

Pollution Prevention for Businesses



How Businesses Can Use Pollution Prevention for a Cleaner

Town of Hanson

What is Pollution Prevention?

Pollution prevention (P2) is a combination of activities that reduce or eliminate the amount of possible chemical contaminants at the business or prevent these chemicals from entering the environment or waste stream.

A successful Pollution Prevention program will consider how to use raw materials, water energy, and other resources more efficiently, how to substitute less harmful substances for more hazardous ones, and examine whether toxic substances can be eliminated from the business.

P2 can best be accomplished using these three methods:

- *source reduction*
- *reuse/recycling*
- *energy recovery.*

Source reduction is the preferred method of P2 and allows for the most significant improvements in environmental protection by avoiding the generation of waste in the first place. Reuse/ recycling and energy recovery are also good tools to reduce potential environmental problems, and also can be used to lower the cost of business.

Why Is Pollution Prevention Important?

Any chemicals or wastes at your business that are exposed to rainwater will run off into the soil or into our town's storm drains, then into nearby lakes and streams.

Our municipal stormwater system was originally designed to carry runoff efficiently away from roads and buildings, then to deliver that runoff to ponds, lakes and streams. Since our storm drain system does not have any built-in treatment, whatever gets into our storm drains gets into our environment, with the potential to damage our local ponds and streams.

That's why P2 is so important: it reduces the amount of pollution going to our local waterways.

What Are the Business Benefits of Using Pollution Prevention?

P2's economic benefits include greater business efficiency, increased competitiveness, and reduced costs for regulatory monitoring and compliance. By preventing the generation of waste, P2 can also reduce or eliminate long term liabilities, clean-up, storage, and disposal costs.

And by preventing pollution there is a greater likelihood that your company will be in compliance with local, state, and federal statutes.

How Can A Business Start Using Pollution Prevention?

P2 for your business can be accomplished through methods such as source reduction, reuse/recycling, and energy recovery. While each business is different, each of these methods can be implemented anywhere.

Source Reduction

- Incorporating environmental considerations into the designing of products, buildings, and manufacturing systems enables them to be more resource-efficient.
- Rethinking daily operations and maintenance activities can help industries eliminate wasteful management practices that increase costs and cause pollution.
- Controlling the amount of water used in cleaning or manufacturing can produce less wastewater.
- Re-engineering and redesigning a facility or certain operation can take advantage of newer, cleaner and more efficient process equipment.
- Buying the correct amount of raw material will decrease the amount of excess materials that are discarded (for example, paints that have a specified shelf life).

Reuse/Recycling

- Using alternative materials for cleaning, coating, lubrication, and other production processes can provide equivalent results while preventing costly hazardous waste generation, air emissions, and worker health risks.
- Using “green” products decreases the use of harmful or toxic chemicals (and are more energy efficient than other products).
- One company’s waste may be another company’s raw materials. Finding markets for waste can reduce solid waste, lessen consumption of virgin resources, increase income for sellers, and provide an economical resource supply for the buyers.

Energy Recovery

- Using energy, water, and other production inputs more efficiently keeps air and water clean, reduces emissions of greenhouse gases, cuts operating costs, and improves productivity.

What Are the Environmental Benefits of Using Pollution Prevention?

Using P2 can benefit your community both environmentally and economically. P2's health and environmental benefits include cleaner air and water, fewer greenhouse gas emissions, less toxic waste to manage, less solid waste going to landfills, greater workplace safety, and better stewardship of natural resources.

This can also lead to a reduction in workplace exposures to hazardous materials, which can positively affect your workers' health and productivity.



GET OUT EARLY

Typically anti-icing is most effective if applied 1-2 hours before the precipitation begins however it can be applied up to 24 hours in advance.

TRY IT FIRST

Trying anti-icing for the first time? Make a 23.3% brine solution and before a storm spray pavement on your own property using a masonry/plant sprayer. Use this experiment to determine how best to use it with your clients.

LEAVE SOME PAVEMENT BARE

It's always best to use stream nozzles instead of fan tip to avoid creating a slippery condition. If the anti-icing liquid freezes the bare pavement will still provide a traction surface.

USE A FILTER

Having a filter in your liquid dispensing system will reduce clogs in your nozzle. Automotive in line fuel filters work quiet well. If your liquid dispenser is not functioning properly be sure to check the filter first.

A Proactive Treatment

Anti-icing before a storm is very similar to using a non-stick spray on a pan before cooking. Just like a non-stick spray prevents food from bonding to the pan, anti-icing prevents snow and ice from bonding to the pavement so that it can be plowed away. Anti-icing can save you money as it costs 50% less than reactive deicing.



How Much Should I Use and When?

You can apply brine up to 24 hours in advance of the storm. Typical application rates range from 0.5 to 0.75 gallon per 1000 sq.ft. (10' x 100' area). Other chemicals such as magnesium are also available—consult your supplier for application rates. Anti-icing is not advised prior to freezing rain events.



Produced in partnership with:



Anti-Icing

NH Best Management Practices



Make Your Own Salt Brine

When making brine it is important to add enough salt to produce a 23.3% solution which freezes around 0°F. Roughly 2.5lb per gallon of water will produce a 23.3% solution. You can verify using a salometer (~\$20) a 23.3% solution will have a specific gravity of 1.176, or 85% salinity. Consult the Brine Making BMP sheet for more info.



Getting Started

Try making your own salt brine by putting 13 lb of salt in 5 gallons of water to get a 23.3% salt brine solution. Mix the brine until all of the salt is dissolved. Using a masonry sprayer apply the liquid several hours before a storm. Start by applying about 0.25—0.5 gallons to a 10' x 50' area. Adjust the application rates based on your experience. Being careful not to over apply and cause a slippery condition.



Storm Drain Stenciling Program

Maintenance and cleaning of catch basins not located on a public street are the responsibility of the property owner. No material should ever be dumped into a catch basin.

To help to educate employees and discourage illegal dumping, property owners may wish to stencil their catch basins with a "Don't Dump" message. BWSC will loan "Don't Dump" stencils to interested business owners.

For owners planning new or resurfacing of existing parking lots, permanent "Don't Dump" castings are available for purchase. For further information, contact the Commission's Communications Department at 617-989-7000.

**When It Rains, It Drains.
Protect Our Local Waterways.**



Report Illegal Dumping

The dumping of any material into a catch basin is illegal in Boston. If you observe someone dumping, immediately report it to Boston Water and Sewer Commission at **617-989-7000**.



Boston Water and Sewer Commission

Community Services Department
617-989-7000

980 Harrison Avenue
Boston, MA 02119-2540
www.bwsc.org

Martin J. Walsh
Mayor, City of Boston

Henry F. Vitale
*Executive Director/CFO
and Treasurer*



2014



Boston Water and Sewer Commission

Stormwater Management for Small Businesses

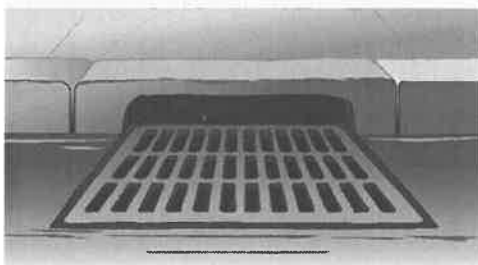


What Is Stormwater Pollution?

Stormwater is rain or snowmelt that flows over the ground. As stormwater runs over impervious surfaces, like driveways, roofs, sidewalks, and streets, it can pick up pollutants that have collected on these surfaces—such as motor oil, fertilizers, pesticides, and trash—and deposit them into catch basins.

Stormwater flows into the storm drain system and is discharged, without treatment, into nearby waterways, including the Charles, Neponset, and Mystic rivers, and Boston Harbor.

Property owners are responsible for all pollutants leaving their property, including pollutants in stormwater. Here are some things you and your employees can do to prevent stormwater pollution.



Property Maintenance Tips

- ▶ Sweep outdoor areas daily for trash and litter control. Do **not** dispose of trash in catch basins.
- ▶ Provide trash receptacles in highly visible locations and outdoor receptacles for cigarette butts, particularly in employee break areas.
- ▶ Keep the area surrounding your dumpster clean and the lid closed. Make sure the clean-out plug is properly secured to prevent leaking.
- ▶ If you must hose down an area, don't use detergents or chemical cleaners to wash sidewalks or driveways.
- ▶ Dispose of all waste wash water in a janitorial sink or a floor drain that is properly connected to the sewer system. Never pour wash water onto a parking lot, alleyway, sidewalk, or street, as these areas ultimately drain to local waterways.



How to Dispose of Hazardous Waste

Never dump hazardous waste—including chemicals, automotive fluids, paint, and commercial waste—into catch basins. Dispose of hazardous waste properly.

If you are unsure as to how to dispose of a certain material, consult the manufacturer of the product or call the Massachusetts Hazardous Waste Hotline for Businesses at 617-292-5898.

Reminders for Restaurants and Food Establishments

- ▶ Properly maintain any grease traps in your establishment, in accordance with Boston Water and Sewer Commission (BWSC) regulations.
- ▶ Dispose of cooking oil and grease properly either in a receptacle designed to contain grease or by hiring a waste hauler.
- ▶ Do not pour oil and grease into sinks, floor drains, catch basins, or onto the ground.
- ▶ Wash garbage cans, floor mats, and kitchen equipment in designated wash areas that drain to the sewer system.

Help Prevent Stormwater Pollution

- ▶ Don't dump into catch basins.
- ▶ Keep property clear of trash and debris.
- ▶ Keep dumpster area clean.
- ▶ Provide trash receptacles for customers.
- ▶ Dispose of wash water properly.
- ▶ Stencil storm drains on your property.

Don't Dump!



Protect Local Waterways.