



**Algonquin to Adirondacks
Conservation Association**



**CATARAQUI REGION
CONSERVATION AUTHORITY**



Gananoque River Waterway Association

DONNER CANADIAN FOUNDATION

The WaterShed



**Thousand Islands
Area Residents'
Association**



**CANADIAN
PARKS AND
WILDERNESS
SOCIETY**

**SOCIÉTÉ
POUR LA NATURE
ET LES PARCS
DU CANADA**



Wildlife Friendly Waterfront



**Questions & Answers
for Landowners**

Front Cover Photo credit: Clive Callaway

How Wildlife Friendly is Your Waterfront Property?

Take the challenge!

Test your knowledge and understanding of waterfront conservation practices by answering the following quiz.

For each question choose only one response. When you have finished, add your score according to the instructions following the questionnaire. Then read the rest of this brochure to find out how you can make your waterfront property as wildlife friendly as possible.

1 Do you remove natural debris along the shoreline of your property (such as windfall, logs, rocks, old vegetation and other dead material), or remove aquatic plants along your waterfront property?

- a. Regularly (every chance I get)
- b. Weekly
- c. Monthly or less
- d. Never

2 If there are wetlands in your waterfront, to what extent have you (or former property owners) altered or reconstructed these areas? (Wetlands are marshes with cattails, or swamps with trees.)

- a. Most of the wetlands have been filled in or dredged, to create more usable areas (over 50% of the wetlands)
- b. A significant portion of the wetlands has been altered (between 25% and 50%)
- c. A small to moderate portion has been altered (less than 25%)
- d. The wetlands have been left untouched; or, there are no wetlands on my property

3 If you have a dock or wharf on your waterfront property, how was it constructed?

- a. The shoreline has been filled in with concrete or wood slab sides to make a dock
- b. Cries have been installed (cribs are built of timber and rock sections which rest on the bottom)
- c. The dock is constructed on piers or posts
- d. The dock is floated on air tanks or cantilevered over the water; or, I don't have a dock or wharf

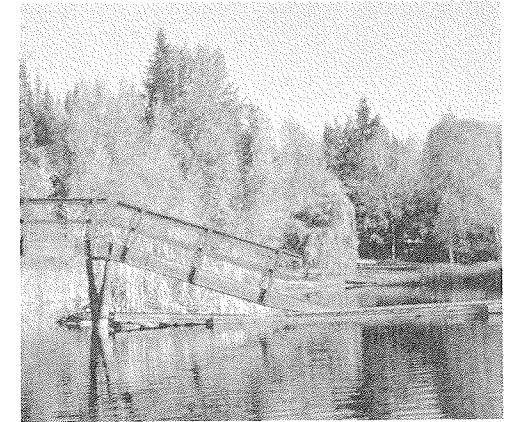


Photo credit: Clive Callaway

4 If you have developed land (such as a feedlot, pasture or cropped land) by a waterfront, is there a vegetation buffer (such as tall grasses, shrubs and trees) between your commercial operations and this waterfront?

- a. There is no buffer zone as described above
- b. The buffer zone is less than 5 ft. or inconsistent in width
- c. The buffer zone is moderate in size, less than 10 ft. (3 metres) wide
- d. There is a planned and properly maintained vegetation buffer more than 10 feet wide; or, there is no developed land next to the waterfront

5 To what extent has the shoreline of your property been developed to enhance its usefulness and/or appeal?

- a. There has been extensive reconstruction of the shoreline, such as grass lawns, retaining walls, sand beaches or large paved areas (over 50% of the shoreline)
- b. A significant amount of reconstruction has taken place (25%-50%)
- c. A moderate amount of reconstruction has taken place (10%-24%)
- d. Only minor or no modifications have occurred (less than 10% developed)



Photo credit: Clive Callaway

6 Most waterfront homeowners take particular pleasure in the views afforded a waterfront location. What have you (or former owners) done to enhance those views?

- All or most of the trees, shrubs and natural grasses in front of the home/cottage have been cut down (over 75% of the foliage)
- A significant amount of the vegetation has been removed (51%-75%)
- A moderate amount of vegetation has been removed (10%-50%)
- Minor pruning (less than 10%) or no pruning has taken place

7 If the shoreline of your property has been bulldozed, filled-in or otherwise disturbed, have you restored the area to its natural condition by planting grasses, shrubs and trees?

- No restoration has taken place
- Small areas have been restored (less than 10% of the shoreline)
- Up to 50% of the shoreline has been restored
- The waterfront has been extensively restored (more than 50% of the shoreline); or, the waterfront is still in a natural condition

8 If your boat or watercraft uses a two-stroke gasoline engine (the oil is mixed with fuel), how frequently do you use your boat?

- The boat is in constant use (more than 10 hours per week) during the boating season
- The boat is used in moderation (such as summer week-ends and holidays – up to 10 hours per week)
- Motor boats are rarely or never used.
- I don't have either a motor boat or a two-stroke engine

9 Do you use pesticides or herbicides on your waterfront property?

- Regularly (monthly in the spring, summer and fall)
- Fairly often (about one to three times per year)
- Rarely
- Never

10 Do you apply chemical fertilizers or uncomposted manures to your waterfront property?

- Frequently (monthly, in the spring, summer and fall)
- Fairly often (about one to three times per year)
- Rarely
- Never

11 How frequently have you had your septic system pumped and/or serviced by a professional company? (Of course, this question depends on usage, which is based on seasonal or full time use and the number of persons using the system)

- "I haven't touched it in over ten years."
- About every 6 to 10 years
- Fairly often (every four or five years)
- Regularly (every two or three years); or, no septic tank is used

12 To what extent have you made improvements to your waterfront property to enhance wildlife habitat? (Improvements include planting native plants, providing nesting sites, leaving dead trees undisturbed, planting trees which support wildlife, allowing natural vegetation to replenish, etc.)

- a. I have not taken any steps to enhance wildlife habitat
- b. Enhancements have been minimal
- c. I have made several improvements
- d. Every year I have new projects to enhance wildlife habitat

13 When you are planning modifications and/or improvements to your waterfront property, to what extent do you take into account the broader or larger picture of the landscape?

- a. I focus primarily on my own land
- b. I often discuss environmental and land management issues with my neighbours
- c. I am a member of a lake association or property owners' association or a similar group
- d. I am active with a group or lake association that supports large scale conservation beyond the immediate area.

Scoring your responses

Score 3 for each "a" response;
2 for each "b" response;
1 for each "c" response; and
0 for each "d" response.

Total your score for the final result.

If your score lies between 0 and 12, you are well informed about waterfront conservation practices and related wildlife issues. You are already following management practices that help protect wildlife by preserving natural habitat. Congratulations!

A score ranging between 16 and 24 indicates that you are already concerned about making improvements to protect your waterfront property. We hope you will enjoy learning about how you can make your property more wildlife friendly. The next section will give you the information you need to take the next steps. If your score exceeds 24, you are in the group of people who can make the most difference by following the suggestions and information in the next section. We will help you identify problem areas and we offer several suggestions for improving wildlife habitat.

Why these questions (and your answers) are important for wildlife

The brief explanations below follow the order of the questions you have responded to above. You will find suggestions for improving your property, and recommended sources for more detailed and comprehensive information.

We invite you to consider playing a more active role in promoting the long-term health of your waterfront property by making improvements that will protect wildlife. Help us pass on the natural heritage which sustains all of us to the next generation. Legislation, regulation and government policies aren't enough without all of us doing our parts. Since most of the land in Southern Ontario lies in private hands, it is up to us, as property owners, to become directly involved in managing our properties in a way that promotes and sustains wildlife habitat.

Under each explanation you will see a section labeled "Resources". The number code refers to the list of resources on page 17 of the booklet together with directions on where you can find the material.

1 **Natural debris** along a shoreline might look untidy and even messy, but debris and vegetation normally enrich and enhance shoreline habitat by providing feeding opportunities and breeding spaces for many species. The shoreland margin is a very fertile area for wildlife; some biologists speculate that as many as 70% of land animals "interact" with the shoreline. Shoreland vegetation and debris also protect the shoreline from erosion.

How You Can Help:

- ▶ Consider leaving natural debris untouched or, at the very least, reduce your disturbance to the smallest extent possible, such as clearing a narrow path to a swimming area.
- ▶ In areas already disturbed, consider replanting native species of grasses and shrubs.

Resources (see pages 17-19):

- ✓ # 1, Chapter 4; # 2, "Buffers Protect the Environment", "Preserving and Restoring Natural Shorelines"; # 3, "Shore Primer"; # 4; # 5.

2 Until recently, **wetlands** were widely regarded as nuisance lands unsuitable for agriculture and development. Scientific investigations have since revealed that the wetland portions of waterfronts play an important and significant role in the ecology of rivers and lakes and in preserving our drinking water. Most wetlands have also been assessed as being significant areas of natural scientific interest (ANSIs).

Wetlands act as giant sponges by soaking up surface runoff and moderating peaks and dips in water levels throughout the year. Wetland water storage allows groundwater recharging, while flood prevention reduces downstream soil erosion. Pollutants and toxic substances in and around wetlands are removed by plants, sedimentation and bacterial metabolism. This capacity to remove sediments, clean and eliminate pollutants has earned wetlands the title of the "nation's kidneys".

Wetlands are among the most productive and biologically diverse ecosystems of the world, providing habitats for a wide range of wildlife during all stages of their life cycle.

How You Can Help:



Photo credit: Clive Callaway

- ▶ Avoid altering or damaging wetlands on your property.
- ▶ Have your community or lake association focus collective attention on the preservation of wetlands.
- ▶ Avoid dredging or filling in wetland areas. (In fact, wetland alteration normally requires a fisheries review or a work permit from the Ontario Ministry of Natural Resources.)

- ▶ Use land management practices that minimize the contamination of wetlands as a result of toxic runoffs (home and car cleaners, paint thinners, gasoline and solvents) and soil erosion.
- ▶ Maintain a buffer of natural vegetation on the land adjacent to your wetland.

Resources (see pages 17-19):

- ✓ # 1, chapter 3; # 2, "Preserving and Restoring the Natural Shorelines", "Buffers Protect the Environment"; # 3, "The Shoreline Primer", # 5; # 6; # 7; #19.

3 **Docks** can harm fish, plants and aquatic life by disturbing the bottom and blocking sunlight. Fish are particularly sensitive to their environment because they require special conditions for spawning and feeding. The general rule to follow in building docks is to minimize the disturbance you are likely to cause to the near shore habitat. According to this rule, docks that are built on top of fill-ins or on slab sided cribs are the most intrusive type of construction. Even cribs can be made to be less destructive if they are constructed with open faces, which allow marine life to penetrate the crib. Docks built on posts or piers, floating or cantilevered docks cause the fewest problems for wildlife.

How You Can Help:

- ▶ Minimize the area of the bottom disturbed when building the dock.
- ▶ Apply for a permit from the Ontario Ministry of Natural Resources (OMNR) whenever you are planning to alter the shoreline. OMNR officials can give you good advice on minimizing shoreline disturbance..
- ▶ Contact your local Conservation Authority, which has an agreement with the Department of Fisheries and Oceans to conduct fish habitat reviews.
- ▶ Use a floating, cantilevered or post-supported dock which will cause less disturbance than docks constructed of slab-sided cribs or fill-ins.

Resources (see pages 17-19):

- ✓ # 2, "Working Around Water"; # 3, "The Dock Primer"; # 8, p.82; # 19.

4 **The borders of streams, rivers, lakes and wetlands** (the riparian zone) are very important for the ecological health of rivers and lakes. Vegetation borders in the riparian zone provide many waterfront benefits; for example, they anchor the soil structure to reduce erosion and filter excess nutrients such as fertilizers that might otherwise cause algae blooms in water. They also provide nesting, feeding and protective sites for mammals, fish and birds.

Despite all our efforts to contain and manage a variety of chemicals and waste products, ground and surface water remain at risk for contamination. Vegetation buffers intercept and moderate flows of pathogens (bacteria and viruses), fertilizers, pesticides and other contaminants that reduce water quality and harm fish and wildlife habitat. These buffers are only effective if they are not breached. If cattle, for example, have access to the waterfront through the buffer, the action of the buffer will be compromised.

How You Can Help:

- ▶ Plant a vegetation buffer using native plants such as willow and dog weed.
- ▶ Retain or expand an existing vegetation buffer to a depth at least 10 metres.
- ▶ Consult various agencies for assistance in dealing with environmental problems, such as your stewardship councilor; (contact through local MNR District Office or www.ontariostewardship.org) the local conservation authority (locate contacts through Conservation Ontario, www.conservation-ontario.on.ca.) and the Ontario Ministry of Natural Resources.
- ▶ Perform an environmental assessment on your commercial or agricultural operations to determine what contaminants might endanger waterways.

Resources (see pages 17-19):

✓ # 2, "Buffers Protect the Environment"; # 10; # 11; # 19, # 20, pp.122-123.

5 "Improvements" to shoreland property may be very damaging to the habitat of many aquatic and land-based species that depend on shoreland habitat for their survival. When large areas of shoreland are converted to sandy beaches, or retaining walls are constructed along the shoreline, valuable wildlife habitat is destroyed. The most important areas for fish are found along the shore. The band of shallow water around a lake or river, referred to as the littoral zone, is responsible for 80%-90% of the fish production of a lake. Boulders, weeds and decaying tree branches are essential elements for the habitats of many aquatic species.

Paved surfaces and grass lawns near the shoreline focus and accelerate runoff and cause erosion. Non-porous surfaces can also accumulate toxic substances such as grease, oil and solvents, which find their way into rivers and lakes.

How You Can Help:

- ▶ Obtain a permit from the Ontario Ministry of Natural Resources or Conservation Authority before making alterations to underwater areas or land near the water's edge. This is required by law because beds of rivers, lakes and streams are public land.
- ▶ Minimize changes to your shoreline as much as possible. If you must have groundcover by your waterfront, consider planting shrubs or native plants instead of grass lawns.
- ▶ Create a wildflower meadow instead of planting a lawn.

Resources (see pages 17-19):

✓ # 2, pp.30-33; # 3, "Buffers Protect the Environment", "Preserving and Restoring the Natural Shoreline"; # 9, pp. 30-33; # 20, pp.54-55

6 Clearing the vegetation (trees, shrubs, native tall grasses) in front of your home or cottage may improve your view of the waterfront; but it also degrades the local environment. You may not intend to destroy wildlife habitat, but clearcutting vegetation can severely affect the habitat of birds, mammals, aquatic life and many other organisms. If this scenario is repeated by lakefront property owners in neighbouring areas, the impact of clearcutting on wildlife is significant. Removing the overcover of large trees will inhibit the growth of other natural vegetation, which in turn degrades wildlife habitat. In addition, clearcutting may lead to soil erosion, since the roots of vegetation that bind the soil are lost. Erosion leads to silting in shoreline areas. This process, in turn, degrades fish habitat and impairs fish reproduction.

How You Can Help:

- ▶ Discrete pruning of foliage in front of your home or cottage may produce more scenic views of the waterfront than clearcutting. Views of waterfront "framed" by the foliage of trees and shrubs provide a far more intimate view of nature than the wide open glare of open spaces. As summer temperatures soar, you will value the shaded areas you have lost.
- ▶ Consider your neighbours, who may prefer a more natural setting along the shoreline rather than the fully exposed views of your home or cottage

Resources (see pages 17-19):

✓ # 2, "Buffers Protect the Environment"; # 3, "The Shore Primer".

7 Shoreland is important for water quality. It also provides critical habitat for many wildlife species and serves as a natural travel corridor for animals. For all of these reasons, it is best to disturb this part of your property as little as possible.

If your property's shoreline has been disturbed, however, consider restoring all or part of the waterfront. The greatest diversity of habitat can be achieved by planting layers of vegetation, such as grassy plants on the shoreline, followed by small shrubs further in, then larger shrubs and trees.

How You Can Help:

- ▶ Replant the disturbed area with native grasses, shrubs and trees.

Resources (see pages 17-19):

✓ #2, Working Around Water Series; "What You Should Know About Fish Habitat and Erosion Control and Shoreline Restoration"; # 3, "The Shore Primer"; # 9, pp.54-55; # 20, pp.150-180

8 Most of us have enjoyed **powered watercraft** for a variety of water sports, including fishing, waterskiing, sightseeing, and other activities. But it's important to consider that some engines are cleaner than others. For example, two-stroke, gasoline engines can release as much as 25%-30% of their oil and fuel into the water through their exhaust systems. One study revealed that a two-stroke marine engine produced 150 grams per kilowatt hour of emissions compared to 4 grams for a four-stroke engine. The California Air Resources Board estimates that a personal watercraft operating for seven hours produces the same quantity of emissions as a late model car operating for 100,000 miles.

Moreover, boats and personal watercraft traveling at high speeds near land can produce wakes that damage shoreline by causing erosion and silting. These craft also disturb and destroy the nests of waterfowl. (For example, loon hatchlings are at particular risk of drowning from wakes.) Personal watercraft are shallow draft vessels which have the capacity to access the shallow areas of swamps and wetlands and shallow areas along the shoreline. This penetration may be very damaging to fish breeding habitat and the habitat of many other aquatic animals and birds, such as the common loon, which nests in low lying nests along the shoreline. Operators of these vessels should avoid these shallow areas.

How You Can Help:



- ▶ Use a canoe, paddleboat, kayak or sailboat. You will be more physically fit and relaxed—and so will your neighbours.
- ▶ Switch to an electric motor for low impact sports such as fishing.
- ▶ Repower your boat with a four-stroke engine that meets EPA 2006 standards, a much cleaner option for the environment.
- ▶ Exercise caution when you are handling fuel (to avoid spills), and have materials on hand to absorb fuel spills.
- ▶ Keep your speed below 6 kph as you approach land or wetlands to avoid harming wildlife and damaging shoreline.
- ▶ Avoid operating any motorized craft in shallow wetlands or shallow areas along the shoreline.

Resources (see pages 17-19):
✓# 13; # 14.

9 Many toxins such as **pesticides and insecticides** are harmful to fish and other shoreline and aquatic life, such as frogs, turtles and insects. While large industrial polluters are frequently responsible for serious problems in lake and river water quality, we should recognize that in rural and cottage areas, the discharge of household cleansers, solvents, fertilizers and pesticides can also have a significant harmful effect on wildlife habitat, as well as human health. (Many of these chemicals have been linked to respiratory and reproductive problems and diseases such as cancer.)

It is estimated that 60% to 90% (by volume) of pesticides used miss their intended target entirely and often end up killing beneficial insects and organisms. Much of this expensive material ends up polluting the air or the groundwater.

How You Can Help:

- ▶ Use natural agents to combat insect pests by promoting predator habitat for beneficial insects such as dragonflies; constructing bat boxes; and enhance bird habitat by building bird houses, allowing dead trees to remain standing and controlling domestic pets.
- ▶ Use organic alternatives instead of chemical pesticides. For example, planting garlic and chives will protect vegetable gardens from rabbits and groundhogs, while shallow dishes filled with beer will attract and kill snails and slugs. Another natural repellent is made from blended garlic and green onion tops. Strain the puree and mix with soapy water. Spread with a spray container.

Resources (see pages 17-19):

- ✓# 2, "Preserving and Restoring Natural Shorelines"; # 3, "The Shore Primer"; # 9, p.61.

10 There is an environmental cost to using **fertilizers** on waterfront property. Fertilizers can produce vibrant looking lawns and gardens but they also contribute to groundwater and surface water contamination. Inorganic fertilizer runoff, caused by routine applications of high concentrations of chemicals, can contribute to "algal blooms" and aquatic plant growth, which can lead to oxygen depletion in lakes when vegetation decomposes. Oxygen depletion in turn kills aquatic life. Fertilizers also damage fish habitat and the capacity of a lakefront to support fish reproduction.

How You Can Help:

- ▶ If you must use fertilizers, use organic fertilizers such as compost materials that have lower concentrations of chemicals and release nutrients at a much slower rate. Fertilizers are less likely to cause runoff problems when soil is treated at a rate plants can easily absorb.
- ▶ Avoid using fertilizers just before a rainfall.
- ▶ Plant native species of shrubs and plants that require little or no fertilizing.

Resources (see pages 17-19):

✓# 1, chapter 8; # 9, p.54; # 20, pp.55-56.

11 Faulty **septic systems** are considered a primary source of pollution along the waterfront and the major cause of faulty septic systems is poor maintenance by homeowners. One group, the Ontario Boating Forum, has carried out visual inspections along several waterways and reported that between 33% and 67% of inspected septic systems were faulty. A report from the Ministry of Environment's former Cottage Pollution Control Program indicated that septic system related problems were found with approximately 35% to 40% of the total number of properties inspected. Septic systems which are constructed under a certificate of approval have a very low failure rate. Older septic systems, which were designed and constructed before more stringent regulations were in effect, can be a significant source of pollution. In addition to dangers to human health, pollution may pass on disease to aquatic wildlife.

How You Can Help:

- ▶ Have your septic system routinely inspected and cleaned by a professional company. Some groups are calling for a guideline of cleaning and inspection every two years.
- ▶ There are many helpful tips for maintaining the health of a septic system, such as avoiding the use of phosphate soaps, reducing the amount of fat being poured in sinks and toilets, not compacting the soil above the filter bed, and avoiding the use of solvents and other toxic materials that might end up in the septic system.
- ▶ If an old septic system is leaking and malfunctioning, invest in a new system to protect yourself and your family, as well as your neighbours. Look for new technology that offers more effective options for sewage management.
- ▶ Consider composting toilets which don't require septic systems.

12 We take our **wildlife** for granted. Most of us are thrilled to hear the haunting cries of loons on our lakes at dusk. Yet in nearby Vermont, the loon is an endangered species, with only 12 mating pairs being reported in 1987. Many local species are in difficulty in the Leeds/Grenville area, including the Barn Owl, the Peregrine Falcon, the Black Rat Snake, and the Southern Flying Squirrel. For several years, COSEWIC (Committee on the Status of Endangered Wildlife in Canada) has reported increases in the number of listed endangered or threatened species.

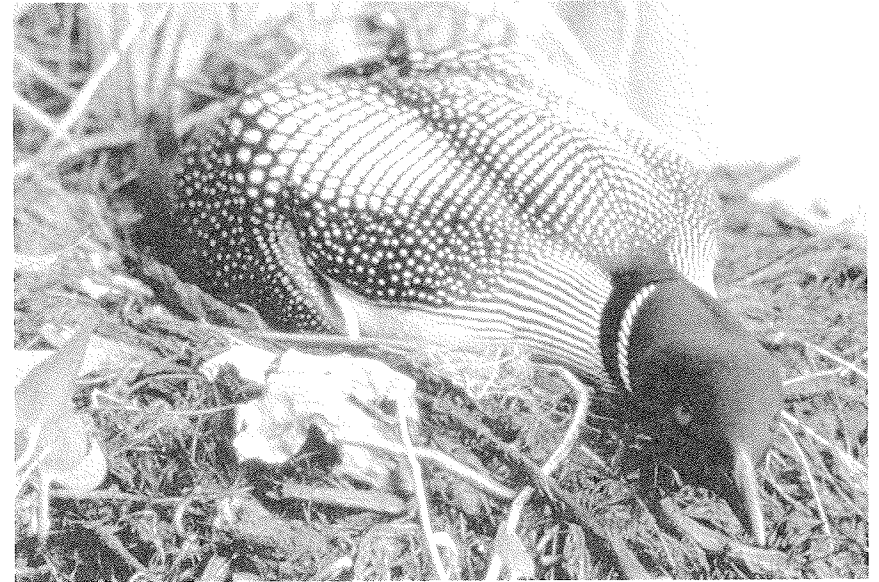


Photo credit: Mike Runtz

How You Can Help:

- ▶ Plant species that are valuable to the reproductive cycles of animals and birds; for example, the thistle is vital to the life cycle of the American Goldfinch.
- ▶ Consider constructing permanent floating nesting platforms for loons (perhaps as a project with your neighbours).
- ▶ Allow dead trees to remain standing to provide bird nesting sites.
- ▶ Build and maintain nesting boxes for a variety of wildlife, including owls, bats and birds.
- ▶ Participate in the Ontario Ministry of Natural Resource's Community Wildlife Involvement Program (CWIP), whereby individuals and groups carry out wildlife projects with the advice and sponsorship of the MNR.
- ▶ Restrict the movement of household pets in order to protect wildlife.
- ▶ Reconsider plans to cut down large areas of shrubs and trees.
- ▶ Hang glitter lines outside windows where bird collisions occur.

Resources (see pages 17-19):

✓# 1, chapter 6; # 9, p.82; # 20, pp.150-180; # 21

13 While individual and local efforts to manage property for wildlife are invaluable, it is equally important to pay attention to the "big picture," that is, the larger area or region within which your waterfront property is located. It is increasingly recognized that conservation efforts will be more effective when the scale and scope of conservation planning and practice are extended to include very large landscapes – such as the area lying between Algonquin Park in Ontario and Adirondack Park in New York State. This view, while it affirms the importance of local and individual initiative in protecting wildlife habitat, believes that small areas (including many of our parks and government-protected areas) are incapable of maintaining all of the processes that support biological diversity. One such conservation proposal is the Algonquin to Adirondacks (**A2A**) Conservation Initiative, which is the vision of an ecologically sustainable region that incorporates the rugged landscape of the Frontenac Axis and is anchored at each end with the large "core" areas of Algonquin Provincial Park to the north-west and Adirondack State Park to the south-east.

The "A2A" region contains valuable populations of both common and rare plant and animal species native to the area. There is an unequalled opportunity to protect and enhance wildlife habitat in this region, because it has remained largely natural. Since most of the land in this region is privately owned, the A2A Conservation Initiative welcomes private landowners and local associations to participate by managing their own land in ways that maintain connected wildlife habitat. In this way, the A2A concept promotes the view that each person's property has the potential to contribute to the broader landscape.

How You Can Help:



- ▶ Consider either forming or joining a home owners' association for the lake or river near your property. Make wildlife protection a priority for that group.
- ▶ Join a conservation organization or land trust in your area that is committed to promoting wildlife habitat. For a list of such organizations, contact the The WaterShed (see address under resources).
- ▶ Discuss wildlife issues with your neighbours.
- ▶ Consider joining the Algonquin to Adirondacks Conservation Association or encourage your organization to work with the AACA.

Resources (see pages 17-19):
 ✓ # 4, # 17; # 18.

Photo credit: Clive Callaway

Algonquin to Adirondack Map



Resources

Most, if not all, the resources listed below are available, not only through the individual organizations which have published the materials, but through organizations such as the Landowner's Resource Centre in Manotick, Ontario and The WaterShed, Gananoque, Ontario. (See details under "Additional Resources")

- 1 Take the Plunge, Federation of Ontario Cottagers' Associations, Chapter 4. FOCA, 156 Duncan Mill Road, Suite 18, Toronto, Ont., M3B 3N2; 416-429-0444; www.foca.on.ca; info@foca.on.ca
- 2 Ontario Ministry of Natural Resources, Conservation Ontario, Fisheries and Oceans Canada, Extension Notes Series, "Buffers Protect the Environment" No. LRC 77"; "Protecting Fish Habitat from Sediment" Order No. LRC 75; Queens Printer for Ontario, ISSN 1193744, "Preserving and Restoring Natural Shorelines"; "Cavity Trees Are Refuges for Wildlife", LRC 8; "Improving Fish Habitat"; Working Around Water Series; What You Should Know About Fish Habitat"; "What You Should Know About Fish Habitat and Building Docks and Boathouses"; "What You Should Know About Fish Habitat and Erosion Control and Shoreline Restoration"; "What You Should Know About Fish Habitat and Building a Beach".

- 3 Federal Department of Fisheries and Oceans, FOCA and Cottage Life, "The Shore Primer" and "The Dock Primer" Cottage Life Magazine, 54 St. Patrick St., Toronto, Ont., M5T 1V1; www.cottagelife.com; clmag@cottagelife.com; 416-599-2000
- 4 Waterfront Living, The Living by Water Project, www.livingbywater.ca
- 5 "Down By the Riverside", Canadian Museum of Nature, PO Box 3443, Station "D", Ottawa, Ontario, K1P 6P4; 613-566-4700, jcurette@mus-nature.ca
- 6 A Wetland Conservation Plan is available from the Landowner Resource Centre in Manotick, Ontario; Box 599, Dickinson St., Manotick, Ont., K4M 1A5; info@lrconline.com; www.lrconline.com; 613-692-2390; (outside 613 area) 1-888-571-4636
- 7 Wetlands Habitat : www.wetlandfund.com, "Useful Wetland Links"; Wetlands Habitat is a partnership of: Wildlife Habitat Canada; Ontario Ministry of Natural Resources, Canadian Wildlife Service and U.S. Fish and Wildlife Service
- 8 www.ducks.ca. Ducks Unlimited is an international conservation organization with a presence in Canada since 1938. It supports habitat conservation, scientific research and educational programs relating to wetlands. Note also: Rural Wetlands in Ontario-A Guide for Landowners.
- 9 Stewardship in the Thousand Islands, St. Lawrence Islands National Park, 2 County Rd. #5, RR3, Mallorytown, Ontario, K0E 1R0, Thousand Islands Heritage Conservancy.
- 10 OMAFRA (Ontario Ministry of Agriculture, Food and Rural Affairs) Best Management Practices Series, "Fish and Wildlife Habitat Management"
- 11 "Buffer Action", Ontario Farm Environment Coalition, (Livestock Manure Pollution Prevention Project)
- 12 Ontario Ministry of the Environment; Canadian Institute of Public Health Inspectors; Concrete Precastors of Ontario. Care and Feeding of Your Septic System. There are several other Ministry of the Environment publications including, Environmental Living: Protecting the Environment at the Cottage, Protecting the Environment when Building or Buying Your Dream Cottage.
- 13 Bluewater Network, www.earthisland.org/bw. The Bluewater Network is a national (US) conservation organization which is campaigning to reduce pollution from shipping and the motorized recreational industry.
- 14 Surfrider Foundation, www.surfrider.org. The Surfrider Foundation is dedicated to the protection and conservation of oceans, "waves" and beaches.
- 15 The Septic Information Website, www.inspectny.com

- 16 www.allaroundthehouse.com
- 17 A2A Conservation Association, The Watershed, Gananoque, Ontario 1-613-382-8489
- 18 Canadian Parks and Wilderness Society, Ottawa Valley Chapter, 601-880 Wellington St., Ottawa, Ont., K1R 6K7, www.cpaws-ov.org, 613-232-7297
- 19 Contact your local conservation authority, e.g. The Cataraqui Region Conservation Authority, PO Box 160, Glenburnie, Ont., K0H 1S0; crca@cataraquieregion.on.ca; www.cataraquieregion.on.ca; 613-546-4228. Other Conservation authorities can be located at: Conservation Ontario, www.conservation-ontario.on.ca. See site map, Corporate Profile.
- 20 Backyard Habitat for Canada's Wildlife, Canadian Wildlife Federation, 2740 Queensview Drive, Ottawa, Ontario, K2B 1A2, www.cwf-fcf.org. This is an excellent resource for a variety of topics relating to wildlife around the rural or urban home.
- 21 The Birdhouse Network www.birds.cornell.edu/birdhouse/bhbasics/refrchart.htm
- 22 Septic Smart: New Ideas for Household Septic Systems on Difficult Sites, Ontario Soil and Crop Improvement Association, 1 Stone Road West, Guelph, Ontario, N1G 4Y2; 519-826-4214; Fax: 519-826-4224; e-mail: agraham@ontariosoilcrop.org; website: www.ontariosoilcrop.org

Additional resources

In addition to the specific resources outlined above, the following services are also available to Ontario landowners:

Conservation Authorities throughout Ontario are responsible for the protection of significant river watersheds in the province. These organizations can be found on Conservation Ontario's website at www.conservation-ontario.on.ca. A map on the website will direct you to the conservation authority nearest to your property.

Stewardship Councils operate under the joint sponsorship of the Ontario and county governments. Each council employs a stewardship councillor or coordinator who can assist landowners considering management options for their properties. These organizations can be found under the Stewardship Ontario Program (www.ontariostewardship.org)

The Landowner Resource Centre situated in Manotick, Ontario, is an invaluable resource for stewardship literature of every description. Most, if not all, the resources identified in this brochure can be located at the LRC.

The Centre maintains an online catalogue of available titles at: www.lrconline.com. Many brief publications such as brochures and pamphlets are available without charge; more substantial publications are available for sale. The LRC is located across the road from the old mill in Manotick.

The WaterShed is a network of conservation groups located close to Gananoque, Ontario and distributes a lot of literature. 19 Reynolds Road, Lansdowne, Ontario, K0E 1L0; 613-659-4824; Fax: 613-659-4827; www.thewatershed.ca; e-mail: info@thewatershed.ca. The new home of the Watershed is located on the corner of Reynolds Road (County Rd. 3) and the Parkway, close to the Thousand Islands Bridge.



Photo credit: Clive Callaway

Can You Make a Difference?

Read how Ping (Meredith) and Jan Green, as members of, and in conjunction with, the Lake Clear Property Owners Association, helped save this lake from an impending environmental disaster.

Meredith and Jan Green

Meredith Green (known to his friends as "Ping") and his wife Jan live on Lake Clear in the Bonnechere Valley Township in Renfrew County. They bought their cottage in 1972, and retired there 20 years later, in 1992. They settled in this area because it had everything they wanted nearby – "the hills, the trees, the rivers and lakes are all within 2 or 3 miles from home." Their home is situated on a one-acre lot in a quiet spot on Lake Clear, a one-time famous trout fishing lake. "When we first came to the lake, I saw people take lake trout that were in the 10-to-15 lb Range, but since 1992 I have only caught one trout in all the time we have been here.

About 10 years ago, the Ontario Ministry of Natural Resources approached Ping about becoming a Lake Steward. At that time he was already a member of the Lake Clear Property Owners Association, which had been formed in 1981 when several home and cottage owners realized the lake was rapidly deteriorating. By 1981, the accumulation of pollutants in the lake, such as raw sewage, shampoo, soap, detergents, fertilizers, pesticides, and runoff from manicured lawns and farms, was causing serious problems. Ping was already monitoring the lake by taking chlorophyll tests and Secchi readings for lake water clarity for the Ministry of the Environment. (These tests measure the density of vegetative matter in the water. If the lake has too much vegetation in the water, there may be a shortage of oxygen for aquatic life. The Secchi disk is lowered into the water until visual contact is lost and the depth is recorded.) When lake monitoring began in 1981, the Secchi reading was only 2 metres and the chlorophyll level was high. Fifteen years later, as a result of persistent monitoring and clean-up efforts by local inhabitants, the Secchi disk reading was up to 6 – 7 metres and the tests for chlorophyll indicated the lake had returned to normal levels. Lake Clear has now recovered to near pristine condition and the trout are slowly reappearing.

With the support of the Properties Association and the Federation of Ontario Cottagers' Associations, Ping has encouraged his neighbours to undertake numerous lake restoration projects. Lakefront restoration activities, such as planting wildflowers and allowing shorelines to revert to their natural state, were also carried out by many of the lake residents. "If you don't leave the shoreline in its natural state you get two things – a lot of runoff and a lot of erosion. No matter how many concrete walls you build, the wave action and ice will eventually take them down. The runoff puts pollutants into the lake and the erosion destroys the shoreline, which will destroy fish habitat and eventually the whole contour of the lake. It is a scar on the lake."

Another crucial victory for the Association, won through meetings and newsletters, was convincing most of the residents to install proper septic systems. By the end of 2001 about 90% of the residents had done so. The Association also installed zebra mussel warnings and speed limitation signs, organized information meetings, and produced newsletters.

Ping also participates in the The Great Ontario Dip-In, an international lake monitoring program that provides a narrow snapshot of the health of lakes all over the world. Each July 1st weekend, Ping takes his Secchi readings. "I find it interesting that thousands of people are working to ensure that the health of our lakes doesn't get worse." He knows that our lands and lakes are connected. "If you think you are the only one doing it [then] you think, what's the point." When asked why he has become so involved in taking care of the lake, Ping says it's not something he can put his finger on. "I just know it is a beautiful and pretty lake and has just about everything to offer. There are 18 islands in it, with beautiful little bays. We see the fish and deer swimming, wolves, fish, fox, coyote, beaver, bears and pileated woodpeckers. There is a lot of wildlife in the area. Each evening I take a walk, not an athletic walk but a nature walk."

As Ping and Jan have discovered, lakes can regain their health, one family at a time, when we all work together to restore the quality of water and wildlife habitat.

Personal Action Plan

Now that you have completed the questionnaire and have given some thought to protecting your waterfront property, you may find it helpful to list three or four activities you can undertake to protect, restore or enhance wildlife habitat on your property.

First Priority

Second Priority

Third Priority

Fourth Priority

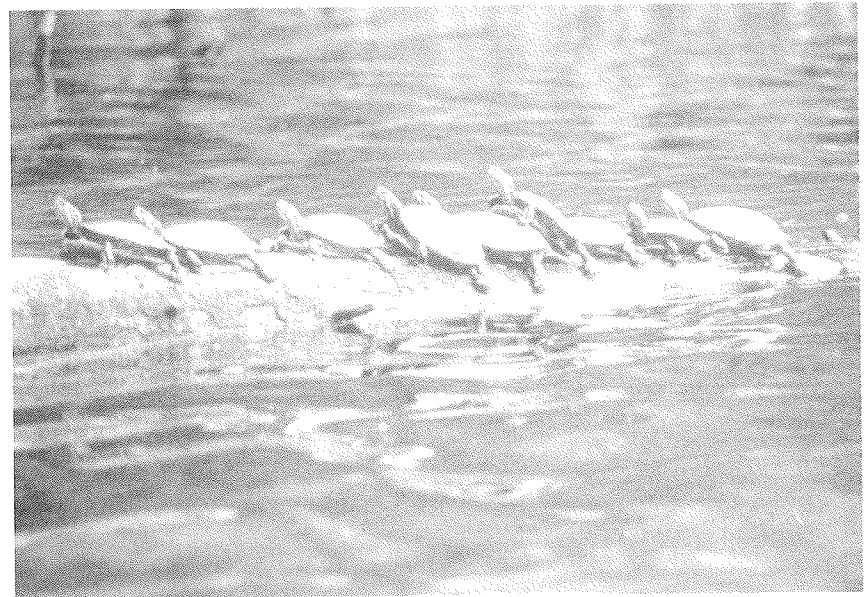


Photo credit: Clive Callaway