code.

c. Greywater reuse must comply with all applicable local ordinances and codes, and state statutes and regulations including, but not limited to, the Uniform State Plumbing Code.

d. The use of a greywater recycling and irrigation system does not serve as an alternative to the use of an approved on-site sewerage system or connection to an approved public sewer for greywater disposal at any building, including buildings using waterless toilets.

C. Administration

a. The local board of health for all cities and towns in the commonwealth shall implement this section under the authority of 248 CMR 10.24. In the event that a local board of health does not implement this section, the provisions of this section shall nonetheless apply to greywater reuse for toilet flushing and irrigation in that jurisdiction.

b. If a local board of health is unable to adjust its resources to implement and enforce this section in accordance with subsection (a) of this section, the provisions of Section 23 shall continue to apply to greywater reuse for toilet flushing and irrigation in that jurisdiction.

c. The local board of health is authorized to establish fees for greywater recycling system permits under this section, and the local health officer is authorized to collect fees to implement this section.

d. Nothing in this section prohibits the adoption and enforcement of more stringent regulations by a local board of health.

D. Definitions

a. These definitions apply throughout this section unless the context clearly requires otherwise.

i. Blackwater is wastewater containing fecal matter and urine. It is also known as brown water, foul water, or sewage. It is distinct from greywater or sullage, the residues of washing processes. Blackwater should not be used in the home because of the high risk of contamination by bacteria, viruses and other pathogens.

ii. Greywater is defined as wastewater from showers, bathtubs, hand washing lavatories, sinks that are not used for disposal of hazardous or toxic ingredients, sinks that are not used for food preparation or disposal, and clothes-washing machines. Greywater does not include wastewater from the washing of material, including diapers, soiled with human excreta or wastewater that has come in contact with toilet waste.

iii. Greywater irrigation system means an integrated system of components located on the property it serves, on or nearby property where it is legally allowed to be used, that conveys greywater from the building where it originates and provides irrigation of plants.

iv. On-site sewage system means an integrated system of components located on or nearby the property it serves that conveys, stores, treats, and/or provides subsurface soil treatment and dispersal of sewage. It consists of a collection system, a treatment component or treatment sequence, and a soil dispersal component. An on-site sewage system also refers to a

holding tank sewage system or other swage system that does not have a soil dispersal component.

v. Public sewer system means all facilities used in the collection, transmission, storage, treatment, or discharge of any waterborne waste, whether domestic in origin or a combination of domestic, commercial, or industrial wastewater. A public sewer system may also be called a sanitary sewer system.

vi. Single family residence means one single-family house that is not used for commercial or other nonresidential purposes as defined by 780 CMR.

vii. Tier 1 greywater system means a greywater recycling and irrigation system with a maximum design flow of 400 gallons per day, as documented by the local building official during the permitting phase, serving a single-family residence. A Tier 1 system serves a single-family residence connected to an approved public sewer system or on-site sewage system.

viii. Tier 2 greywater system means a greywater recycling and irrigation system serving a residential or nonresidential building. A Tier 2 system only serves a building connected to an approved public sewer system or large on-site sewage system.

E. General Requirements applicable to all Tiers

a. Construction of a greywater system, including storage and disposal systems, must comply with this chapter and any more stringent requirements of the State Code.

b. Greywater does not contain hazardous chemicals derived from activities such as cleaning car parts, washing greasy or oily rags, or disposing of waste solutions from home photo labs or similar hobbyist or home occupational activities.

c. The design goal for a greywater recycling system is to store greywater for no longer than 24 hours.

d. This section will allow the reuse of kitchen sink water with approval from the local building official. It is required that kitchen sink water be applied subsoil or contained within a rat-proof outlet shield.

e. Towns or cities may not further limit the use of greywater described in this section by rule or ordinance.

F. Tier 1 Greywater Systems allow private residential direct reuse of greywater for a flow of less than 400 gallons per day. This section shall not require a permit for applying less than 400 gallons per day of private residential greywater originating from a residence for the residence's toilet flushing, household gardening, composting, or landscape irrigation if the following conditions are met:

a. The greywater originates from a single family dwelling;

b. Human contact with greywater and soil irrigated by greywater is avoided;

c. Greywater is applied in a manner that minimizes the potential for contact between greywater or soil irrigated with greywater and domestic pets;

d. A constructed greywater distribution system provides for overflow and/or diversion into the sewer system or on-site wastewater treatment and disposal system;

G. Tier 1 Greywater Requirements. A greywater system may only be connected to the public sewer system or on-site sewage system if the following requirements are met:

a. The connection must be in the line between the house stub-out for the on-site wastewater treatment and disposal system and the on-site treatment tank.

b. The greywater system is constructed so that if blockage, plugging, or backup of the system occurs, greywater can be directed in to the sewage collection system or onsite wastewater treatment and disposal system, as applicable except as provided for under 4, below. The greywater system may include a means of filtration to reduce plugging and extend system lifetime;

c. The greywater distribution system shall be designed so that 100% of the greywater can be diverted to the sewer system or on-site wastewater treatment and disposal system during periods of non-use of the greywater system. For residential use an onsite wastewater treatment facility for blackwater treatment and disposal, the use of a greywater system does not change the design, capacity, or reserve area requirements for the onsite wastewater treatment facility at a residence, and ensures that the facility can handle the combined blackwater and greywater flow if the greywater system fails or is not fully used. The greywater system shall be designed with two valved zones, each of which can accommodate the full expected greywater volume. Providing the greywater system passes a flow test in each zone, the capacity of the on-site system may be reduced, or in the instance that an approved composting toilet system is present, eliminated;

d. Greywater diverter valves shall be downstream from traps and vents in plumbing that leads to septic or sewer;

e. The greywater is stored in tanks per 248 CMR 10.03(b)

f. and the tanks:

i. Are clearly labeled as nonpotable water;

ii. Utilize biodegradable nontoxic dye to color the greywater to identify it in contrast to potable water;

iii. Restrict access, especially to children;

iv. Are covered to eliminate habitat for mosquitoes and other pests;

v. Are able to be cleaned;

vi. Are sited outside of a floodway; and

vii. Meet the structural requirements of the 2004 American Water Works Association standards;

g. The greywater system uses piping clearly identified as a nonpotable water conduit, including identification through the use of painted purple pipe, purple pipe or pipe taped with purple metallic tape;

h. The greywater system is operated to maintain a minimum vertical separation distance of at least 5 feet from the point of greywater application to the top of the seasonally high groundwater table;

i. Greywater applied by surface irrigation does not contain water used to wash diapers or similarly soiled or infectious garments unless the greywater is disinfected before irrigation;

j. Application of greywater is managed to minimize standing water on the surface and to ensure that the hydraulic capacity of the soil is not exceeded, for example by splitting the flow, moderate application rates, and generous mulching;

k. The greywater is applied at a rate that will not result in ponding or pooling or will not cause runoff across the property lines outside of the site where it was generated or onto any paved surface;

l. Surface application of greywater is not used for irrigation of food plants which have an edible portion that comes in direct contact with greywater;

m. Surface irrigation for greywater is only by flood or drip irrigation. Containment within horticultural basins or swales is encouraged for flood irrigation;

n. The greywater is not disposed of using a spray distribution system;

o. the greywater is not discharged into a river corridor as defined by 302 CMR 3; and

p. the greywater use within cities or towns complies with all applicable local ordinances.

q. No reduction in the size of the on-site septic system will be allowed when using a greywater system.

r. Builders of single family dwellings are allowed by right to:

i. Install plumbing in new housing to collect greywater from all allowable sources; and

ii. Design and install a subsurface greywater system around the foundation of new housing to minimize foundation movement or cracking.

s. Greywater shall only be used:

i. For flushing toilets;

ii. For gardening inedible food plants;

iii. For composting; or

iv. For landscaping at a single family dwelling.

t. The installer of the greywater system must advise the owner of basic operating and maintenance procedures including any effects on the on-site septic system.

u. Greywater use must not create a nuisance or damage the quality of surface water or groundwater. If greywater use creates a nuisance or damages the quality of surface water or groundwater, the permitting authority may take action to protect the surface or groundwater.

H. Tier 2 Greywater Systems are for greywater systems that process over 400 gallons but under 3,000 gallons of water per day. This category includes commercial, multifamily, and institutional systems. They follow the same requirements as Tier 1 above, with the additional requirement that Tier 2 Greywater Systems require a standard permit. The department of environmental protection in conjunction with the Department of Public Health and Massachusetts Plumbing Board of the commonwealth shall promulgate guidelines for Tier 2 Greywater Systems.

I. Permits

a. Permits shall be issued by the local regulatory authority for a reasonable fee.

J. Enforcement

a. The local health officer shall enforce these rules and may initiate enforcement actions against the system owner or other person causing or responsible for the violation of these rules including system failure. Enforcement actions may include, but are not limited to, fines for each day the violation continues, requiring a person to stop work on any greywater system, or to divert the greywater to the approved public sewer system or on-site sewage system serving the building, until all permits, approvals, and registrations required by rule or statute are obtained.

b. Enforcement orders issued under this section shall be in writing and shall include the violation and the corrective action required, and the name, business address, and phone number of an appropriate staff person who may be contacted regarding the order.

c. Enforcement orders shall be personally served in the manner of service of a summons in a civil action or in a manner showing proof of receipt.

K. Waivers

a. The local health officer may grant a waiver from specific requirements of this section if the officer determines:

i. That the waiver requested is the minimum deviation from the specific requirements of this chapter that is necessary for the conditions; and

ii. The alternative approach proposed by the person requesting the waiver is consistent with the requirements and intent of these rules.

L. Applicable Building Types

a. This section shall apply as a mandatory regulation to all new multifamily building construction projects, as defined in 780 CMR for one and two family units and multifamily units, and all significant multifamily addition or renovation projects over 10,000 square feet and as defined by the Massachusetts Building Code.

M. Effective date

a. This section shall take effect on January 1, 2016.

SECTION 2. Chapter 248 of the Code of Massachusetts Regulations Section 10.03 of the Uniform State Plumbing Code is hereby amended by replacing the definition of "Gray-water." with the following:

A. Greywater is defined as wastewater from showers, bathtubs, hand washing lavatories, sinks that are not used for disposal of hazardous or toxic ingredients, sinks that are not used for food preparation or disposal, and clothes washing machines. Greywater does not include wastewater from the washing of material, including diapers, soiled with human excreta or wastewater that has come in contact with toilet waste.