

MARBLEHEAD WATER AND SEWER COMMISSION



THE FLOW N' GO

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JANUARY/FEBRUARY/MARCH 2024

NEW SEWER DEDUCT (SD) METER PROGRAM

The Water and Sewer Commission had received a request to review the current sewer deduct meter program, as residents often found the process cumbersome and confusing. A review was completed by the Commission on the existing program. A draft of the updated program was provided to the Commission, reviewed, and approved at the January meeting.

Moving forward, residents must purchase sewer deduct meter assembly's from the Water and Sewer Commission; rather than Gilbert & Cole or Ace Hardware.

Purchasing starts with a request to the Commission to initiate the process. A package will be provided with instructions, information, and an agreement to be signed by the property owner.

In order to receive the privilege of sewer deduct credit on ones bill, a plumbing permit shall first be obtained from the plumbing inspector who is located at the Town offices, 7 Widger Road. Next, the sewer deduct agreement shall be signed, a copy of the plumbing permit shall be provided, and payment received for the invoice. Home owners shall also abide by the Cross Connection Control Program, which is described in greater detail in the next section

of this newsletter.

Once all these items are completed, the sewer deduct meter can be collected by an owner representative at the Commission's office. A licensed plumber must install the sewer deduct meter and an approved backflow prevention device. Documentation of an approved plumbing inspection is required prior to scheduling a sewer deduct meter inspection with the Commission. At the time of the Commission's inspection, the touch pad and remote reader will be installed.

As with the previous policy, the sewer deduct meter is purchased and owned by the homeowner and the homeowner is entirely responsible for its maintenance and for ensuring that it is recording accurately. The Commission is in no way liable for deduct meters that fail to record usage. No deduct, or credit shall be given for usage that is not recorded on the meter. No sewer credit, refund, or abatement shall be given for malfunctioning, faulty, incorrectly installed meters, meters not having the required permits, inspections, or meters that have not been recognized and approved by the Water and Sewer Commission.

DO YOU HAVE AN IRRIGATION SYSTEM? A BACKFLOW PREVENTER IS REQUIRED

The article above about installing a second meter to measure outside water use could be very valuable to home-owners who do a lot of outside watering. Whether you have an irrigation system or you water your little patch of lawn using your garden hose, doing so carries a responsibility.

What is your responsibility when using your irrigation, watering your lawn, or

washing your car? To make sure that you are protecting the public water supply.

It's a massive responsibility and one that the Water and Sewer Commission takes very seriously.

How do you fulfill this responsibility? By making sure your outside watering systems have what is known as a backflow prevention device (*continued on next page*).

SD CREDIT PROCEDURE

1. Acquire plumbing permit
2. Purchase sewer deduct meter assembly from the Commission
3. Owner to sign sewer deduct meter agreement
4. Plumber to install sewer deduct meter and obtain plumbing inspection
5. Schedule a sewer deduct meter inspection with Commission
6. Upon passing inspection, sewer deduct meter credit will begin

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781 631-2694

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waterandsewer](http://Marblehead.org/waterandsewer)

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Sump Redirection Program
www.resump.org

(Continued from front page)

Is your irrigation system in compliance with Massachusetts Department of Environmental Protection regulations?

The Massachusetts DEP Cross Connection Control Program 310CMR 2222(9) *requires* that all irrigation systems have a backflow prevention device installed.

The Water and Sewer Commission is responsible for the protection of the public potable water distribution system from contaminants or pollutants. To ensure that our drinking water supply remains safe, the Commission has an established Cross Connection Control Program.

The purpose of the Cross Connection Control Program is to protect the public water supply, to promote the elimination or control of existing cross connections between potable water systems and non-potable systems, and to

provide for the maintenance of a continuing program of cross connection control which will effectively prevent the contamination or pollution of all potable water systems by cross connection.

As previously noted, a backflow preventer, or backflow device, is *required* for all irrigation systems, but is also used for any scenario with the potential of a cross connection. Even when using an outside spigot, a hose bib vacuum breaker is strongly recommended to prevent back siphonage events.

Approved devices on irrigation systems include an air pressure vacuum breaker or a reduced pressure zone backflow prevention device. Double-check valve backflow prevention devices are *not* approved by the DEP. These devices are described more fully on the water and sewer website.

What these devices do is prevent pollutants and contaminants from backflowing or being back siphoned into the drinking water system.

Lets say that your lawn has been treated with weed killing chemicals or chemical fertilizer. You are using your irrigation system to water the lawn when there is a sudden drop in water pressure in the water delivery system. This drop in pressure could result in the chemicals being siphoned, or pulled into, the drinking water system and polluting the water supply. A backflow device would prevent this from happening.

Marblehead's Cross Connection Control Program is very important, and very necessary. More information on the program, including the responsibilities of the homeowner, when a backflow device is required, backflow device testing requirements, and descriptions and illustrations of acceptable backflow devices can be found on the water and sewer website at www.marblehead.org/water. Click on the Water Department drop-down menu and select the Cross Connection Control Program tab.

IS A SEWER DEDUCT METER WORTH THE COST?

When you look at your water and sewer bill, you will see that water charges and sewer charges are billed separately at different rates. The amount owed for each commodity is based on every 100 cubic feet of water used.

Every household has a water meter that measures the amount of water coming into the residence. That measurement is used to bill for the water consumed and sewer collected.

After the water brought into the house is consumed, the majority of it exits the residence and goes into the Town's sanitary sewer system where it is collected and transferred for treatment as wastewater.

Since there is no separate meter to measure how much water actually enters the sewer system, it is projected that all water that comes into the house leaves via the sanitary sewer system.

What this means is that the homeowner may be paying sewer charges on water that does not enter the Town's sanitary sewer system. A second meter could be added to measure the water that is used to water your lawn or garden, to wash your car or boat, or to fill your pool or hot tub. For homeowners who use a lot of water outside, this could represent

significant savings.

The Marblehead Water and Sewer Commission is cognizant of this and allows homeowners to install a second meter, known as a sewer deduct meter, that measures the water that is used outside and doesn't enter the sewer system. The amount of water that passes through this sewer deduct meter is then credited on the sewer portion of the quarterly invoice.

Because there is a cost to purchase a sewer deduct meter, have it installed by a licensed plumber, and pay all associated fees, the homeowner needs to evaluate their outside usage to determine if the expense is justified and what the payback period might be.





TOWN OF MARBLEHEAD

Water and Sewer Commission

Sewer Deduct Meters

Definition: Sewer deduct meters shall be considered to be any meter that is installed after the house meter for the purpose of measuring water that does not enter the sewer system. The measured flow through this meter would then be used to calculate a reduction in the sewer use fee. All meters used for sewer use credits shall be installed and maintained completely at the owner's expense.

Meters: All meters shall be of the sealed register positive displacement type, conforming to AWWA standard C-70 I-Pearl with an ECR Reader and have a MXU radio read module. Deduct meters can be purchased from the Marblehead Water and Sewer Commission ONLY.

Register: All meters must register in hundred cubic feet and have a remote readout permanently attached to the outside of the building at a location approved by the Water Department and must be capable of being read by the Sensus Computer System. **Outside Readers:** *At the time of the inspection, the Water Department will install the outside reading device as well as the MXU radio reading device.*

Installation: The installation of the meter shall be done by a **duly licensed person** in accordance with all applicable local, state and federal regulations.* *The meter shall be positioned after the house meter (in series); other installations will not be accepted. Sewer deduction meters must be located in an area protected from frost and must have valves immediately before and after the meter. Sewer deduct meters that must be removed annually and are subject to freezing will not be accepted. The property owner or plumber must call the Water and Sewer office to set up an appointment to have the meter inspected once the installation is complete and the plumbing inspector has inspected the licensed plumber's work. There will be no credit issued to the account until an inspection has been made by the Water Department and the installation has been found to be working in a satisfactory manner. Water use prior to inspection by the Water Department will not be credited.* A \$100.00 inspection fee will be billed for the original inspection and, should the meter not be accepted, \$100.00 for each subsequent re- inspection.

Maintenance: **It is the owner's responsibility to assure that the deduct meter is operating properly** and to make any necessary repairs at **their own expense**. After a meter has been repaired, the Water and Sewer Commission **must** be notified so that a new inspection can be done. The owner is responsible for payment of any usage not recorded on the deduct meter.

In-Ground Sprinklers: In accordance with Mass DEP Cross Connection Control Program 310CMR22.22 (9), all lawn irrigation systems are required to have a backflow prevention device installed. Approved devices include a testable pressure vacuum breaker or a reduced pressure zone backflow prevention device. Double check valve backflow prevention devices are NOT APPROVED. Upon installation, the water department **must** be notified so that the device can be inspected and recorded.

Please contact the Water and Sewer Department at 781 631-0102 if you have any questions.

*A Plumbing Permit is required. Contact the Building Inspection Department at 781 631-2220.

ABSOLUTELY NO CREDIT, REFUND OR ABATEMENT WILL BE GIVEN FOR USE PRIOR TO ACCEPTANCE OF THE DEDUCT METER BY THE COMMISSION.

As the owner of the property for which this Plumbing Permit is issued, I accept responsibility for contacting the Water and Sewer Commission (*after* the deduct meter has been inspected and tagged by the Plumbing Inspector) to schedule an inspection by the Water Department. **The sewer credit will begin with the meter reading taken at the time of acceptance by the Commission**, without exception.

Owner's Name

Signature

Date

Address of Deduct Meter Installation



TOWN SEAL

Bradford Smith
Inspector

Town of Marblehead Office of PLUMBING INSPECTOR

Mary A. Alley Municipal Building
7 Widger Road, Marblehead, MA 01945

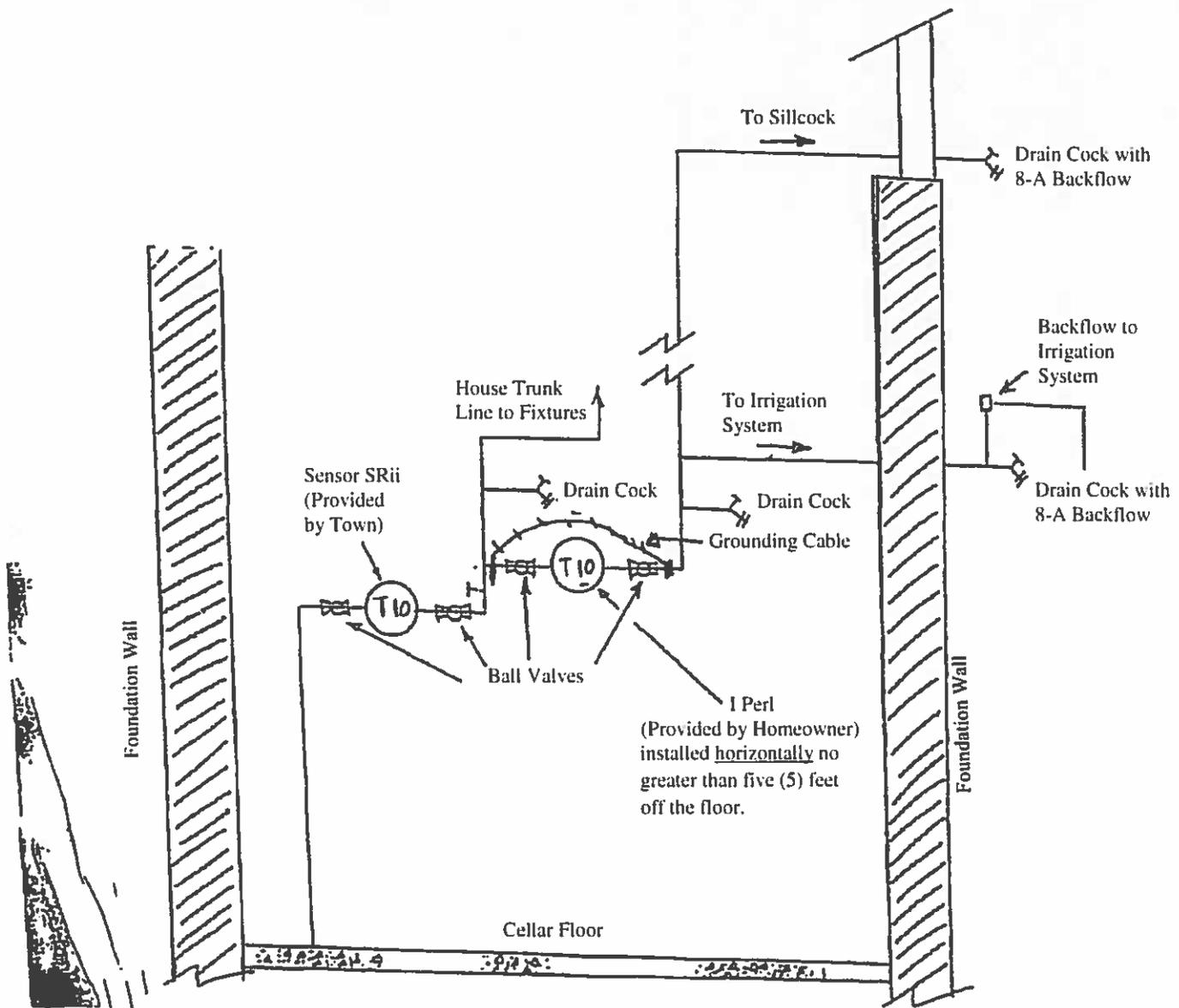


SPIRIT OF '76

tel: 781-639-9151
fax: 781-631-2617

To avoid a \$40.00 re-inspection fee, meters must be installed as shown in the diagram below:

1. Meters must be installed in horizontal position only;
2. Meter installation (other than as shown), must have Water and Sewer Commission and Plumbing Inspector approval;
3. Licensed plumbers must install the water meter and then contact the Plumbing Inspector at the telephone number listed above for an inspection;
4. After receiving the Plumbing Inspector's approval, the homeowner must then call the Water and Sewer Commission at 781 631-0102 to schedule an inspection by the water department;
5. A jumper cable for grounding must be placed around the meter (number 4 or larger copper braided grounding wire is required).





TOWN OF MARBLEHEAD

Water and Sewer Commission

Sewer Deduct Program

During Meter Pilot Program

June 5, 2025

The Water and Sewer Commission is currently reviewing new meter technology and metering options for Marblehead. The outcome of this review will create a project to upgrade water meters throughout the Town. This will affect the Sewer Deduct Program.

Any Sewer Deduct Meters Assemblies purchased after **June 5, 2025**, and prior to the implementation of the Water Meter Upgrade Project, must have the following provisions accepted by the Property Owner.

This procedure will also be posted on the Town's website and sent to the Marblehead Plumbing Inspector.

- Sewer Deduct Meters provided in assemblies at this time are for temporary use only.
- Temporary meters may be repurposed meters from existing stock (Sensus; SR II's and iPerls).
- The property owner is responsible for any plumbing modifications required to install this temporary meter. (Threaded Connections only)
- By signing this document, the property owner confirms that they will allow the water department to replace the temporary Sewer Deduct Meter purchased after June 5, 2025, with an upgraded meter **within 30 days** of notification.
- If access is not granted **within 30 days** of notification, Sewer Deduct Meter credit will be removed from the account. Credit will not be reinstated until the temporary meter is replaced with an upgraded meter.
- There will be no cost for the replacement of the temporary meter with an upgraded meter for accounts that have purchased, installed, and passed all required inspections.
- Temporary Sewer Deduct Meters are still subject to all the present procedures.

Owner: _____

Date _____



MARBLEHEAD WATER AND SEWER COMMISSION

Cross-Connection Control

The purpose of a Cross-Connection Control Program is to protect the public potable water supply; to promote the elimination or control of existing cross-connections between potable water systems and non-potable systems; and to provide for the maintenance of a continuing program of cross-connection control which will effectively prevent the possible contamination or pollution of all potable water systems by cross-connection.

The Marblehead Water and Sewer Commission is responsible for the protection of the public potable water distribution system from contamination or pollution due to the backflow or back-siphoning of contaminants or pollutants. If, as a result of a survey of the premises, the Commission determines that an approved backflow prevention device is required at the town's water service connection or as in-plant protection on any customer's premises, the Commission, or its designated agent, shall issue a cross-connection violation form to said customer to install approved backflow prevention devices. The customer shall, within a time frame determined by the Commission, install such approved device or devices at his or her own expense, and failure or refusal or inability on the part of the customer to install said device or devices within the specified time frame shall constitute grounds for discontinuing water service to the premises until such device or devices have been properly installed to the Commission's satisfaction.

This authority is provided for in the Federal Safe Drinking Water Act of 1974, (Public Law 93-523); the Commonwealth of Massachusetts Drinking Water Regulations, 310 CMR 22.22; the Acts of 1916, chapter 309, section 15; the Acts of 1979, chapter 443, section 2; and Town of Marblehead By-Laws section 268-1 and section 268-3.

When is the Installation of a Backflow Device Required?

A backflow preventer is required for:

- Permanently-installed irrigation systems. (This includes residential in-ground sprinkler systems);
- Industrial, commercial or institutional premises having a private well or other private water source with a cross-connected to the public water system. (Permission for such cross-connections may be denied by the Commission);
- Property that contains a private well or individual water source that does not serve a residential dwelling. (A private well or individual water source serving residential dwellings used for potable or non-potable purposes will not be allowed a physical connection with the public water supply system.)

Responsibilities of the Property Owner

The cross-connection control program requires that:

- The owner shall be responsible for the elimination or protection of all cross-connections on his or her property;
- The owner shall be responsible for applying for and obtaining all necessary approvals and permits for the maintenance of cross-connections and installation of backflow prevention devices;
- The owner shall correct any malfunction of the backflow preventer that is revealed by periodic testing;
- The owner shall inform the Commission of any proposed or modified cross-connections and also any existing cross-connections of which the owner is aware but has not been identified by the Commission;
- The owner shall not install a bypass around any back-flow preventer unless there is a backflow preventer of the same type on the bypass. Owners who cannot shut down operations for testing of the device(s) must supply additional devices necessary to allow testing to take place;
- The owner shall install backflow preventers in a manner approved by the Commission;
- The owner shall install only backflow preventers approved by the MassDEP;
- The owner of industrial, commercial or institutional premises having a private well or other private water source must have a permit if the well or source is cross-connected to the Commission's system. Permission to cross-connect may be denied by the Commission. The owner may be required to install a backflow preventer at the service entrance if a private water source is maintained even if it is not cross-connected to the Commission's system;
- The owner of a private well or individual water source serving residential dwellings used for potable or non-potable purposes will not be allowed a physical connection with the public water supply system;
- The Commission may require the owner of a property that contains a private well or individual water source that does not serve a residential dwelling to install a backflow preventer if in their opinion the potential for cross-connection exists;
- The owner of a permanently installed irrigation system shall install, at minimum, a testable pressure vacuum breaker. Failure to maintain a device in proper working order or failure to provide proof of testing will result in termination of service;
- The owner shall be responsible for the payment of all fees for permits, annual or semi-annual device testing, retesting in the case that the device fails to operate correctly, and second re-inspections for non-compliance with MassDEP or Commission requirements.

At times the Commission through its authorized representative may request the installation of non-testable devices to protect the water supply from low potential hazards within the system. Failure of the owner to comply may result in the mandatory installation of a testable device.

Backflow Device Testing Requirements

“The public water system [Marblehead Water and Sewer Commission] is responsible to ensure that each reduced pressure backflow preventer will be inspected semi-annually in accordance with the public water system's approved cross-connection program plan, as provided for in 310 CMR 22.22(3)(b). If the supply is used less than six months of the year, these devices shall be inspected and tested once each year. Each double check valve assembly shall be tested annually. Pressure-type vacuum breakers should be tested at least annually by the owner of the device. Each test shall be conducted by a Certified Backflow Prevention Device Tester.”
(MassDEP Cross-Connection Control Program Regulations – 310 CMR 22.22(13)(d).)



MARBLEHEAD WATER AND SEWER COMMISSION

Cross-Connection Backflow Devices

Below are examples of typical backflow preventers that are required to be installed on **all** irrigation systems.

PRESSURE VACUUM BREAKER



A Pressure Vacuum Breaker (PVB) device is an atmospheric vacuum breaker that can be utilized under constant pressure and that can be tested in line. These units are available in several configurations and sizes and have broad use for residential irrigation systems. Installation of these devices must be at least 6 to 12 inches higher than the existing outlet.

A PVB device does not have to be registered with the Water and Sewer Commission. MassDEP Cross-Connection Control Program Regulations 310 CMR 22.22(13)(d) reads that, "Pressure-type vacuum breakers should be tested at least annually by the owner of the device."

(The illustration shows one of several PVB devices that are available at hardware or home improvement stores.)

REDUCED PRESSURE ZONE BACKFLOW PREVENTER

A Reduced Pressure Zone (RPZ) Backflow Preventer device provides maximum protection against back-siphonage. They can be used under constant pressure and are required for high hazard installations.

A RPZ Backflow Preventer must be registered with the Water and Sewer Commission. Complete and return the Backflow Device Registration Data Sheet available on the water department web page or at the Water and Sewer Commission office.

RPZ Backflow Preventers must be tested semi-annually (or at least annually for water systems that are used for less than six (6) months of the year). Each test shall be conducted by a Certified Backflow Prevention Device Tester. (310 CMR 22.22(13)(d)).

The certified test results are to be completed by June (semi-annual) and December (annual) of each year and be submitted to the Water and Sewer Commission within 48-hours of the test.

(The illustration shows one of several RPZ Backflow Preventers that are available at hardware or home improvement stores.)

