



Phippsburg

**Caring for Our Land
and Waters**

Stewardship Guide
for our Coastal Community

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THE ESTUARY AND YOU

INTRODUCTION

Located in the Lower Kennebec and Sheepscot river estuaries, the towns of Arrowsic, Georgetown, Phippsburg, and Westport Island are very dependent on water stored in the bedrock under our feet and in the coastal waters that surround our communities. Without urban infrastructure such as publicly supplied potable water, sewer, and stormwater management systems, it is up to us to take actions on our own properties to protect our communities' vitally important resources.



This guide contains steps each of us can take to protect our water resources, conserve our local habitat, and provide a healthy community for our family and friends for generations to come.

Information and contacts, specific to your town, can be found in the center section of this guide (pages 13–16) and on the inside back cover.

THE ESTUARY AND YOU

HOW TO USE THIS GUIDE

The conservation commissions of Arrowsic, Georgetown, Phippsburg, and Westport Island, as well as the Kennebec Estuary Land Trust, have been working on protecting and enhancing the natural resources within our towns. Since we all share the same estuary waters, we decided



Gayle Wagner

to pool our collective energies and focus on the challenges shared by our communities. This guide is the result of that effort, and we invite you to join us in protecting our drinking water, important habitat, favorite views, and sacred spots. Suggestions included in this booklet will help keep our communities safe and healthy for our families, friends, and the creatures that live among us.



Michael Kreindler

Our guiding principles are to:

- Protect drinking water
- Conserve or restore the native ecosystem so it can, in return, provide the priceless functions on which we rely
- Ensure that our communities will be as beautiful tomorrow as they are today

Each page of this guide focuses on a resource or management action, identifies its importance to our region, and then provides suggestions for management practices. If you have questions, the last page and the inside back cover list additional resources and contact information.

PROTECTING GROUNDWATER

WHERE DOES IT COME FROM?

Introduction

Maine is blessed with an average of 42 inches of precipitation per year. On average, about half this amount ends up as surface water runoff. Most of the rest returns to the atmosphere through evaporation or transpiration through plants. Less than a quarter is absorbed into the soil and cracks in the bedrock to become groundwater.

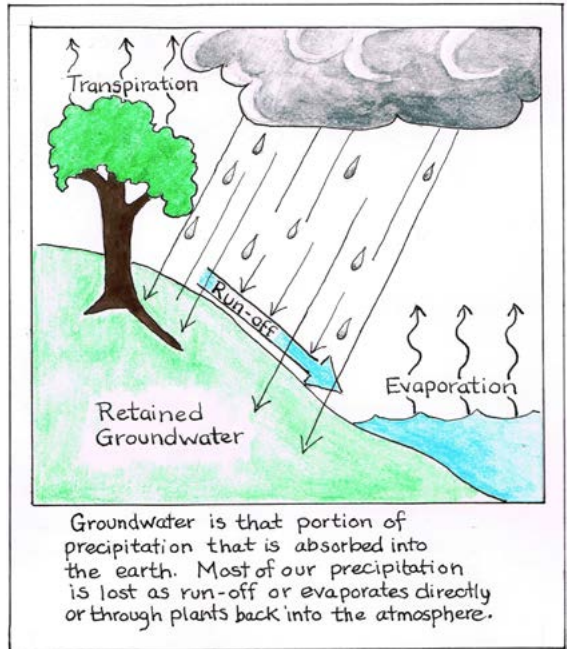
Our four coastal towns depend on the availability and cleanliness of the water that surrounds us, both below ground and lapping our shorelines. We have no municipal water supplies, and our domestic water comes entirely from private wells. Our coastline has the potential to keep supplying us with fresh, local food, if we keep the water clean.

In the following three pages, we propose ways to decrease surface water runoff, increase groundwater retention, and prevent pollution to our wells and our waterways.

Your well and your family are dependent on that retention!

Additional Information on Groundwater

- The Groundwater Foundation:
groundwater.org/get-informed/basics/hydrocycle.html



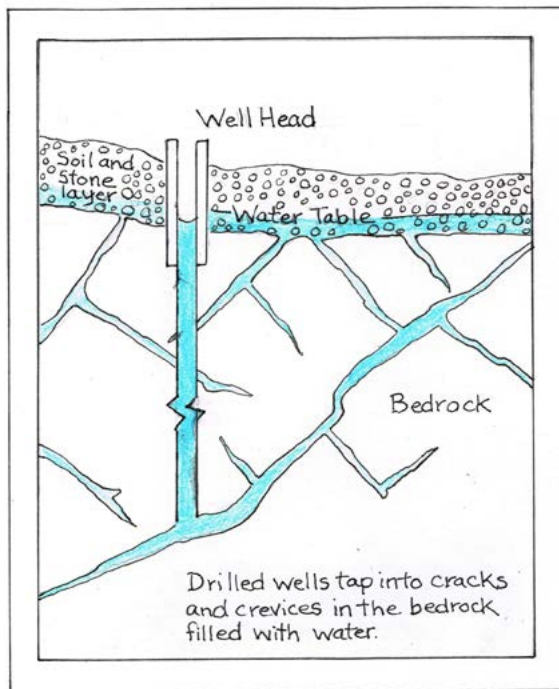
Phine Ewing

PROTECTING GROUNDWATER

STORAGE LIMITED TO BEDROCK AQUIFERS

Why?

Groundwater is that 10–20% of the annual precipitation that does not run off the land or evaporate back to the atmosphere. It accumulates deep in the soils and within cracks and fissures in the bedrock. Soil and glacial till have more water storage capacity than bedrock; however, in our rocky coastal towns, bedrock is very close to the surface of the ground. Therefore, our water storage capacity is limited and must be nurtured. Furthermore, the filtering capacity of sands and living soil are likewise limited. We must be very careful to prevent pollutants from seeping into the bedrock aquifers.



Phine Ewing

Steps You Can Take

- Minimize runoff (*see section, Managing Your Landscape*).
- Make sure your septic system is sited properly and is well maintained (*see section, Around the House*).
- Select low-flow appliances and toilets to save water.
- Don't store toxic substances that might leak: petroleum (over 20 gallons), antifreeze, pesticides, solid wastes, or leachable materials. Don't store unregistered cars, as they can leak, too.

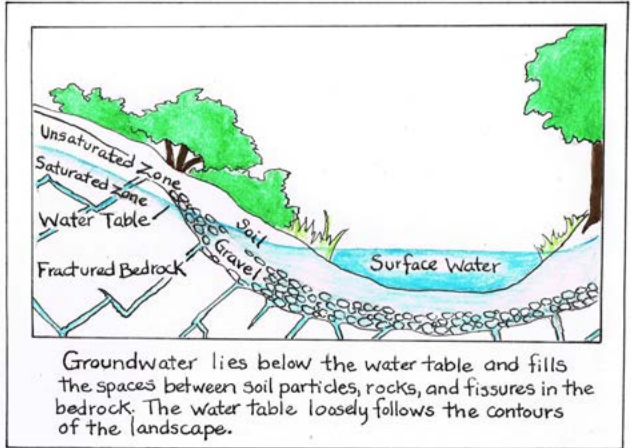
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PROTECTING GROUNDWATER

STORAGE LIMITED TO BEDROCK AQUIFERS *(continued)*

Steps You Can Take *(continued)*

- Watch out for road salt near your well.
- Be aware of the possibility of salt-water intrusion into your well water. As sea level rises, this may affect more and more wells.
- If you are on a shared aquifer, contamination in one area can quickly spread to affect many neighbors.
- Test your tap water every 3–5 years (*see link below*, Maine Division of Environmental Health). Testing should include coliform, radon, pH, arsenic, and salt. Individual wells may have other problem minerals such as too much iron or magnesium.



Additional Information on Aquifers

- See your town plumbing inspector and code enforcement officer for questions, and check town ordinances and the town comprehensive plan.
- To learn how to test your well water and more, check the Maine Division of Environmental Health website: maine.gov/dhhs/mecdc/environmental-health/eohp/wells/mewellwater.htm.
- To learn about wells drilled in your town since 1987 (and some before) check the Maine Well Water Database: maine.gov/dacf/mgs/pubs/digital/well.htm.

PROTECTING GROUNDWATER

VERNAL POOLS

Why?

Vernal pools, also known as “ephemeral pools,” are temporary wetlands. In Maine, they are typically filled with water in winter and spring, and dry out by mid-summer, although occasionally they can persist throughout an entire year.

Vernal pools serve as reservoirs for the slow replenishment of bedrock aquifers. They are also important because they are home to several rare species that depend on this particular habitat. Because vernal pools dry up periodically, they do not support fish. Frog and salamander eggs laid in vernal pools are therefore safe from predation by fish. Some sensitive Maine species that require vernal pools for survival include the spotted salamander, Blanding’s turtle, and fairy shrimp. The salamanders and reptiles that breed in vernal pools typically spend the dry months within several hundred yards of their natal pool, so it is important to preserve nearby upland habitat as well as the pool itself.



Vernal pool with masses of wood frog eggs. Inset: Wood frog eggs.

Ellen Winchester

Steps You Can Take

- Identify any vernal pools on your property or close by. They should be visible and audible in spring before the trees leaf out.
- Do not disturb, build on, or drain a vernal pool, and protect surrounding habitat.
- Check your town’s codes for setback requirements.

Additional Information on Vernal Pools

- Of Pools and People: vernalpools.me
- Maine Audubon—Vernal Pools: maineaudubon.org/wildlife-habitat/vernal-pools/

ON OR NEAR THE WATER

STOP BOAT DISCHARGES

Why?

Sewage discharge from boats can carry pathogens that impair water quality, cause sickness, and harm sea creatures.

Federal law prohibits discharging sewage within three miles of shore or in EPA-designated No Discharge Areas (NDAs). As no area of the Kennebec and Sheepscot river estuaries lies outside the three-mile zone, discharge is entirely prohibited. By not releasing waste in the waters around Arrowsic, Georgetown, Phippsburg, and Westport Island, boaters are helping to protect shellfish resources and the people who work and play in the estuary.



Friends of Casco Bay

Steps You Can Take

- Install a US Coast Guard-approved holding tank.
- If a pumpout facility is not available, empty your holding tank at least three miles from shore and outside any NDAs.
- If your boat does not have an installed toilet, use a portable toilet or onshore restroom facilities.
- Do not use holding tank additives with chlorine, formaldehyde, or chemicals that can interfere with treatment plant and septic system operation, or harm marine life, if pumped directly overboard.
- Area pumpout stations: Bath Waterfront Park Dock; Boothbay Harbor; Boothbay Region Boatyard, Southport; Derecktor/Robinhood (formerly Robinhood Marine), Georgetown; Sebasco Harbor Resort, Phippsburg; Wiscasset Town Landing.

Additional Information on Boat Discharges

- Keeping Sewage Out of Maine Waters:
maine.gov/dmr/rm/public_health/sewagefacts2012.pdf
- Maine Pumpout Stations/NDAs:
maine.gov/dep/water/wd/vessel/pumpout/pumpoutguide.pdf

ON OR NEAR THE WATER

KNOW YOUR MATERIALS

Why?

Materials used to build docks and floats can leach harmful chemicals into waterways. Sanding residue and wash water from antifouling paint can harm marine life. Marine coatings and solvents can be highly toxic.



Dennis Dunbar

Steps You Can Take

- Discuss the most appropriate and environment-friendly materials to use for proposed docks and floats with the permitting agency and your contractor prior to finalizing the design and submitting an application.
- Select the least-toxic antifouling paint possible.
- The Maine Clean Boatyards & Marinas Program (*see link below*) is a partnership among industry, state and federal agencies, and environmental organizations dedicated to promoting best management practices in boatyards and marinas. Best practices include storm-water runoff management, erosion and sedimentation control, boat maintenance and repair, fueling activities and petroleum control, waste recycling, disposal, storage, and boat pumpouts. Encourage your marina or boatyard to participate in this program and/or consider these guidelines when working on or operating your own boat.

Additional Information on Materials

- Maine Clean Boatyards & Marinas Program: mainemarinetrades.com/clean_marinas/
- Boat Bottom Wash Water: maine.gov/dep/water/wd/antifouling-paint/is_clean.pdf

ON OR NEAR THE WATER

LEAVE NO LITTER

Why?

Besides being unsightly, litter, particularly plastic, can break down in the water and create even more harmful materials. The smaller particles and chemical substances can be a threat to shellfish and coastal nurseries which form the bottom of the food chain for nearly all marine species. Aquatic life, birds, and marine mammals can be sickened or killed by consuming plastic or other foreign materials.



Camille Kauffinger

Steps You Can Take

- When no facilities are available, bury human waste at least 200 feet from the shore.
- Use pocket ashtrays to dispose of cigarette butts, which are toxic to fish and birds.
- Dispose of pet waste by placing in trash cans or by burying it well away from the shore.
- Pick up trash, especially after a storm, when large quantities of litter are often deposited on the shoreline.
- Carry containers to haul out trash, even if it's not yours.
- Take part in Maine Coastal Cleanup activities in your town.

Trash doesn't fall from the sky. It falls from human hands. And human hands have the power to stop it.

—Ocean Conservancy

Additional Information on Litter

- Marine Debris: epa.gov/region9/marine-debris/
- Maine Coastal Cleanup: maine.gov/dacf/mcp/planning/coastweek/index.htm

MANAGING YOUR LANDSCAPE

EROSION CONTROL DURING/AFTER CONSTRUCTION

Why?

Soil, the number one pollutant in Maine waterbodies, can harm plant and animal life. Erosion-control measures protect water quality by preventing soils from leaving a site and becoming suspended in water, by limiting exposed soils during construction, and by slowing the velocity of water in the landscape.



Maine DEP

Steps You Can Take

- **Temporary measures**—required by Maine state law when soil is disturbed, and maintained until the site is stabilized:
 - To break the impact of falling rain, mulch with hay, straw, or erosion-control mix.
(cumberlandswcd.org/publications/bmp_fact_sheets/ECM.pdf)
 - Install/maintain sediment barriers (straw bales, silt fencing).
- **Permanent controls**—a permanent part of the landscape, covering bare soil, stabilizing slopes, and stopping areas from becoming unstable from flowing water:
 - Plant new or protect existing vegetation to stabilize exposed soil, increase permeability, and slow the velocity of water.
 - Use angular stone riprap to protect inlets and outlets of culverts or to line ditches or coastal banks where water velocity and energy are too great for soil to remain stable.
 - Use ditch turnouts or install rubber edges (razors) on steep areas of driveways to direct runoff toward vegetated areas.

Additional Information on Erosion Control

- Maine Erosion Control Law: maine.gov/dep/land/erosion
- Certified Contractors: maine.gov/dep/land/training/ccec.html
- Need an expert? Contact: Bill LaFlamme, Maine DEP, william.n.laflamme@maine.gov, 207-215-9237.

MANAGING YOUR LANDSCAPE

SHORELAND PROTECTION AND BUFFER ZONES

Why?

Buffer zones are well-distributed stands of trees, shrubs, ground cover, and duff (decomposed plant material) which support soil-binding fungi and a sturdy network of roots. They protect water quality by providing erosion control, and reducing nonpoint source pollution

by trapping pollutants such as excess fertilizer or road salt before they enter a waterbody. Buffered areas composed of native vegetation can provide food, shelter, and nesting sites for birds and other wildlife.

Shoreland is one of Maine's special features, and buffer zones are one of the most effective ways to provide protection. Our towns have adopted *shoreland zoning ordinances* governing the area within 250 feet of the ocean, rivers, great ponds, and wetlands.

Steps You Can Take

- Review your town's Shoreland Zoning Ordinance.
- Contact your local code enforcement officer with questions before clearing vegetation, creating paths or driveways, planning a structure, stabilizing a shoreline, or otherwise disturbing soils in the regulated shoreland zones.
- Utilize meandering paths, rather than straight-line, down-slope paths, to reduce erosion and minimize runoff.
- Stabilize and maintain banks with easy-to-establish native plants.

Additional Information on Protecting Shorelands

- Maine Shoreland Zoning: maine.gov/dep/land/slz/citizenguide.pdf
- The Buffer Handbook: maine.gov/dep/land/watershed/buffhandbook.pdf
- Conserving Native Landscapes: umaine.edu/publications/2500e/
- Native Plants: umaine.edu/publications/2502e/



A natural buffer.

Maine DEP

MANAGING YOUR LANDSCAPE

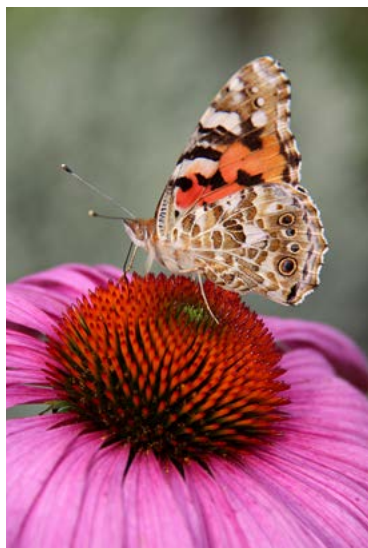
FOR POLLINATORS

Why?

Not all insects are pests. Nearly 75 percent of flowering plants rely on pollinators to set fruit or seed, and one-third of humankind's food comes from plants dependent on pollinators. Pollinators keep plant communities healthy and productive and kill harmful insects. Use of insecticides to control insect pests can also kill pollinators and other beneficial insects, and result in these toxins leaching into the estuary and our groundwater.

Steps You Can Take

- Protect existing pollinator habitat. Minimize lawn area or mow less often.
- Increase foraging habitat to include a range of plants and blooming periods. Pollinators prefer patches of plants that are a minimum of three feet wide.
- For butterflies and moths, provide forage plants for the larvae.
- Provide a source of pesticide-free water.
- Provide nesting sites or build nesting boxes or nest blocks.



Ellen Winchester

Additional Information on Pollinators

- Landscaping for Butterflies: umaine.edu/publications/7151e/
- Understanding Native Bees: umaine.edu/publications/7153e/
- Farming for Bees: www.xerces.org/guidelines-farming-for-bees/
- Field Conservation Management of Native Leafcutting and Mason Osmia Bees: umaine.edu/blueberries/factsheets/bees/301-field-conservation-management-of-native-leafcutting-and-mason-osmia-bees/
- Need an expert? Contact: Frank Drummond, UMaine, frank.drummond@umit.maine.edu, 207-581-2989.

PRECIOUS, VULNERABLE PHIPPSBURG

Phippsburg is a precious and vulnerable peninsula. It is a unique watershed area that lies down river from Merrymeeting Bay. The Bay is the confluence of two major rivers in Maine, the Androscoggin and the Kennebec. Nutrient-rich silt continually washes into our broad bays and feeds the fragile ecosystem.

Climate change and sea level rise are issues we are facing. Phippsburg needs our protection, preservation, and stewardship.

Our community takes great pride in being the home of the 1607 Popham colony.

Whether your family has settled here generations ago or you're a new resident, you can add to the

fabric of this community. Volunteerism is a way of life here. Annual Roadside Cleanup Day is reinforced by walkers who pick up litter throughout the year, keeping their neighborhoods litter-free. Our many walking trails are maintained by dedicated volunteers.

Think of it... Every facet of our lives is affected by the waters that surround Phippsburg. Ships built nearby must travel the Kennebec, past our shores, to reach to the sea. Our coast's expansive sandy beaches are swept daily by significant tidal flows. Popham is a prime attraction, and its shoreline is frequently subjected to change. Casco Bay feeds the harbors in Small Point, West Point, and Sebasco on the west shore. All of our waters are shared with recreational sailors and fishermen.

Phippsburg has many pocket beaches, rocky outcroppings, and marshes to explore and protect. Within this coastal town, there are many protected preserves, in part due to the efforts of the local land trust.



Totman Cove.

Ronnie Kamphaussen

(continued on page 16)

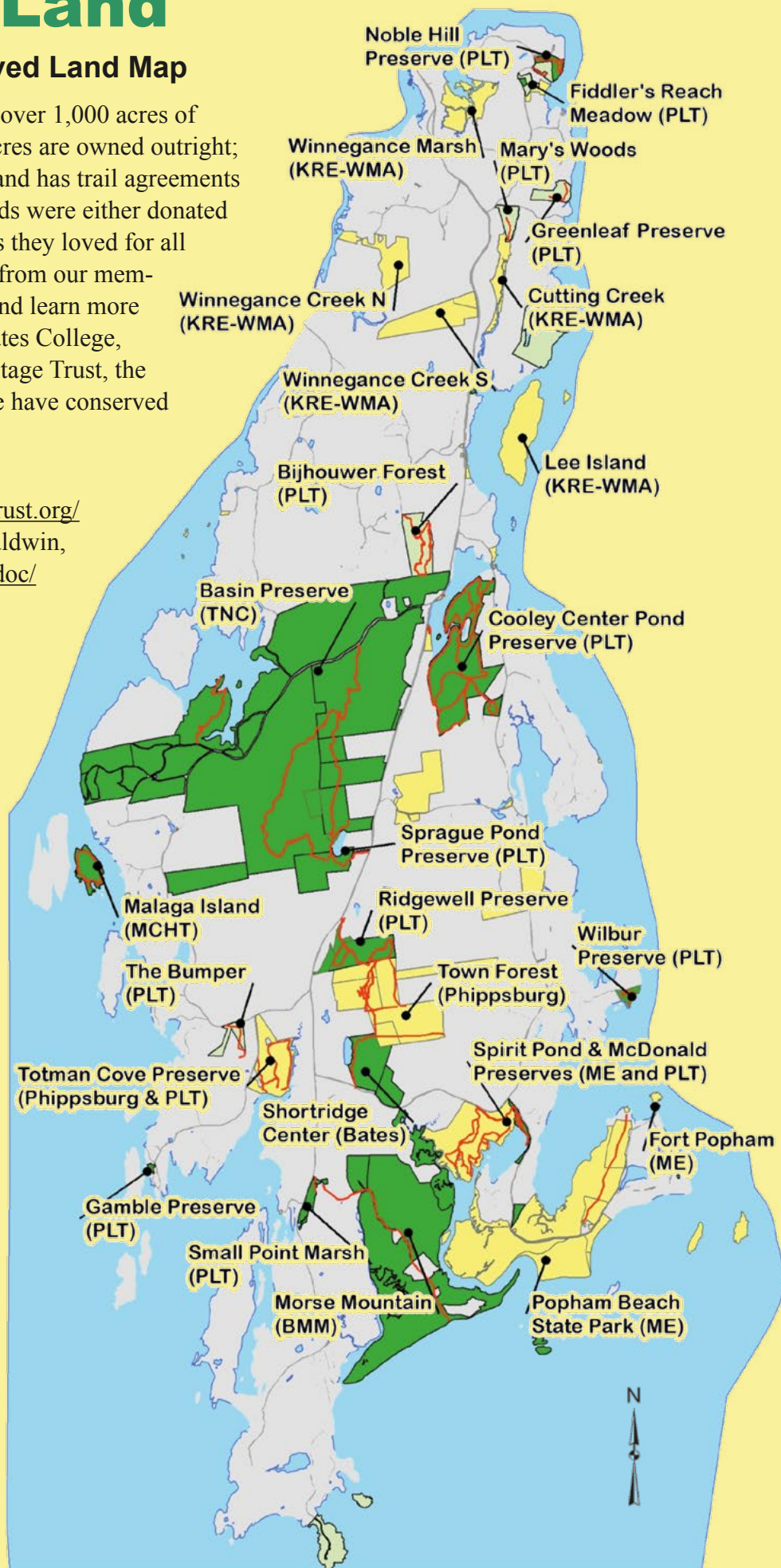
Visit the Land

Phippsburg Land Trust Conserved Land Map

The Phippsburg Land Trust (PLT) cares for over 1,000 acres of conserved lands in Phippsburg. Over 500 acres are owned outright; PLT holds easements on another 300 acres and has trail agreements on the remaining 200 acres. All of these lands were either donated by owners who wished to preserve the lands they loved for all time, or were purchased with contributions from our members and friends. We invite you to explore and learn more about these beautiful places. In addition, Bates College, The Nature Conservancy, Maine Coast Heritage Trust, the Town of Phippsburg, and the State of Maine have conserved lands in Phippsburg, as shown on the map.

For more information:

- Phippsburg Land Trust: phippsburglandtrust.org/
- State of Maine—Popham Beach, Fort Baldwin, Fort Popham: maine.gov/cgi-bin/online/doc/parksearch/index.pl
- KRE-WMA (Kennebec River Estuary-Wildlife Management Areas): maine.gov/ifw/wildlife/land/department/wma_maps.html
- Bates College (Bates-Morse Mountain and Bates Shortridge): bates.edu/harward/bmmcashortridge-field-research/
- The Nature Conservancy—The Basin Preserve: nature.org/ourinitiatives/regions/northamerica/unitedstates/maine/placesweprotect/me-basin-preserve.xml
- Maine Coast Heritage Trust—Malaga Island: mcht.org/preserves/malaga-island.shtml
- Town of Phippsburg—Totman Cove: phippsburglandtrust.org/directions-totman-cove/
- Other Town Land and Town Landings: www.phippsburg.com



Legend

Conservation Lands

- Nonprofit-Owned Conserved Land
- Conservation Easements
- Town and other Government Lands
- Walking trails

PRECIOUS, VULNERABLE PHIPPSBURG

(continued from page 13)

These lands are rich with many opportunities for learning about native flora and fauna, and for exploring habitats such as freshwater ponds. Bates-Morse Mountain Conservation Area is accessible to view the beauty of hills and valleys cut through wetlands, with the open ocean beyond.

This century, Phippsburg has successfully merged conservationists and four-wheelers. The Phippsburg Sportsmen's Association has combined efforts with the Land Trust, both working to encourage our young people to enjoy and care for our special places. Phippsburg now has trails for cross-country skiing, hiking, hunting, geocaching, and riding enthusiasts.



Bob Cummings

Center Pond beaver flowage

Phippsburg values our traditional water-based economy. Many year-round residents count on trapping and digging shore line and shallow water creatures to feed themselves and others, and face challenges due to warming waters and a changing climate. Clam flats are at risk from pollution and the changing chemistry of our waters. We all must take special care not to allow pollution—from our animals, septic systems, or fertilizers—to contaminate this shared resource. Our plates are filled with the joy of eating lobster, crabs, fish, mussels, and clams from our waters.

Phippsburg remains a spectacular peninsula—vulnerable, but worth every effort to protect and preserve its special places and remarkable features.

CARING FOR YOUR PROPERTY

HOW TO HAVE A TRULY GREEN LAWN

Why?

An attractive lawn *can* be grown without the use of pesticides (weed, insect, or disease controls) and little or no added fertilizer. The following tips will help you to have a truly “green” lawn that can significantly reduce the risks for our families, pets, and the environment.

Steps You Can Take

- *Mow high.* Three inches or more for vigorous roots and to shade out weeds.
- *Let the clippings lie.* Clippings are high-quality, low-cost fertilizer.
- *Fertilize?* Lawns older than 10 years need only clippings. Younger lawns need nitrogen. Look for 10-0-0 on the bag (the key is nitrogen only; no phosphorus or potassium). When needed, apply in September, when grass can best use it. To prevent runoff, never apply to frozen/saturated soils or in advance of rain, and always sweep back onto the lawn from sidewalks and driveways.
- *Got weeds?* Liberally apply perennial ryegrass seed all season long to out-compete the weeds.
- *Got bugs like grubs?* Overseed with insect-resistant fescue grasses or use beneficial nematodes, fungi, or bacteria.
- *Water wisely.* If needed, water once or twice a week with a deep soaking (1–1½"), to encourage root growth.



A local lawn on the water—treated with nothing except what visiting geese leave behind.

Gayle Wagner

Additional Information on Caring for Your Lawn

- Maine YardScaping Partnership: yardscaping.org
- Need an expert? Contact: Megan Patterson, Maine YardScaping Partnership, megan.i.patterson@maine.gov, 207-287-7593.

CARING FOR YOUR PROPERTY

HEALTHY, ECONOMICAL AMENDMENTS

Why?

Making smart choices about which soil amendments we use in our yards can protect our families' health and our water supply. It also conserves habitat and saves us money.

Steps You Can Take

- Mix **compost** into your garden soil. Healthy, living soil allows water and air into the plant's root zone, holds and recycles nutrients, stores water, and provides protection from pests and disease.
- Apply an organic layer of **mulch**, such as leaves, wood chips, or compost to the surface of your yard or garden. This helps to conserve water, reduce weeds, and provide nutrients to the soil.
- If you need to use a **fertilizer**, use one that is organically based. If using a synthetic fertilizer, use one labeled "phosphorus-free" or "slow release." Products should be water insoluble. Ask your landscaper or lawn care professional to do the same.
- Avoid "weed and feed" products. These contain fertilizers and harmful herbicides that can end up in our waterways.



Paul Schlein

Compost is free and worth its weight in gold.

Additional Information on Amendments

- Maine Organic Farmers and Gardeners Association Fact Sheets: mofga.org/Publications/FactSheets/tabid/133/Default.aspx
- Maine YardScaping Partnership—Fertilization: maine.gov/dacf/php/pesticides/yardscaping/lawn/fertilization.htm

CARING FOR YOUR PROPERTY

THINKING BLUE—WATERING WISELY

Why?

Our towns' water comes out of the sky and is stored in our soils and bedrock (*see section*, Protecting Groundwater—Where Does It Come From?). To protect our limited supply, it is important to use water in our landscapes wisely and conservatively, so they will thrive with minimal waste.

Steps You Can Take

- Water deeply and infrequently. Annual vegetables and flowers can be watered at the first sign of wilting. Perennials usually need watering only if still wilting late in the day.
- Moisten the entire root zone, the area under the footprint of the tree branches or vegetation. Deep, infrequent watering helps the plant develop a healthy root system.
- Using soaker hoses or drip irrigation at the soil surface adjacent to the plants helps to focus the water where it is needed most. Using a sprinkler is inefficient, as it allows water to evaporate before it can be used by the plants.
- If your lawn must be watered, make sure sprinklers are not creating runoff by over-spraying onto adjacent, impervious surfaces, such as roofs and driveways.



Sue Sergeant

Additional Information on Watering Wisely

- Maine YardScaping Partnership—Watering: maine.gov/dacf/php/pesticides/yardscaping/lawn/water.htm
- Think Blue Maine: thinkbluemaine.org
- Drip Irrigation: umaine.edu/publications/2160e/

CARING FOR YOUR PROPERTY

RAIN GARDENS

Why?

Rain gardens are planted to catch the rain that flows off impervious surfaces, such as roofs and driveways. They detain the water for long enough to allow it to soak into the ground, instead of becoming runoff that carries pollutants to the shore.

Steps You Can Take

- Locate a dry site, not over a leach field or near your well. Direct water from your impervious surface to this area.
- Determine size and shape of the rain garden based on drainage area. Typical rain gardens are 100–300 square feet, twice as wide as long, and 4–8" deep.
- Plant with native plants to create habitat for birds, butterflies, and other pollinators.
- Install a rain barrel (with a tight-fitting screen or other suitable cover to keep out mosquitoes) at the outlet of a gutter and use collected water to irrigate a conventional or rain garden.



Rain gardens help minimize runoff.

Laura Wilson

Additional Information on Rain Gardens

- Landscapes for Maine: Adding a Rain Garden to Your Landscape: umaine.edu/publications/2702e/
- Native Plants: A Maine Source List: umaine.edu/publications/2502e/
- Need an expert? Contact: Cumberland County Soil & Water Conservation District, 207-892-4700.

LIVING WITH PESTS

INVASIVE PESTS

Why?

Invasive plants and insects are those not native to a particular ecosystem, where their introduction is likely to cause economic, environmental, or human harm.

Invasive plants in our region include: Japanese barberry, Japanese knotweed, multiflora rose, Norway maple, purple loosestrife.

Invasive insects include: Asiatic garden beetle, browntail moth, hemlock wooly adelgid, Japanese beetle, lily leaf beetle, winter moth.



Japanese knotweed.

Tom Heutte, USDA Forest Service,
Bugwood.org

Steps You Can Take

- **Plants**
 - Use native Maine plants for landscaping and gardening.
 - Dig up invasive plants and remove roots remaining.
- **Insects**
 - Buy firewood where you burn it.
 - Report invasive insect sightings:
maine.gov/dacf/mfs/forest_health/tree_ailment.html

Additional Information on Invasive Pests

- Invasive Species Network: umaine.edu/invasivespecies/
- Invasive Plant Fact Sheets:
maine.gov/dacf/mnap/features/invasive_plants/invsheets.htm
- Native Plants: extension.umaine.edu/publications/2500e/
- Invasive Insect Threats to Maine's Forests and Trees:
maine.gov/dacf/mfs/forest_health/invasive_threats/index.htm
- Need an expert?
 - Invasive Plants: Nancy Olmstead, Maine Natural Areas Program, nancy.olmstead@maine.gov, 207-287-8044
 - Invasive Insects: Allison Kanoti, Maine Forest Service, allison.m.kanoti@maine.gov, 207-287-2431

LIVING WITH PESTS

BUGS ARE NOT ALL PESTS

Why?

Insects can be pests, but many more are beneficial. Beneficial insects prey on pests, pollinate, or serve as food sources for bats or birds. Use of insecticides to control insect pests threatens ecosystem health. These chemicals may kill and temporarily keep harmful insects in check, but they may also kill beneficial ones. Insecticides applied near the shore can get into the water and harm aquatic life.

Steps You Can Take

- **Home**

- Carpenter ants build homes in wet or rotting wood. Don't store firewood next to your house.

- **Garden**

- Plant native flowers near your garden to attract beneficial insects that eat or parasitize insect pests.
- Clean out plant debris around your garden.

- **Yard**

- Bees and wasps are important pollinators or insect predators. If you don't bother them, they won't bother you.
- Applying insecticides in your yard to kill a pest will also kill beneficial insects.
- Eliminate mosquito-breeding sites by emptying or removing all potential sources of stagnant water.



Paul Schlein

Tomato hornworm parasitized by braconid wasp larva.

Additional Information on Bugs

- Plants that Attract Beneficial Insects:

maine.gov/dacf/php/pesticides/documents2/master%20gardeners/BeneficialsFinalPDF.pdf

- Got Pests?: maine.gov/dacf/php/gotpests/index.html

LIVING WITH PESTS

LIVING WITH TICKS

Why?

Ticks are present in our ecosystem and they are not going away. The deer tick can transmit four diseases, with Lyme being the most common. Fortunately, there are things you can do to reduce your family's interaction with ticks, other than applying toxic insecticides that can harm you and the environment. There is no substitute for daily personal inspection when in a tick-infested area.



Sexes/stages of blacklegged (deer) tick, compared to the head of a pin.

Jim Occi, BugPics, Bugwood.org

Steps You Can Take

- Maintain a well-manicured border between your house and brushy areas.
- Trim back tree branches that overhang your lawn. Clear out low brush, vines, and leaf litter.
- **When in the woods**
 - Wear long sleeves and long pants.
 - Wear light-colored clothing to make tick detection easy.
 - Pull your socks up over your pant legs.
 - Avoid brushy areas and sitting or lying on the ground.
- **After returning home**
 - Inspect your children, pets, and yourself for ticks. Ask another person to inspect those hard-to-see places.
 - Remove ticks found with tweezers or a tick removal spoon.
 - Monitor the bite site for any signs of a bull's-eye rash. If the rash or other symptoms appear, contact your physician.

Additional Information on Ticks

- Tick Identification Lab: extension.umaine.edu/ipm/tickid/
- Lyme Disease Fact Sheet: maine.gov/dhhs/mecdc/infectious-disease/epi/vector-borne/lyme/documents/Lyme-Fact-Sheet.pdf

LIVING WITH PESTS

GETTING OUT OF THE WEEDS

Why?

Although weeds can be annoying additions to gardens and lawns, herbicides are not the solution. Besides the potential human health effects, they can run off into coastal water or groundwater and threaten local ecosystems. There are other control methods that will protect our water resources.

Steps You Can Take

- Know your weeds. Identify which weeds grow in your yard and decide how much of each weed you are willing to live with. Some weeds are beneficial and fix nitrogen or feed pollinators; others indicate problems like soil compaction or lack of nutrients that weed removal alone will not fix.



Crabgrass

R Dyer, Bugwood.org

- **Lawn**

- *See section, How to Have a Truly Green Lawn.*

- **Garden**

- Place mulch or composted material around garden plants to suppress weed growth.
- Pull weeds by hand or with weeding tools. Weeds are easier to pull when they are small in the spring and when the soil is slightly moist.

Additional Information on Weeds

- Weeds and Your Garden: maine.gov/dacf/php/gotpests/weeds/factsheets/weeds-garden-cornell.pdf
- Weed ID: maine.gov/dacf/php/gotpests/weeds/index.htm
- Need an expert? Contact: Lois Stack, UMaine, lois.stack@maine.edu, 207-581-2949.

AROUND THE HOUSE

HOUSEHOLD WASTE

Why?

The three Rs—Reduce, Reuse, Recycle—are a great way to save resources, protect the environment, and save money. When material needs to be disposed of, it should be handled in an environmentally sound way. Every year, we are getting better and smarter about how to safely, efficiently, and effectively manage what we no longer want.



REDUCE

UPCYCLE

REUSE

REPAIR

COMPOST

RECYCLE

DISPOSE

Steps You Can Take

- Upcycle or recycle everything possible.
- Take beverage containers to a redemption center.
- Plastic bags can be recycled at local grocery stores.
- Compost vegetable waste.
- Electronics can be recycled at some transfer stations.
- Fluorescent bulbs are collected at hardware and home centers.
- For ideas on recycling used oil:
maine.gov/dep/waste/wasteoil/documents/morpdire.pdf
- Hazardous waste day collections prevent contamination from dangerous materials. *See:*
maine.gov/dep/waste/publications/hhwbroch.html
- Pet and disposable diaper waste are both significant waste categories—each about 1–2% of the waste stream. Pet waste can be disposed of in septic or wastewater systems, or buried away from edible plants, and well away from the shore, where it will decompose. Use reusable cloth diapers or a delivery service.
- For paint recycling, *see* paintcare.org/drop-off-locations/

Additional Information on Household Waste

- Reducing Municipal Waste: epa.gov/waste/nonhaz/municipal/
- Reduce, Reuse, Recycle: epa.gov/recycle

AROUND THE HOUSE

HOUSEHOLD HAZARDOUS WASTE AND MEDICAL WASTE

Why?

Households purchase and use toxic chemicals, including medicines, solvents and paint removers, oil and gas, pesticides, batteries, and oil- and water-based paint. Excess toxic material and waste need to be properly disposed of, to prevent contamination of the environment.



Maine Board of Pesticides Control

Obsolete and banned pesticides should be disposed of at free town HHW collection days.

Steps You Can Take

- Try to find safer, alternative products.
- Only purchase the amount you need.
- When you have hazardous waste, use the town hazardous waste collection day or contact Maine DEP for alternatives.
- The state sponsors an annual waste medicine collection day, typically through local police departments. Check with local police, pharmacies, and hospitals for everyday drop off.

Additional Information on Waste

- Medical Waste:
 - Maine Drug Enforcement Agency: maine.gov/dps/mdea/
 - Dispose My Meds: disposemymeds.org/index.php/pharmacy-locator
- Maine Waste Disposal: maine.gov/dep/waste/publications/hhwbroch.html

AROUND THE HOUSE

MAINTAINING A HEALTHY SEPTIC SYSTEM

Why?

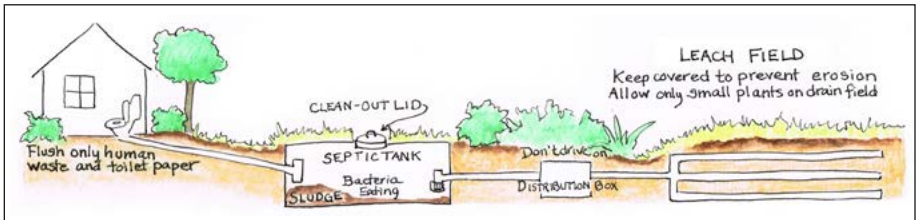
A healthy septic system will protect your environment and the environment of neighbors downhill. It will avoid contaminating your and your neighbor's groundwater with disease-causing bacteria and viruses. A malfunctioning or failed septic system will lower your property value and cost you money.



Phine Ewing

Steps You Can Take

- Have your septic system pumped every 3–5 years.
- Conserving water improves the operation of your septic system.
- *Do not* use your toilet as a trash can. Only flush human waste and toilet paper.
- Don't dispose of toxic chemicals or oils down your drain.
- Avoid parking on or driving across your leach field.
- Plant trees and bushes away from your leach field; roots can damage septic systems.



Phine Ewing

Additional Information on Septic Systems

- Your Septic System: umaine.edu/publications/7080e/
- Septic Systems: epa.gov/septic (see Why Maintain Your Septic System, How to Care for Your Septic System, What to Do If Your Septic System Fails, and How Your Septic System Works)

GET INVOLVED

CONSERVE OUR RESOURCES, BUILD COMMUNITY

Why?

In small towns such as ours, each of us takes care of our families and joins with our neighbors to conserve our resources and protect our environment. Together we will ensure a great future for our kids and the community. If this guide has left you with questions, or an increased desire to help out, please ask and please do.



Kathy Gravino

Steps You Can Take

- Pick up litter.
- Offer to steward a favorite place.
- Volunteer with a nonprofit.
- Join a town committee.
- Stay involved and help educate others.

Additional Information on Getting Involved

- Annual Maine Coastal Cleanup: maine.gov/dacf/mcp/planning/coastweek/cleanup.htm
- Kennebec Estuary Land Trust: kennebecestuary.org/
- Friends of Merrymeeting Bay: fomb.org/
- Maine Master Naturalist Program: mainemasternaturalist.org
- Midcoast Conservancy: midcoastconservancy.org/
- Town committee or conservation commission

GET INVOLVED

LOCAL CONTACTS

Phippsburg

- For the most up-to-date town information: www.phippsburg.com

Steps You Can Take To Conserve Energy

- Another way to get involved and save money is to remember that ***energy conservation is good stewardship***. Doing more with less benefits everyone.
- Lower your indoor temperature in winter, raise it in summer.
- Reduce drafts around doors, windows, attic accesses, and outdoor penetrations.
- Turn off lights and computers when not in use, use energy-efficient light bulbs, and ENERGY STAR® appliances.
- For more information: Phippsburg Climate Action Committee or Phippsburg Conservation Commission.

ACKNOWLEDGMENTS

The producers of this guide would like to thank the staff of the Maine Department of Environmental Protection for their help in the grant-writing process and members of the Harpswell Conservation Commission for providing their guidance and inspiration for this publication with their own

A Resident's Conservation Guide to Casco Bay.



Popham Beach.

Ronnie Kamphaussen

This project was funded in part by the Maine Outdoor Heritage Fund (MOHF), in which proceeds from the sale of the dedicated instant lottery ticket, currently “Moose Moolah,” are used to support outdoor recreation and natural resource conservation. For more information about MOHF, go to maine.gov/ifw/MOHF.html.

Conservation Commission
Town of Phippsburg
1042 Main Road
Phippsburg, ME 04562

Phippsburg Stewardship Guide

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