



THE FLOW N' GO

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SPECIAL EDITION HOW CAN YOU PREVENT STORMWATER POLLUTION OF OUR HARBORS?

Stormwater runoff is a major polluter of our waterways. Stormwater is water from rain or melting snow that does not soak into the ground. It flows from rooftops and over paved areas. As it flows, it collects and transports animal waste, litter, salt, pesticides, fertilizers, oil and other potential pollutants into our storm drains and eventually into our harbors.

Many people are under the assumption that the *sanitary sewer system* and the *stormwater system* are the same. They are not. What goes down your sink drains and toilets is transported to the South Essex Sewerage District's wastewater facility in Salem for treatment. What goes down the catch basins that are found on our streets flows directly into Marblehead and Salem harbors. It is not treated. What goes into the drains comes out into the harbors.

This special edition of *The Flow N' Go* will identify some of the issues caused by stormwater runoff and a few of the many ways that you can help to reduce stormwater pollution.

What's the problem with stormwater going into the harbors?

The stormwater itself isn't the problem—it's what goes with it. Nutrients such as phosphorus and nitrogen from fertilizers can cause the overgrowth of algae, resulting in the depletion of oxygen that is required to sustain ocean life. Toxic substances from motor vehicles and pesticides can kill fish and other aquatic life. Bacteria from animal waste can make the harbors unsafe for wading, swimming and the consumption of fish and other ocean delights. Plastic products such as straws and cups can be ingested by various sea creatures, blocking their intestines and causing a slow and painful death.

Stormwater runoff is the number one source of pollution to Massachusetts' waters. It is estimated that the discharge of stormwater in our waterways (streams, lakes, harbors and other bodies of water) contributes to at least 55% of the impairments of the state's waters.

What can YOU do to help make our harbors cleaner?

The simple answer? Be aware of what you allow to go down the stormwater drains found on our streets. Even though your individual contribution may seem small, together we can all make a sizeable impact in reducing the pollution of our local harbors.

So, what CAN you do to help lessen stormwater pollution of our harbors?

Wash your car on your lawn

Many soaps contain chemicals that harm fish. When you wash your car in the driveway, the soap and any oil and grease will flow into the catch basins with the water and out to the harbor.

What can you do? Wash your car on the lawn or gravel. This will allow the contaminated water to soak into the ground where the soil can act as a filter. Dump your bucket into a sink and not onto your driveway or the street.

Clean up after your pet

Scoop it! Always clean up after your pet. Animal waste left in the yard or on the street will allow bacteria to be washed into our waterways.

What can you do? Carry a disposable bag to pick up with, bring it home and put it in with your trash.

To read more go to www.marblehead.org/drain and click on "Scoop the Poop" on the upper left of the page.

TIP OF THE QUARTER



This device is an MXU. One like it (or similar to it) is attached to the outside of your house. It allows

us to read your water meter without having to enter your residence. The MXU is an extension of the meter and as such is the property of the Commission.

That means that you should not remove, damage, or discard it. If you do, the water department will need to replace it—at your expense.

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Reduce your use of fertilizers

Fertilizers may give your plants bigger flowers and keep your lawn greener but they can also wreck havoc with the environment when they are allowed to wash into the storm drains.

The two primary ingredients in fertilizer are phosphorus and nitrogen. Just like in the garden, these cause the waterways' plants and algae to rapidly spread and grow. As this over-abundance of plants and algae die off and decompose, they deplete oxygen from the water. A lack of oxygen then kills off fish and other aquatic life.

The dead algae has another undesirable result. As it washes up on the shoreline and decays, it can give off a very offensive odor. Want proof? Just take a ride along Lynn Shore Beach on a hot summer day and you can witness (or smell) first-hand one result of fertilizer entering the harbors.

Another way that phosphorus can enter the harbor is from grass clippings and tree leaves that are left in the street. These wash down the drain and run into the harbors where they decay, giving off phosphorus.

What can you do? Reduce the use of fertilizers and when watering the lawn and do not allow the water to run into the streets. Have your soil tested; you may find that the soil is sufficiently nutrient-rich and doesn't even need to have fertilizer applied. If you do need to apply fertilizer, read the label instructions carefully. Clean up any spilled fertilizer and never apply fertilizer to the frozen ground. Use slow-release fertilizer, as recommended by the National Gardening Association, that slows down the release of nutrients. And clean up any grass clippings and fallen leaves from the street and storm drains.

Keep plastics out of the drains

Plastics—straws, cups, bottles, coffee cup lids, and the like—are creating a serious pollution problem for our waterways. Not only is this debris ugly (and often dangerous) when it washes up on our shores, it also presents deadly consequences for marine life. Thousands of seabirds and sea turtles, seals, and other marine mammals are killed each year after ingesting plastic or getting entangled in it.

This debris is often referred to as 'marine debris,' which is sort of a misnomer. Only about twenty percent of the plastics found in our oceans comes from marine use such as loss of fishing tackle and recreational gear, litter from pleasure boats, and illegal dumping. The other eighty percent is, unbelievably, swept in from land. This includes the straws and cups that humans find easier to toss into a storm drain than into a waste barrel.

The United Nations Environment Program estimates there could be as many as 51 *trillion* pieces of plastic in the oceans. And we all know that plastic isn't biodegradable. In fact, the Environmental Protection Agency (EPA) reports "every bit of plastic ever made still exists."

This is not only a danger to marine life but to humans as well. Plastics contain toxins, such as diethylhexyl phthalate (DEHP), a known carcinogen. (If you can't pronounce it, it can't be good for you.) The fish eat the plastic and we eat the fish, thus introducing DEHP and other chemicals into the food chain.

What can you do? Recycle! When you see plastic on our beaches, no matter how small a piece it is, pick it up and dispose of properly. Never, ever toss your plastic cups, straws—or *anything*—down the storm drains.

What is being done nationally and locally to reduce pollution from runoff?

Nationally, the Environmental Protection Agency (EPA) has instituted a program, known as the Municipal Separate Storm Sewer System (or MS4) Permit, that requires cities and towns to reduce polluted stormwater runoff. It requires communities throughout the country to educate residents, businesses and developers about stormwater runoff pollution; to control construction site discharge; to retain or treat runoff from developments; to ensure that streets and catch basins are clean; and to develop a stormwater management plan to improve operation and maintenance. You will be reading a lot more about this in the future.

Salem Sound Coastwatch, a local organization whose mission is to protect and improve the environmental quality of Salem Sound and its watershed, sponsors numerous projects and programs aimed at keeping our surrounding waters clean and safe. These include taking water samples from area stormwater outfalls and test for bacterial contamination and organizing an annual beach cleanup. More information on Salem Sound Coastwatch and their programs can be found at www.salemsound.org.

Aging infrastructure, asset management, increased costs, and weather result in higher rates

You may have noticed that your current water and sewer bill is somewhat higher than usual. That is because a convergence of several factors forced a higher-than-usual increase in rates.

Budget increases, a nine percent in-

crease in system construction expenses, upgrades to the Geographic Information System and the addition of a new position for GIS and asset management, and a three percent decrease in average water usage (a result of a rainy year) all combined to make the higher rates necessary.

The Water and Sewer Commission is committed to maintaining and improving our infrastructure and to supporting the skilled labor who maintains our systems on a daily basis or responds to emergencies 24/7 and who strive to meet our customers' expectations.