Sustainable Tourism Resources

A. Section Overview

B. The Marine Environment (p. 20)
C. Water Conservation and Protection (p. 28)
D. Building Design (p. 37)
E. Energy Conservation (p. 42)
F. Air Pollution (p. 48)
G. Ecological Landscaping (p. 50)
H. Waste Management and Recycling (p. 55)

A. Section Overview

Tourism businesses can do a lot to protect the environment of the Down East Maine and Southwest New Brunswick Region, while growing profits and investing in local communities. Any efforts that businesses make to improve the local environment and economy can be great opportunities for marketing and distinguishing oneself among competitors as an environmental and social leader.

This section of the guidebook is intended to provide tips and resources for businesses to use in becoming environmentally friendly and improving the resources of the Gulf of Maine. Subsections provide details where tourism businesses can change practices to make a difference in water conservation and protection, marine conservation, building design and energy conservation, ecological landscaping, and waste management and recycling. Each subsection is further divided into tips for different tourism sectors. For instance: water conservation tips may be different for a hotel vs. a restaurant. These tips are followed by a list of education resources, self-assessment tools, and other resources. Wherever possible, local resources have been listed in addition to national or state/provincial resources, such as the Maine State Energy Program. While this information was accurate at the time of publishing, readers are encouraged to visit the Web sites listed for the most recent information available. Finally, case studies throughout this chapter serve to highlight a few of the many businesses in our region who are already leading the way in sustainable tourism practices.

Note that there are a number of certification programs and membership-based organizations (Chapter 5), as well as green purchasing options (Chapter 4) listed in separate sections of this document.

Old Quarry Ocean Adventures: Greening an Experiential Operation

Old Quarry Ocean Adventures, of Deer Isle, Maine, is a campground with sailboat, bike, and kayak rentals, guided tours, a summer home rental, and lobster and charter boat tours.

Owner Captain Bill Baker says his “green” activities unfolded slowly. He has always been conscious of the world around him, and developed a sustainable, experiential tourism business while learning from books, articles and people around him how it could positively impact the world. He does some basic things (compact fluorescent bulbs, green cleaning supplies, recycling…); and has built tent platforms to reduce erosion, developed a lecture for his tours about the Gulf of Maine and fishing grounds, and removed all garbage and human waste from the islands his kayakers use on their trips. He promotes Leave No Trace, has close partnerships with Maine Coast Heritage Trust, Island Heritage Trust, Maine Island Trail Association, and many more community organizations.

He wishes he had installed solar electric power, an environmentally friendly septic system, and a solar water heater for the bathhouse. It’s pricey to change now, but the hot water heater may be a realistic goal. Captain Bill has some advice for folks starting out. When planning your business cash flow, double every expense, and cut the revenue in half. That is what it will really be like!

His big goal is to have the greenest campground in Maine and “maybe anywhere.” It’s a lofty goal, one he can’t accomplish overnight, but is something to work toward. In the meantime, he has some pretty impressive awards under his belt. Yankee Magazine named the business as their Editor’s Pick 2005, and the campground was named Maine’s Sustainable Tourism business in 2003. Until he won the award, Bill didn’t think of his business as sustainable or even really know what that meant. He was just operating his business as if he cared about the land and the ocean. And last, but certainly not least, Bill was featured in the “Lobstermen of Maine” calendar… just call him Mr. October!
B. The Marine Environment

Introduction
The marine environment is an important draw for a large percentage of tourists and recreationists in our region. From lobsters to lighthouses, seafood to sailing, tide pooling to island exploring, the coast and ocean represent a significant part of the region’s heritage and culture. With whale watching, sea kayaking, a diverse array of boat tours, and proximity to the world’s highest tides, the Northern New England and Canadian Maritime marine environment has become a world renowned destination for touring and nature-based travel. Visitors to our region want to experience a clean and healthy marine environment and they want to know how the businesses they frequent contribute to the protection of their location of operation. Improving environmental practices can not only contribute to the conservation of the marine environment, it can also contribute to the health of coastal communities and attract discerning visitors.

The practices employed by tour operators, restaurants, lodging establishments and all businesses involved in tourism have a bearing on the health of the Gulf of Maine and Bay of Fundy. Every location, every stream and river in Hancock, Washington, and Charlotte counties feed into the ocean. The ocean is the final resting place of our entire collective watershed. Therefore, nearly every decision made by business owners somehow affects the marine environment. Water conservation, building design, landscaping, energy consumption, waste management… all of these have a direct bearing on the Gulf of Maine and the Bay of Fundy.

The recommendations, tips and resources offered in this section are specific to the coast and ocean. Be sure to look at the other sections of this document, too, as you will find resources that also have bearing on the marine environment (such as water conservation, waste management, etc.).

Best Practices for Marine and Boat-related Activities
Boat Maintenance
- When maintaining your boat’s hull, regularly clean up paint chips and dust to avoid transportation of these chemicals. Clean the boat on an impervious surface, not in the water. Use a dustless vacuum sander if possible (they can capture up to 98% of the dust!). Label and dispose of waste properly. (Note, in many cases, some of your waste will be considered hazardous/toxic, see “Brightwork” resource listed below in “Education Resources” for details on how to handle it).

Sailing along the coast of Maine (N. Springuel)
Using environmentally sensitive chemical paint strippers that are biodegradable, non-chlorinated, and have low volatility can eliminate much of the paint chips and dust associated with sandblasting.

Prevent paint, solvents and spray drift from getting into the intertidal zone, water or air by working over an impervious surface and in enclosed spray areas (use approved respiratory equipment), using tarps and drop cloths as needed, and labeling/disposing of waste properly. Look for HVLP (High Velocity Low Pressure) and HELP (High Efficiency Low Pressure) spray guns which have much greater spray efficiency.

For onshore engine maintenance and repair, work over an impervious surface, avoid hosing work area wastes down the drain, and label and collect all wastes for proper disposal, including oily waste collection. For on-water engine maintenance and repair, always use oil absorbent pads. Use non-hazardous cleaning solvents.

### Waste and Sewage

- If you shrink-wrapped your boat for winter storage, talk with your local municipality to see if they can help you recycle the plastic.
- Reduce the amount of packaging you take aboard, use recycled paper products and encourage your customers to dispose of them properly by supplying well-secured recycling and trash receptacles.
- Establish boat rules that include no overboard dumping, including organics such as apple cores.
- Encourage passengers to use land-based restrooms before boarding.
- Use a marine sanitation device and holding tank to store sewage until you can get to a legal sewage pump out facility (see below for list of pumpout stations). Avoid using chemicals such as formaldehyde and ammonia to minimize odor in your sewage tank. They are considered toxic by Environment and Health Canada, and also kill bacteria needed for decomposition. Look instead for biological or environmentally friendly treatment products (see Chapter 4).
- If your business is on the water, consider installing a sewage pumpout system that your boating customers can use.
- For sea kayak outfitters, tour boat operators,

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**Bar Harbor Whale Watch: Partnering with Research**

Bar Harbor Whale Watch is Maine’s largest boating tour company, conducting whale watching, lighthouse, nature, and lobster fishing and seal watching tours. Annually, their staff of 12 naturalists has the opportunity to educate over 100,000 passengers. On all trips they strive to provide informative narration and a strong conservation message.

A successful partnership has developed with the Maine Coastal Islands National Wildlife Refuge. Together with Refuge staff and with faculty at College of the Atlantic, they hire a seabird researcher to conduct a pelagic seabird census on whale watching tours. During visits to Petit Manan Island to view puffins, passengers are able ask questions about seabird ecology directly to refuge staff living onshore, via a hand held radio.

The company also has a close partnership Allied Whale, the local marine mammal research group. During tours Allied Whale researchers collect photographs and scientific information of all whales encountered. Also, the company allows Allied Whale to operate the Bar Harbor Whale Museum and use profits to meet their research goals.

Onboard, the company features brochures from conservation organizations like the Cousteau Society, the Ocean Conservancy, and the Abbe Museum. They also hand out “adopt a whale” brochures to every passenger and sell buttons for $2 to send local high school kids to college to study ocean life. Lead naturalist Zack Klyver adds, “We try to be on the front line of environmental education.”

*LEFT: Watching a humpback whale (Z. Klyver)*

Fueling and Fuel Efficiency

- Use care when refueling, know how much your tank holds and don't top off; avoid tank overflow.
- For small boats, refuel tanks on land, not on water.
- Have oil absorbent pads ready to catch any drips (see Chapter 4 on “Green Purchasing” for where you can buy these products).
- Keep your engine well-maintained to maximize fuel efficiency and minimize emissions.
- Keep your hull clean of barnacles for maximum efficiency.
- A damaged propeller can reduce efficiency, get it checked and fixed!
- Excess water in the boat can also minimize efficiency.
- When under way, allow your boat to come up on plane where it will be most efficient. Balance the load.
- Idling uses fuel, creates fumes, and makes noise. Keep idling to a minimum.
- Consider switching your boat’s fuel source to biodiesel. Maritime businesses that have already partially switched to biodiesel fuel (including the Rockland, ME schooner American Eagle, and Freeport, ME marina Strout’s Point Wharf Company) report very positive results including reduced exhaust odor, improved lubrication, and pleased customers. For more information, Biodiesel for Maine is at www.renewmaine.org/BFM2.htm.

Products

- In Canada, look for environmentally friendly marine products certified under the Environmental Choice Program. They certify hundreds of products in all sectors, including the marine environment, www.environmentalchoice.com
- Look for energy efficient products when purchasing new engines and parts. A fuel flow meter can help you meet your maximum efficiency as you watch your fuel consumption.
- See Chapter 4 on Green Purchasing for sources of products.

General Best Practices

- The marine environment of the Gulf of Maine is rich in food sources you can serve your passengers and
customers. See Chapter 4 on Green Purchasing for some resources.

- Practice Leave No Trace boating (see side bar).
- Practice ethical whale watching (see side bar).
- Review other sections of this resource guide to find tips on other best practices that improve the quality of the marine environment (water conservation, green landscaping, recycling, etc.).
- For non-boating businesses (hotels, restaurants, etc.) who either contract with or send their customers to tour operators: research the operators before sending them business! Form partnerships with operators who share your environmental philosophy. Do they practice Leave No Trace? Do they have an environmental policy?

**Education Resources**


- **The Maritime Clean Boating Guide,** produced by the Bluenose Coastal Action Foundation in Nova Scotia, covers details on maintenance, repair and winterizing, sewage, waste disposal and hazardous waste, fuel issues, sensitive areas and considerations for small craft, [www.coastalaction.org/index_home.html](http://www.coastalaction.org/index_home.html).


- **Boat U.S. Foundation Clean Water Programs,** the website includes a large array of resources for clean boating, including maintenance and fuel issues, as well as invasive species and ethical angling. Also runs a grant program that helps groups promote clean water programs, [www.boatus.com/foundation/cleanwater/default.asp](http://www.boatus.com/foundation/cleanwater/default.asp).

- **The Maine Island Trail Association** and the Maine

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### Two Marine Codes of Ethics for Tour Operators

#### The Seven Principles of Leave No Trace

1. Plan Ahead and Prepare
2. Travel and Camp on Durable Surfaces
3. Dispose of Waste Properly (Pack out all human waste)
4. Leave What You Find
5. Minimize Campfire Impacts (Kindle No Fires)
6. Respect Wildlife (Avoid nesting seabird islands from April 1-August 31; steer clear of seal haulouts and pupping ledges)
7. Be Considerate of Other Visitors

For more information on each of the seven principles as they relate to the marine environment of the Gulf of Maine, please visit [www.mita.org](http://www.mita.org).

#### The Bay of Fundy Code of Ethics for Whale Watching

Developed by whale watching vessels and marine mammal researchers, the Bay of Fundy Code of Ethics is a series of tenets to which most whale watch companies operating in the Bay of Fundy adhere. The purpose of this code is to foster an environment of cooperation and trust among marine tour operators for the protection and safety of the whales and other marine wildlife, and the safety and understanding of their passengers. For more information, please visit [www.bayoffundytourism.com/environmental_leadership/code_of_ethics.php](http://www.bayoffundytourism.com/environmental_leadership/code_of_ethics.php).
Chapter 3. Sustainable Tourism Resources
B. The Marine Environment

Coastal Livelihoods Trust: Educating Tourists about Maritime Heritage

The Gulf of Maine, Bay of Fundy, and the coastal border region between Maine and New Brunswick are enriched by a long legacy of fishing that formed the backbone of settlement for centuries. From natives to Europeans, it was the fish and other marine critters that drew settlers to the islands and shores of this region, and it was the fish that kept them here for generations after. Though people diversified into saltwater farming, logging, ship building, quarrying, and any manner of more contemporary industries, our marine resource-based heritage has maintained a place of importance into the 21st century, providing an important economic boon to the region. For sure, that boon comes from the price of fish and lobster at the market, but it also comes in the form of tourists spending money to experience an authentic coastal heritage vacation. In Southwest New Brunswick, the experience that tourists have will undoubtedly be enhanced by the work of Coastal Livelihoods Trust.

As the fishing industry faces challenges throughout northern New England and the Canadian Maritimes, it lives on the tightrope between an active healthy industry and a compelling museum piece, both of which are important components of maritime heritage. According to Director Maria Recchia, St. Andrews-based Coastal Livelihoods Trust is dedicated to engaging people of coastal communities in the stewardship of their resource-based livelihoods, ensuring that the fisheries industry successfully makes it across that tightrope.

The organization, barely a year old (though building on years of work carried out by the principles involved), has already produced a brochure called “A Sense of Pride: Bay of Fundy Inshore Fisheries.” This simple brochure is more than just a description of the fisheries themselves. It is an invitation for

Association of Sea Kayak Guides and Instructors have both adopted marine-specific Leave No Trace practices that apply to all boaters. See www.mita.org/leavenotrace.html for details.

- A Sea Kayaker’s Guide to Safety and Stewardship in Maine, in-depth brochure covers Leave No Trace for coastal kayakers, coastal ethics, safety, a blank float plan, resources, and much more. Produced by Maine Sea Grant, Maine Association of Sea Kayak Guides and Instructors, and a host of outfitters, boating agencies and non-profits. Download PDF from www.seagrant.umaine.edu/documents/pdf/s2s03.pdf or contact Natalie Springuel, Maine Sea Grant, nspringuel@coa.edu, 207-288-2944 ext.298) for hard copies.


Evaluation and Assessment Tools, and Incentive Programs

- The Maine Clean Marinas and Boatyards Program is a voluntary, "beyond compliance" program dedicated to promoting best management
practices in boatyards and marinas. The Program focuses on five areas of concern for boatyards and marinas:

- Stormwater Management
- Boat Maintenance & Repair
- Fueling Activities/Petroleum Control
- Waste Recycling, Disposal & Storage
- Boat Pumpouts & Sewage

Participation in the program is voluntary. Facilities are certified following a process that includes taking a pledge, completing a self-assessment and submitting to an independent verification. Participating businesses must meet or exceed State and Federal standards of environmental compliance to achieve designation. Clean Marina designation is made at three different levels: Bronze (80% score in each of five areas), Silver (90% score in each of five areas), Gold (100% score in each of five areas). The program is sponsored by the Maine Marine Trade Association and is funded by the U.S. Department of Commerce, Office of Ocean and Coastal Resource Management, with administration by the Maine Coastal Program at the Maine State Planning Office. For more information, contact Susan Swanton, Maine Marine Trade Association, 207-773-8725 or swanton@mmtaonline.com, www.mmtaonline.com.

- Managing Environmental Impacts in the Marine Sector, Self-Assessment Checklist and A Practical Guide to Good Practice. Though this self-assessment checklist is geared towards coral reef environments, it is an excellent tool for any tour operator who wants to minimize impact on the places where they take their customers. Covers general touring, marine wildlife viewing, fishing, snorkeling, diving, and scuba. The accompanying “Practical Guide” offers information on how to green operations. The project is supported by the United Nations Environmental Program and produced by the Center for Environmental Leadership in Business, the Tour Operators’ Initiative for Sustainable Tourism Development, and the Coral Reef Alliance, www.unep.org/pc/tourism/library/Marine%20Guide.htm.

**Resources**

**Marine Tourism Associations**

- Maine Windjammer Association  
  www.sailmainecoast.com
- Maine Association of Sea Kayak Guides and Instructors  
  www.maineseakayakguides.com

**Coastal Livelihoods Trust**

Coastal Livelihoods Trust works directly and primarily with the fishing industry, so providing information to the tourism industry is only a tiny fraction of what they do. What makes them unique is the strategic linking of two Gulf of Maine industries whose future livelihoods are intertwined.

NOTE: both publications produced with support from the Gulf of Maine Council on the Marine Environment.

**Herring Weir in Passamaquoddy Bay, New Brunswick (N. Springuel)**
Chapter 3. Sustainable Tourism Resources
B. The Marine Environment

- **Association of Eastern Canadian Sea Kayaking Outfitters**

### Sewage and Marine Pump Out Services

There are many reasons to avoid dumping raw sewage overboard. According to Atlantic Green Boating, [www.atlanticgreenboating.com/en/](http://www.atlanticgreenboating.com/en/) “dumping sewage overboard depletes the amount of available oxygen in water, which makes it harder for fish to breathe, encourages harmful algae blooms and decreases your recreational enjoyment.” In the United State, the Clean Water Act prohibits the untreated discharge of sewage within three miles of the coast. Vessels with an installed head must be equipped with a Coast Guard approved marine sanitation device (holding tank) or treat the sewage prior to discharge. In Canada, the Pleasure Craft Sewage Pollution Prevention Regulations, pursuant to the Canada Shipping Act, regulates sewage discharge in only certain designated bodies of water in the nation. For all other bodies of water, including all New Brunswick waters, there are currently no regulations preventing discharge. New Brunswick Department of Environment has developed **Guidelines for waste disposal from pleasure craft in New Brunswick**, which can be found at [www.gnb.ca/0009/0372/0002/0001-e.asp](http://www.gnb.ca/0009/0372/0002/0001-e.asp). Whether it is legal or not, it is always a better idea to use designated sewage pump out stations than dumping into the ocean.

#### Pump-out Services in Hancock and Washington Counties, Maine, and Charlotte County, New Brunswick

**Maine**
- Devereux Marine
  Penobscot - 207-326-4800
- Billings Diesel and Marine Service Stonington - 207-367-2328
- Morris Yachts Tremont - 207-224-5509
- Up Harbor Marina Tremont - 207-667-1382
- Up Harbor/Red Fern Pumpout Boat Tremont - 207-667-1382
- Great Harbor Marina
  Southwest Harbor - 207-244-0117
- Hinkley Company
  Southwest Harbor - 207-244-5572
- Downeast Diesel Southwest Harbor - 207-244-5145
- Southwest Boat & Service
  Southwest Harbor - 207-244-5525
- NE Harbor Municipal
  Dock Northeast Harbor - 207-276-5737
- Clifton Dock Northeast Harbor - 207-276-3752
- Bar Harbor Whale Watch
  Bar Harbor - 207-288-3322
- Winter Harbor Marine
  Winter Harbor - 207-963-7449
- Town of Machiasport
  Machiasport - 207-255-4516

**New Brunswick**
- St. Andrews Market Wharf - 506-529-5170

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*Barney Cove on Beals Island, Maine (J. East)*
Ferry Service
Encouraging tourists to travel by ferry enables a true maritime experience while minimizing the use of fossil fuels. Ferries are an important transportation link in all three counties. The following list includes destinations that are accessible by ferry. Contact the operators directly for schedules and prices.

- Bass Harbor, ME – Swans Island, ME, also Frenchboro, ME: Maine State Ferry Service, [www.state.me.us/mdot/opt/ferry/maine-ferry-service.php](http://www.state.me.us/mdot/opt/ferry/maine-ferry-service.php)
- Southwest Harbor/Manset, ME – Cranberry Islands: The Cranberry Cove Ferry (207-244-5882)
- Deer Isle/Stonington, ME – Isle au Haut, ME: Isle au Haut Mailboat, [www.isleauhaut.com](http://www.isleauhaut.com)
- Blacks Harbor, NB – Grand Manan, NB, also White Head Island, NB: Coastal Transport Ltd, [www.coastaltransport.ca/](http://www.coastaltransport.ca/)
C. Water Conservation and Protection

Introduction
We all live within the Gulf of Maine watershed, which is defined as the land area that drains into the Gulf of Maine. From providing drinking water and waste disposal to millions of humans to providing habitat for freshwater and marine species, water is a vital resource without which we could not survive. This means that each of us, whether residents, tourism providers, or visitors, must be good stewards of the resource – conserving water resources and preventing pollution.

We are all familiar with pollution. While the term may conjure up images of drainpipes dumping foul-smelling sewage into a river, the majority of pollution affecting water quality in Maine and the Canadian Maritime provinces today comes from indirect sources. Each of us may be contributing to nonpoint source (NPS) pollution through our everyday land use activities.

According to the U.S. Environmental Protection Agency, NPS pollution is the number one threat to our waters (www.epa.gov/owow/nps). Every time it rains, stormwater runoff drains our driveways, parking lots, roofs, roads, construction areas, etc., carrying contaminants such as oil, road salt, and sand, to the nearest stream, lakes, or ocean. Eventually, these contaminants can also reach down into our groundwater, a drinking water source in Maine and the Maritime Provinces. We have the power to control NPS pollution and to improve the resources of the Gulf of Maine through the land use management and water usage choices we make every day.

In recent decades, many industries and land management groups have responded to the threat of NPS pollution, developing best management practices (BMPs), for preventing water contamination by NPS pollutants. Many of these BMPs are applicable to tourism business establishments and provide another mechanism for these businesses to distinguish themselves as stewards of the Gulf of Maine. Similarly, water conservation is paramount to ensuring that freshwater resources exist for future generations to enjoy in the Gulf of Maine, and there are many resources to assist businesses with water conservation tips.

The following are some of the best management practices for tourism providers to consider when conserving water or preventing pollution. Note that many of the tips and resources elsewhere in this guide also contribute to water conservation and protection, and that marine-related topics are covered in more detail in the last section.

Duck Brook, Acadia National Park, Maine (Friends of Acadia)
Best Practices

Best Practices for All Sectors

- Fix all plumbing leaks and toilets that run in between flushes.
- Replace all toilets, faucets, and shower heads with alternatives that use less water.
- Replace washing machines with Energy Star™ models that use less water.
- Use mulch around landscaping to hold water in the soil for longer periods of time (www.epa.gov/nc/eco/drinkwater/water_conservation_schools.html).
- Minimize the amount of lawn that needs to be mown and watered. Water lawns during the evening or early morning hours to allow for more water to reach the roots rather than evaporating. Use water systems that direct water to the roots of individual plants rather than sprinkler systems which apply water more randomly (www.epa.gov/nc/eco/drinkwater/water_conservation_schools.html).
- Use certified WaterSense irrigation professionals (www.epa.gov/owm/water-efficiency/pubs/irrprof.htm).
- If you have a swimming pool, consider lowering the water level to reduce the amount of water splashed out.
- Do not use water to clean surfaces like sidewalks, driveways, etc. Use a broom instead (www.epa.gov/owm/water-efficiency/pubs/bus.htm).
- Hire contractors that are certified in erosion control.

Best Practices for Lodging Establishments

- Notify visitors that they may choose not to have their linens and towels laundered every day, thereby saving water. Also give visitors water conservation tips, such as turning off the faucet while brushing teeth or turning off the shower while lathering with soap.

Best Practices for Restaurants

- Install automatic faucets (www.maine.gov/dep/oia/p2/restaurant.htm).
- Notify patrons that they will not be served water automatically, but can request it.

Education Resources

Understanding and Managing NPS Pollution

- U.S. Department of Environmental Protection: Visit the U.S. Department of Environmental Protection’s (EPA) Wetlands, Oceans, and Watersheds (OWOW) Web page: www.epa.gov/owow/facts to view and download fact sheets highlighting potential sources of polluted runoff (or NPS pollution) from urban areas, households, forestry practices, boating and marinas, as well as management tips, increasing public involvement, and funding assistance programs.
- The Maine Department of Environmental Protection (MDEP) Watershed Materials: www.maine.gov/dep/blwq/docwatershed/materials.htm provides information about nonpoint
source pollution, types of NPS pollution and their impacts on water quality, watershed protection, conservation practices and BMPs, and more.

- **Understanding the Law: A Guide to New Brunswick’s Watershed Protected Area Designation Order**: This document serves as a plain-language guide to this legislation, including watershed areas receiving protection, land-use restrictions in the protected areas and how they may affect businesses and commercial operations, NPS pollution and erosion control methods, and more. Available on line in PDF format from the New Brunswick Department of Environment Web site: [www.gnb.ca/0009/0371/0004/watershed-e.pdf](http://www.gnb.ca/0009/0371/0004/watershed-e.pdf)

### Land Use Planning

- **Nonpoint Education for Municipal Officials (NEMO)**, a national educational program available in Maine for land use decision makers that addresses the relationship between land use and natural resource protection, with a focus on water resources, nonpoint source pollution, and stormwater runoff. While the program is geared toward municipal officials, the tips and principles offered for protecting water quality and management of NPS pollution and stormwater runoff may be applied by commercial and residential property owners and managers, [www.mainenemo.org/](http://www.mainenemo.org/).

- **Maine Resources Guide for Land Use Planning** This guide provides information regarding resources and assistance available to land owners and property managers interested in sustainable development, resource protection, and conservation options. [www.mainenemo.org/publication/mrg.pdf](http://www.mainenemo.org/publication/mrg.pdf)

- **Environmental Management – A Guide for Town Officials**: While the program is geared toward municipal officials, the tips and principles offered for protecting water quality and management of NPS pollution and stormwater runoff may be applied by commercial and residential property owners and managers. Available in hard copy only. Contact your nearest Maine Department of Environmental Protection office, Soil and Water Conservation District, or local watershed council/group.

- **Local land trusts**, non-profit organizations working to protect lands of ecological importance and, at times, public access to recreational lands through acquisition or conservation easement, can provide information regarding land use planning options. The Maine Land Trust Network can connect you with a land trust organization serving your community. The network’s Web site includes an organization database searchable by county or alphabetically by organization name, [www.mltn.org](http://www.mltn.org).
Conservation Practices for Tourism Property Owners and Managers

- **The Green Home and Cottage** is a quick reference guide to 'green living' for shoreline property owners that developed by the New Brunswick Department of Environment to assist waterfront property owners with application of conservation practices to protect water quality and reduce soil erosion. Available on-line in PDF format: [www.gnb.ca/0009/0013-e.pdf](http://www.gnb.ca/0009/0013-e.pdf).

- **Show You Care: Green Garden and Lawn Care**, developed by the New Brunswick Department of Environment to provide property owners and managers with landscaping guidelines for water conservation and erosion control. Available on-line in PDF format: [www.gnb.ca/0009/0010-e.pdf](http://www.gnb.ca/0009/0010-e.pdf).

- **The American Water Works Association** has a searchable database ([www.awwa.org/waterwiser/education/index.cfm](http://www.awwa.org/waterwiser/education/index.cfm)) for educational tools for all ages related to water conservation. The site includes a listing for a water conservation kit from the Water Education Foundation designed to help homeowners save water around the house. It also has listings from the New Mexico Office of the State Engineer and the California Urban Water Conservation Council of booklets that describe common household water leaks and ways to prevent or fix them.

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*Erosion from dirt roads and other surfaces can run down towards the nearest stream and contribute to siltation.*

**Below:** Road erosion  
**Right:** Cherryfield River Park, Maine  
(T. Gamache)
Protecting Water Quality for Property Owners: The following series of 20 fact sheets developed by the Maine Department of Environmental Protection (MDEP) and the Portland Water District profiles common conservation practices designed to help property owners and managers protect water quality. The fact sheets, geared toward homeowners, include detailed instructions, diagrams and color photos about installation and maintenance of specific conservation applications which may be adapted for business use throughout the Gulf of Maine and beyond. The sheets are available for individual download on-line (PDF format) at www.pwd.org/news/publications.php#Brochures.

1. Construction BMPs: Details design and installation of sediment barriers and mulching on construction sites as BMPs (Best Management Practices) to minimize flow of sediment and other pollutants from disturbed areas into nearby streams and lakes. Measures as directed in these guidelines will meet the requirements of the Maine Erosion and Sediment Control Law.

2. Roof Dripline Trenches: Designed for rooftops without gutter systems, these trenches collect roof runoff, store it until it soaks into the soil and minimize wear on siding by reducing backsplash.

3. Dry Wells: Designed to manage roof runoff for homes with gutter systems, drywells collect and infiltrate runoff at gutter downspouts and other places where large quantities of concentrated water flow off rooftops. Drywells help control erosion and runoff on your property, and “…reduce wear on your house by minimizing backsplash.”

4. Erosion Control Mix: “A type of mulch made of partially composted bark, sand, gravel, stone and wood fragments…” Erosion Control Mix is used to reduce soil erosion. “Like other mulches, it retains moisture, controls weeds and improves the soil as it decomposes.” It can be used on “paths, slopes and between plantings.”

5. Infiltration Trenches: Infiltration trenches collect and allow runoff from rooftops or paved driveways to infiltrate the soil. “Infiltration trenches work best in well-drained soils like sands and gravels.”

6. Infiltration Steps (New Installations): Infiltration steps use crushed stone to slow down and allow runoff to infiltrate the soil. They are effective on moderate slopes (less than 45°).

7. Infiltration Steps (Retrofit): Infiltration steps use crushed stone to slow down and allow runoff to infiltrate the soil. “They are effective on moderate slopes (less than 45°).”

8. Open-Top (Box) Culvert: Open-top culverts are used to collect and divert water from seasonal camp roads and driveways that receive little or no winter plowing to a vegetated or other stable area. By getting stormwater off the road, open-top culverts reduce erosion of the road surface, while allowing easy movement of vehicles across the structure. Open-top culverts are inexpensive to build and relatively easy to install. They can be built from lumber with common hand tools.

9. Paths and Walkways: Properly designed pathways “…direct foot traffic, absorb water, reduce the rate of flow, and protect soil.” Pathways can also reduce the potential for erosion and minimize the amount of pollutants flowing from your property into nearby streams and lakes.

10. Permitting: Information about Maine laws, permit requirements and town ordinances for activities adjacent to wetlands and water bodies.

11. Vegetated (Riparian) Buffers: Riparian buffers are vegetated zones between waterbodies and areas of human development. Ideally, buffers include a mix of trees, shrubs and groundcover plants that catch sediment and other pollution before it reaches lakes or streams. Trees and shrubs “…intercept raindrops and reduce their impact on the soil. Low growing plants and the “duff” layer on the ground filter runoff. Root systems hold soil in place and absorb water and nutrients.” In addition, buffers can enhance privacy, filter noise and wind, and provide food and shelter for birds, butterflies, and other wildlife.

12-15. Native Plants Lists - part to full shade & dry, part to full shade & wet, part to full sun & dry, part to full sun & wet.

16. Rain Barrels: “Rain barrels provide an innovative way to capture rainwater from your roof and store it for later use.” Water collected from rain barrels can be used to water lawns, gardens, and indoor plants. They can help to lower your water bill, conserve well water in the dry season, and reduce polluted stormwater runoff.

17. Rain Gardens: Rain gardens are “…attractive and functional landscaped areas designed to capture and filter stormwater from roofs, driveways, and other hard surfaces. They collect water in bowl-shaped, vegetated areas, and allow it to slowly soak into the ground.” This reduces the potential for erosion and minimizes the amount of pollutants flowing from your lawn into a storm drain, and eventually into our streams and lakes.

18. Rubber Razors (Water bars): “Rubber Razors divert water off gravel driveways and camp roads into stable vegetated areas. These structures are well suited for seasonal roads that are not plowed.”

19. Turn Outs: Turnouts return stormwater runoff as sheet flow to natural drainage areas. Often turnouts are simply extensions of ditches that redirect water into the woods and disperse runoff before it can cause erosion. “[Turnouts] reduce the speed of runoff, allowing soil particles to settle out instead of being transported to a stream, river, or lake. Water and nutrients can then be filtered and absorbed by the surrounding vegetation.”

20. Water Bars: A water bar intercepts water traveling down “…moderately steep footpaths, trails and other areas with concentrated flow” and diverts it into stable vegetated areas.
Road Maintenance


- **BMP Guidelines for Roads in Atlantic Salmon Watersheds.** A guide developed in partnership through Project SHARE (Salmon Habitat and River Enhancement) for best practices to reduce erosion and sedimentation in Maine’s eight federally-protected Atlantic salmon river watersheds, all of which are located in the Gulf of Maine, [www.salmonhabitat.org](http://www.salmonhabitat.org).


Septic System Maintenance

- “Septic System Inspection: Protect your investment by minimizing the risk of costly system replacement or repair” ([www.maine.gov/dep/blwq/docwatershed/septic.pdf](http://www.maine.gov/dep/blwq/docwatershed/septic.pdf)). Poorly maintained septic systems can affect groundwater quality. Groundwater is the primary drinking water source in the Gulf of Maine. This guide provides practical tips for keeping your septic system working safely and efficiently.

**Evaluation and Assessment Tools, and Incentive Programs**

- **LakeSmart,** an educational program implemented by MDEP in 2003, offers free workshops for lakefront property owners on how to manage runoff and erosion through application of BMPs and landscaping. For more info: [www.maine.gov/dep/blwq/doclake/lakesmart/index.htm](http://www.maine.gov/dep/blwq/doclake/lakesmart/index.htm). From the LakeSmart Web site: “The LakeSmart evaluation process involves a site visit by a MDEP-certified Soil and Water Conservation District employee or an educator from MDEP who reviews landscape and management practices in the five following categories:
  - Road, Driveway, and Parking Areas
  - Structures and Septic System
  - Lawn, Recreation Areas, and Footpaths
  - Shorefront and Beach Areas
  - Undeveloped Land

Points based on established criteria are given in each category. If a property owner scores 67% or more points in a given category, he or she is recognized for their efforts in that category with an award certificate”...and a plaque for their property. “Often an evaluator will
make recommendations for improvements that will help the property qualify for the LakeSmart Award and protect water quality.” Property owners can receive a free LakeSmart evaluation of their property and receive recognition for their efforts through press, a certificate, and a plaque for their property.

- **The American Water Works Association** has a “Water Wiser Drip Calculator” tool (www.awwa.org/advocacy/learn/conserve/dripcalc.cfm) that estimates the amount of daily, monthly, and annual water losses creating by dripping faucets. The losses are estimated by counting the number of drips per minute and running the number through the calculator.

- **The California Urban Water Conservation Council** has a water budget calculator (www.waterbudgets.com/ConservVision/CUWCC/DataInput.htm) that can help home or tourism business owners calculate how much water they use based on items such as showerheads, water bills, and other figures.

- **The U.S. Environmental Protection Agency** (EPA) offers a program called, “Water Alliances for Voluntary Efficiency (WAVE)” (www.epa.gov/ne/eco/drinkwater/water_conservation.html) that encourages businesses to enter into voluntary partnerships with the EPA to install technologies and use techniques to reduce water consumption. Business owners receive free water management software and technical support. For more information, businesses should contact Barbara McGonagle at 617-918-1608.

- **The U.S. Environmental Protection Agency** (EPA) offers a “portfolio manager” that allows businesses to track their water consumption and compare to other businesses of similar size and usage (www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager).

**Resources**

- **Watershed Councils**
  Throughout the Gulf of Maine, citizens concerned about the health of their local river, stream, or lake have formed volunteer watershed councils or coalitions dedicated to protecting water quality through educational outreach. For more information about a specific watershed, local river, lake or stream, contact your local watershed organization:

  - **Charlotte County**
    St. Croix International Waterway Commission
    #5 Route 1 Dufferin
    St. Stephen, N. B. E3L 2Y8
    www.stcroix.org

  - **Hancock County**
    Branch Pond Association
    P.O. Box 850
    East Holden, Main 04429
    www.branchpond.org

    Friends of Blue Hill Bay
    P.O. Box 1633
    Blue Hill, ME 04614
    www.fobhb.org

    MDI Water Quality Coalition
    P.O. Box 911
    Mount Desert, ME 04660
    www.mdwqc.org

  - **Union River Watershed Coalition**
    105 Eden St.
    Bar Harbor, ME 04609
    www.unionriver.org

  - **Washington County**
    Dennys River Watershed Council
    347 Dixie Road
    Trescott, ME 04652
    www.mainesalmonrivers.org

    East Machias River Watershed Council
    P.O. Box 121
    Machias, ME 04654
    www.mainesalmonrivers.org

    Friends of Tunk
    P.O. Box 477
    Cherryfield, ME 04622

  - **Machias River Watershed Council**
    P.O. Box 121
    Machias, ME 04654
    www.mainesalmonrivers.org

    **Narraguagus River Watershed Council**
    P.O. Box 406
    Cherryfield, ME 04622
    www.narraguagusriver.org

    **Pleasant River Watershed Council**
    P.O. Box 201
    Columbia Falls, ME 04623
    Webpage under “Watersheds” at www.mainesalmonrivers.org

    **St. Croix International Waterway Commission**
    P.O. Box 610
    Calais, ME 04619
    www.stcroix.org
- **Maine Congress of Lake Associations:** A statewide, non-profit, charitable organization that works to protect water quality and promote sustainable land use practices in Maine lakes watersheds. It is the only statewide network of individuals and lake associations devoted solely to the protection and preservation of our lakes. It also serves as an information clearinghouse and has a lake association contact list, [www.mainecola.org](http://www.mainecola.org).

- **LakeSmart Landscape Professionals Listing:** Companies and individuals listed here have completed LakeSmart training and agree to adhere to landscape development practices around lakes that help protect water quality and meet all MDEP erosion and sediment control laws, shoreland zoning requirements, and help the property owners qualify for the LakeSmart Award. For the most up-to-date list of landscapers who have completed LakeSmart training, see [www.maine.gov/dep/blwq/doclake/lakesmart/landscapepro.html](http://www.maine.gov/dep/blwq/doclake/lakesmart/landscapepro.html).

- **Contractors Certified in Erosion Control Practices:** A certified contractor has completed an eight-hour training course in erosion control practices that is available through the Maine Nonpoint Source Training and Resource Center. This course provides instruction on erosion control planning and the proper installation of Best Management Practices for erosion and sediment control. After course completion, each certification candidate must have an evaluation of one of his or her construction sites completed, in order to determine if the candidate can adequately install and maintain erosion control practices. To received a list of contractors that have received

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**The Lucerne Beach Club: Managing Land to Protect Water**

The Lucerne Beach Club on Phillips Lake in Lucerne-in-Maine was faced with an unvegetated, sloping hillside walkway that was eroding and causing sedimentation into the lake. The project started as an empty slope with no style and more importantly no substantial ground cover to protect the soil. They developed a hillside walkway and buffer system to stop the erosion and sedimentation (see photo). The walk was constructed to create a specific pathway for lake users in order stop the hillside from eroding and to familiarize them with useful buffer plants. Native plants were planted for their characteristics such as deep roots and ability to thrive in shade. The plants are protected with hemlock mulch and the pathway was built out of cedar. In addition to the erosion-control project, the group also created a rain garden, open-top culverts, streambed stabilization project, and several buffer strips designed to filter polluted water before it enters the lake. *(Source and photo: T. Goodrich, UMaine Cooperative Extension)*
erosion control certification, contact: Bill Laflamme, phone 207-287-7726, fax 207-287-7191

- **The American Water Works Association** has a listing of articles and studies completed on water efficient appliances and fixtures ([www.awwa.org/waterwiser/links/index.cfm?LinkCategoryID=6](http://www.awwa.org/waterwiser/links/index.cfm?LinkCategoryID=6)).

- **The Maine Department of Environmental Protection** lists several resources for purchasing water saving products, such as low-flow toilets ([http://www.maine.gov/dep/oia/p2/restaurant.htm](http://www.maine.gov/dep/oia/p2/restaurant.htm)).

- **The U.S. Environmental Protection Agency**, beginning in 2007, is labeling toilets that have achieved high efficiency ratings in water savings. Look for the “WaterSense” label. According to the EPA, toilets are responsible for 30% of all household water consumption ([www.epa.gov/owm/water-efficiency/pubs/het.htm](http://www.epa.gov/owm/water-efficiency/pubs/het.htm)).

- **Environment Canada** has good diagrams and information about retrofitting toilets, showerheads, and faucets ([www.ec.gc.ca/water/en/manage/effic/e_retro.htm](http://www.ec.gc.ca/water/en/manage/effic/e_retro.htm)) to be more efficient in conserving water.

D. Building Design

**Introduction**

Constructing or renovating a tourism business to more environmentally friendly standards can help save money, distinguish a business among competitors, and attract visitors who are interested in seeing the building. According to the organization, Global Green, “buildings in the United States account for 36% of total energy use, 65% of electricity consumption, 30% of greenhouse gas emissions, 30% of raw material usage, 30% of waste output, and 12% of potable water consumption.” Additionally, a 1,700 ft.² wood frame house requires approximately one acre of forest to be clear-cut. (www.globalgreen.org/gbrc/whygreen.htm). These are all good reasons to construct or renovate buildings to environmental standards.

Becoming a green building means maximizing energy efficiency, choosing renewable energy sources, being good water stewards, choosing environmentally friendly building materials, reducing waste, eliminating toxins, promoting healthy indoor environments, and paying attention to the principles of smart growth (see box). Every building or renovation project is different so it is difficult to prepare a standard list of building design and landscaping tips that will apply across all sectors. However, the following are several tips for either constructing or renovating a building and landscape that will be environmentally beneficial in the Gulf of Maine.

**Best Practices for All Sectors**

1. Use an architect or engineer to help you achieve Leadership in Energy Design (LEED) certification. The LEED certification is a nationally recognized standard for designing, constructing, and running green buildings. LEED certification is measured based on five factors related to “human and environmental health – sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality” (www.usgbc.org). In order to become a LEED certified building, the project must be registered and performance standards must be met throughout the construction and operation stages. Buildings are granted silver, gold, or platinum status depending on the number of standards that are met.

2. Plant native deciduous trees on the south side of your building and native evergreens on the north side of the building. The south side of the building is the sunniest side and therefore will benefit from shade in summer and the sun’s warmth in winter.

3. Choose recycled materials or use environmentally certified products, such as “FSC” wood that meets the criteria for

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**Ten Principles of Smart Growth**

**GrowSmart Maine** ([www.growsmartmaine.org/](http://www.growsmartmaine.org/)), a statewide non-profit organization working to promote sustainable prosperity and to protect the state’s distinctive character and quality places by educating people about sprawl and alternative approaches to development.

**The Smart Growth Network** ([www.smartgrowth.org/](http://www.smartgrowth.org/)), formed to create new ways to grow that boost the economy, protect the environment, and enhance community vitality. Includes environmental groups, historic preservation and professional organizations, developers, real estate interests, government, and the Environmental Protection Agency. The network promotes the 10 Principles of Smart Growth:

1. Create Range of Housing Opportunities and Choices
2. Create Walkable Neighborhoods
3. Encourage Community and Stakeholder Collaboration
4. Foster Distinctive, Attractive Communities with a Strong Sense of Place
5. Make Development Decisions Predictable, Fair and Cost Effective
6. Mix Land Uses
7. Preserve Open Space, Farmland, Natural Beauty and Critical Environmental Areas
8. Provide a Variety of Transportation Choices
9. Strengthen and Direct Development Towards Existing Communities
10. Take Advantage of Compact Building Design
sustainable forestry from the Forest Stewardship Council (www.fsc.org/en/).
4. Use stormwater holding ponds, grassy swales, or other stormwater control devices to prevent toxics from entering waterbodies.
5. Choose building locations that meet the needs of your customers and prevent sprawl.
6. Use energy efficient fixtures and design buildings to maximize natural light. See the Energy Conservation section, p. 42, for more information and resources.
7. Use landscaping techniques and design buildings to conserve water resources and prevent non-point source pollution. See the ecological landscaping section, p. 50, for more information and resources.

Education Resources

1. The U.S. Green Building Council (www.usgbc.org) offers a number of courses related to LEED certification. These courses vary from an introduction to LEED certification, to accreditation programs for professionals, to using LEED on existing buildings and historic properties. The U.S. Green Building Council also offers a newsletter, an annual conference, on-line courses, and a searchable database for certified architects, engineers, and designers. Most significantly, the Council offers a LEED resource guide and a technical manual for sustainable building design.
2. The American Institute for Architects (www.aia.org) provides at least one on-line course on green building design. The Institute also has mentoring and scholarship programs for students.
3. The Royal Architectural Institute of Canada (www.raic.org/raic/professional_development/courses/index_e.htm) offers many courses on sustainable building design – everything from incorporating photovoltaic systems to LEED certification. The Institute also offers a newsletter, on-line courses, and a searchable database for Canadian architects and affiliate members.
4. Land Use Planning: Many communities in the Down East region of Maine do not have any zoning requirements beyond the state-managed shoreland zoning guidelines and, for those that do, there often is much variation from town to town. Therefore, if you are planning a change of use for buildings on the site where your business is located, it is best to first check with your municipal office to find out if the intended use is allowed and what type of documentation must be provided, if any. For general information related to land use planning, there are great resources posted on the Web site of the State Planning Office (www.maine.gov/spo/), the Hancock County Planning Commission (www.hcpcme.org) and the Washington County Council of Governments (www.wccog.net). Residents of the Unorganized Territories must contact the Land Use Regulation Commission (LURC) to find out what is required: (207) 287-2631.

Renovations to the former Calais Middle School include capitalizing on solar exposure, new thermal pane windows and a state of the art heating system. (J. East)
Chapter 3. Sustainable Tourism Resources
D. Building Design

**Self Assessment Tools:**
The Building and Fire Research Laboratory of the National Institute of Standards and Technology has prepared software to assist builders with selecting the most cost effective, environmentally friendly materials for any proposed projects. The software is free and available at [http://www.bfrl.nist.gov/oae/software/bees.html](http://www.bfrl.nist.gov/oae/software/bees.html).

**Resources**
1) The U. S. Green Building Council ([www.usgbc.org](http://www.usgbc.org)) is a membership organization that brings together builders, suppliers, financiers, managers, insurers, nonprofit organizations, agencies and others that share a common desire to further sustainable building practices and buildings that are healthy, environmentally friendly places to live and work. The Maine Chapter’s Web site is [www.maineusgbc.org](http://www.maineusgbc.org), and the local contact is Richard Graves of WBRC Architects-Engineers. The Web site for the Maine chapter lists events of interest around the state and members in the Hancock/Washington County Region. The members for this area include:
   a. Erica Atherton Libby, New Form Building Systems, 32 Lee St., Bucksport ME 04416; 207-469-2711; elibby@newformbuilding.com
   b. John Atkinson, Atkinson Builders, Inc., P.O. Box 122, Hulls Cove, ME 04644; 207-288-9979; 207-288-9462 (fax); atkinsonbuilders@prexar.com
   c. Garret Bertolini, A.W. Hastings & Co LLS; 57 Millbrook Ln, P.O. Box 16, Blue Hill, ME 04614; 207-266-4684; 207-374-5424 (fax); rconterio@awhastings.com
   d. Kenneth Shea, E.L. Shea, Inc., 23 Church St., Ellsworth ME 04605; 207-667-4598; 207-667-5647 (fax); kenshea@elshea.com
   e. Elizabeth Wastler Bruno; Bruno Architecture, 36 Main St., PO Box 975, Blue Hill, ME 04614; 207-374-5574; 207-374-5258 (fax); eliz@brunoarchitecture.com

For a complete list of the members of the Maine Chapter of the U.S. Green Building Council, visit [www.maineusgbc.org](http://www.maineusgbc.org). For a complete list of the members of the national U.S. Green Building Council, visit [www.usgbc.org](http://www.usgbc.org). Additionally, the following businesses were listed as members on the national Web site for the U.S. Green Building Council, but were not on the Maine Chapter Web site:
   a. Sam Coplon, Coplon Associates Landscape Architects, 112 Cottage St., Bar Harbor, ME 04609; 207-288-4122; scoplon@acadia.net
   b. Ayola Greene, Designer, Eric A. Chase Architecture, 5 Black Bear Rd., Brooksville, ME 04617; 207-326-9339; ayola@ecarchitecture.com

**The Windsor House of St. Andrews: Working Towards Sustainable Goals**
During the 2004 Gulf of Maine Summit, members of the Gulf of Maine Council on the Marine Environment’s Sustainable Tourism Task Force toured four St. Andrews, New Brunswick, businesses that embodied some aspect of sustainable tourism ideals. Jay Remer was invited to host the group for a stop at his historic inn, the Windsor House of St. Andrews. The funny thing was, Remer didn’t particularly think of himself as being part of a movement towards sustainability, he just poured his heart into what he cared about most: running a high quality establishment in an exquisitely renovated grand old Georgian home, offering the finest of food and catering as much to discerning travelers in the summer as to his neighbors in the winter. And along the way, if Remer could make some business decisions that were in line with his care for the environment and community, then that could only benefit the business in the long run.

Rare for the resort town of St. Andrews, the Windsor House is open year round and is an active business member of the year round community. As Remer says, if you want the local vendors to stay in business, you need to support them. They buy liquor locally, use the downtown supermarket for incidentals and local vendors for meat and produce as much as possible. The soaps provided to customers are locally made, and much of the vegetables come from their own farm (whose compost heap, fed by 2000 pounds of potato peels from the inn’s restaurant, nourishes the vegetable gardens). In most cases, seafood is harvested by local fishermen from the waters of the Bay of Fundy, Gulf of Maine, and Canadian.
c. Phil Bailey, Consultant, 86 Jellison Cove Rd., Hancock, ME 04640; (207) 422-3218; pbsustain@aol.com

d. Bob Poole, Poole Fallow and Company, 705 The Shore Road, Castine, ME 04421; 207-326-9596; bob@poolefallow.com

2) The Canada Green Building Council (www.cabgc.com) is a coalition that exists to further the design and construction of green buildings in Canada. The Web site lists workshops and seminars, news and events, information on the LEED registration and certification program in Canada, and information on chapters throughout the country.

3) The Royal Architectural Institute of Canada is a voluntary association of architects in Canada. It has a page on its Web site (www.raic.org/raic/green_architecture/sustainability_e.htm) that is dedicated to sustainability in building design including information on LEED certification, model national energy codes, life cycle costing to building design, waste reduction, and more.

4) The Rainforest Alliance has prepared a guide to wood sources for cabinets, decking, doors/windows, engineering needs (e.g., beams), flooring, siding, lumber, panels, etc. (http://www.rainforest-alliance.org/programs/forestry/trees/activities/pdfs/green_building.pdf). A quick search of the guide did not appear to have any sources in Maine, but the guide does list companies across the country.

5) BuildingGreen.com (www.buildinggreen.com) offers two important resources for environmentally friendly construction. It publishes a monthly newsletter, Environmental Building News, that covers diverse topics that relate to creating an environmentally friendly building. Example topics include indoor air quality, recycled building materials, energy efficiency, and land use planning. Additionally, the editors of Environmental Building News have compiled a guidebook to over 1,600 green building products. There is also a searchable database of green building projects that could serve as models. The Building Green Web site has a bibliography of topics related to green building – policies and certifications, land use, process for LEED certification, energy, materials, indoors, and site and water use.

6) The U.S. Environmental Protection Agency (www.epa.gov/greenbuilding/) lists resources for green buildings according to building type, but more importantly lists funding opportunities for green building construction.
7) GreenerBuildings.com (www.greenerbuildings.com/) contains resources, case studies, a free monthly e-newsletter, and a searchable bookstore. Topics covered include architecture and design, energy consumption, building materials, facility management, waste management, interiors, land use, and water use.

8) R-2000 is an initiative of Natural Resources Canada (http://oee.nrcan.gc.ca/residential/business/participants-networks/r-2000/join.cfm?attr=12) that certifies a builder as qualified to construct energy efficient buildings. The builder must go through a two-day classroom course that leads to construction of an R-2000 energy efficient home. Natural Resources Canada offers support, technical updates, and marketing assistance to R-2000 qualified builders.

9) The Canada Mortgage and Housing Association (http://www.cmhc-schl.gc.ca/) also offers a 10% refund on its mortgage loan insurance premium if the building is R-2000 certified.

10) Canada has a property tax abatement program for restoration of heritage properties. This program (http://www.gnb.ca/0131/historicplaces/Programs/PTA/index-e.asp) allows property owners to be forgiven for four years for a portion of the property tax increases that are anticipated as a result of the restoration of the historic property.

11) In the United States, information about tax incentives and funding programs for preservation of historic buildings can be found at the National Trust for Historic Preservation (www.nationaltrust.org).
E. Energy Conservation

Introduction
Saving energy is an environmentally friendly decision and should result in cost savings for tourism businesses. Additionally, selecting appropriate energy sources and reducing energy waste can be a prime marketing tool for businesses to set themselves apart from competitors in attracting sustainable tourism business. The following are several tips for tourism businesses to consider as a means of conserving energy:

Best Practices
Best Practices for All Sectors

• Turn off lights and other equipment when not in use.
• Make best use of daylight for lighting and passive solar heating.
• Install thermostats with timers to ensure automatic temperature decreases at times when they are regularly not in use.
• Replace incandescent bulbs with compact fluorescents (CFL’s) because they use much less energy and last 10-12 times as long.
• Wrap hot water heaters with insulation.
• Replace incandescent and fluorescent exit signs with light emitting diodes (LEDs) that use a tenth of the energy and can run for 100,000 hours.
• Schedule cleaning services during the day.
• Replace T-12 fluorescent fixtures with energy saving T-8 fixtures and electronic ballasts.
• Use motion sensors, timers, and photoelectric sensors to control when exterior lighting comes on.

The propane-powered Island Explorer bus has carried almost 2.2 million passengers around Acadia National Park in eight seasons of operations and has eliminated almost 814 thousand private vehicle trips. (Friends of Acadia)

• Tune-up your heating, ventilating, and air conditioning systems and check them every year.
• Purchase office equipment, appliances, and electronics that have the ENERGY STAR™ label, which indicates that the equipment is energy efficient.
• “Use ENERGY STAR™ ceiling fans to circulate air and room fans, which use less energy than air conditioning.” (www.efficiencymaine.com)
• Set thermostats higher in summer and lower in winter.
• Reduce the settings on your hot water heater. It can be set at 120°F or lower if just for general purposes. Booster heaters can be installed if needed for higher temperatures.
• Install proper insulation and caulk or add weatherstripping to doors, windows, ducts, and other places where heat can escape.
Best Practices for Lodging Establishments
Information summarized from Efficiency Maine’s Web site, www.efficiencymaine.com, unless otherwise indicated

- Use motion sensors on lights in areas that are not frequently used, such as closets and storage areas to prevent electricity waste when people forget to turn off the lights.
- If using room air conditioners, be sure to seal all air leaks around the units, and cover them in winter with an insulated cover.
- Clean air conditioner filters regularly.
- Allow guests to choose whether to have their linens laundered every day.
- Only do loads of laundry when the washing machine is full and use lower temperatures, including cold for rinses.
- Clean dryer vents after each use to aid with air flow.
- Install low-flow shower heads and toilets to save energy.
- Repair all plumbing leaks because they cause the water pump to come on more frequently, thereby wasting energy.

Best Practices for Restaurants

- “Purchase high efficiency equipment. Refrigeration options like hot gas defrost and evaporative condensers can yield returns of as much as 50 percent.” (www.efficiencymaine.com)
- Check gaskets and closing mechanisms on refrigerator and oven doors frequently. Close a dollar bill in the refrigerator door, and then pull. If it comes out easily, check for worn gaskets or out-of-adjustment closing mechanisms.
- Place a lit flashlight inside the oven or refrigerator, and if you see light around the gasket, it’s time to replace the gasket.” (www.efficiencymaine.com)
- Use exhaust fans while cooking to vent hot air. The costs of running the fan are less than air conditioning costs.
- Clean refrigerator coils often.

Best Practices for Outfitters/Guides

- Purchase hybrid electric vehicles or, where possible, use biodiesel to help cut down on costs of transportation. In 2006 and maybe 2007, federal tax credits are available to businesses that purchase hybrid electric vehicles for their business. These tax credits are available on a limited basis and only for certain hybrids. See the Alliance to Save Energy (www.ase.org) for more information.

The Craig Brook National Fish Hatchery:
Saving Energy while Restoring Fish

For 131 years, a hatchery at Craig Brook in East Orland, Maine, has produced fish for anglers. A federal national fish hatchery since 1889, Craig Brook National Fish Hatchery now hatches Atlantic salmon to replenish seven Maine rivers. It also offers educational exhibits for adult visitors and school children alike, including a stream model with running water and live young salmon.

Perhaps more behind the scenes is what the Craig Brook Hatchery does to keep its energy usage under control. Some of the things they are doing are things anyone can do, others require some thought and planning. They keep the temperature a little low in winter (68°F) to keep fuel usage low, and a little high (72°F) in summer to keep electric usage low. They use low-wattage fluorescent light bulbs and minimal lighting levels, again, to save electricity, and use a propane heating system instead of oil or electric.

They have insulated the building well and have double entrance doors, to keep the inside air in and the outside air out, saving on energy costs. They use a gravity flow water system whenever water levels are high enough, to avoid pumping. They even have a propane-fueled forklift.

Some of the more complicated efforts concern the treatment of the water. They use sand filtration, UV disinfection, N2 reduction, and O2 injection. Their future plans include constructing a wastewater treatment plant.
Education Resources

1. Clean Energy Maine (www.maine.gov/msep/cleanenergymaine/) is a statewide campaign being run by the Maine State Energy Program and the Maine State Energy Investment Corporation to inform Maine residents and businesses about the benefits of environmentally friendly energy options, how they are produced, and how to sign up for them.

2. Efficiency Maine offers several courses on energy auditing and building operator certification at several levels.

The Maine State Energy Program offers the following education resources:

- A guide to accepted practices for energy efficient residential home construction (mainegov-images.informe.org/msep/pdf/map.pdf).
- A guide to starting up small wind energy projects, such as the installation of a private small wind turbine (www.nrel.gov/docs/fy03osti/34342.pdf).

Tax Credits/Incentives

There are several tax credits or incentives that may assist tourism businesses with saving money while implementing practices to save energy or using energy efficient projects. The following is a list of several of these credits/incentives. Tax laws and programs change frequently, so tourism businesses should check regularly for updated information.

- Tax credits are available in the United States for the purchase of some gasoline-electric hybrid vehicles. See the Alliance to Save Energy Web site www.ase.org for more information.
- Energy efficient commercial buildings in the U.S. may be eligible for tax incentives. See www.energytaxincentives.org for more information.
- In the U.S., people can receive a one-time tax credit of $500 for home energy-efficiency improvements such as adding insulation, energy efficient windows and doors, ENERGY STAR™ pigmented metal roofs, and appropriate heating and cooling equipment (www.ase.org). In order to receive this credit, the homeowner must fill out the appropriate Internal Revenue Service (IRS) form to accompany annual taxes, and they must keep proof of the ENERGY STAR™ certifications and the purchase receipts for all the equipment. See www.irs.gov/pub/irs-drop/n-06-26.pdf for more information.
- U.S. businesses can receive federal tax credits in 2006 for using solar technology for lighting and hot water. These credits are 30% of the price for systems put in place in 2006, but may revert to only 10% in 2007. The Solar Energy Industries Association has more information at their Web site (www.seia.org/getpdf.php?iid=21).
- The Alliance to Save Energy (www.ase.org) has excellent information about tax credits that are available to businesses and homeowners for the installation of energy efficient products and purchase of hybrid electric vehicles.

Evaluation and Assessment Tools

1) Efficiency Maine offers self-survey tools for businesses to assess ways to save electricity costs. They have cost savings calculation worksheets for life cycle costing, exit lights, fluorescent lamps and ballasts, tankless hot water systems, programmable thermostats, and roof-top systems.
2) The Alliance to Save Energy includes home energy audit checklists, including a program for children (www.ase.org).

3) The ENERGY STAR™ Web site (www.energystar.gov/index.cfm?c=guidelines.guidelines_index) lists a program, “Guidelines for Energy Management” that takes a business from the commitment phase through implementation and evaluation of increasing energy efficiency. The ENERGY STAR™ Web site (www.energystar.gov) also has a self-assessment tool for homeowners to use in comparing their energy efficiency to comparable homes. The self-assessment will give tips on improving efficiency. Homeowners must have 12-months worth of energy bills or an energy summary from their utility company. In Canada, information about ENERGY STAR™ can be found at http://oee.nrcan.gc.ca/energystar/english/consumers/index.cfm

4) The Environmental Energy Technologies Division at Lawrence Berkley National Laboratory has developed a home-based energy audit system (hes.lbl.gov/) that will help homeowners determine the best ways for residents to reduce energy costs in their homes.

5) Natural Resources Canada has an “Interactive Energy Cost Calculator” (oee.nrcan.gc.ca/Equipment/english/index.cfm?PrintView=N&Text=N) that helps consumers calculate the secondary energy costs associated with operating their old appliances and/or purchasing a new appliance (i.e. it’s not just the purchase price, but the operating costs of that appliance that should figure into the purchase or disposal decision).

**Resources**

1) Efficiency Maine (www.efficiencymaine.com) offers information, training programs, self-evaluation tools, energy efficiency supplier information, and cash incentives to Maine businesses, non-profit organizations, schools, colleges, governments, farms, airports, water and wastewater facilities, and quasi-governmental and regional systems. Maine businesses can receive up to $100,000 in cash incentives in a year. Efficiency Maine also offers a quarterly newsletter for which Maine businesses can sign up online.

2) Efficiency New Brunswick (www.efficiencynb.ca/index-e.asp) has four programs that offer loans and grants for energy efficiency upgrades for existing homes, new homes, small apartment buildings, and low income households in New Brunswick. These grants and incentives could be applicable to home-based tourism businesses. The offerings range from free energy audits and grants up to $4,500 for low income households to a $100 coupon on energy audits and a $2,000 grant or $10,000 interest free loan for existing households that decide to implement the recommendations of the energy audit. The incentives are changing in 2007, so tourism businesses are recommended to check with the Efficiency New Brunswick or Natural Resources Canada Web site.

Encouraging visitors to bicycle rather that drive saves energy and is a great way to see the local attractions. (Friends of Acadia)
3) Natural Resources Canada’s Office of Energy Efficiency program, “EnerGuide for Existing Buildings” was designed to create incentives for existing businesses to renovate and retrofit to save energy. The program was fully subscribed in 2006, so additional funding does not seem to be available, but tourism businesses should continue to monitor the Web site http://oee.nrcan.gc.ca/commercial/existing.cfm?attr=20 for more information. The Office of Energy Efficiency also publishes the “Heads Up Energy Efficiency” newsletter (http://oee.nrcan.gc.ca/commercial/technical-info/reference/existing-library.cfm?attr=20) with information on programs, funding opportunities, and best management practices.

4) The Maine Green Power Connection (www.maine.greenpower.org) is set up to help people select environmentally friendly power choices in Maine. The Web site includes all the power options that are commercially available to residences and businesses in Maine, including options that rely on small hydroelectric dams, wind power, biomass, and others. The menu lists the prices for each of these options. There is also a “buying wizard” on the site that will match you to the best option for you based on your environmental choices. Additionally, the Web site has a pollution calculator that estimates your current pollutant emissions based on your present power choices and then estimates emission reductions based on your new choices.

5) The Maine State Energy Program (www.maine.gov/msep/small_business_program.htm) offers energy audits and low-interest loans (up to $35,000 at 3% interest) for businesses to follow up on the recommendations provided through the energy audit. To qualify, businesses must have fewer than 50 employees, sales less than $5 million, and no in-house engineers. For more information, consult the Maine State Energy Program Web site or Shirley Bartlett at the Maine Public Utilities Commission at (207) 287-3318.

6) ENERGY STAR™ (www.energystar.gov) is a government program designed to help businesses and homeowners save energy and money. The ENERGY STAR™ label is placed on energy efficient appliances, which should help save money for tourism businesses. Whole buildings can also receive the ENERGY STAR™ label, which can be a marketing advantage in the tourism business. The ENERGY STAR™ Web site has a searchable database to help businesses and homeowners find retailers of energy efficient products across the United States. The Web site also has a database to find builders, lenders, building certifiers, and utilities or sponsors that specialize or can assist with pursuit of the ENERGY STAR™ classification for a building.

7) Natural Resources Canada also has an ENERGY STAR™ Web site (http://oee.nrcan.gc.ca/energystar/english/consumers/products.cfm?attr=12) with listings of appliances, office equipment, and other products that meet energy efficiency guidelines.

8) Natural Resources Canada has an “EnerGuide” program (http://oee.nrcan.gc.ca/Equipment/english/index.cfm?Print
that assists consumers with choosing the most energy efficient and cost effective choices for appliances and heating and cooling systems.

9) Natural Resources Canada lists the most fuel efficient vehicles for purchase (http://oee.nrcan.gc.ca/transportation/personal-vehicles-initiative.cfm?text=N&printview=N). The agency also has published a fuel consumption calculator (http://oee.nrcan.gc.ca/publications/transportation/fuel-calculator/gasoline_calcul_e.pdf) to enable drivers to estimate how much fuel they’ve burned and how much greenhouse gas they’ve emitted.

10) The Canada Solar Industries Association offers much information to help businesses and homeowners decide whether solar is appropriate for their power needs. Additionally, the Association offers a Canadian Solar Industry Directory that is helpful in considering and finding appropriate contractors (www.cansia.ca/directory/).

11) If a business is interested in installing a small wind turbine to generate power, the Canadian Wind Energy Association has a Web site (www.smallwindenergy.ca/en/SmallWind.html) dedicated to helping individuals make that decision. The Web site includes cost calculators, information on zoning considerations, manufacturers and dealers, and other pertinent facts.

12) As part of the 2001 agreement between the New England Governors and the Premiers of the Eastern Canadian Provinces to reduce greenhouse gases, Maine’s Governor John Baldacci began a “Carbon Challenge Initiative” (www.state.me.us/dep/oc/carbon.htm). Businesses and organizations can sign up to be part of the initiative and agree to reducing their mobile (e.g. automobile) and stationary (e.g. furnace) greenhouse gas emissions by the standards set by the Governors and Premiers. Being a part of this initiative will help distinguish the environmental commitment of tourism businesses.

13) Bangor Hydro (www.bhe.com) is the electricity transmission and delivery service for much of the Down East region. Bangor Hydro offers a selection of renewable power supplies. They also offer the ability to contribute monthly (or one-time donation on the Web site) to the Maine Renewable Resource Fund, a research and technology fund that invests in community and university research that will contribute to renewable energy technologies.

14) Eastern Maine Electric Co-op (EMEC) is the not-for-profit electric cooperative delivering power to Calais and 3,000 surrounding square miles. The Co-op offers free electric hot water heater blankets and low-flow shower heads. As a Touchstone Energy Cooperative, EMEC also partners with over 600 other electric co-ops nationwide to provide energy-saving information and programs. Extensive information about energy savings, including an energy use calculator and home energy audit, is available through a link at www.emec.com.
F. Air Pollution

Introduction
Air pollution is a very real concern in coastal Maine and New Brunswick with the threat of sea level rise associated with global warming and the damage to human health and the environment from mercury and ground level ozone pollution (basically smog). Despite this fact, however, much of the air pollution in this region is blown here from points to the south and west. This means that some of the most successful efforts to prevent air pollution in Down East Maine and Atlantic Canada involve investments in clean power plants and public transportation in places upwind, such as Boston, New York, Toronto, and Ohio.

Any improvements to air quality in Maine, however, can make a difference elsewhere in Canada. All tourism businesses can improve air quality by encouraging their visitors to reduce energy consumption, take public transportation where available, bicycle or walk to destinations, and take part in programs to offset the carbon emissions created by visitor travel to the region. The following are some tips and resources for tourism businesses to use to reduce air pollution.

Best Practices for All Sectors
- Use energy efficient lighting, appliances, and heating. See the Energy Conservation section page 42 or tips on where to find these items.
- Research public transportation options in your region. See the resources section below for a listing of some of the public transportation options in Down East Maine and Charlotte County, New Brunswick. Feature these options on a “How to get here” page on your Web site.
- Make your establishments friendly to bicyclists. Offer bicycle racks for parking and locked storage if the bicyclists will be staying overnight.
- Use environmentally friendly paints and solvents that have low volatile organic compound (VOC) content. When VOCs are released to the atmosphere, they become one of the components of ground level ozone.
- Drive less and purchase fuel efficient cars with low emissions. This will help prevent the release of carbon dioxide, which is one of the greenhouse gases causing global warming.
- Encourage visitors to offset their carbon emissions associated with their trip. There are many companies and organizations that will help visitors calculate the amount of greenhouse gases that they caused during their flights or vehicle travel times. Visitors can then pay these companies and organizations to invest in renewable energy projects proportionate to the amount of greenhouse gas emissions that
the visitor created. Link to some of these companies and organizations on your Web site and encourage visitors to take action. See the Resources section below for a location to find these Web sites.

**Education Resources**
- Clean Air-Cool Planet ([www.cleanair-coolplanet.org](http://www.cleanair-coolplanet.org)) has a good, basic introduction into what global warming is and how to get involved to combat it.

**Evaluation and Assessment Tools**
- Clean Air-Cool Planet ([www.cleanair-coolplanet.org/action/footprint.php](http://www.cleanair-coolplanet.org/action/footprint.php)) offers several calculators designed to help one calculate his/her “carbon footprint” or the amount of greenhouse gases that he/she produces in regular activities.

**Resources**
- The Maine Department of Transportation maintains the “Explore Maine” Web site ([www.exploremaine.org](http://www.exploremaine.org)) that lists transportation options by air, bike, bus, car, ferry, and train.
- In Hancock County visitors can fly commercially to the Bar Harbor/Hancock County airport and use the Island Explorer bus service ([www.exploreacadia.com](http://www.exploreacadia.com)) to reach many destinations on Mount Desert Island and in Acadia National Park. There are several other small airports in the region at which visitors can land in private planes. And, visitors can fly to Bangor, which has several commercial airlines and connect to the Down East and Canadian Maritime region via bus service.
- In addition to the Island Explorer, there are many bus companies traveling through the region. Visitors can take Down East Transportation’s regular bus service ([www.maine.gov/mdot/opt/transit/dti.php](http://www.maine.gov/mdot/opt/transit/dti.php)) to Bangor or to Ellsworth from many Hancock County towns. In Bangor or Ellsworth, visitors can connect with West’s Transportation ([www.westbusservice.com](http://www.westbusservice.com)) that travels through Down East Maine stopping in many towns. Pleasant Point Indian Reservation (207-853-2600) also offers a public bus that runs between the reservation and downtown Calais five days a week. Visitors can even connect to Charlotte County, New Brunswick by catching the Acadian bus lines ([www.acadianbus.com](http://www.acadianbus.com)) from the Greyhound Bus Terminal in Bangor. From Bangor, passengers have many travel options including commercial bus service to Boston by either Greyhound/Vermont Transit ([www.vermonttransit.com](http://www.vermonttransit.com)) or Concord Trailways ([www.concordtrailways.com](http://www.concordtrailways.com)), which also has a coastal route that stops in Searsport, Maine en route to Boston from Bangor.
- There are several ferry operations in Down East Maine and Charlotte County, New Brunswick. For a complete list, see page 27 (in the Marine Environments section).
G. Ecological Landscaping

**Introduction**
An important aspect of any tourism business is to ensure that the grounds and landscaping are attractive and welcoming to visitors. Good landscaping choices and practices can also have positive environmental benefits. Selecting native plant species helps create valuable habitat for wildlife species that reside in or visit the Gulf of Maine. Similarly, constructing roads and parking lots with erosion controls and designing ecologically sensitive lawns and gardens can reduce the amount of sand and silt that enters waterways, reduces water quality, and degrades habitat.

The following are important tips that tourism businesses and residents should consider when designing and maintaining landscaping. Also, please note many additional resources and tips in the Water Conservation section (page 26).

*The Lubec Cemetery and its magnificent Camperdown Elm, at sunset (J. East)*

**Best Practices for All Sectors**
Gardens and built features, such as sidewalks and driveways, need to multi-task. Your landscape needs to look good and be inviting to customers. But it can also direct customer traffic, enhance the environment, control runoff, protect from cold, and hide unsightly work areas. The following are several ways to make landscape multi-task in an ecologically friendly way:

- Place gardens and walkways so that they slow runoff and absorb water-soluble nutrients.
- Cut down on heavy feeders like lawns that may require additional feeding. This will reduce the need to fertilize thereby lowering costs and pollutants.
- Make use of native material. Many native plants survive in our area because they don’t need extra care and are not susceptible to local pests.
- Use your landscapes to hide work areas. Fences and plantings can hide trash bins and catch loose debris keeping it from entering public areas.
- Plan the placement of trees and evergreens to cut down on heating and cooling costs.
  - A deciduous tree planted on the west side of a building can cut down on cooling costs in the summer and allow welcomed afternoon sun in the winter.
  - Plant evergreen trees to block the north wind in the winter or evergreen shrubs to protect northern foundations.
Landscaping can also be used to attract or support local wildlife. Educate yourself on wildlife needs in your area and evaluate your needs.

- You and your guests may enjoy birds or butterflies but if your landscape attracts deer or bear this could become a health or safety concern.
- Use low voltage lighting. Aim lights down and use long wave length lights (above 580 NM). The three criteria that MUST be met for a fixture to be deemed “Wildlife Friendly Lighting” under the U.S. Fish and Wildlife Service Official Marine Turtle Lighting Course are: a) Keep it low (Fixtures should be mounted as low as practicable for the task); b) Keep it shielded and downward directed [Use only full cut-off fixtures (FCOs) or fixtures with the bulb/lamp/lens shielded from line-of-sight of the beach]; and, c) Keep it long [Use longer wavelength light sources such as red or amber light emitting diodes (LEDs), yellow “bug” lights, true red neon or filtering which filters short wavelengths and minimizes light scatter in the atmosphere. This is typically 580 nm or longer].
- As an overall practice, make sure the people you hire to maintain your landscape are qualified and understand your priorities. A great deal of planning and effort can be wiped away by unskilled or uninformed help.

**Education Resources**

**University of Maine Cooperative Extension (UMCE)**

- **Master Gardner trainings**: UMCE trains master gardeners, offers business marketing education and information regarding local food sources. The organization regularly holds educational opportunities available the general public. In Hancock County, Cooperative Extension offers at least one course on ecological landscaping -- using native plants, enhancing wildlife habitat, insect ecology, and integrated pest management. For more information contact the Hancock County Cooperative Extension Office, at (207) 667-8212 or in Maine 1-800-287-1479. Similar courses are offered in Washington County (call (207) 255-3345 or 1-800-287-1542 in Maine) and can be accessed via the Cooperative Extension Web site. ([www.umext.maine.edu](http://www.umext.maine.edu))

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**Kingsbrae Garden: Ecological Landscaping at its Finest**

With land donated by a garden-loving benefactor, the 27-acre Kingsbrae Garden was founded on three old estates to honor St. Andrews’ long heritage of beautiful gardens. Most of the construction and large projects are done by wheel barrow and hoe rather than heavy, soil compacting machinery. Right from the beginning, says Maureen McIlwain of Kingsbrae, being green was a priority. A garden this size needs a lot of compost to keep building up soil, so Kingsbrae struck a deal with the neighboring Fairmont Algonquin Hotel to relieve them of their kitchen refuse in exchange for helping build up the Garden’s compost supply. With small exceptions (such as the Rose Garden), very few pesticides are used on the grounds. Gravel, creeping thyme and bark mulches are used in most garden areas, to minimize evaporation and watering.

St. Andrews by-the-Sea, as the name implies, is reliant on the sea, and Kingsbrae Garden is no exception. The Garden’s fertilizers are chock full of seaweed from the Bay, and recently, the Garden started working with local salmon aquaculture operators to turn their fish farm refuse into fertilizers. They will use the fertilizer on their own gardens and also make it accessible to the public through their Garden Center where customers can purchase a large variety of perennials and seasonal plants.

Kingsbrae Garden also created a Therapy Garden
Gardening/landscaping publications: UMCE also maintains an online Web site for publications regarding native plant landscaping (http://extesnionpubs.umext.maine.edu). Publications of interest may include the following:

- **Gardening to Conserve Maine's Native Landscape: Plants to Use and Plants to Avoid:** Nonnative plants choke out native vegetation, reduce the food plants available for wildlife, and alter the behavior of native pollinators, plant-eating insects and fruit-eating birds. Learn how you can help preserve Maine's many habitats with this exhaustive chart of trees, shrubs, vines, ground covers, flowering perennials and ferns. 2003.

- **Native Plants: A 2002 Maine Source List:** How Maine will look 50 years from now depends greatly on what we choose to plant today. This bulletin contains a list of Maine nurseries and garden centers that sell native plants. All of these companies sell propagated native plants only, not plants dug from the wild. 2002.

- **Principles for Creating a Backyard Habitat:** This 8-page fact sheet explains nine principles for creating landscapes beneficial to wildlife and humans alike. Includes list of backyard wildlife species common in Maine. 2000.

- **Invasive Plants Threaten Maine's Natural Treasures:** This brochure introduces and promotes the 22-part "Maine Invasive Plants" series (item 2503). Describes the difference between "weeds" and "invasive plants"; explains where invasive plants come from and why they are a problem. Includes prevention steps you can take and a list of resources. Color photos, 2 pages, 2005.


**Resources**

- **Planning:** Information related to vegetative clearing in the shoreland zone has been adapted from standards outlined in a guide titled “Issue Profile – Clearing Vegetation in the Shoreland Zone” (2003) and can be found at www.maine.gov/dep/blwq/doestand/ip-szveg.htm. Again, because there is much variation between what each community regulates, stricter standards may apply and it is best to check with your municipal officials during the planning stage. Residents of the Unorganized Territories must contact the Land Use Regulatory Commission (LURC) to find out what is required: (207) 287-2631.

- **Demonstration sites** listed by the University of Maine Cooperative Extension and Hancock/Washington County Soil and Water Conservation Districts illustrate the use of native plants next door to a nursing home, with benches, level walkways, and free golf cart tours for residents. The Scents and Sensitivity Garden, where all plant labels are in Braille, has waist high raised beds with plants chosen specifically for the enjoyment of the visually impaired. At Christmas time, Kingsbrae Garden is a central feature of the town’s Winter Festival, with an incredible display of Christmas lights and music. A voluntary donation goes to the food bank, in lieu of admission.

Kingsbrae Garden was the first in its class in New Brunswick to become a "Certified Audubon Cooperative Sanctuary." Their Bird and Butterfly Garden, with special flora, shallow drinking troughs and other features certainly contributed to the award, but the staff also demonstrated they were maintaining a high degree of quality in environmental planning, wildlife habitat management, resource conservation, waste management outreach and education. The Fairmont Algonquin Golf Course also received this designation so a good part of St. Andrews is landscaped with local ecosystems in mind. Kingsbrae Garden has also met the standards to become a Fundy Recommended Experience (see page 73).
and best management practices to avoid erosion and nonpoint source pollution and to protect water resources.

1. Eastern Maine Native Plant Arboretum (UM Cooperative Extension) located at 307 Maine Avenue in Bangor. An outdoor classroom for the study of native tree and shrub species best suited for managed landscapes. For more information contact Marjorie Peronto, Hancock County Cooperative Extension Office in Ellsworth. 667-8212.

2. Demonstration Garden at the Hancock County Cooperative Extension Office, 63 Boggy Brook Road, Ellsworth, ME. The latest addition to this unique outdoor classroom is a Native Plants for Wildlife Garden, designed with eight different types of fruiting shrubs that provide food and cover for birds and small mammals. There are also extensive perennial gardens, raised bed vegetable gardens and a hoop house for Master Gardener projects.

3. Branch Pond Erosion Control Demonstration Sites. Six sites around Branch Pond in Ellsworth that demonstrate best management practices (BMPs) for controlling erosion and improving water quality. Each site demonstrates methods of construction that support and enhance the natural surroundings, use natural materials, are sustainable and maintainable and which eventually blend back into the natural landscape. For a brochure and more information contact Hancock County Soil and Water District, (207) 664-7496.

4. Several new businesses in Washington County have worked with Washington County Soil and Water Conservation District to develop strategies for effectively dealing with building/driveway runoff and native plant landscaping. For more information contact: Nathan Pennell, District Manager, (207) 255-4659 or (207) 255-3995 e-mail nate.pennell@verizon.net.

5. University of Maine Rain Garden at 495 College Ave, Orono. Research shows that rain gardens are remarkably effective at treating phosphorus from stormwater runoff - on an individual or larger commercial scale. This rain garden includes plantings of trees, shrubs, perennials, and groundcover to stabilize eroding slopes, a rock-lined trench to carry water from paved areas, and a rain garden to capture and filter runoff. For more information visit: www.raingardens.org and www.umaine.edu/waterquality/landscapes.htm.


- **Growing Concern Farm and Nursery:**
  Landscaping, Design and Maintenance - Richard East, Horticulturist and Owner. 207-454-0183 PO Box 1328 Calais, ME 04619 Lic.# NUR000002629 www.growingconcern-maine.com

- **The Native Plant Information Network** (www.wildflower2.org/) has a goal to assemble and

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*Landscaping with local plants adds color and a local feel. Top: Blueberries (B. Cassidy) Bottom: Seaside Rose (T. Gamache)*

53
disseminate information that will encourage the cultivation, conservation, and preservation of wildflowers and other native flora throughout North America. The network is a program of the Lady Bird Johnson Wildflower Center whose mission is to increase the sustainable use and conservation of native wildflowers, plants, and landscapes. The Wildflower Center is a botanical garden in Austin, Texas, dedicated to native plants, with a vision to preserve and restore the natural beauty and biological richness of North America by inspiring people to love the land. The Wildflower Center (www.wildflower.org) describes programs for Landscape Restoration, Plant Conservation, Horticulture, and Education, and, of greatest utility to businesses doing landscaping, they provide “regional factpacks” (http://wildflower.utexas.edu/clearinghouse/factpacks.php) that recommend native plant material, native plant and seed suppliers and landscapers in individual regions.

- **Agritourism World** is a national online clearinghouse of information related to developing and promoting an agritourism business. Agritourism world invites qualified businesses to list their Web site at no cost; there currently are no farms listed from the State of Maine. [www.agritourismworld.com](http://www.agritourismworld.com)

- **Local and Organic farms:** This Resource Guide’s chapter on Green Purchasing (page 67) includes listings for local and organic farming resources.
H. Waste Management and Recycling

Introduction
People operating businesses in our region tend to be thrifty by nature and often are quite familiar with the concept of recycling or reusing materials, but there is so much more that can be done to manage waste! Recycling, composting and properly handling hazardous waste are not only good for the environment, but represent another opportunity to tap into an increasingly choosy clientele. Ultimately, proper disposal of all types of waste creates an increased interest in your business, helps promote the local availability of recycled products, and saves money.

Proper waste management takes a bit of planning and this section is intended to help you wade through the options, types, and regulations. Because there is so much variation in the management of different types of materials between municipalities and regions, it is important to contact your municipality with your recycling and waste-management questions. Use of regional facilities often is limited to certain member municipalities and there may be many changes in services and/or regulations over the course of a year; therefore, check with them often.

Kendall Farm Cottages: Reducing Waste and Pollution

Kendall Farm cottages are located on a 5th generation farm on Boyden Lake in Perry. There is a 200-year-old farmhouse, a large barn, and two old family cemeteries on the property. The farm is a wonderful piece of history, treasured by family and visitors alike. So it is no surprise that the Kendall family is working to maintain the pristine quality of the farm and the lake, which are the main attractions of the cottages.

They use only environmentally friendly cleaning products, compost, and recycle everything. They sell environmentally friendly bath, body, and kitchen products from the local natural food store, promote locally made arts and crafts, and sell homemade fruit and vegetable preserves. They grow their own vegetables, buy locally grown vegetables and meat as much as possible, and buy many items in bulk. This all helps keep packaged products to a minimum, thereby reducing waste.

They do not allow motorboats on the lake from their cottages, but do have human powered boats available for visitor’s use. They do not use a clothes dryer, but use a clothesline. They use fans and the Maine air for cooling in summer; wood stove for heating when the Maine air is a little too cool.

They encourage bathing in the lake or sauna, and drive energy efficient vehicles. At Kendall Farm Cottages, they are doing their part to reduce waste and pollution and to keep the world around them green and healthy.

A table on page 61 outlines the location of all recycling centers in our region, including what materials they accept.
(S. Churchill)
### Comparing Waste Management Requirements across the Border

There are many categories of waste and the laws vary greatly depending on the quantity of material produced, whether you are a business or homeowner, and where you are located. Although there are some similarities across the border, the rules can be quite confusing at times. The following table highlights the general definitions and management guidelines for each region.

<table>
<thead>
<tr>
<th>Type of Material</th>
<th>Maine</th>
<th>New Brunswick</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal Solid Waste (MSW):</td>
<td>Management decisions made at the municipal level.</td>
<td>Management decisions made at the municipal level.</td>
</tr>
<tr>
<td>Non-hazardous waste produced at household level in relatively small quantities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Universal Waste (UW):</td>
<td>Recycling required of homeowners and businesses. Municipalities required to provide options to homeowners only.</td>
<td>Not currently mandatory but strongly encouraged.</td>
</tr>
<tr>
<td>Commonly used items that contain a relatively small amount of hazardous material such as fluorescent light bulbs, rechargeable batteries, and mercury thermometers.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electronic Waste (e-waste):</td>
<td>Recycling computer and TV monitors required of homeowners and businesses. Municipalities required to provide options to homeowners only.</td>
<td>Not currently mandatory but strongly encouraged.</td>
</tr>
<tr>
<td>Common electronic items, such as computers and televisions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household Hazardous Waste (HHW):</td>
<td>Required of businesses but voluntary for households; often through regionally-held HHW collections which may or may not be supported by individual municipalities.</td>
<td>Not currently mandatory but strongly encouraged.</td>
</tr>
<tr>
<td>Any material considered to be toxic, flammable, corrosive or reactive such as pesticides, cleaning materials, pool chemicals, non-latex paint.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recyclables:</td>
<td>Management decisions made at municipal level. Municipal and regional facilities scattered throughout the region. Businesses with 15+ employees required to recycle cardboard and office paper.</td>
<td>Recycling Depots located in various regions where residents may drop off recyclable materials. Recycling is strongly encouraged but not mandatory.</td>
</tr>
<tr>
<td>Items that can be converted into raw materials, including glass, cardboard, newspapers and magazines, metals, and plastic.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compost:</td>
<td>Voluntary backyard composting strongly encouraged.</td>
<td>Voluntary backyard composting encouraged.</td>
</tr>
<tr>
<td>Capturing organic materials such as kitchen scraps or lawn clippings.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Best Practices
Best Practices for All Sectors
Recycling Hierarchy: Reduce, Reuse, Recycle
- Reduce the amount and toxicity of trash discarded.
- Reuse containers and products; repair what is broken or give it to someone who can repair it.
- Recycle as much as possible; purchase products with recycled content.

Handling Household Hazardous Waste
- Buy only the quantities you need.
- Keep products in original containers and store them according to label directions.
- Avoid skin contact and vapors.
- Never mix different products as they can lead to violent chemical reactions.
- Never transport materials in the passenger compartment of your vehicle.

Using Non-Hazardous Cleaning Products
- Baking soda: Cleans, deodorizes, softens water, scours.
- Soap: Unscented soap in liquid form, flakes, powders or bars is biodegradable. Avoid petroleum distillates.
- Borax (sodium borate) cleans, deodorizes, disinfects, softens water, cleans wallpaper, painted walls and floors.
- White vinegar: Cuts grease, removes mildew, odors, some stains and wax build-up.
- Isopropyl Alcohol: An excellent disinfectant.
- Cornstarch: Can be used to clean windows, polish furniture, shampoo carpets and rugs.
- Citrus solvent: Cleans paintbrushes, oil and grease, and some stains.

Septic Tank Management
Many rural businesses rely on septic tanks for water-waste disposal, yet owners are not aware of the sensitive relationship between material going down the drain and our friendly processors down below! A healthy septic system effectively treats water by separating solids from liquids and then draining the remaining effluent into the ground while bacterial decomposition of larger particles takes place. A failed septic system can lead to the introduction of untreated wastewater and sewage into groundwater or nearby streams and water bodies. For more information, see: “Septic System Inspection: Protect your investment by minimizing the risk of costly system replacement or repair”
The Department of Environmental Protection publishes a Septic System Maintenance brochure with the (www.mainerealtors.com/DocumentsYouAskFor/DEP%20Brochure.pdf) with useful maintenance tips such as:

- Know the exact location of your leach field, and keep it free from root growth and parked vehicles.
- Have your septic tank pumped out EVERY 3-5 years or more frequently for larger families.
- Conserve Water! Too much water in a septic system may cause solid wastes to flow into and clog leach fields.
- Stagger laundry days. Too much water can shock-load your system and cause a premature failure.
- Don’t use a garbage disposal.
- Never dispose of chemicals like paint or petroleum products through drains or toilets.
- Collect cooking grease in a can and toss the grease in the trash, NEVER down the drain.
- Limit the use and disposal of bleach, disinfectants, and other harsh chemicals.
- Don’t use septic system cleaners.
- Plan parties and gatherings to include a temporary portable toilet.

Gardening related
See below on page 62 for tips on composting and dealing with lawn and garden pesticides.

Best Practices for Restaurants

- **Restaurant Guide to Waste Reduction and Recycling.** This publication, created by the California Integrated Waste Management Board is full of information applicable to restaurants in any location, including purchasing tips. [www.ciwmb.ca.gov/Publications/BizWaste/44198016.pdf](http://www.ciwmb.ca.gov/Publications/BizWaste/44198016.pdf)
- **Best Management Practices for Fats, Oils, and Grease.** Published by the North Carolina Department of Environmental and Natural Resources useful for restaurants and other food-related establishments, [www.p2pays.org/ref/05/04281.pdf](http://www.p2pays.org/ref/05/04281.pdf).

Education Resources

General Education Resources

- **EPA Educational Resources for Teachers.** Activities to engage students in recycling and waste management, [www.epa.gov/epaoswer/education/teachers.htm](http://www.epa.gov/epaoswer/education/teachers.htm).
- **Staples Recycling for Education.** Staples will pay participating schools $3 for printer toner cartridges to raise money for school-related programs, [https://staplesrecyclefored.com/](https://staplesrecyclefored.com/).
- **Chewonki Foundation:** Provides environmental education programs and publishes free curriculum, on K-12 waste management (fits Maine Learning Results) [www.chewonki.org/pathways_waste.asp](http://www.chewonki.org/pathways_waste.asp).

*Providing visitors with easy and safe recycling and waste collection systems adds value to the experience you offer. (Friends of Acadia)*
Useful Organizations
The following organizations all providing some level of waste management or recycling-related technical information.

- **State Planning Office (SPO) Department of Waste Management and Recycling**: The SPO’s Department of Waste Management and Recycling offers recycling and waste management assistance to help improve recycling rates throughout the State. Services offered include (but are not limited to) technical training, school education programs, hazardous and special waste collection assistance, and locating capital investment resources. The Department organizes “Maine Recycles Week” in November of each year, engaging school children in year-round recycling education initiatives. SPO encourages businesses to attend workshops or contact them with inquiries about improving their waste management and recycling strategies. Among the great amount of information available found on their Web site is recycling data for each Maine community, [www.state.me.us/spo/recycle/](http://www.state.me.us/spo/recycle/).

- **Department of Environmental Protection (DEP) Bureau of Remediation and Waste Management**: The DEP oversees enforcement and compliance related to hazardous, special, and municipal waste, but also offers training programs and provides information related to motor vehicle recycling, waste oil management, lead abatement, brownfields, asbestos removal, and many other types of waste-related issues. They will respond to emergency spills or respond to inquiries about proper disposal practices. Their Web site includes applicable laws, waste management strategies, and various other disposal resources, [www.maine.gov/dep/rwm/](http://www.maine.gov/dep/rwm/).

- **Maine Resource Recovery Association (MRRA)**: The MRRA is non-profit organization that provides recycling marketing assistance and educational programs for Maine municipalities, businesses and individuals. Multiple education programs are held each year on topics such as composting, safety, marketing strategies, innovative recycling strategies, and re-use opportunities. Programs are open to anyone from the general public. More information can be found at [www.mrra.net](http://www.mrra.net).

- **Hancock County Planning Commission (HCPC)**: In recent years, grants from the US Department of Agriculture Rural Utilities Services Program have allowed the HCPC to offer waste management and recycling-related technical assistance to Hancock County member municipalities, businesses, and individuals. When funding permits, the agency offers community education programs, compost assistance, and regularly organizes annual household hazardous waste collections on behalf of participating municipalities for the greater Ellsworth region in collaboration with the University of Maine Cooperative Extension and the greater Mount Desert Island region, [www.hcpcme.org](http://www.hcpcme.org).

- **Washington County Council of Governments (WCCOG)**: WCCOG offers planning-related assistance to members located throughout Washington County. The WCCOG organized the first household hazardous waste collection in Washington County in 2005 and hopes to secure funds to provide another collection in the future, [www.wccog.net](http://www.wccog.net).

- **South West Solid Waste Commission (SWSWC), New Brunswick**: The SWSWC, located at the Hemlock Knoll Sanitary Landfill in Lawrence Station, serves the South West region of New Brunswick, [www.swswc.com/index.html](http://www.swswc.com/index.html).

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**Solid Waste Management Hierarchy**

The US EPA has developed a four-tiered solid waste management hierarchy, ranking the most preferable ways of addressing solid waste. Source reduction or waste prevention, including reuse, is the preferred approach (tier 1), followed by recycling (tier 2). Waste that cannot be prevented or recycled can be combusted with energy recovery (tier 3). Tier 4 is landfilling or incineration without energy recovery.

More information can be found on the EPA Web site at [www.epa.gov/epaoswer/non-hw/muncpl/faq.htm#1](http://www.epa.gov/epaoswer/non-hw/muncpl/faq.htm#1).
**Hospitality, Leisure, Sport and Tourism Network.** This is a British Web site with links to several publications specific to sustainable waste management in the hospitality, leisure, sport and tourism industries, [www.hlst.heacademy.ac.uk/resources(guides/waste.html)](http://www.hlst.heacademy.ac.uk/resources/guides/waste.html).

**Evaluation and Assessment Tools**

- The State Planning Office Waste Management & Recycling Program can provide technical assistance, including waste audits, to businesses wishing to start a recycling program. For more information, contact them toll-free at 1-800-662-4545.
- Environmental Product Environmental Assessment Tool (EPEAT) is a system to help evaluate, compare and select desktop computers, notebooks and monitors based on their environmental attributes. It provides a consistent set of performance criteria for the design of products, and provides an opportunity for manufacturers to secure market recognition for efforts to reduce the environmental impact of its products, [www.epeat.net](http://www.epeat.net/).

**Resources**

**Waste management in general**

- **National Waste Prevention Coalition.** Junk mail reduction campaign and the computer disk recovery project – extensive links to waste reduction and waste reuse sites, [www.metrokc.govnwpc/](http://www.metrokc.govnwpc/).
- **Restaurant waste reduction.** A fact sheet published by the North Carolina Department of Natural Resources Division of Pollution Prevention and Environmental Assistance, [www.owr.ehnr.state.nc.us/ref/03/02790.pdf](http://www.owr.ehnr.state.nc.us/ref/03/02790.pdf).

- **The Waste Management Services Directory** is a comprehensive list of companies providing recycling services in the State of Maine, [http://portalx.bisox.state.me.us/pls/spo_wm/spwmdev.directory.main_page](http://portalx.bisox.state.me.us/pls/spo_wm/spwmdev.directory.main_page).

- **Best Management Practices Guidebook for Special Event-Generated Waste in Rural Communities.** This guidebook was produced by the Northeast Recycling Council, Inc. in 2006 with funding from the US Dept. of Agriculture Rural Development Solid Waste Management Program, [www.nerc.org/adobe/Special_Event_BMPs_FINAL.pdf](http://www.nerc.org/adobe/Special_Event_BMPs_FINAL.pdf).

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_Bulky items recycling (dishwashers, refrigerators etc) (S. Churchill)_
Recycling

- For a complete list of recycling facilities in the three counties, please refer to the table at the end of this section on page 64.

- Northeast Recycling Council. Ten states united for recycling market development. Many programs throughout the Northeast, including electronics and newsprint initiatives. Produces a recycling business assistance guide which provides technical and financial resources for recycling market development. [www.nerc.org](http://www.nerc.org)

- Freecycle ([www.freecycle.com](http://www.freecycle.com)) is a Web-based resource for those who want to advertise recycled items free for the taking (i.e., furniture, baby items, building materials) rather than throw them away. Regional groups can be found at the following Web locations:
  - Washington County: [www.groups.yahoo.com/group/calaisrecycle/](http://www.groups.yahoo.com/group/calaisrecycle/)
  - Hancock County: [www.groups.yahoo.com/group/freecyclehancock/](http://www.groups.yahoo.com/group/freecyclehancock/)
  - Edmundston, New Brunswick: [www.groups.yahoo.com/group/edmundstonfreecycle/](http://www.groups.yahoo.com/group/edmundstonfreecycle/)
  - Moncton, New Brunswick: [www.groups.yahoo.com/group/MonctonFreecycle/](http://www.groups.yahoo.com/group/MonctonFreecycle/)


- Global Recycling Network, a global clearinghouse for recyclable materials, includes everything from old tires and computers to natural materials. [www.grn.com](http://www.grn.com)

- Institution Recycling Network, works with over 125 colleges and universities, hospitals, and other institutions throughout New England to improve the performance and economics of their recycling programs. [www.ir-network.com](http://www.ir-network.com)

- Uncle Henry’s. This weekly publication from Northern New England lists mostly second-hand items people advertise for swap, buy, or sell. It includes a section titled “Free for the taking.” [www.unclehenrys.com/Common/Content/Articles/MaineLiving.aspx](http://www.unclehenrys.com/Common/Content/Articles/MaineLiving.aspx)

- Craig’s List. Craig’s List is an international community with links to jobs, apartments, and other resources such as second-hand items available for sale or free. [http://maine.craigslist.org/](http://maine.craigslist.org/) and [http://newbrunswick.craigslist.org/](http://newbrunswick.craigslist.org/)

Hazardous Waste

- The Environmental Depot, Maine. Maine’s first permanent Household Hazardous Waste drop-off facility located in Lewiston, is open (first and third Saturdays of each month between April and November) to all Maine residents for a fee. [www.envdepot.com/](http://www.envdepot.com/)

- Lawrence Station, New Brunswick. A permanent Household Hazardous Waste depot is available at the Hemlock Knoll Landfill Site in Lawrence Station on the last Saturday of each month between the hours of 8:00 to 12:00 or by appointment. There is no cost for homeowners to drop off HHW; industrial and commercial waste is not accepted. Items not accepted at the site include: radioactive materials, explosives, fireworks, pathological/biological waste, unknown...
Chapter 3. Sustainable Tourism Resources
H. Waste Management

materials, ammunition, 25+ liters of motor oil, and medications or prescriptions. The Hemlock Knoll Sanitary Landfill Site is located at 5749, Route #3 - Lawrence Station.

**Electronics and Cell Phone Recycling:**
- **Maine Department of Environmental Protection:** This link takes you to more links with information relating to cell phone recycling resources throughout the State.
  [www.maine.gov/dep/rwm/recycle/cellphones.htm](http://www.maine.gov/dep/rwm/recycle/cellphones.htm)
- **Rechargeable Battery Recycling Program** collects rechargeable batteries and cell phones at no cost.
  [www.rbrc.org/call2recycle/](http://www.rbrc.org/call2recycle/)
- **Electronic Industries Alliance:** A consumer education initiative that directs users to local charities, schools, neighborhood and community groups, and other local and national recycling programs that collect used electronics. [www.eliac.org](http://www.eliac.org)

**Composting**
Composting can be active or passive and just about any type of organic material can be used in the process. Some people prefer fancy bins that can be purchased at your local garden store; others simply dig a pit or use inexpensive materials to build their own. These basic steps will help speed up the amount of time until you have a finished product that can be used in your garden or lawn:

- Feed your pile with about 25 parts carbon-containing material (brown materials such as dried leaves, wood chips or straw) to 1 part nitrogen (green materials such as fresh grass clippings, seaweed, animal manure).
- Mix materials to evenly distribute the micro-organisms and allow a healthy carbon-nitrogen balance.
- Your pile should allow for some type of air flow to let it “breathe.”
- Water your pile each time you add more material or mix the pile.

**Composting Resources**
- **Coast of Maine Organic Products, Inc.** operates a composting facility in Washington County. They work with salmon and blueberry processors and others in both Maine and New Brunswick to create organically certified plant food and compost-based soil. Kelp, shrimp, crab, and lobster are all part of the ingredients. For more information, see: [www.coastofmaine.com/](http://www.coastofmaine.com/)
- **Maine Master Gardeners.** Conference, publications, and training programs, [www.umext.maine.edu/mgmaine/welcome.htm](http://www.umext.maine.edu/mgmaine/welcome.htm).
- **The Maine Composting School.** Located in Monmouth, this school offers comprehensive and intensive composting programs, this is a collaboration of the Maine State Planning Office, Department of Environmental Protection, University of Maine Cooperative Extension, and the Department of Agriculture, Food and Rural Resources, [www.composting.org/](http://www.composting.org/).
- **The US Composting Council** is involved in research, education, and expanding compost markets, [www.compostingcouncil.org/index.cfm](http://www.compostingcouncil.org/index.cfm).
- **Composting Council of Canada** serves as the central resource and network for the composting industry in Canada and, through its members, contributes to the environmental sustainability of the communities in which they operate, [www.compost.org](http://www.compost.org).
- **Humusphere:** links composting and sustainable communities, [www.composter.com](http://www.composter.com).
• **Worm Digest.** Contains many articles related to the value of “vermicomposting”, or composting with worms, [www.wormdigest.org](http://www.wormdigest.org).

### Lawn and Garden Pesticides

Laws related to the purchase and disposal of pesticides vary according to the type of material and user. For more information, see the following:

- **Maine Board of Pesticide Control.** Information on Maine pesticide standards (including obsolete pesticide disposal or any pesticide material), who to contact in case of poisoning, integrated pest management strategies, standards for indoor application, and more. [www.maine.gov/agriculture/pesticides/](http://www.maine.gov/agriculture/pesticides/).

- **University of Maine Cooperative Extension** for the latest information on pests and pest control recommendations. [www.umext.maine.edu/topics/pest.htm](http://www.umext.maine.edu/topics/pest.htm)

- **Maine Department of Environmental Protection.** Pesticide and other hazardous materials spill response. [www.maine.gov/dep/rmw/index.htm](http://www.maine.gov/dep/rmw/index.htm) or (800) 452-4664.

- **Poison Control Center:** 24-hour hotline for information on poisoning, (800) 222-1222.

- **Maine Department of Agriculture.** The Obsolete Pesticide Program is a free program established in the State of Maine to help homeowners safely dispose of obsolete pesticides. [www.maine.gov/agriculture/pesticides/public/obsolete.htm](http://www.maine.gov/agriculture/pesticides/public/obsolete.htm).

Until you are able to take advantage of the collection program, sound storage practice remains the best—and only—way to prevent an environmental or health crisis from occurring in your backyard. Some good practices for storage, transport and use of these products follows:

<table>
<thead>
<tr>
<th>Handling Pesticides</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Storage</strong></td>
</tr>
<tr>
<td>Keep pesticides high, dry and locked up away from children and pets.</td>
</tr>
<tr>
<td>Dry materials should be free of moisture, wrapped in heavy duty plastic bags.</td>
</tr>
<tr>
<td>Liquid materials in glass bottles in good condition require no special attention other than to store beyond reach of children.</td>
</tr>
<tr>
<td>Rusting metal cans must be wrapped in plastic bags and placed into rubber or plastic trash containers. Surround wrapped pesticides with kitty litter, newspaper, vermiculite or other absorbent material. Be sure secondary containers have labels identifying contents.</td>
</tr>
<tr>
<td>If a bottle, bag or other container leaks, call the Department of Environmental Protection for advice on proper cleanup.</td>
</tr>
<tr>
<td><strong>Transport</strong></td>
</tr>
<tr>
<td>Wrap dry materials in plastic bags and place in cardboard cartons or plastic buckets. Liquids must be put into plastic containers with newspaper.</td>
</tr>
<tr>
<td>Never transport pesticides in cab or interior of vehicle. Use truck’s bed or car’s trunk.</td>
</tr>
<tr>
<td>Attach labels to containers. Unlabeled materials will not be accepted at the collection site.</td>
</tr>
<tr>
<td>Brace items in your vehicle’s bed or trunk to prevent shifting while en route.</td>
</tr>
<tr>
<td>Cover loads in open trucks in case of rain.</td>
</tr>
<tr>
<td>Sign both copies of “shipping papers.” Keep one copy in vehicle and the other on yourself in case an accident requires you leave vehicle to inform authorities. Note phone numbers for fire and police.</td>
</tr>
<tr>
<td>Drive directly to pesticide collection site after you load your vehicle.</td>
</tr>
<tr>
<td>Drive carefully, please! You are responsible for any spills and their subsequent clean up and restoration costs.</td>
</tr>
<tr>
<td><strong>Use</strong></td>
</tr>
<tr>
<td>Buy the right product only in quantities needed to do a given job.</td>
</tr>
<tr>
<td>Make sure the product you buy controls the pest. If the pest is not listed on a product’s label, the product’s not for you!</td>
</tr>
<tr>
<td>Avoid volume and buy-one-get-one-free promotions. The dollar or two saved today can cost hundreds later in hazardous waste disposal costs. Surplus pesticides can be a storage problem as well.</td>
</tr>
<tr>
<td>Keep products in good condition. Don’t let liquids freeze or moisture damage dry materials.</td>
</tr>
<tr>
<td>Give recently purchased pesticides you no longer need to someone who does. The best way to dispose of a pesticide is to use it according to its labeled directions.</td>
</tr>
</tbody>
</table>
Waste Management Section Addendum:
Recycling Centers

With no base of funding to support waste management programs, efforts to address particular waste issues are largely grant driven. For instance, in Washington County, technical assistance was provided to municipalities to set up mandatory Universal Waste collection systems through US Department of Agriculture grants received by the Eastern Maine Development Corporation. As well, the first ever Household Hazardous Waste Collection was held in two locations, Calais and Machias, through the efforts of the Washington County Council of Governments and funds provided by participating towns and the State Planning Office.

There are no countywide waste management programs in the region. However there are many regional waste, recycling and transfer stations as listed below (for Maine, these are identified by the Maine State Planning Office Waste Management and Recycling Department).

Charlotte County, New Brunswick: Recycling Facilities

<table>
<thead>
<tr>
<th>Recycling depots in the region collect paper, cardboard and #1 and #2 plastic. With the exception of Fundy High School, recycling depots located in local schools is for their use only. According to the South West Solid Waste Commission’s (SWSWC) Web site (<a href="http://www.swswc.com/html/about.html">http://www.swswc.com/html/about.html</a>), recycling depots may be found in the following locations throughout Charlotte County, New Brunswick:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• St. Stephen - Price Chopper on King St; Super Store</td>
</tr>
<tr>
<td>• Milltown - across from St. Stephen's Roman Catholic Church</td>
</tr>
<tr>
<td>• St. Andrews - Behind WC.O'Neill arena in parking lot</td>
</tr>
<tr>
<td>• St. George - Fundy High School</td>
</tr>
<tr>
<td>• Pennfield - Fire Hall</td>
</tr>
<tr>
<td>• Deer Island - Ferry Landing</td>
</tr>
<tr>
<td>• Blacks Harbour – Keith's Building Supplies</td>
</tr>
<tr>
<td>• Campobello - Co-Op parking lot</td>
</tr>
<tr>
<td>• Chamcook - Opposite Atlantic Salmon Federation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Following depots are also served by the SWSWC in New Brunswick:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Harvey - behind Post Office</td>
</tr>
<tr>
<td>• McAdam - opposite Lions Club</td>
</tr>
<tr>
<td>• Canterbury - Horseshoe pit</td>
</tr>
<tr>
<td>• Meductic - By ball field</td>
</tr>
</tbody>
</table>

For more information, SWSWC can be contacted at:
P.O. Box 70
St. Stephen, NB
E3L 2W9
crww@nbnet.nb.ca
(506) 466-7830
(800) 561-5615 - toll free
(506) 466-7833 (fax)

Key for Maine Facilities Tables (on next page)

<table>
<thead>
<tr>
<th>MUNICIPAL OFFICIALS</th>
<th>CM=City Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>TM=Town Manager</td>
<td></td>
</tr>
<tr>
<td>AA=Admin. Ass't.</td>
<td></td>
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<tr>
<td>RC=Recycling Coord.</td>
<td></td>
</tr>
<tr>
<td>C=Solid Waste or Recycling Coord.</td>
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</tr>
<tr>
<td>PW=Public Works Department</td>
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<tr>
<td>S=Selectmen</td>
<td></td>
</tr>
<tr>
<td>P=Town Planner</td>
<td></td>
</tr>
<tr>
<td>TS=Transfer Station Attendant</td>
<td></td>
</tr>
<tr>
<td>SW=Solid Waste Manager</td>
<td></td>
</tr>
<tr>
<td>DOM=Dir. of Operations &amp; Maintenance;</td>
<td></td>
</tr>
<tr>
<td>GM=General Manager</td>
<td></td>
</tr>
<tr>
<td>ED=Executive Director</td>
<td></td>
</tr>
<tr>
<td>TC=Town Clerk</td>
<td></td>
</tr>
<tr>
<td>D=Director</td>
<td></td>
</tr>
<tr>
<td>TA=Town Administrator</td>
<td></td>
</tr>
<tr>
<td>SC=Secretary</td>
<td></td>
</tr>
<tr>
<td>M=Manager</td>
<td></td>
</tr>
<tr>
<td>SP=Superintendent</td>
<td></td>
</tr>
<tr>
<td>PLAS=Plastics</td>
<td></td>
</tr>
<tr>
<td>OM=Other Materials</td>
<td></td>
</tr>
<tr>
<td>CPOST=Yard Waste Composting</td>
<td></td>
</tr>
<tr>
<td>FOOD=Food Waste, Animal Feed or Composting</td>
<td></td>
</tr>
<tr>
<td>BB=Bargain Barn/Exchange Centers</td>
<td></td>
</tr>
<tr>
<td>TIRES=Tires</td>
<td></td>
</tr>
<tr>
<td>CDD=Construction/Demolition Debris</td>
<td></td>
</tr>
<tr>
<td>WW=Wood Waste</td>
<td></td>
</tr>
<tr>
<td>BY=Backyard Composting Program</td>
<td></td>
</tr>
<tr>
<td>OC=Other Compost</td>
<td></td>
</tr>
<tr>
<td>OIL=Motor Oil</td>
<td></td>
</tr>
<tr>
<td>PVC=PVC Plastic</td>
<td></td>
</tr>
<tr>
<td>TBKS=Telephone Books</td>
<td></td>
</tr>
</tbody>
</table>
### Hancock County, Maine: Regional Centers

**Blue Hill Region** (6,605)
- **Towns**: Blue Hill, Brooklin, Brooksville, Sedgwick, Surry
- **Contact**: John Bannister, S
- **P.O. Box**: 412, Blue Hill, ME 04614
- **Phone**: 374-5458
- **Facility**: Blue Hill/Surry Town Line – Rt. 172
- **Materials**: OCC, ONP, OMG, HDPE, MET, TIRES, CDD, WW, BB

**Bucksport** (7,750)
- **Towns**: Bucksport, Orland
- **Contact**: Roger Raymond, TM
- **P.O. Box**: X, Bucksport, ME 04416
- **Phone**: 469-7368
- **Email**: bucksport@acadia.net
- **Facility**: Central St. (9-5)
- **Materials**: OCC, ONP, RMP, GLSS, MET, TIN, HDPE, PET, OM, FOOD, BB, CDD, WW

**Coastal Recycling** (8,803)
- **Towns**: Franklin, Gouldsboro, Hancock, Harrington, Sorrento, Sullivan, Winter Harbor
- **Contact**: Joyce Levesque, GM
- **Phone**: 422-6766
- **Facility**: W (7-4); Th (8-4) Sat (8-4)
- **Materials**: OCC, ONP, RMP, HDPE, PLAS, GLSS, ALUM, OP, PET, TIN, MET

**EMR Region** (4,865)
- **Towns**: Southwest Harbor, Tremont, Trenton
- **Contact**: Ben Worcester III, M
- **P.O. Box**: 787, Southwest Harbor, ME 04679
- **Phone**: 244-9033
- **Email**: bcw@midmaine.net
- **Facility**: M-F (8-5); Sat (8-3)
- **Materials**: OCC, RMP, GLSS, MET, ALUM, TIN, HDPE, FOOD, CPOST, BB, CDD, WW

**Union River Joint Solid Waste Management District** (773)
- **Towns**: Aurora, Amherst, Great Pond, Osborn, Waltham
- **Contact**: Steve Jordon, RC
- **Phone**: 584-5581
- **Materials**: MET, OM

It should be noted that the Acadia Disposal District (ADD) is a quasi-municipal association that currently is exploring opportunities for increased waste management and recycling efficiencies. The association does not own a facility or have a joint contact for waste or recycling management services. As of January, 2007, members of the ADD include the towns of Cranberry Isles, Mount Desert, Tremont, Trenton, and Southwest Harbor. The committee Chairman, Tony Smith, can be contacted at 276-5743.

### Hancock County, Maine: Municipal Programs

**Town: Bar Harbor**
- **Contact**: Chip Reeves, D
- **135 Ledgelawn Ave. Bar Harbor, ME 04609
- **Phone**: 288-4681
- **Email**: pwdirector@barharbormaine.gov
- **Facility**: Ledgelawn Ave; W (8:30-4)
- **Materials**: OCC, RMP, GLSS, MET, HDPE, BY

**Town: Castine**
- **Contact**: Dale Abernethy, TM
- **P.O. Box**: 204, Castine, ME 04421
- **Phone**: 326-4502
- **Email**: dale.abernethy-castine@verizon.net
- **Facility**: Mon (7-3); Tues – Fri (12-1); Sun (12-3)
- **Materials**: OCC, ONP, GLSS, MET, TIN, HDPE

**Town: Cranberry Isles**
- **Contact**: Ben Worcester III, M
- **P.O. Box**: 787, Southwest Harbor, ME 04679
- **Phone**: 244-9033
- **Email**: emr@midmaine.net
- **Materials**: OCC, RMP, GLSS, MET, TIN, HDPE, BB, CDD, WW

**Town: Dedham**
- **Contact**: Barbara Cox, FD
- **2073 Main Rd., #A, Dedham, ME 04429
- **Phone**: 843-6217
- **Email**: treasurer@dedhamme.us
- **Materials**: OCC, RMP, GLSS, MET, ALUM, TIN, HDPE, BB, CDD, WW, OM

**Town: Deer Isle**
- **Contact**: Neville Hardy, S
- **P.O. Box**: 627, Deer Isle, ME 04627
- **Phone**: 348-2324
- **Materials**: OCC, ONP, MET, TIN, PET, OM, TIRES

**Town: Eastbrook**
- **Contact**: Charles Yeo, S
- **RR#1, Box 438-B, Eastbrook, ME 04634
- **Phone**: 565-3307
- **Materials**: OCC, ALUM, CPOST, FOOD, MET

**Town: Ellsworth**
- **Contact**: Tammy Mote, T
- **P.O. Box**: 586, Ellsworth, ME 04605
- **Phone**: 667-2563
- **Email**: tmote@cityofellsworthme.org
- **Materials**: OCC, ONP, GLSS, TIN, MET, TIRES, CDD, WW

**Town: Lamoine**
- **Contact**: Stu Marekoon
- **606 Douglas Hwy, Lamoine, ME 04605
- **Phone**: 667-2242
- **Email**: town@lamoine-me.gov
- **Facility**: Rte. 184: Fri/Sat (8-5)
- **Materials**: OP, OCC, ONP, OMG, GLSS, MET, TIN, HDPE, BB, CDD, WW

**Town: Mariaville**
- **1686 Mariaville Rd, Mariaville, ME 04605
- **Phone**: 537-2107
- **Email**: townofmariaville@rivah.net
- **Facility**: Rte. 181, Sat (8-4)
- **Materials**: OCC, ONP, GLSS, MET, TIN, HDPE, TIRES, OM, WW

**Town: Stonington**
- **P.O. Box**: 9, Stonington, ME 04037
- **Phone**: 367-2351
- **Materials**: OCC, ONP, GLSS, TIN, HDPE

**Town: Swans Island**
- **Contact**: Dexter Lee, S
- **P.O. Box**: 11, Swans Island, ME 04685
- **Phone**: 526-4279
- **Email**: swanisle@midmaine.com
- **Materials**: MET

**Town: Otis**
- **Contact**: David Cook, AA
- **Phone**: 537-221
### Washington County, Maine: Regional Centers

<table>
<thead>
<tr>
<th>Region</th>
<th>Towns</th>
<th>Contact</th>
<th>Phone</th>
<th>Email</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baileyville Region (3,131)</td>
<td>Alexander, Baileyville, Baring, Brookton, Crawford, Talmadge, Topsfield, Waite, Forest City, Grand Lake Stream, Township 6 &amp; 27</td>
<td>James McLaughlin, RC</td>
<td>427-8330</td>
<td><a href="mailto:jamesmc@midmaine.com">jamesmc@midmaine.com</a></td>
<td>OCC, ONP, RMP, MET, ALUM, HDPE, TIRES, CDD, WW</td>
</tr>
<tr>
<td>Cherryfield Region (1,235)</td>
<td>Beddington, Cherryfield, Deblois, Tap 10</td>
<td>Robert Morse</td>
<td>546-2941</td>
<td><a href="mailto:cherryto@midmaine.com">cherryto@midmaine.com</a></td>
<td>OCC, ONP, RMP, GLSS, MET, TIN, PLAS, TIRES, CDD, WW, OM</td>
</tr>
<tr>
<td>Machias Region (3,373)</td>
<td>Machias, Marshfield, Roque Bluffs, Whitneyville</td>
<td>Henry Chausse, Bill DeRoss</td>
<td>255-8292</td>
<td><a href="mailto:milanjamieson@hotmail.com">milanjamieson@hotmail.com</a></td>
<td>OCC, RMP, TIN, OM, BB, MET, TIRES, WW, CDD</td>
</tr>
<tr>
<td>Northfield Rd., Machias</td>
<td>04654</td>
<td>Billy Majors, M</td>
<td>546-9737</td>
<td><a href="mailto:majors@guagusriverinn.com">majors@guagusriverinn.com</a></td>
<td>OCC, ONP, RMP, MET, TIN, HDPE, OM, TIRES, CDD, WW</td>
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</tbody>
</table>

### Washington County, Maine: Municipal Programs

<table>
<thead>
<tr>
<th>Town</th>
<th>Contact</th>
<th>Phone</th>
<th>Email</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calais</td>
<td>Jim Porter, CM</td>
<td>454-2521 ext:10</td>
<td><a href="mailto:economicdevelopment@calaismaine.org">economicdevelopment@calaismaine.org</a></td>
<td>OCC, ONP, MET, TIRES, OM</td>
</tr>
<tr>
<td>Danforth</td>
<td>Tammy Bonner, TM</td>
<td>448-2321</td>
<td>townofdanthornidad وبعد نونه.</td>
<td>OCC, ONP, MET, TIRES, OM</td>
</tr>
<tr>
<td>Eastport</td>
<td>George Finch, CM</td>
<td>853-2341</td>
<td><a href="mailto:westportmgr@pte-me.net">westportmgr@pte-me.net</a></td>
<td>OCC, ONP, GLSS, MET, TIN, PLAS</td>
</tr>
<tr>
<td>Indian Township Tribal Government</td>
<td>George Stevens Jr., D</td>
<td>796-5263</td>
<td><a href="mailto:publicworks@passamaquoddy.com">publicworks@passamaquoddy.com</a></td>
<td>OCC, ONP, OMG, RMP, GLSS, TIN, OM</td>
</tr>
<tr>
<td>Lubec</td>
<td>Maureen Glidden, AA</td>
<td>546-2422</td>
<td><a href="mailto:steuben@townofsteuben.org">steuben@townofsteuben.org</a></td>
<td>OCC, ONP, RMP, OM, HDPE, PET, BB, TIRES, CDD, WW</td>
</tr>
<tr>
<td>Princeton</td>
<td>Jacquelyn O'Neill, T</td>
<td>796-2744</td>
<td><a href="mailto:princeconme@verizon.net">princeconme@verizon.net</a></td>
<td>OCC, ONP, RMP, OM, HDPE, PET, WW</td>
</tr>
<tr>
<td>Steuben</td>
<td>Tom Richmond, TM</td>
<td>546-7209</td>
<td><a href="mailto:steuben@townofsteuben.org">steuben@townofsteuben.org</a></td>
<td>OCC, ONP, RMP, OM, HDPE, MET, WW</td>
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</tbody>
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