



DEP ISSUE PROFILE

Overboard Discharges (OBDs)

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Contact: (207) 287-7688

What is an overboard discharge?

An overboard discharge (OBD) is a discharge to surface waters of the State of domestic pollutants (sanitary wastes or wastewater from household activities generated at residential or commercial locations) that are not conveyed to municipal or quasi-municipal sewerage treatment facilities. The vast majority of OBDs in Maine are associated with residential dwellings and small commercial operations along the coast. Treated wastewater from the OBD system is discharged directly into Maine's rivers, streams and the ocean. The Department of Environmental Protection (DEP) has regulated OBDs since the 1970s when most direct discharges of untreated waste (*i.e.*, straight pipes) were banned. By the late 1980s, most of the "straight pipe" discharges were connected to municipal wastewater treatment systems or were replaced with subsurface leachfield systems. Certain properties were not within the reach of a public sewer line and did not have suitable soils for the installation of a subsurface treatment system. In these cases, OBDs were installed. There are approximately 1,300 licensed OBDs remaining in Maine as of October 2010, which is less than half the number of OBDs documented to be in existence in 1987. With advances in wastewater disposal technologies and revisions to Maine laws and rules, the number of OBDs in Maine continues to decrease each year.

How does my overboard discharge system work?

OBDs provide a secondary level of wastewater treatment followed by effluent disinfection and discharge to the receiving water. OBDs generally provide an equivalent level of treatment to what a large municipal wastewater treatment facilities provides, except on a much smaller scale. Secondary treatment standards are mandated by State and Federal law. Secondary treatment is a biological process accomplished by two general types of systems in Maine: passive sandfilters and active mechanical OBDs.

Sandfilter OBD. A typical sandfilter OBD consists of a septic tank, sandfilter bed and chlorination chamber. Wastewater flows from the facility to a septic tank for solids settling. This is referred to as primary treatment and results in approximately 30-50% pollutant reduction from raw wastewater levels. Primary treated wastewater flows to a sandfilter bed, which consists of (from top to bottom) distribution pipes, layers of stone and filter sand, collection pipes and a plastic liner, for additional biological treatment and filtration. This is referred to a secondary treatment and results in approximately 85% or greater pollutant reduction from raw wastewater levels. The treated, filtered wastewater is then collected at the bottom of the filter bed and conveyed to a disinfection unit, which is typically a chlorination chamber. The wastewater flows in contact with chlorine tablets (in some cases a UV light is used at this point in the process) for effluent disinfection and compliance with the State's bacteria standards before being discharged as final effluent to the receiving waterbody. Passive systems are typically maintained by the OBD owner. Maintenance generally consists of placing chlorine tablets in the disinfection unit (usually twice monthly) and pumping the septic tank every 3-5 years.

Mechanical OBD. A typical mechanical OBD consists of a septic tank, one or more tanks with pumps or paddles to break up solids, an aeration chamber and a chlorination chamber. Wastewater flows from the facility to a septic tank for solids settling. Primary treated wastewater flows to a package mechanical OBD system, which vary in technology based on manufacturer but generally consist of an aeration tank to enhance aerobic biological treatment and a quiescent zone or "rest" period for additional settling and wastewater clarification. This process also provides a secondary level of treatment and results in approximately 85% or greater pollutant reduction from raw wastewater levels. The treated wastewater is then conveyed to a disinfection unit, which is typically a

chlorination chamber as described above for sandfilter, and discharged to the receiving water as final effluent. DEP rule requires all mechanical treatment systems to have an operating alarm system; to maintain a current service contract with a licensed service contractor; and to attach a service tag on or near the treatment system that provides the service contractor's name and the last date of service. All mechanical systems require power, so be sure that power is supplied to the unit and that it is turned on 7 days a week during the season of use.

How do I maintain my overboard discharge treatment system?

These are a few general tips that will help to extend the life of your OBD and promote high quality effluent.

- Some household chemicals kill the microorganisms that digest the wastes in your treatment system and may pass through to the receiving waterbody. Toxic chemicals, harsh cleaners, paint, pharmaceuticals, and non-biodegradable materials should not be disposed of by dumping or pouring down the drain.
- Using low-flow toilets and water-saving showerheads will prolong the life of your system.
- Septic tanks should be pumped at least once every three years. Depending on how much the OBD facility is used, you may want to increase the septic pumping frequency or decrease it to once every five years if it receives very little use.
- Trees, shrubs and woody perennials should be cleared away from system components. Sandfilter surfaces should be mowed at least once per year. If a wet spot appears on or near the sandfilter bed notify the DEP inspector.
- Mechanical systems operate best if they are used at a consistent rate and may malfunction or produce poor quality effluent if overloaded on the weekend and "starved" during the week. Try to manage laundry, cleaning, and showers so that the load is spread out as evenly as possible. Leave a mechanical OBD operating as recommended by your service contractor at all times during the season of use.
- Check the chlorine level at least every two weeks and keep fresh chlorine in contact with the treated wastewater. Don't overfill the chlorinator tubes; only the bottom two or three inches of the tubes should have chlorine. Old, brown or mushy chlorine does not properly disinfect and must be replaced. Take care to remove old chlorine from your chlorinator rather than washing it out to the waterbody.
- Ensure that the outfall pipe extends to below the low water mark of the receiving waterbody. In extenuating circumstances a specific waiver to this requirement may be granted by the Department.
- Treated wastewater should be clear and without a strong septic or chlorine odor. If wastewater in the disinfection unit is not nearly clear, smells like rotten eggs, raw sewage, or smells strongly of chlorine, call your service contractor or notify the DEP inspector.

Why do the Maine DEP and the Maine Legislature want to eliminate OBDs?

Maine waters must be of such quality that they are suitable for recreation in and on the water, fishing, aquaculture, propagation and harvesting of shellfish – these are called designated uses. The Maine Department of Marine Resources (DMR) restricts or closes shellfish harvesting areas where there are pollution threats, such as unacceptable bacteria levels, potential pollution sources from point source discharges, or poor water quality. As a precautionary measure, the DMR prohibits shellfish harvesting in the immediate vicinity of OBD outfall pipes because they have the potential to discharge harmful bacteria and other pathogens if they fail or are not properly maintained.

The Maine Legislature has declared that it is the State's objective to restore and maintain the chemical, physical and biological integrity of the State's waters and to preserve certain pristine state waters. In order to achieve this objective the State's goals are: that the discharge of pollutants into the waters of the State be eliminated where appropriate; that no pollutants be discharged into any waters of the State without first being given the degree of treatment necessary to allow those waters to attain their classification; and that water quality be sufficient to provide for the protection and propagation of fish,

shellfish and wildlife and provide for recreation in and on the water. These objectives are consistent with those set forth in the Federal Clean Water Act.

Simply stated, eliminating OBDs results in overall higher water quality and the reopening of more shellfish growing and harvesting areas.

What are the significant highlights from Maine's laws and rules pertaining to OBDs?

- OBD owner(s) must maintain a current Waste Discharge License for each OBD. Failure to submit an application for renewal before the expiration date of the current license may result a lapse in legal coverage to discharge wastewater. Waste Discharge Licenses are typically issued for a five-year term.
- The licensee is required to pay an applicable annual fee for discharges authorized by this license. The Department may pursue enforcement, including, but not limited to, penalties and suspension or revocation of a license for the failure to pay any portion of licensing fees.
- There may be no new or expanded OBD discharges to Maine waters. New sources include wastewater that was not licensed as of June 1, 1987, and increases in the volume (such as by increasing the number of bedrooms associated with the dwellings connected to the OBD) or duration (number of months per year) of the discharge.
- OBD owners must demonstrate to the Department whether a technologically proven alternative to the OBD is practicable on land owned or controlled by the OBD owner(s). This documentation must be available at the time of property transfer and license renewal.
- A grant program is available to assist certain OBD owners with the cost of OBD replacement. Transfer applicants and non-primary residence OBDs do not qualify for grant assistance.
- DEP must inspect all licensed OBDs. The cost of the inspections is assessed as part of the annual license fee.
- **Prior to transfer of ownership of property** containing an OBD, the parties to the transfer shall determine the feasibility of technologically proven alternatives to the overboard discharge that are consistent with Maine plumbing standards. The evaluation must be based on documentation from a licensed site evaluator who has demonstrated experience in designing replacement systems for OBDs. If an alternative to the overboard discharge is identified, the alternative system must be installed within 180 days of property transfer. Grant assistance is generally not available for OBD removal costs associated with a property transfer. Transfer is a change in the legal entity that owns a property, facility or structure that is the subject of a license issued by the Department. Deeding a property to your children or to a trust, for example, DOES constitute a transfer of ownership. Questions regarding the requirements of Maine law and rule should be directed to DEP staff before finalizing any agreements on property transfers involving OBDs.

What is the OBD Removal Grant Program?

State contribution to residential overboard discharge replacement projects, 38 M.R.S.A. § 411-A provides, subject to the availability of funds, that the Maine DEP shall pay a portion of the expense of a technologically feasible alternative that results in the elimination of an OBD. There are two significant changes to this law:

1. The DEP may not provide grant funding to a residential OBD owner unless the residence is the owner's primary residence.
2. The DEP may not provide grant funding to an OBD owner with an annual income of more than \$125,000.

OBD owners who *are* eligible for grant funding are not required to eliminate the OBD until such time that a technologically-proven alternative system is identified and the DEP offers a grant. If a technologically-proven alternative system has been identified, residential and commercial **OBD owners who are not eligible for grant funding because the OBD serves a secondary residence or have an annual income of more than \$125,000 will be required to eliminate the OBD after July 2, 2012**. If you have an alternative and believe you are not eligible for a grant, the Department strongly encourages you to contact us before your license expires to discuss these requirements in greater detail.

Who do I call or e-mail at DEP?

DEP staff information for various OBD program areas is provided below. Please do not hesitate to contact the DEP with any questions you have regarding an OBD.

For more information:	Contact	Telephone	Email
OBD System Compliance, Inspections, and Reports	William Johnson	(207) 287-7684	william.johnson@maine.gov
OBD Fees, Licensing, General Program Inquiries	Irene Saumur	(207) 485-2404	irene.saumur@maine.gov
OBD Removal Grant Program	Brandy Piers	(207) 287-6093	brandy.m.piers@maine.gov

Contact us:

Maine Department of Environmental Protection
State House Station 17
Augusta, ME 04333-0017

DEP Home: maine.gov/dep

DEP's OBD Page: <http://www.maine.gov/dep/water/wd/OBD/index.html>