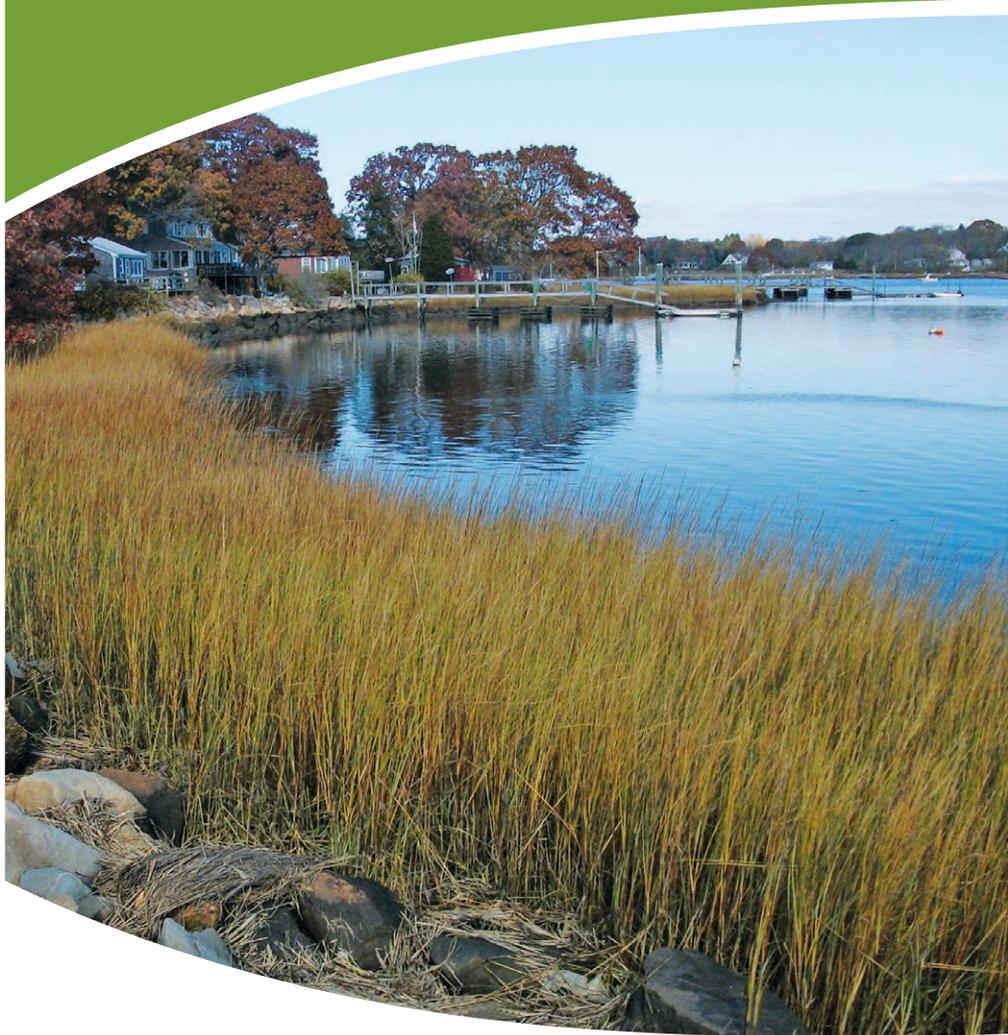


.....  
**BAY-Friendly**  
**LIVING**

YARD CARE AND LIFESTYLE TIPS  
TO SAVE TIME, MONEY AND THE BAY



**SAVE THE BAY®**

NARRAGANSETT BAY

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# Introduction

## LIFE IN A WATERSHED

Narragansett Bay and the many beautiful rivers and streams that flow into it from Massachusetts, Rhode Island, and Connecticut are an integral part of our lives, giving us food, recreation, jobs and beauty. You can help protect and improve these waters so future generations will be able to enjoy them for years to come.

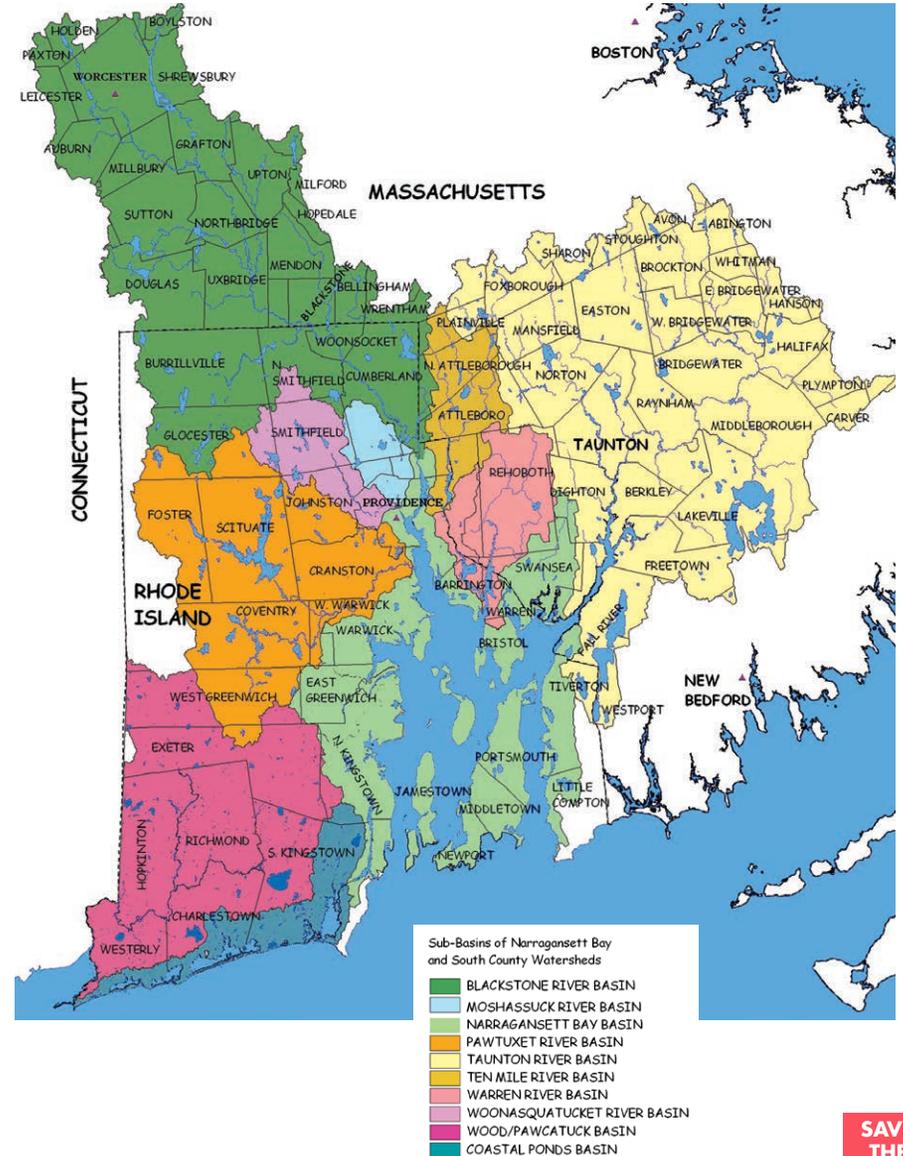


Even if you live miles away from Narragansett Bay, you play an important role in its health, because you live in its **watershed**. A watershed is an area of land where groundwater, rain and melting snow flow into a body of water, such as a river, salt pond, estuary or ocean. The greater Narragansett Bay watershed extends as far north as Worcester and flows southward to the Rhode Island Sound and southern coastal beaches.

Bay-friendly living is as easy as the simple actions you'll find in this guide. These are things you can do on your own – and things we can do together as a community – to make a positive impact on the health of our rivers and streams, coastal waters and Narragansett Bay. What's more, they can also save you time and money.

## NARRAGANSETT BAY AND SOUTH COUNTY WATERSHEDS

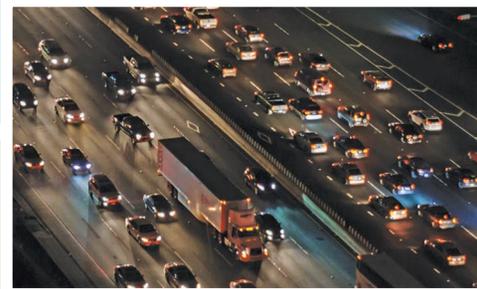
The map below highlights the land areas that drain, via streams and rivers, into Narragansett Bay and Rhode Island coastal waters. Pollution from the watershed flows many miles into these waters.



# Introduction

## WHAT'S HAPPENING TO OUR WATERS?

When we burn coal, oil and gas for transportation, electricity and heating, we release excess **carbon dioxide** (CO<sub>2</sub>) into our atmosphere. This CO<sub>2</sub> acts like a heat-trapping blanket around the earth. That "blanket" causes ocean and land temperatures to rise, and these rising temperatures affect different parts of the world in different ways. Locally, water temperatures have risen 4° F and air temperatures have risen 2° F since 1930, and in the Northeast, we are experiencing more rainfall and more intense storms. Since 1950, annual precipitation in Rhode Island has increased more than five inches, and the number of heavy downpours has more than doubled – more than any other state in the country.



## WHY DO WE CARE?

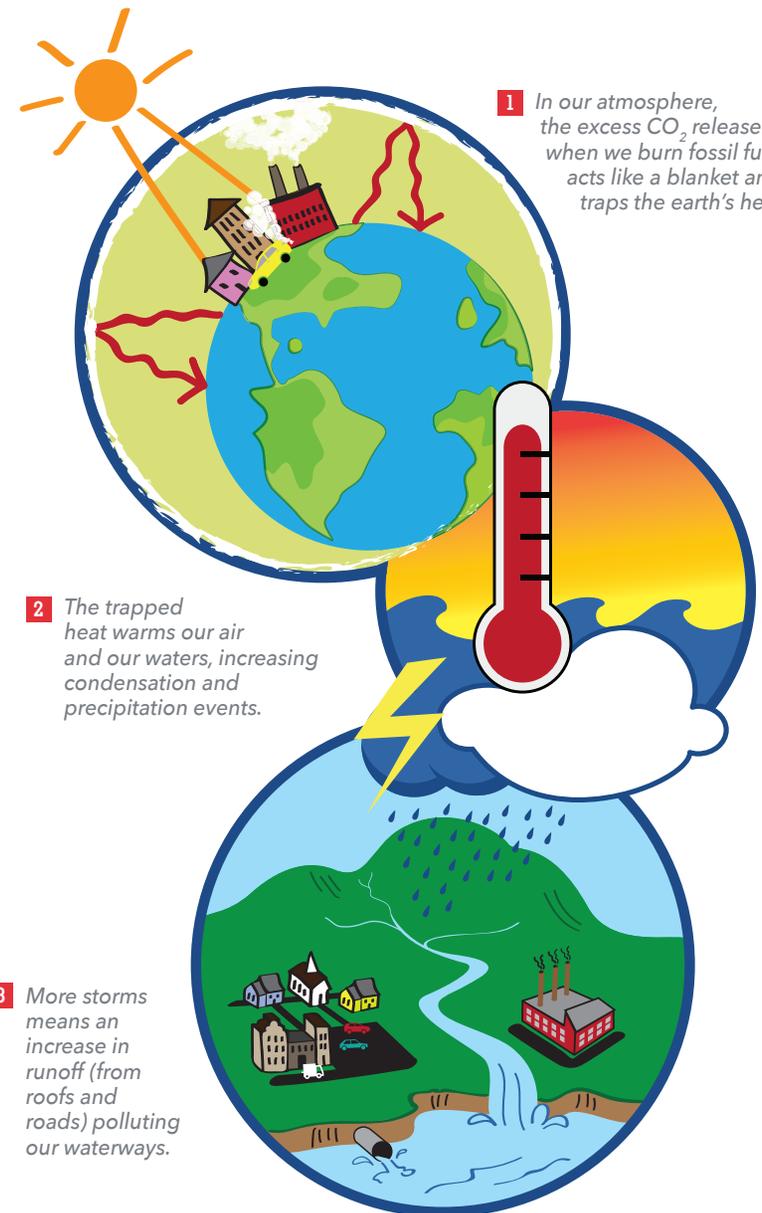
Bay-friendly living is more important now than ever because rapidly changing climate conditions amplify the effects of human activities on water quality and Bay health. Here's how:

More downpours, more intense storms, and more snow means more water than ever is rushing over our lawns, parking lots, and roadways into our **storm drains** and waterways. This stormwater **runoff** collects **pollutants** such as oil, pet waste, **fertilizer**, trash and sand along the way and dumps them into Narragansett Bay – posing a major threat to water quality and aquatic life, leading to beach closures and **harmful algae blooms** that make fish and shellfish toxic to eat.

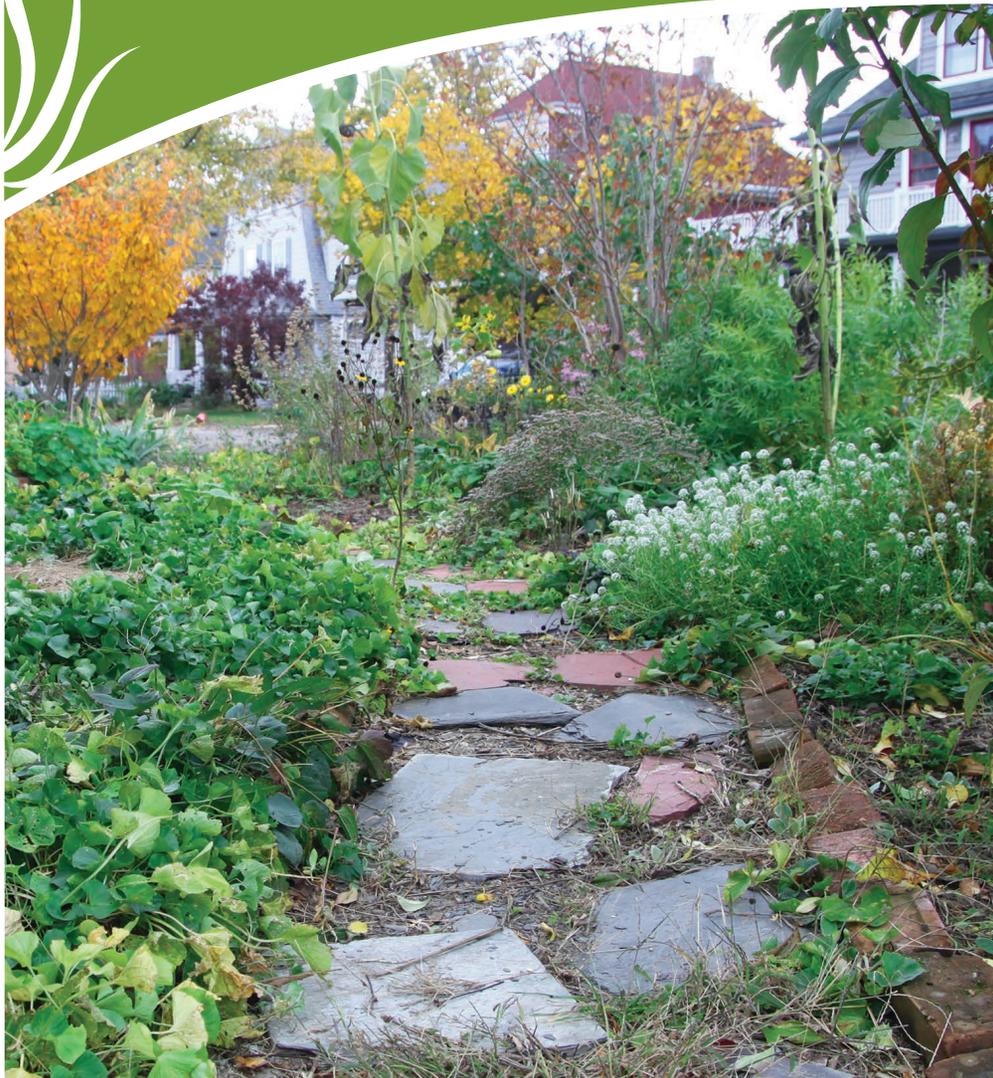
Taking part in individual and community-scale efforts, not only to reduce this "**polluted runoff**," but also to reduce our **carbon emissions** and prevent this chain reaction, is an essential part of protecting the Bay for future generations. Our *Bay-Friendly Living* booklet is designed to give you some simple tips to protect and improve Narragansett Bay.

## HEAT-TRAPPING BLANKET & RUNOFF

The infographic below depicts the connection between our reliance on fossil fuels and the health of Narragansett Bay and its watershed.



# Landscape MANAGEMENT



- MAKE YOUR YARD A SPONGE..... 10
- GROW A HEALTHY LAWN ..... 12
- SAVE WATER ..... 14
- PLANT NATIVE..... 16
- PLANT A RAIN GARDEN..... 18

## DID YOU Know...

Most lawns **DON'T NEED IRRIGATION** and can survive droughts by going dormant?

Your soil might not be able to handle fertilizer at all?

**LONGER GRASS IS HEALTHIER** than shorter grass?

Your grass can get up to **ONE-THIRD OF ITS NUTRIENT** needs from its own clippings?

Fertilizer runoff from your yard can pollute local waters?

Experts estimate that **HALF OF THE WATER WE USE OUTDOORS IS WASTED** from wind, evaporation, or runoff due to overwatering?

## MAKE YOUR YARD A *Sponge*

Runoff pollution – when rainwater runs off yards and hard surfaces and carries pollutants with it into rivers, streams and the Bay – is a major cause of beach closures and **fish kills**. In nature, plants slow the flow of rain, allowing it to seep back into the ground. The next time it rains, watch where the water flows from your gutters, driveway and yard. If it's flowing into the street and down a storm drain, it is likely going directly into a stream, river, or the Bay, taking pollutants with it along the way.

Rainwater is a free resource from nature. With a few simple actions, you can easily keep more rainwater on your lawn and gardens and less pollution from reaching our waters.



### ■ WHAT YOU CAN DO

- **DO** direct runoff from your roof and driveway onto grass and planted areas.
- **DO** collect rainwater from your downspouts in rain barrels to use for watering your yard and garden during drier summer months.
- **DO** create rain gardens to collect and filter rainwater. (See *rain gardens*, page 18)
- **DO** keep your lawn at least 3" high to reduce runoff and soil evaporation.
- **DO** use **pervious** asphalt or pavers for driveways and walkways, which allow rain to soak into the ground.

### MAKING THE MOST OF RAINWATER

This illustration shows some of the ways you can keep water on your lawn and out of storm drains to help protect water quality in the Bay and watershed.



### ■ RESOURCES

Rain Barrels, URI Stormwater Solutions: [bit.ly/URIRainBarrel](https://bit.ly/URIRainBarrel)

New England Soak Up the Rain Program, EPA: [bit.ly/SoakUpTheRain](https://bit.ly/SoakUpTheRain)

Rain Barrel and Other Water Conservation Tools, Mass. DEP: [bit.ly/WaterConsTools](https://bit.ly/WaterConsTools)

Reduce Runoff.org, CT Fund for The Environment & Save The Sound: [bit.ly/RedRunoff](https://bit.ly/RedRunoff)

## Grow A HEALTHY LAWN

The **nitrogen** and **phosphorus** in fertilizers are major contributors to water pollution and **algae blooms** in Narragansett Bay and its watershed. That's because, just as fertilizer makes your grass green, it can also make our waters green, because it fuels rapid algae growth. Excessive algae uses oxygen in the water and suffocates other aquatic life.

The fact is, healthy lawns are resistant to drought, weeds and pests, and don't usually need fertilizer, **pesticide** and **herbicides**. Using too much fertilizer, or fertilizing at the wrong time of year, can actually harm your lawn's natural resistance to disease and drought. If you feel you must use fertilizer, use it sparingly and only at the right time of year.



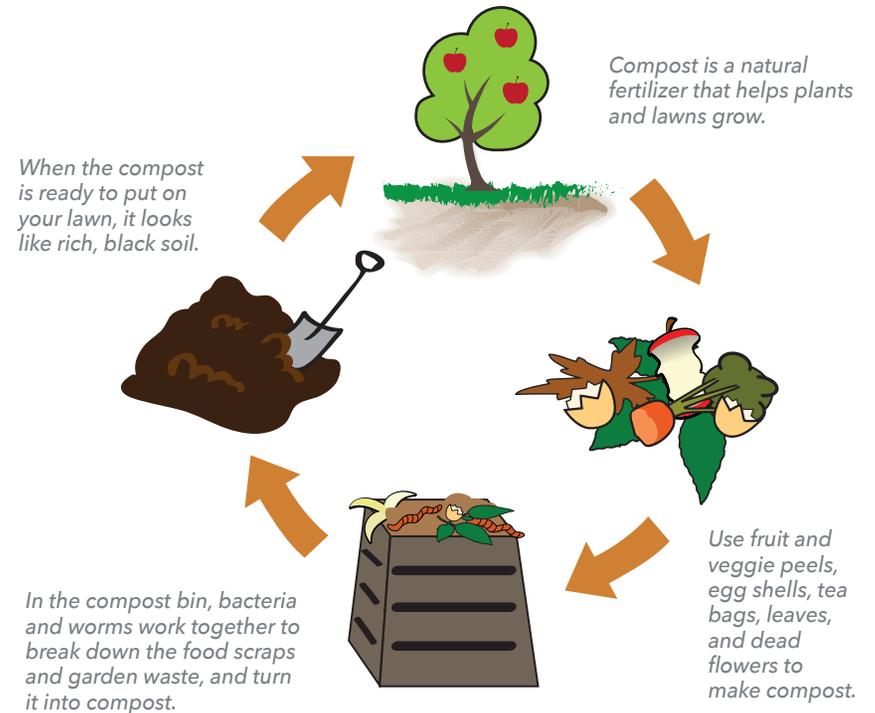
### ■ WHAT YOU CAN DO

- **DO** leave grass clippings on the lawn. This free, natural fertilizer can provide up to one-third of your lawn's **nutrient** needs.
- **DO** test your soil. If the **pH** of the lawn is too low, the grass can't absorb the fertilizer, no matter how much you use.
- **DO** use up to ½" **compost** as a fertilizer to topdress your lawn or garden.

#### IF YOU MUST FERTILIZE:

- **DO** fertilize sparingly. Fall is the best time to fertilize, before October 15. If you must fertilize in spring, wait until your lawn greens up.
- **DON'T** fertilize in the summer when your lawn is naturally dormant.
- **DO** choose slow-release fertilizer, such as **organic fertilizers**, that release nutrients over time and are less likely to run off or burn your lawn. Slow-release nitrogen is listed on the bag as "**water insoluble nitrogen.**"
- **DON'T** apply fertilizer immediately before or after a rainfall, which washes fertilizer off your lawn and into storm drains.

**COMPOST CYCLE** Compost is nutrient-rich organic matter including decomposed leaves, fruit and vegetable scraps. Compost can be used as a natural fertilizer that fuels plant growth and restores vitality to depleted soil. It's also free, easy to make and good for the environment.



### ■ RESOURCES

Healthy Lawn Care, URI Water Quality Program:  
[bit.ly/HealthyLawn](https://bit.ly/HealthyLawn)

Composting, Rhode Island Resource Recovery: [bit.ly/BYcompost](https://bit.ly/BYcompost)

Organic Lawn Care, CT Dept. of Energy & Environmental Protection:  
[bit.ly/DEEPLawn](https://bit.ly/DEEPLawn)

Soil Testing: [bit.ly/umasstesting](https://bit.ly/umasstesting), [bit.ly/uconntesting](https://bit.ly/uconntesting), [bit.ly/uritesting](https://bit.ly/uritesting)

## SAVE *Water*

Excessive watering of lawns not only is a waste of our water supplies and your money, but also can impact the water quality of our rivers and Bay. That's because when water runs off your lawn, it takes chemicals with it. Did you know that just one inch of water a week is sufficient for a healthy lawn? Overwatering leads to shallow grass roots that are vulnerable to disease, drought and pests, perpetuating the unnecessary cycle of fertilizer, herbicides, pesticides and water use. And, when you think you're watering deeply, most of that water is just running right off your lawn, taking the chemicals with it, into storm drains, rivers and the Bay.



### ■ WHAT YOU CAN DO

- **DO** let your lawn grow. Set your mower at 3". Grass kept at 3" or more shades the soil and roots, prevents weeds, retains moisture and requires less work of you.
- **DO** leave grass clippings on the lawn when you mow, to reduce evaporation and provide natural nutrients.
- **DO** plant a lawn grass mix of tall and fine **fescues**, which require less water, fertilizer and maintenance.
- **DO** let your lawn go dormant in summer. Lawns that turn brown and dry during the summer will green up when it rains.
- **DO** embrace clover, which attracts pollinators and is a free source of nitrogen for your soil.

#### IF YOU MUST WATER:

- **DO** use a sprinkler timer so that you do not overwater your lawn.
- **DON'T** allow your sprinkler to water paved surfaces.
- **DO** water in the early morning to reduce evaporation and avoid plant scalding by the sun.
- **DON'T** water more than once a week, and **DO** let your lawn dry out between waterings.

### STRESSED VS. HEALTHY GRASS

In the illustration below, note the difference between a stressed lawn (top) that's been overwatered and kept too short and a healthy lawn (bottom) with its deeper roots, longer blades, and mix of grass types.

**STRESSED LAWN:**  
A lawn cut too short doesn't allow deep root growth, which is needed to absorb soil moisture.



*Shallow roots are caused by overwatering and prevent your grass from absorbing soil moisture.*

**HEALTHY LAWN:**  
Increased grass density and a mix of grass types.



*Deeper roots promote water absorption.*

### ■ RESOURCES

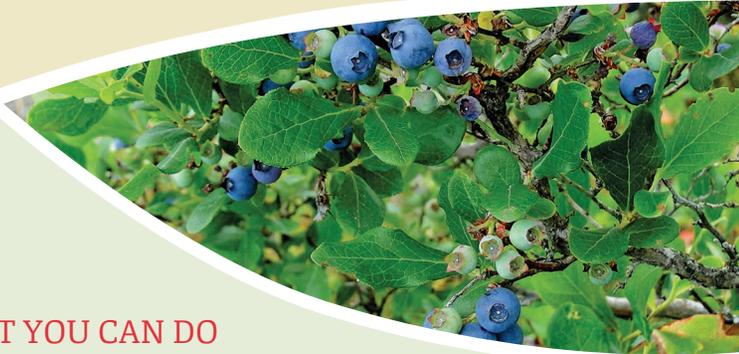
Water Wisely & Conserve Water, URI Water Quality program:  
[bit.ly/urisave](http://bit.ly/urisave)

Don't Trash Grass, CT Dept. of Energy & Environmental Protection:  
[bit.ly/DeepTrash](http://bit.ly/DeepTrash)

Tips for Conserving Water, CT Dept. of Energy & Environmental Protection: [bit.ly/deepconserve](http://bit.ly/deepconserve)

## PLANT *Native* & SUSTAINABLE

Native and sustainable shrubs and trees are well adapted to Southern New England's soil, light and climate. When planted in the right spot, they require far less water and fertilizer, saving time, money, and perhaps most important of all, the environment. Less fertilizer and water means fewer chemicals are washing off your yard and into the Bay and watershed.



### ■ WHAT YOU CAN DO

- **DO** plant native trees and shrubs, which provide a variety of food for wildlife.
- **DO** plant native flowers such as New England aster, milkweed and bee balm to attract bees, birds and butterflies.
- **DO** plant native grasses, such as switchgrass and little bluestem.
- **DO** eliminate invasive species such as Japanese knotweed, oriental bittersweet and multiflora rose in your yard when possible. Try to catch an infestation early.
- **DO** encourage beneficial insects like ladybugs and spiders by planting flowering plants. These help keep harmful pests in check.
- **DO** choose organic ways to control pests, such as **insecticidal soap**. Make your own with 2½ tablespoons of liquid dish soap and one gallon of water.
- **DON'T** buy invasive trees and plants.
- **DO** use native plant guides (right) to choose plants suited to your yard's light and soil conditions.

### COMMON NATIVE TREES FOR LANDSCAPES

American Holly, *Ilex opaca*  
Pagoda Dogwood, *Cornus alterniflora*  
Red Cedar, *Juniperus virginiana*  
Red Maple, *Acer Rubrum* (1)  
Shadbush, *Amelanchier canadensis*



### COMMON NATIVE SHRUBS

Arrowwood, *Viburnum dentatum*  
Bayberry, *Myrica penslvania*  
Black and Red Chokeberry, *Photinia melanocarpa* and *P. pyrifolia* (2)  
Highbush and Lowbush Blueberry, *Vaccinium corymbosum* and *V. angustifolium*  
Inkberry, *Ilex glabra*  
Mountain Laurel, *Kalmia latifolia*  
Steeplebush and Meadowseet, *Spiraea tomentosa* and *S. latifolia*  
Sweet Fern, *Comptonia peregrina*  
Sweet Pepperbush, *Clethra alnifolia* (3)  
Virginia Rose, *Rosa virginiana*  
Winged Sumac, *Rhus copallina*



### COMMON NATIVE PERENNIALS & GRASSES

Blueflag Iris  
Butterfly Milkweed  
Goldenrod  
New England Aster (4)  
Switchgrass



### ■ RESOURCES

- What to Plant, EPA: [bit.ly/epaplanting](http://bit.ly/epaplanting)  
R.I. Native Plant Guide, URI: [bit.ly/rinative](http://bit.ly/rinative)  
Coastal Plant Guide, CRMC: [bit.ly/coastalplant](http://bit.ly/coastalplant)  
Mass. Prohibited Plant List, Mass. DEP: [bit.ly/PlantsToAvoid](http://bit.ly/PlantsToAvoid)  
Pest Identification, URI Plant Protection Clinic: [bit.ly/urippc](http://bit.ly/urippc)

# Plant A RAIN GARDEN

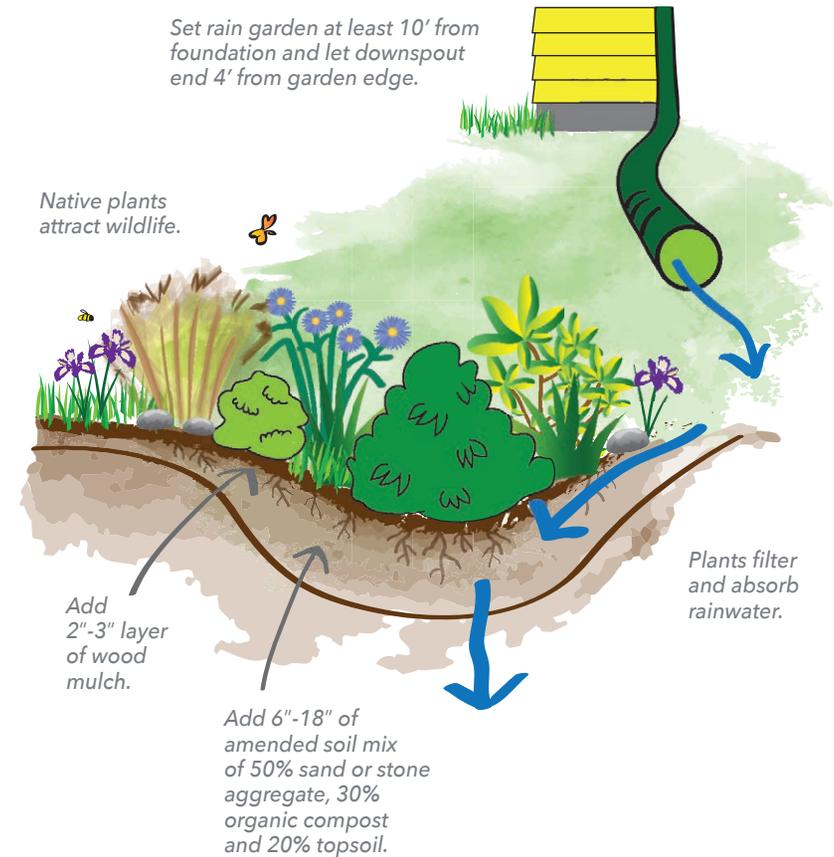
Up to 50% of all polluted runoff comes from residential properties. The more water we keep on our lawn, the more we can reduce polluted runoff. You can reduce runoff from your yard by planting a **rain garden**, which soaks up 30% more water than a traditional patch of grass. Rain gardens are shallow, planted depressions that absorb rainwater from roofs, driveways, and other hard surfaces, keeping it from running into the road and down storm drains.

## HOW TO PLANT A RAIN GARDEN

- Plant your rain garden at least 10 feet from your foundation.
- Direct your downspouts toward the rain garden.
- Till the soil to a depth of 18" and add compost or sand as needed to make a well-drained soil.
- Make sure the center of the rain garden is a 3"- 8" depression (lower than the edge).
- Plant a combination of native flowers, shrubs, trees and grasses, putting tallest plants in the deepest part of the garden.
- Use 2" of mulch to retain moisture.



**RAIN GARDEN CROSS-SECTION** The illustration below shows how a rain garden captures, absorbs and filters rainwater and runoff.



## RESOURCES

Soak Up the Rain: Rain Gardens, EPA: [bit.ly/epasoakup](https://bit.ly/epasoakup)

Rain Gardens, URI Stormwater Solutions: [bit.ly/uriraingarden](https://bit.ly/uriraingarden)

Rain Gardens, UConn: [bit.ly/connraingardens](https://bit.ly/connraingardens)

How to Plant a Rain Garden, Northern RI Conservation District: [bit.ly/nricd](https://bit.ly/nricd)

# Bay-Friendly ACTIONS



- SCOOP THE POOP ..... 22
- DON'T FEED THE DUCKS ..... 24
- DON'T BE A LITTERBUG ..... 26
- RESPECT THE STORM DRAIN..... 28
- MAINTAIN YOUR SEPTIC SYSTEM..... 30
- LEAVE A SMALLER FOOTPRINT ..... 32

## DID YOU Know...

It's illegal to feed ducks and geese in Rhode Island?

One goose can produce **A POUND OF POOP** per day?

Dog and goose poop that washes off the land is a leading cause of beach closures?

Rhode Island has **MORE THAN 50** publicly accessible electric car charging stations?

You can offset much of your electric bill by **INSTALLING 10 SOLAR PANELS?**

Volunteers collected **14,911 POUNDS OF TRASH** from Rhode Island beaches during the International Coastal Cleanup in 2016?

The average household's water leaks can account for more than **10,000 GALLONS OF WATER WASTED** every year, or the amount of water needed to wash 270 loads of laundry?

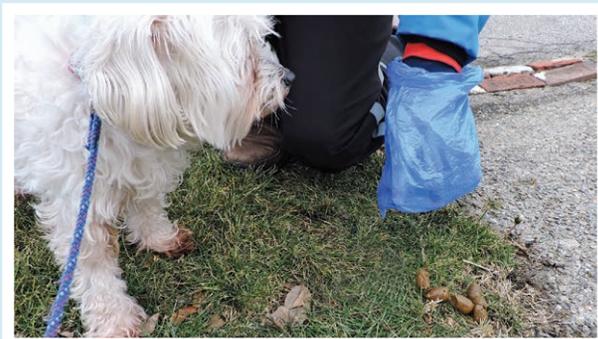
## Scoop THE POOP

Do you pick up after your pet? Studies have shown that nearly 40% of dog owners do not pick up after Fido, and that dog waste accounts for nearly 25% of the bacteria that makes its way to our waterways. Pet waste carries bacteria, viruses and parasites that can threaten the health of humans and wildlife and leads to beach and shellfish closures. "Scooping the poop" helps our local waters by preventing harmful bacteria and nutrients from spreading.



### ■ WHAT YOU CAN DO

- **DO** pick up after your pet. It's the law in most communities, and even if it's not, picking up after your pet is the right thing to do.
- **DO** carry a plastic bag and paper towel with you at all times to pick up Fido's waste.
- **DON'T** leave your bag of poop on the ground.
- **DO** clean up the pet waste in your yard. Bacteria in dog poop makes its way to the Bay, either through storm drains or by leaching into the ground.



**THE POOP EFFECT** Dog poop can take over one year to decay, and the bacteria and parasites in dog poop can linger in the soil and seep into groundwater.



### ■ RESOURCES

Pet Waste, RI Dept. of Health: [bit.ly/dohwaste](http://bit.ly/dohwaste)

Managing Pet Waste, Mass. DEP: [bit.ly/masswaste](http://bit.ly/masswaste)

## DON'T FEED THE *Ducks*

Feeding ducks and geese is illegal in Rhode Island and other states. And for good reason. Like junk food for birds, it can make them sick, overly-dependent on humans, and can attract large concentrations of waterfowl to areas that can't naturally support such numbers. Also, a single adult goose can produce up to a pound of poop every day. This waste contains high levels of bacteria that can cause beach and shellfish closures and sicken humans. Like fertilizers, waterfowl waste also contains high amounts of nitrogen and phosphorus, which causes excessive algal growth that suffocates aquatic life. Waterfowl also trample and eat salt marsh grasses that serve as important habitat for young Bay critters and filter runoff before it enters the Bay.

### ■ WHAT YOU CAN DO

- **DON'T** feed the ducks. Or geese. Or any other waterfowl. Regular feeding of birds can cause water pollution, poor nutrition, disease, and migration issues, just to name a few.
- **DO** keep your grass long, which helps it retain moisture and discourages waterfowl from gathering and feeding on your lawn.
- **DO** plant a buffer of native plants along the shoreline, which not only helps keep geese off your property, but also filters and removes pollutants from rainwater and protects the shoreline from erosion.



### THE SCOOP ON GOOSE POOP

Fecal matter from waterfowl can overfertilize lawns, contribute to excessive algae growth in our waters that can result in fish kills, and potentially contaminate municipal water supplies.



### ■ RESOURCES

Don't Feed the Ducks, Mass. Audubon: [bit.ly/Dontfeed](https://bit.ly/Dontfeed)

Canada Geese in Connecticut, CT Dept. of Energy & Environmental Protection: [bit.ly/deepgeese](https://bit.ly/deepgeese)

## DON'T BE A *Litterbug*

Trash is one of the most widespread problems affecting our Bay. Animals can mistake bits of trash for food or accidentally ingest litter while feeding. Certain types of trash, such as fishing line, can fatally entangle birds, turtles and other creatures. Plastics and cigarette butts do not biodegrade; they break down into smaller and smaller bits, contaminating the sand, the water and even the fish we eat. And when it rains, storm water carries litter and other pollutants into storm drains, which flow to rivers and the Bay.



### ■ WHAT YOU CAN DO

- **DON'T** litter. Let no bottlecap, straw or cigarette butt fall from your hands onto the ground.
- **DO** bring an empty trash bag with you when you go to the shore, and take your trash with you when you leave. Many sites do not have trash cans, and trash cans are often overflowing. So bring a bag, and be prepared to carry it out.
- **DO** carry a portable ashtray with you if you smoke.
- **DO** take extra care that fishing line does not end up in the environment to entangle wildlife.
- **DO** set an example for others by picking up litter each time you go to the shore and every day in your neighborhood.
- **DO** speak up. If you see friends or family littering, let them know it's not okay to trash the Bay.
- **DO** join or lead a beach cleanup with Save The Bay from March through November.

### TOP TRASH COLLECTED

Plastics, including cigarette butts, don't biodegrade. They break down into tiny pieces that become indistinguishable from the natural environment. These microplastics are found in the gills and digestive tracts of the seafood we humans eat. How much plastic do you want to eat?



### ■ RESOURCES

Join or Lead a Beach Cleanup with Save The Bay: [bit.ly/stbvol](http://bit.ly/stbvol)

Trash-Free Waters, EPA: [bit.ly/trashfreewater](http://bit.ly/trashfreewater)

What You Can Do About Marine Debris, EPA: [bit.ly/Marinetrash](http://bit.ly/Marinetrash)

Marine Debris Program, NOAA: [bit.ly/noatrash](http://bit.ly/noatrash)

MA COASTSWEEP Marine Debris Program: [bit.ly/coastswEEP](http://bit.ly/coastswEEP)

## RESPECT THE *Storm Drain*

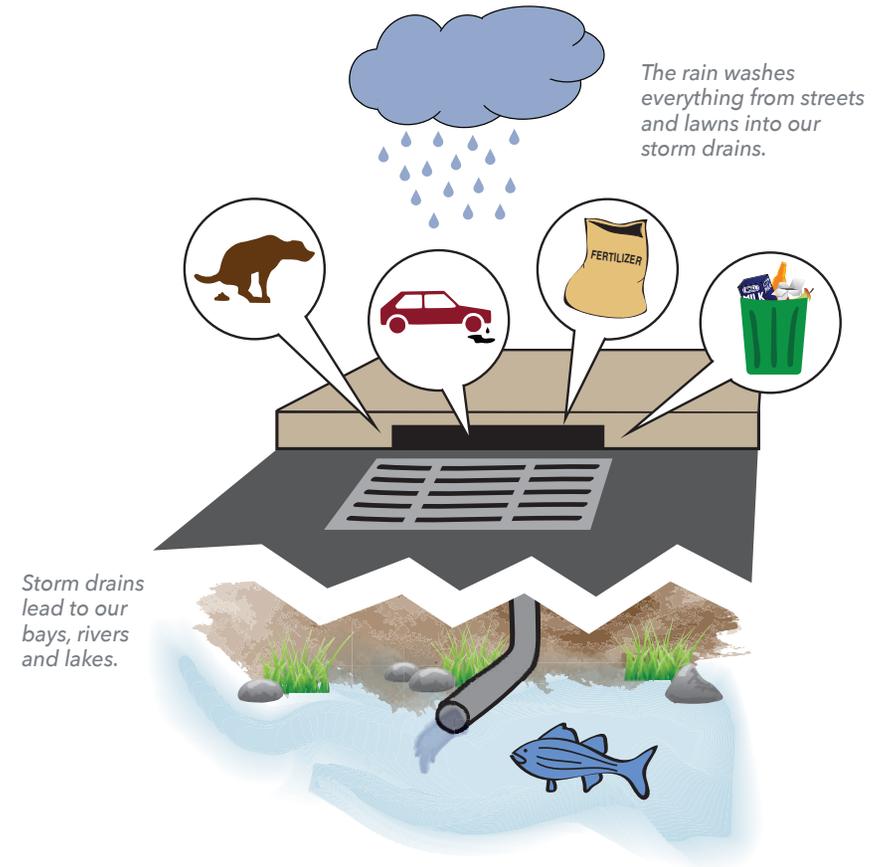
Many people use storm drains as garbage cans. But instead of going to a treatment plant, all of their trash – cigarette butts, pet waste, leftover household chemicals and even motor oil – just ends up polluting the Bay! And, in Rhode Island and Massachusetts, it is against the law to dump anything into a storm drain.



### ■ WHAT YOU CAN DO

- **DON'T** toss or dump anything into a storm drain.
- **DO** sweep grass clippings and fertilizer off hard surfaces so it doesn't run into your storm drain, polluting local waters.
- **DO** dispose of such hazardous waste as paint, motor oil, and pesticides properly.
- **DO** bag your pet waste along with your regular household trash.
- **DON'T** let leaves, grass clippings or road sand wash into storm drains – they cause clogs that lead to street flooding and increased maintenance costs.
- **DO** spread the word! Let people know about the connection between storm drains and the Bay.
- **DO** organize a storm drain marking project with Save The Bay.

**IT ALL FLOWS DOWNSTREAM** Even miles from the shoreline, everything that goes down a storm drain finds its way to our local waters.



### ■ RESOURCES

Disposing of Household Hazardous Waste, RIRC: [bit.ly/rirrcwaste](http://bit.ly/rirrcwaste)

Waste and Recycling, Mass. DEP: [bit.ly/DEPwaste](http://bit.ly/DEPwaste)

Household Hazardous Waste Programs, CT Dept. of Energy & Environmental Protection: [bit.ly/deephazard](http://bit.ly/deephazard)

Save The Bay Storm Drain Marketing Project: [volunteer@savebay.org](mailto:volunteer@savebay.org)

## MAINTAIN YOUR *Septic* SYSTEM

The average home with three people produces about 85,000 gallons of **wastewater** a year – more than 200 gallons per day! In homes with **septic systems**, this means 200 new gallons of wastewater is added to an underground tank and leach field every single day. If those septic systems aren't functioning properly, that wastewater is leaching into the groundwater we drink and the local waters in which we swim and fish.

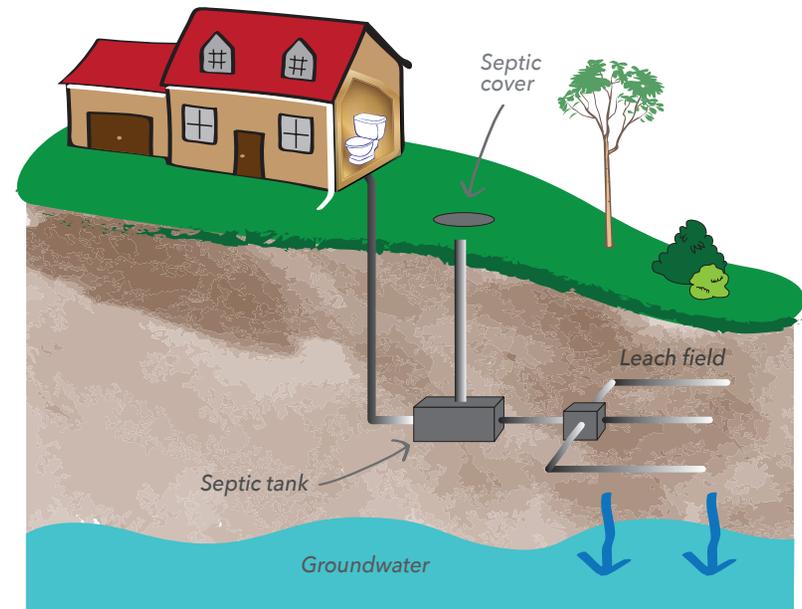
### ■ WHAT YOU CAN DO

- **DO** have your system inspected once per year. Annual inspections are cheaper than fixing a big problem and help you detect issues before they become big problems.
- **DO** have your septic system pumped every three to five years, depending on usage.
- **DON'T** use septic system additives – they are not a substitute for regular pumping.
- **DON'T** put anything down the toilet or sink that can't normally decompose, such as diapers, sanitary products, disposable wipes, cooking fats, grease and coffee grounds.
- **DO** conserve water to reduce the strain on your septic system and prevent the chance of backups.



### WHAT IS A SEPTIC SYSTEM?

The illustration below shows how the average homeowner's septic system is designed. When your septic system fails, solid and liquid waste can overflow into your yard and seep into the ground, contaminating groundwater that supplies our drinking water.



**1** Solids settle in a tank and need to be removed (pumped out) every 3-5 years through the septic cover above the tank.

**2** Wastewater is discharged through perforated pipes into a drainfield where it is slowly absorbed and filtered by the soil before being discharged to groundwater.

### ■ RESOURCES

Understanding Septic Systems, URI Onsite Water Treatment Program: [bit.ly/septicys](http://bit.ly/septicys)

Septic Systems, EPA: [bit.ly/epaseptic](http://bit.ly/epaseptic)

Caring for Your Septic System, Mass. DEP: [bit.ly/caringseptic](http://bit.ly/caringseptic)

## LEAVE A SMALLER *Footprint*

Climate change threatens our ability to keep Narragansett Bay's watershed healthy. If you think you can't do anything about climate change, think again. People around Rhode Island and Massachusetts are coming together to reduce carbon emissions and take responsibility for the health of our ecosystems. You can, too!



### ■ WHAT YOU CAN DO

- **DO** green your home with National Grid's free energy audits and rebate programs for such energy efficiencies as light bulbs, low flow showerheads, home insulation and heating/cooling systems.
- **DO** go solar and take advantage of state incentives to make solar cost-effective for homeowners.
- **DO** drive electric cars, which are almost five times more efficient than gasoline cars and emit far less carbon, even when charged from the electric grid.
- **DO** join or start a *Walking School Bus*, where adults take turns as the "bus driver" and walk your neighborhood of schoolchildren to their school together.
- **DO** walk, bike or take public transportation whenever you can. It's great exercise and good for the environment.
- **DO** support policy initiatives in your town and state that will help reduce carbon emissions communitywide. Register to vote, learn about issues on the ballot, and vote for the changes you wish to see.

### SMALL ACTIONS, BIG IMPACT

Can you identify the many small things the folks who live in the home below are doing to reduce their carbon footprint? If we all do many small things together, we can make a big, positive difference for Narragansett Bay.



### ■ RESOURCES

National Grid Home Energy Checkups: [bit.ly/energyasse](http://bit.ly/energyasse)

Rhode Island Rebate Program for Electric and Hybrid Cars: [bit.ly/ridrive](http://bit.ly/ridrive)

Solarize Rhode Island: [bit.ly/solarri](http://bit.ly/solarri)

Energize Connecticut: [bit.ly/ctenergize](http://bit.ly/ctenergize)

Mass. Save for Your Home: [bit.ly/MassRebate](http://bit.ly/MassRebate)

Start a Walking School Bus: [bit.ly/walkingschool](http://bit.ly/walkingschool)

Idle-Free Schools Campaign, Alliance for Climate Education:  
[bit.ly/idlefreeeschool](http://bit.ly/idlefreeeschool)

# Glossary

**Algae Bloom/Algal Bloom:** rapid growth of algae that often coats the surface of water and can produce harmful biotoxins

**Carbon Dioxide:** a gas that is emitted when humans and animals breathe and when we burn fossil fuels or organic material. **Rampant Carbon Dioxide** is carbon dioxide that is added to the atmosphere when we burn fossil fuels

**Carbon Emissions:** carbon that is added to the air from burning fossil fuels or other organic material

**Compost:** decayed organic material

**Fertilizer:** a chemical or natural substance added to soil to increase its fertility

**Fescue:** types of narrow-leaved grasses that can be drought- and disease-tolerant

**Fish Kill:** an episode of low oxygen in water where fish die, often in large numbers

**Herbicide:** chemicals used to control unwanted plants

**Insecticidal Soap:** a solution that uses natural oils to protect plants from pests and is safe for the environment

**Nitrogen:** essential to life on earth, this element helps plants grow, but too much of it can cause overgrowth of algae and can pollute the Bay and coastal waters

**Nutrient:** essential for growth, the most important nutrients for plants are nitrogen and phosphorus

**Organic Fertilizer:** these come from natural plant and animal sources and can include manure, compost or bone meal

**pH:** the measure of acidity or alkalinity of a solution

**Phosphorus:** essential to life of earth, this element helps plants grow, but too much of it can cause overgrowth and can pollute rivers and the Bay

**Pervious:** a porous surface that allows liquids (such as rainwater) to penetrate through it (such as stepping stones or sand)

**Pesticide:** chemicals used to control unwanted insects or other animals

**Pollutant:** a substance that contaminates air or water

**Polluted Runoff:** contaminants that are contained in water that drains off hard surfaces

**Rain Garden:** a planted depression that captures rainwater and allows it to soak into the ground

**Runoff:** water that drains off a hard surface

**Septic System:** a wastewater system that relies on natural soil drainage and biology to treat sewage

**Slow-Release Fertilizer:** fertilizers that are coated to release their nutrients over time rather than by dissolving immediately

**Storm Drain:** a system for capturing and directing water that runs off hard surfaces

**Wastewater:** Spent or used water with dissolved or suspended solids, discharged from homes, commercial establishments, farms, and industries

**Water-Insoluble Nitrogen:** a source of nitrogen that is not easily dissolved in water

**Watershed:** an area of land that drains to a common point

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