



Massachusetts Department
of
Environmental Protection
One Winter Street
Boston, MA 02108-4746

Commonwealth of
Massachusetts
Charles D. Baker,
Governor

Executive Office of
Energy and Environmental
Affairs
Kathleen A. Theoharides,
Secretary

Department of
Environmental Protection
Martin Suuberg,
Commissioner

Produced by the
Bureau of Water
Resources,
rev 2018

Printed on recycled paper.

This information is
available in alternate
format by calling our ADA
Coordinator at
(617) 574-6872

A Wellhead Protection Guide

Updated 2019

Floor Drain Discharges

310 CMR 22.21(2)(a)(8)

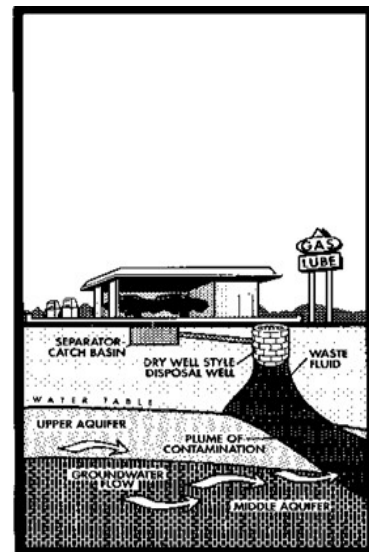
Commercial and industrial floor drains discharging directly to the ground or via septic systems, cesspools, leaching fields or dry wells, pose a serious threat to public drinking water quality. In Massachusetts, floor drain discharges have caused groundwater and soil contamination, resulting in lengthy and costly remediation.

LOCAL REQUIREMENTS

- To address these discharges, MA Drinking Water Regulations require a local prohibition on **existing** floor drain discharges in Zone II of public drinking water wells. Specifically, MA Wellhead Protection Regulation 310 CMR 22.21(2)(a)(8) prohibits: *any floor drainage systems in existing facilities, in industrial or commercial hazardous material and/or hazardous waste process areas or storage areas, which discharge to the ground without a MassDEP permit or authorization. Existing facilities with such a drainage system shall be required to either seal the floor drain (in accordance with the state plumbing code, 248 CMR 10.00), connect the drain to a municipal sewer system (with all appropriate permits and pre-treatment), or connect the drain to a holding tank meeting the requirements of all appropriate MassDEP regulations and policies.*

BENEFITS OF HAVING A LOCAL CONTROL

- Once a floor drain control is adopted a municipality can establish a local floor drain inspection program. Such programs are usually implemented by the Board of Health or the Building or Plumbing Inspector. Inspections can be streamlined by prioritizing facilities located in a Zone II, and conducting inspections over a phased period of time. See *'Tips for Implementing a Successful Floor Drain Prohibition'*. Additionally, MassDEP's *'Sample Board of Health Floor Drain Letter'* can be used to notify business of an upcoming inspection, and the steps they must take to meet compliance. A local program can also be used to provide technical assistance to businesses having difficulty achieving compliance.



HOW THE PLUMBING CODE DIFFERS

- The Drinking Water Program is often asked *why* the Plumbing Code, 248 CMR 10.00, cannot be used to satisfy the floor drain prohibition 310 CMR 22.21(2)(a)(8). The reason is because the Plumbing Code is limited in scope. It applies only to those activities that *'produce oily or liquid hazardous wastes'*. In contrast, the floor drain prohibition includes these facilities **and** facilities which also *'store hazardous wastes or hazardous materials'*. A local floor drain control, meeting 310 CMR 22.21(2)(a)(8), is thus a more stringent and comprehensive control.



TIPS FOR IMPLEMENTING A SUCCESSFUL FLOOR DRAIN PROHIBITION

■ **Prioritize Inspections**

- ✓ If the local floor drain regulation applies to the entire municipality, prioritize facility inspections in the Zone II, then phase in facilities outside the Zone II.
- ✓ Develop an inspection list. If the regulation applies to just the Zone II, prioritize facilities that have not recently been inspected, or have other regulatory concerns.
- ✓ Enlist the aid of the building and/or plumbing inspector in identifying facilities with existing floor drains in the Zone II (building modifications and change of use often require inspections).

■ **Send Facilities a Letter**

Inspections should serve as the primary vehicle to implement the floor drain prohibition. Prior to inspections it can be helpful to inform facilities of the newly adopted floor drain regulation, an upcoming inspection, and the information they must have on hand for the inspection. MassDEP designed '*A Sample Inspection Letter*' to assist local entities with notifying businesses (included in this guide).

■ **Conduct Inspections**

- ✓ Provide businesses with a map indicating the location of their facility with respect to the drinking water well and their location in (or near) the Zone II;
- ✓ Determine if floor drains are present in the hazardous material or hazardous waste process or storage areas of the facility. These are the areas where floor drains are prohibited. If a floor drain is located, determine the ultimate discharge point of the drain.
 - Sewer Connection - Verify the discharge of a drain to the municipal sanitary sewer line by either seeing "as-built" diagrams or municipal own or state sewer connection records; or through the use of field efforts, such as a dye test, metal detector survey or drain line inspection camera.
 - Holding Tank - Verify the connection of a drain to a holding tank by seeing MassDEP holding tank permit records.
 - Oil/Water Separators - These are designed to have a discharge. Unless specifically converted with MassDEP approval, these are not considered holding tanks. If an oil/water separator is in use (they must be used by some facilities such as auto repair garages with drains tied to the sanitary sewer line) determine if the facility obtained MassDEP approval of conversion to a holding tank.
- If it is determined that the facility is subject to the floor drain prohibition, notify the facility of the results of the inspection, and the steps they must take to comply with the local floor drain prohibition.
- To verify if a facility has a valid Ground Water Discharge Permit, contact MassDEP at 617-556-1029, <https://www.mass.gov/service-details/the-groundwater-discharge-permitting-program>.
- For information about floor drain discharges, contact the Underground Injection Control Program at 617-292-5859, <https://www.mass.gov/underground-injection-control-uic>.

SAMPLE BOARD OF HEALTH LETTER ¹
FLOOR DRAIN REQUIREMENT
310 CMR 22.21(2)(a)(8)

Dear Business Owner / Facility Operator,

This letter is to inform you that the Board of Health adopted a Floor Drain Regulation on [date] to comply with MassDEP Wellhead Protection Regulation 310 CMR 22.21(2)(a)(8). The purpose of this regulation is to eliminate floor drains located in hazardous material and hazardous waste storage and process areas. Of particular concern are floor drains which discharge directly to the ground or to subsurface infiltration structures such as septic systems, cesspools, leaching fields or dry wells. These types of floor drain discharges are known to pose a serious threat to groundwater quality. The Floor Drain Regulation will enable the Board of Health to further community efforts in protecting groundwater resources and public drinking water supplies.

The Board of Health will be scheduling inspections over the next few [weeks/months]. Because your facility has been identified as one that may have a floor drain discharge system, the following information will assist you in preparing for this inspection.

1. If you are currently connected to a sewer line, please have available your local permit information from the plumbing inspector/building department. Be aware that certain facilities, such as engine and motor vehicle repair shops, must also be equipped with oil/water separators.
2. If you are currently connected to a holding tank, or if you have a permit for the discharge, please have available your holding tank *Compliance Certification Form DEP01* or *Groundwater Discharge Permit / Underground Injection Control (UIC) Registration* as issued by MassDEP.
3. If you are not sure that you have a floor drain, inspect all areas where hazardous material or hazardous waste is processed or stored, including any temporary storage areas. If you locate a floor drain you must determine where it discharges. You may need to examine underneath your facility structure, review your building plans and/or hire a plumber to perform a dye test.
4. If you have a floor drain discharge system AND it is located in a hazardous material or hazardous waste process or storage area AND it is not connected to municipal sewer or a holding tank AND you do not have a MassDEP Permit/Registration, then the floor drain discharge **must** be discontinued. Subsurface infiltration structures receiving floor drain discharges are considered to be UIC Class V Wells. If the floor drain discharges to a UIC Well, then the well must also be closed. You will need to complete and submit to MassDEP a *UIC Well Pre-Closure Notification Form BRP WS-06d* at least thirty days prior to closing the well. After the well is closed, a *Post-Closure Notification Form* will also need to be submitted to MassDEP. In addition to closing the well, the floor drain will need to be altered in one of the following ways:

¹ This letter is available electronically. If the municipality adopts a floor drain general bylaw (rather than a BOH regulation) please modify this letter as needed.

1. Connect the floor drain to a holding tank and apply for MassDEP certification;
OR
2. Connect to the municipal sewer line with approval from the municipality; OR
3. Permanently seal the floor drain.

Please note that if the floor drain is permanently sealed, you must complete and submit *Form WS1 Notice of Plumbing Inspector Approval to Seal Floor Drain* to MassDEP. The plumbing inspector must be notified of your intention **prior to sealing the floor drain** as they may require their on-site presence during the closure activities.

The information, instructions and forms described in this letter are available on MassDEP's website; <https://www.mass.gov/lists/detailed-information-about-underground-injection-control-uic>

A member of the Board of Health will be contacting you to schedule a floor drain inspection. As described in this letter, please have all relevant documents available for this inspection. For your convenience I have enclosed a copy of the Floor Drain Regulation. We thank you for your assistance in protecting groundwater resources and public drinking water supplies in [name of community]. If you have any questions, please feel free to contact the Board of Health at [phone/email].

Sincerely,

Board of Health

Cc: Local Boards/Departments

MODEL BOARD OF HEALTH FLOOR DRAIN REGULATION

updated 2019

A local floor drain discharge prohibition is required under the MA Wellhead Protection Regulations 310 CMR 22.21(2). The floor drain control must be implemented by the municipality and prohibits the following activity:

any floor drainage systems in existing facilities, in industrial or commercial hazardous material and/or hazardous waste process areas or storage areas, which discharge to the ground without a MassDEP permit or authorization. Any existing facility with such a drainage system shall be required to either seal the floor drain (in accordance with the state plumbing code, 248 CMR 10.00), connect the drain to a municipal sewer system (with all appropriate permits and pre-treatment), or connect the drain to a holding tank meeting the requirements of all appropriate MassDEP regulations and policies.

This Model is designed to assist Boards of Health in developing a floor drain control that complies with 310 CMR 22.21(2)(a)(8). Please note that this Model is broader in scope, more comprehensive and more stringent than 310 CMR 22.21(2)(a)(8).

Adoption of this Model is strongly recommended but not required. Only the prohibition language in 310 CMR 22.21(2)(a)(8) is required for compliance with the Wellhead Protection Regulations. When using this Model be sure to:

- delete notes and foot notes
 - delete the word 'Model' from the title
 - choose the correct [term/words] in brackets and delete brackets; and
 - fill in blanks _____ and remove underlines
-

[NAME OF TOWN/CITY]
BOARD OF HEALTH FLOOR DRAIN REGULATION
date

Section I. Purpose of Regulation

Whereas:

- floor drains in industrial and commercial facilities are often tied to a system leading to a leaching structure or a septic system; and
- improper maintenance or inappropriate use of these systems may allow the passage of contaminants or pollutants entering the drain to discharge from the leaching structure or septic system to the ground; and
- discharges of hazardous wastes and other pollutants to floor drains leading to leaching structures and septic systems have repeatedly threatened surface and ground water quality throughout Massachusetts; and
- ground water resources in the [Town/City] of _____ contribute to public drinking water supplies.

The [Town/City] of _____ adopts the following regulation, under its authority as specified in Section II, as a preventative measure for the purposes of preserving and protecting the community's drinking water supply from discharges of pollutants to the ground via floor drains, and minimizing the threat of economic losses due to such discharges.

Section II. Scope of Authority

The Board of Health adopts the following regulation pursuant to authorization granted by M.G.L. Chapter 111 Sections 31 and 122. This regulation shall apply to all new and existing facilities located within the [Town/City] of _____.²

Section III. Definitions

For the purposes of this regulation, the following words and phrases shall have the following meanings:

Commercial and Industrial Facility: A public or private establishment where the principal use is the supply, sale, and/or manufacture of services, products, or information, including but not limited to: manufacturing, processing, or other industrial operations; service or retail establishments; printing or publishing establishments; research and development facilities; small or large quantity generators of hazardous waste; laboratories; hospitals.

MassDEP: Massachusetts Department of Environmental Protection.

Discharge: The accidental or intentional disposal, deposit, injection, dumping, spilling, leaking, incineration, or placing of toxic or hazardous material or waste upon or into any land or water so that such hazardous waste or any constituent thereof may enter the land or waters of the Commonwealth. Discharge includes, without limitation, leakage of such materials from failed or discarded containers or storage systems and disposal of such materials into any on-site leaching structure or sewage disposal system.

Floor Drain: An intended drainage point on a floor constructed to be otherwise impervious which serves as the point of entry into any subsurface drainage, treatment, disposal, containment, or other plumbing system.

Leaching Structure: Any subsurface structure through which a fluid that is introduced will pass and enter the environment, including, but not limited to, dry wells, leaching catch basins, cesspools, leach fields, and oil/water separators that are not water-tight.

Oil/Water Separator: A device designed and installed to separate and retain petroleum based oil/grease, flammable wastes and sand particles from normal wastes while permitting normal sewage or liquid wastes to discharge into the drainage system by gravity. Other common names for such systems include MDC traps, gasoline and sand traps, grit and oil separators, grease traps, and interceptors.

Toxic or Hazardous Material: Any substance or mixture of physical, chemical, or infectious characteristics posing a significant, actual, or potential hazard to water supplies or other hazards to human health if such substance or mixture were discharged to land or waters. Toxic or hazardous materials include, without limitation, synthetic organic chemicals, petroleum products, heavy metals, radioactive or infectious wastes, acids and alkalis, and all substances defined as Toxic or Hazardous under Massachusetts General Laws (MGL) Chapter 2 1C and 2 1E or Massachusetts Hazardous Waste regulations (310 CMR 30.000), and also include such products as solvents, thinners, and pesticides in quantities greater than normal household use.

² Alternatively this regulation can apply to just to the MassDEP approved Zone II(s), or to the municipal overlay protection district that covers the Zone II(s).

Use of Toxic or Hazardous Material: The handling, generation, treatment, storage, or management of toxic or hazardous materials.

Zone II: The delineated recharge area to a public drinking water well as approved by MassDEP and defined under the MA Drinking Water Regulations 310 CMR 22.00.³

Section IV. Prohibitions

With the exception of discharges that have received, or have applied and will receive, a MassDEP issued permit prior to the effective date of this regulation, no floor drain shall be allowed to discharge with or without pretreatment, such as an oil/water separator, to the ground, a leaching structure, or septic system in any industrial or commercial facility if such floor drain is located in:

- A. An industrial or commercial process area; or
- B. A petroleum, toxic, or hazardous materials and/or hazardous waste storage area; or
- C. A leased facility lacking either A or B as described above, but which has the potential for a change in use to one which has either A or B; and is in the opinion of the Board of Health or its Agent, sufficient to warrant the elimination of the ground discharge present at this facility.

Section V. Requirements for Existing Facilities

A. The owner of a facility in operation, prior to the effective date of this regulation, with a prohibited floor drain system as defined in Section IV shall:

1. Where possible, disconnect and plug all applicable inlets to and outlets from applicable leaching structures, oil/water separators, and/or septic systems; and
2. Remove all existing sludge in oil/water separators, septic systems and, where accessible, leaching structures. Any sludge determined to be a hazardous waste shall be disposed of in accordance with state hazardous waste regulations, 310 CMR 30.000. Remedial activity involving any excavation and/or soil or groundwater sampling must be performed in accordance with appropriate MassDEP policies; and
3. Alter the floor drain system so that the floor drain shall be either:
 - (a). Connected to a holding tank that meets all applicable requirements of MassDEP policies and regulations, with hauling records submitted to the Board of Health at the time of hauling; or
 - (b). Connected to a municipal sanitary sewer line, if available, with all applicable MassDEP and local permits; or
 - (c). Permanently sealed. Any facility sealing a drain shall be required to submit for approval to the Board of Health a hazardous waste management plan detailing the means of collecting, storing, and disposing any hazardous waste generated by the facility, including any spill or other discharge of hazardous materials or wastes.

B. Any oil/water separator remaining in use shall be monitored weekly, cleaned not less than every 90 days, and restored to proper conditions after cleaning so as to ensure proper functioning. Records of the hauling of the removed contents of the separator shall be submitted to the Board of Health at the time of hauling.

C. Compliance with all provisions of this regulation must be accomplished in a manner

³ Include this definition only if the term 'Zone II' is used in the body of the regulation.

consistent with Massachusetts Plumbing, Building, and Fire Code requirements.

D. Upon complying with one of the options listed under Section V.A.3, the owner/operator of the facility shall notify MassDEP of the closure by filing the UIC Pre-Closure Form BRP WS-06d (which may be obtained by calling MassDEP at 617-292-5770) and sending a copy to the Board of Health.

Section VI. Effective Dates for All Facilities

The effective date of this regulation is the date posted on the front page of the regulation, which shall be identical to the date of adoption of the regulation.

A. Existing Facilities:

1. Owners and Operators of a facility affected by this regulation shall comply with all of its provisions within 120 days of the effective date; and
2. All applicable discharges to the leaching structures and septic systems shall be discontinued immediately through temporary isolation or sealing of the floor drain.

B. New Facilities:

1. As of the effective date of this regulation, all new construction and/or applicable change of use within the [Town/City] of _____ shall comply with the provisions of this regulation.
2. Certification of conformance with the provisions of this regulation by the Board of Health shall be required prior to issuance of construction and occupancy permits; and
3. The use of any new oil/water separator shall comply with the same requirements as for existing systems, as specified above in Section V.B.

Section VII. Penalties

Failure to comply with provisions of this regulation will result in the levy of fines of not less than \$_____ but no more than \$_____. Each day's failure to comply with the provisions of this regulation shall constitute a separate violation.

Section VIII. Severability

Each provision of this regulation shall be construed as separate to the end that, if any provision, or sentence, clause or phrase thereof, shall be held invalid for any reason, the remainder of that section and all other sections shall continue in full force and effect.