

# Protecting Our Watersheds

A Guide for Home and Property Owners



# OUR WATERS NEED YOUR HELP

## EVERYONE LIVES IN A WATERSHED.

Even if we are miles away from a lake or river, all land eventually drains into a watershed and our actions have downstream impact.

To view an interactive map of Maine's watersheds, visit: [mainelakes.org/resources/more/watershed-map/](http://mainelakes.org/resources/more/watershed-map/)

## Protecting Our Watersheds A Guide for Home and Property Owners

This booklet provides information about the actions you can take to protect the lakes and waterways we all treasure. We hope it helps you understand and appreciate the fragility of our extraordinary natural resource. Please further your awareness and understanding by sinking into the knowledge you will find from links on pages 16-19. The watershed says "Thank You."

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- Center for Ecology Based Economy (CEBE)
- Pleasant Lake/ Parker Pond Association
- The Otisfield Conservation Committee
- The Otisfield Resilience Committee
- The Town of Otisfield
- The Town of Casco
- Thompson Lake Environmental Association

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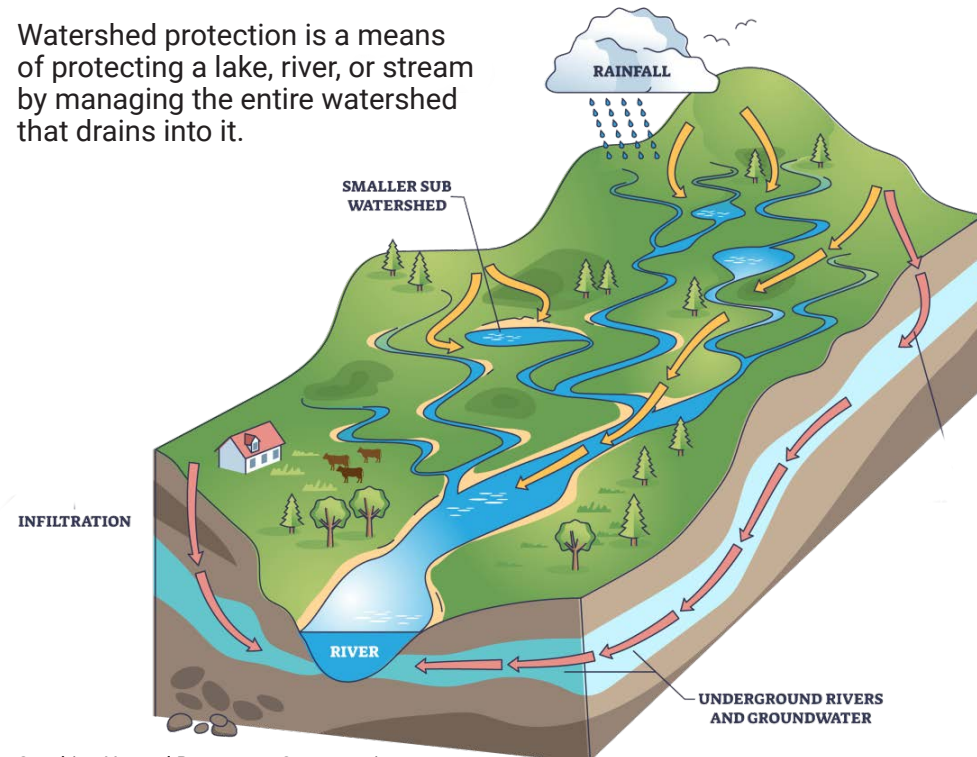
*Printed by Grassroots Graphics.*

Our lakes, rivers, and streams are living ecosystems and there is a direct connection between land use and water quality.

Watersheds are geographic areas in which precipitation drains into a common body of water, such as a stream, river, wetland, lake, or ocean. A healthy watershed naturally filters and stores water, prevents flooding, impedes wildfires, and conserves habitat.

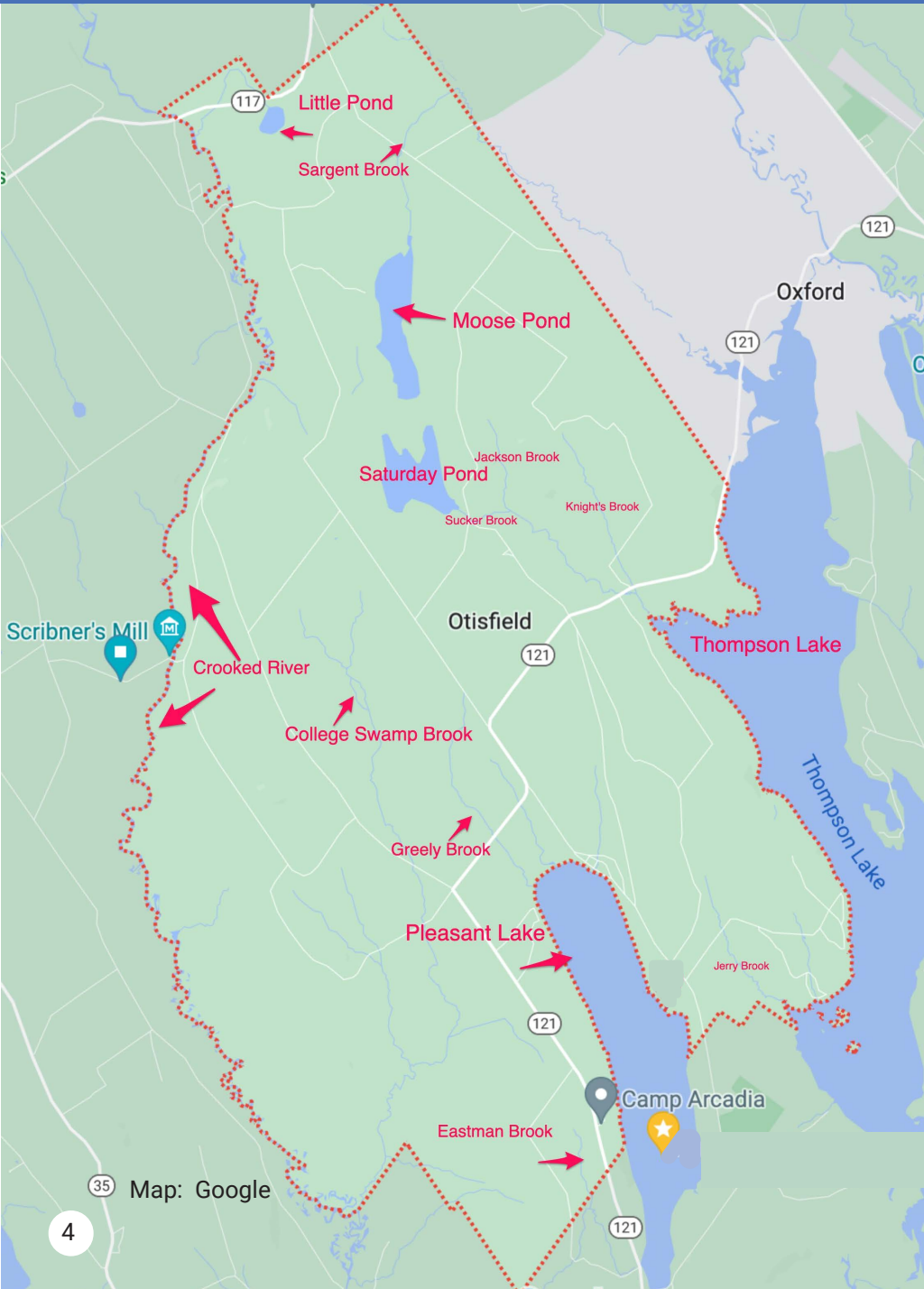
Unfortunately, various forms of pollution can interfere with the health of the watershed. Shoreland development and other human activities contribute to soil erosion and polluted runoff in amounts that lakes and other water bodies cannot handle.

Watershed protection is a means of protecting a lake, river, or stream by managing the entire watershed that drains into it.

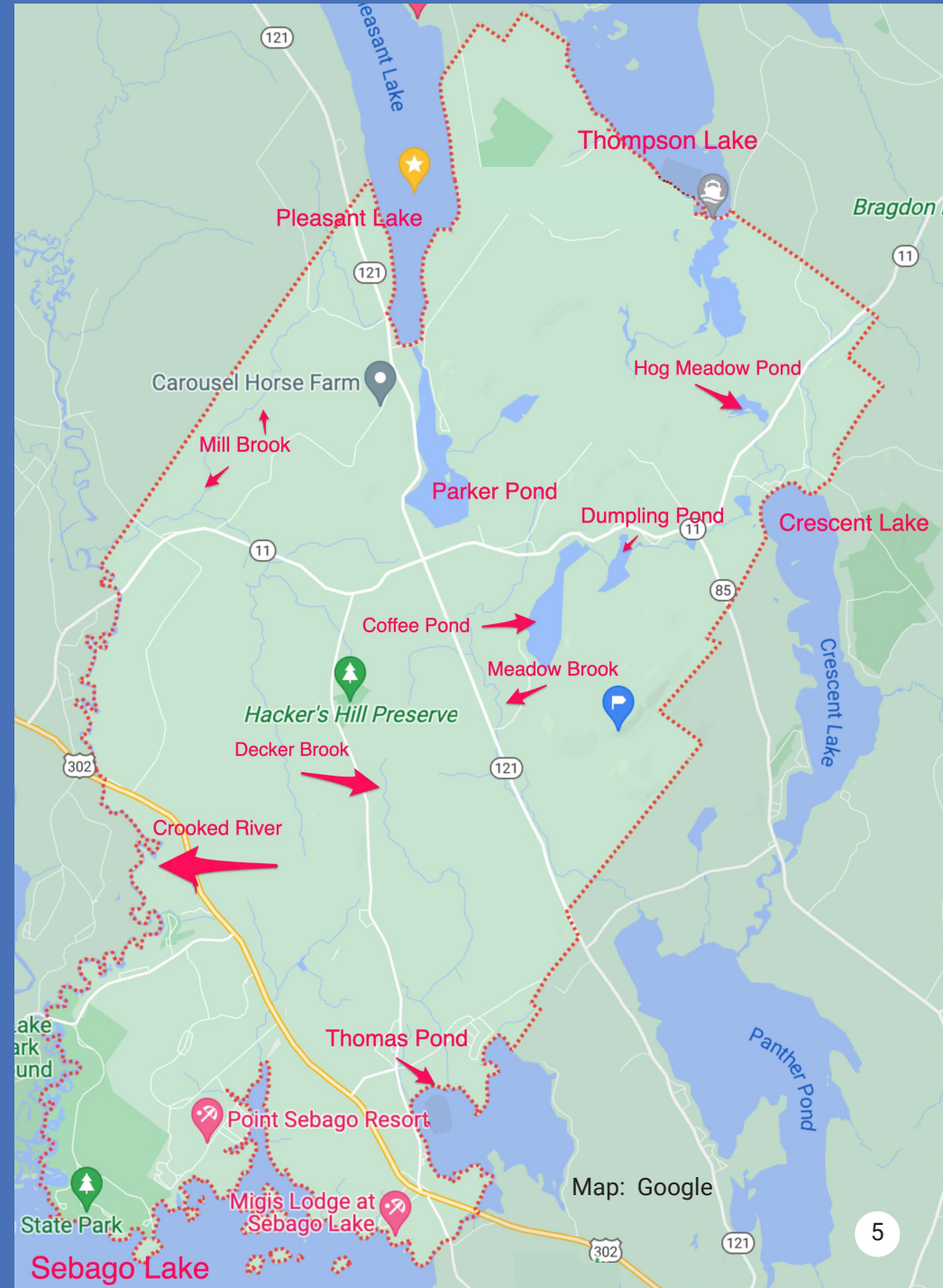


Graphic: Natural Resources Conservation Service U.S. Department Of Agriculture

# OTISFIELD WATERWAYS



# CASCO WATERWAYS

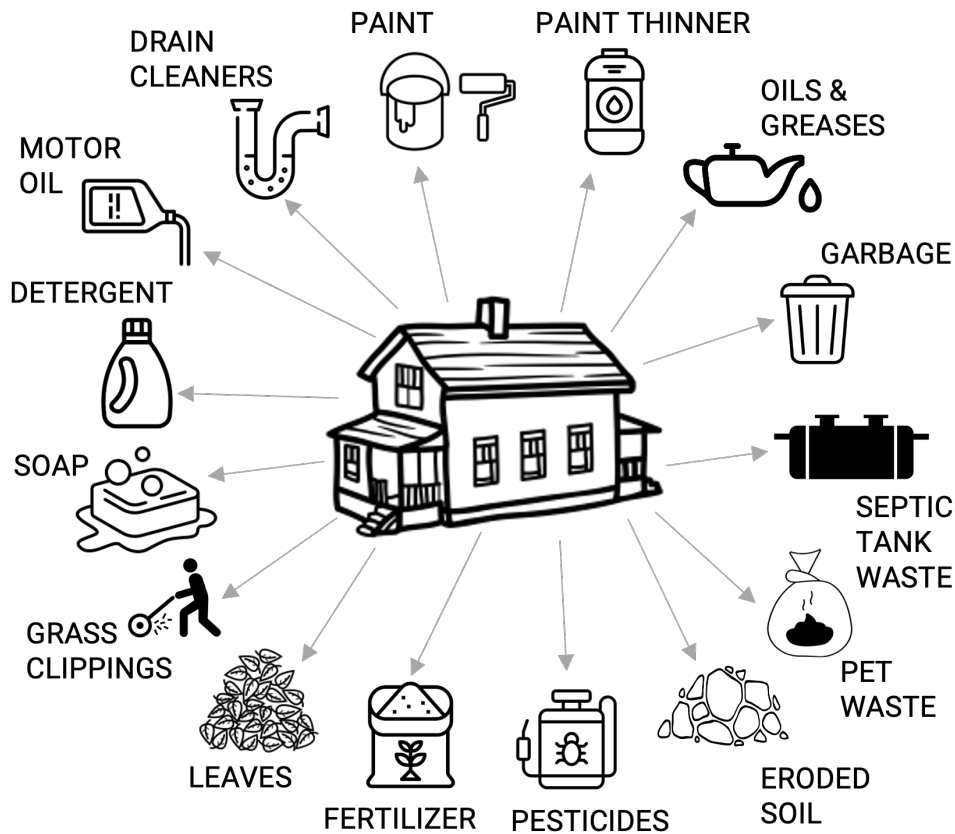


# NONPOINT SOURCE POLLUTION

# WHAT'S THE PROBLEM?

Unlike pollution from an easily identifiable source such as an industrial plant, nonpoint source pollution (NPS) is difficult to control because it comes from many different sources and locations. NPS pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and ground waters.

- Rainstorms and snowmelt wash pollutants high in phosphates (fertilizer, detergents, other soaps) into the water.
- Lawns and roads near the shoreline can increase surface runoff, creating a runway that sends phosphates straight into the lake without having a chance to be naturally filtered.
- Septic systems – even those set back from the shoreline – can leak into surface runoff after strong storms or if the tanks are not properly maintained.



Phosphorus is a fertilizer. It is naturally present in soil and that's good for plants. When excessive amounts of phosphorus wash into a lake, it can fuel an algae population explosion called an algal "bloom." The algae blocks sunlight to beneficial aquatic plants, consumes oxygen (which may lead to fish kills), and can suffocate other aquatic life. Some types of algal blooms can create toxins that are harmful to people and pets.



If you observe or suspect an algal bloom, call the Maine Department of Environmental Protection (DEP) at (207) 287-3901.

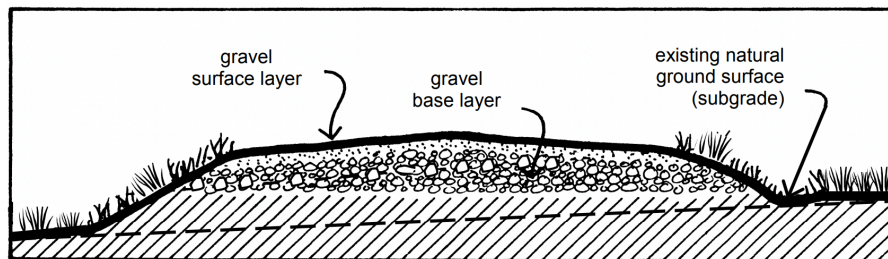


To minimize erosion and runoff, prevent water from flowing directly into lakes and streams. Deflect runoff into depressions or flat wooded areas. It's all about proper drainage – spread the stormwater out and slow it down!

## ROADS AND DRIVEWAYS

It's important to construct and crown roads and driveways so that rain and snowmelt drain into the roadside ditches as fast as possible.

- Proper roadside ditches containing grass or other ground cover gather, slow, and divert runoff to settle its sediment and allow its absorption.
- Stabilize roadside ditches by lining them with stone or by clearing vegetation that interferes with their operation and maintain them to ensure they function properly.



Graphic from the Maine Department of Environmental Protection (DEP)

## ROOFS

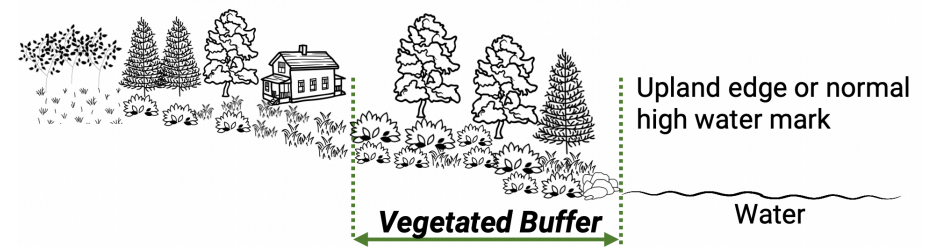
Roofs rapidly shed large quantities of rain and snowmelt.

- Roof gutters and downspouts should collect and direct runoff away from waterbodies into vegetated areas or swales that settle its sediment and allow its absorption.
- Clean gutters regularly, particularly in late autumn after leaves fall, to prevent downspouts from clogging and causing gutters to overflow.
- Roofs without gutters and downspouts should drain onto gravel drip edges that prevent runoff, draining soil away from foundations and facilitating its absorption into the ground.

Bands of trees, shrubs, grasses, and other plants, are nature's guardrails and the protection systems for lakes and streams. They interrupt the flow of nonpoint source pollution and minimize the affect of phosphorus and sediment on water quality.

## MAINTAIN A VEGETATED BUFFER

- Rocks, plants, and trees along the shoreline provide necessary erosion control and diffuse wave action.
- Deep rooted vegetation -- including perennials, shrubs, ground cover, and trees -- absorb & filter precipitation.
- Trees filter sediment from stormwater runoff, reducing the amount of sediment entering lakes, rivers, and streams.
- Sand may not be added to the shoreline or used to create new beaches; it is illegal as sand contains phosphorus and can disrupt the water quality.



## MAINE'S "NATURAL RESOURCES PROTECTION ACT" (NRPA)

This state law is designed to protect Maine's natural resources and it applies to specific sensitive areas including lakes, ponds, wetlands, rivers, and streams. Projects involving building, draining, filling, or otherwise changing the land within 75 feet of the protected resource area, or directly altering the resource itself, may require a state permit. Examples include permanent docks, shoreline rip-rap, beach repair, bridges, marinas, and retaining wall repairs. Call Maine DEP at (207) 822-6300 for more info or visit [maine.gov/dep/land/nrpa/](http://maine.gov/dep/land/nrpa/).

# SHORELAND ZONING ORDINANCES

Shoreland zoning ordinances are intended to control the intensity and impact of development around water and to maintain or establish a buffer between development and the waterway. These regulations are the minimum standards to protect the health of the watershed. Consider doing more!

**OTISFIELD:** [otisfieldme.gov/code-enforcement](https://otisfieldme.gov/code-enforcement)

The shoreland zone is comprised of all land areas within 250 feet, horizontal distance, of the normal high-water line of any great pond (lake) and river and all land areas within 75 feet, horizontal distance, of the normal high-water line of other water bodies, wetlands, and streams. A vegetated buffer strip (see page 9) is recommended 100 feet from the high-water mark of great ponds (lakes) and 75-foot from a river or stream.

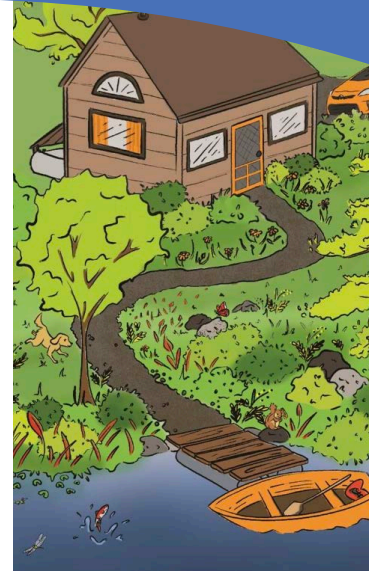
**CASCO:** [cascomaine.org/code-enforcement](https://cascomaine.org/code-enforcement)

The shoreland zone is comprised of all land areas within 250 feet, horizontal distance, of the normal high-water line of any great pond (lake), river, and wetlands and all land areas within 75 feet, horizontal distance, of the normal high-water line of streams. A vegetated buffer strip (see page 9) shall be preserved within 100 feet from the high-water mark of great ponds (lake) and rivers, and a 75-foot buffer from other water bodies, streams, and wetlands.



**Before starting any work within a Shoreland Zone, you must consult with the local Code Enforcement Officer to find out how your building, remodeling, or landscape plans fit local ordinances and what permits you must obtain.**

# LAKESMART PROGRAM



LakeSmart is an education and reward program for lakefront property owners who maintain their homes in ways that protect lake water quality and property values. LakeSmart is the flagship program of Maine Lakes partnered with your local Lake Association.

LakeSmart helps address small sources of erosion that together add up to big lake impacts.

Visit: [lakes.me/lakesmart](https://lakes.me/lakesmart)



**WHAT DOES IT COST A HOMEOWNER?**

The visit is free, non-regulatory and completely voluntary. LakeSmart is the most cost-effective strategy that homeowners can use to protect their lake, their property's value, and their recreational activities. Many home/property improvements can be "do it yourself" or done with assistance from your local Youth Conservation Corp.

**HOW LONG DOES IT TAKE?**

The LakeSmart visit takes less than an hour. A trained volunteer will assess four areas of your property, starting at the driveway and working toward the shorefront. You will be informed right away of the observations, and you'll receive information about lake-friendly land practices. Your evaluation is then sent along to the Maine Lakes for final review.



# HOW YOU CAN MINIMIZE

# PHOSPHORUS AND POLLUTION

## LEAVE TREES/PLANTS

Shrubs and trees help to retain and recycle phosphorus throughout the watershed ecosystem. By minimizing lawns near the shoreline, you help ensure that we have the best chance of catching excess phosphorus naturally!

## CONTROL STORM WATER

Maintain effective draining on your driveway and other areas of your property. Carefully designed ditches divert flow to woodlands (vs the shoreline) and help filter high volumes of water.

## USE PHOSPHATE-FREE FERTILIZER

Most soils in Maine naturally have enough phosphorus to keep a lawn lush and green. If you use fertilizer, make sure it is phosphate-free (noted by the "0" in the middle number of the the fertilizer blend).

## PUMP OUT YOUR SEPTIC TANK

Septic tank levels should be checked every 2 years. A tank should be pumped when it is half full, about every 2 to 3 years for year-round residents and every 3 to 4 years for seasonal residents.



## USE PHOSPHATE-FREE LAUNDRY, DISH, AND DISHWASHER DETERGENT

In Maine, it is illegal to buy household laundry detergent with phosphates. But there are no state regulations on dish and dishwasher soaps. Many brands offer phosphate-free options. Read labels!

## USE PHOSPHATE-FREE HANDSOAP & SHAMPOOS

Make environmentally smart choices when buying personal cleaning products. Look for phosphate-free, biodegradable options.

## CLEAN AND REFUEL BOATS RESPONSIBLY

Wash boats at public car washes or areas where there is ample soil to infiltrate runoff water; Maine law prohibits washing vehicles and boats in lakes and ponds. Gas spillage from fueling boats contributes to nonsource point pollution. Please fuel on land or use a siphon.

## DISPOSE OF HOUSEHOLD HAZARDOUS WASTE (HHW) PROPERLY

Collect and manage these items separately. Dispose safely at the appropriate hazardous waste center. Don't put toxic chemicals down the drain!

# OTHER WAYS YOU CAN PROTECT THE WATERSHED

# ENJOY THE WATER RESPONSIBLY!

## LET NATIVE AQUATIC PLANTS LIVE

Native aquatic plants are a vital part of a balanced ecosystem, including water quality, algae control, and food for fish and wildlife. Removal or use of chemicals to eradicate plants is only allowed with a DEP permit.

## CLEAN, DRAIN, DRY

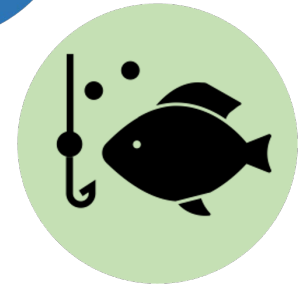
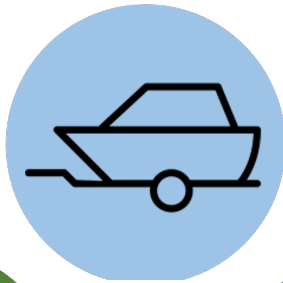
Make sure you clean, drain, and dry your watercraft BEFORE putting it in water. It's the law! To prevent the spread of invasive species, drain watercrafts away from any water body. Watercrafts should NOT be drained on boat ramps.

## COURTESY BOAT INSPECTIONS

Inspectors are trained to spot and remove plant fragments on your watercraft and trailer in hopes of stopping the spread of invasive species. Please be courteous and thank them for protecting our watershed!

## MINIMIZE BOAT WAKE NEAR THE SHORE AND IN SHALLOW WATER

Within 200 feet of the shoreline, maintain headway speed or less -- it's the law! Perform wake sports in deeper water, at least 500 feet from shoreline to reduce wave impacts.



## LOOK OUT FOR LOONS

Watch loons from a distance. Boat slowly near loons and obey no-wake speeds within 200 feet of shore or islands. Do not approach loon nests and do not collect eggs.

## RESPECT WILDLIFE

Waterways provide a wonderful opportunity to see animals in their natural setting. Please respect their space as it is illegal to chase, harass, or herd wildlife.

## FISH RESPONSIBLY

Release fish that you don't intend to keep or exceed your legal limit, following proper catch and release techniques to minimize stress and injury to the fish.

## FISH LEAD-FREE

Ingested lead tackle is the leading cause of death for adult loons. Switch to lead-free tackle! Also, dispose of fishing-related litter (e.g., fishing line, bait containers) properly to prevent it from entering waterways.



# STATE AND LOCAL RESOURCES

## **Otisfield Town Office**

(207) 539-2664 Ext. 2  
[otisfieldme.gov](http://otisfieldme.gov)

## **Casco Town Office**

(207) 627-4515  
[cascomaine.org](http://cascomaine.org)

## **Lake Stewards of Maine**

Protects Maine lakes and promotes lake stewardship through widespread citizen participation.

(207) 783-7733  
[lakestewardsofmaine.org](http://lakestewardsofmaine.org)

## **Loon Echo Land Trust**

Protects land in the Lake Region of Maine to conserve its natural resources and character for current and future generations.

(207) 647-4352  
[lelt.org](http://lelt.org)

## **Maine Audubon**

Maine's oldest and largest wildlife conservation organization.

(207) 781-2330  
[maineaudubon.org](http://maineaudubon.org)

## **Maine Department of Agriculture, Conservation & Forestry (DACF)**

Support center for land-based, natural resource interests.

(207) 287-3200  
[maine.gov/dacf](http://maine.gov/dacf)

## **Maine Department of Environmental Protection (DEP)**

Responsible for protecting and restoring Maine's natural resources and enforcing the state's environmental laws.

(207) 822-6300 Southern Maine Regional Office  
[maine.gov/dep/index.html](http://maine.gov/dep/index.html)  
[maine.gov/dep/water/invasives/index.html](http://maine.gov/dep/water/invasives/index.html)

## **Maine Department of Inland Fisheries and Wildlife**

Preserves, protects, and enhances the inland fisheries and wildlife resources of the state.

(207) 287-8000  
[maine.gov/ifw/](http://maine.gov/ifw/)

## **Maine Lakes**

The clear voice for protection of our most precious freshwater resources and wildlife habitat.

(207) 495-2301  
[lakes.me](http://lakes.me)

## **Maine Warden Service**

Protecting Maine's unique natural resources, outdoor heritage, and economy.

(800) 452-4664 (24-hour Warden Dispatch Center)  
(207) 287-2345 (Southwestern Division/Gray HDQ)  
[maine.gov/ifw/warden-service](http://maine.gov/ifw/warden-service)

## **Natural Resources Conservation Service / Maine Office**

Leadership and technical assistance to address natural resource conservation issues.

(207) 289-2825 (Cumberland County)  
(207) 743-5789 Ext. 3 (Oxford County)  
[nrcs.usda.gov/conservation-basics/conservation-by-state/maine](http://nrcs.usda.gov/conservation-basics/conservation-by-state/maine)

## **Portland Water District**

Supplies water to 16% of Maine's population.

(207) 761-8310 (Customer Service)  
[pwd.org](http://pwd.org)

## **Western Foothills Land Trust**

Protects farmlands, wetlands, forestlands, natural resources, and open space in the greater Oxford Hills area of Western Maine.

(207) 739-2124  
[wfltmaine.org](http://wfltmaine.org)

# OTHER RESOURCES

## **Interactive Maine Watershed Map**

Scroll in and out to see watersheds at different scales and how they are all connected.

[mainelakes.org/resources/more/watershed-map](http://mainelakes.org/resources/more/watershed-map)

## **Maine Invasive Plant Advisory List**

List of non-native plants found to pose a threat to habitats and natural resources in Maine.

[maine.gov/dacf/mnap/features/invasive\\_plants/invasives.htm](http://maine.gov/dacf/mnap/features/invasive_plants/invasives.htm)

## **Maine Field Guide to Aquatic Phenomena App**

A convenient, reliable, go-to resource for all who love spending time on, in, and around the lakes of Maine.

[lakestewardsofmaine.org/volunteer-programs-tools/field-guide-aquatic-phenomena-app](http://lakestewardsofmaine.org/volunteer-programs-tools/field-guide-aquatic-phenomena-app)

## **Maine LakeSmart**

An education and outreach program that rewards lakefront homeowners who manage their land to protect water quality.

[lakes.me/lakesmart](http://lakes.me/lakesmart)

## **Maine Loon Project**

For more than three decades, efforts to assess the status and safeguard the future of Maine's loon population.

[maineaudubon.org/projects/loons](http://maineaudubon.org/projects/loons)

## **Maine Boater's Laws & Responsibilities**

This handbook is a guide to Maine boating laws.

[maine.gov/ifw/docs/maine-boating-laws.pdf](http://maine.gov/ifw/docs/maine-boating-laws.pdf)

## **Maine Boating Safety and Education Course**

Participating in a recreational boating safety education course will teach you how to safely operate and maintain a boat and introduce you to Maine boating laws and resources.

[maine.gov/ifw/programs-resources/educational-programs/safety-courses/boating-safety.html](http://maine.gov/ifw/programs-resources/educational-programs/safety-courses/boating-safety.html)

# LAKE ASSOCIATIONS

## **Pleasant Lake/Parker Pond Association**

P.O. Box 419  
Casco, ME 04015

[plppa.org](http://plppa.org)

## **Saturday Pond Watershed Association**

40 Ridgewood Terrace  
Otisfield, ME 04270

[saturdaypond.org](http://saturdaypond.org)

## **Thompson Lake Environmental Association**

P.O. Box 25  
Oxford, ME 04270

[thompsonlake.org](http://thompsonlake.org)

## **Crescent Lake Watershed Association**

P.O. Box 1298  
Raymond, ME 04071

[crescentlakemaine.org](http://crescentlakemaine.org)

## **Moose Pond**

Otisfield  
henrycoons29@yahoo.com

## **Lakes Environmental Association**

Protecting the waters and watersheds in the Greater Sebago Lake Region.

(207) 647-8580

[mainelakes.org](http://mainelakes.org)



## EVERYONE LIVES IN A WATERSHED.

Even if we are miles away from a lake or river, all land eventually drains to into a watershed and our actions have downstream impact.

**We dedicate our efforts to the children of our community: the actions we take today can preserve water quality and our watershed for generations to come.**

