

INFOSHEET #22

WETLANDS AND WILDLIFE PONDS

How to address concerns identified in your Environmental Farm Plan Worksheet #22



Based on
Environmental Farm
Plan Workbook,
4th ed. 2013

This infosheet outlines options to address concerns identified in your Environmental Farm Plan (EFP) as they relate to wetlands and wildlife ponds.

All options are classed as **Actions** or **Compensating Factors**.

- **Actions** address the areas of concern identified, and will change the EFP rating to (3) or Best (4).

- **Compensating Factors** are alternatives that will adequately address the identified concern, but will not change the rating in the EFP worksheet.

In most cases, you'll need more information before choosing and implementing options. Sources for more information are noted at the end of this infosheet.

For help with technical terms, please see the full glossary in your EFP Workbook.

LOCATION

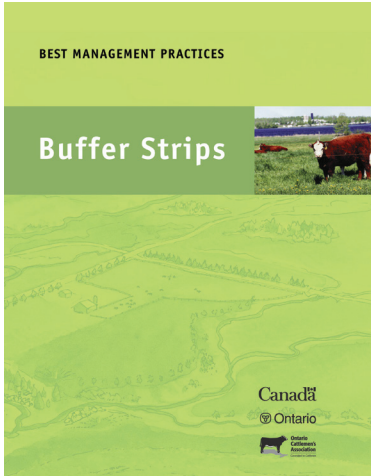
22-1. Upland buffer strip between wetland or pond and cropland

BACKGROUND	WHAT CAN YOU DO?
<p>Buffer strips directly benefit surface water quality. They help filter sediments and pollutants out of runoff water before it enters the wetland or wildlife pond. Buffer filtration capacity depends on the types of vegetation, e.g. grasses are less effective than shrubs and trees. Some vegetation holds soil in place better than others, while others filter nutrients better.</p> <p>Buffer strips also provide essential cover and food for wildlife. The habitat potential of buffers increases with their width.</p> <p>Riparian buffers along drains can decrease maintenance costs associated with drain cleanouts.</p>	<p>OPTION 1 – ACTION</p> <p>Maximize the width of the buffer strip around the perimeter of wetlands or wildlife ponds:</p> <ul style="list-style-type: none"> • establish a permanent buffer composed of natural vegetation such as trees, shrubs, grasses etc. around more than half of the wetland or wildlife pond under your control <ul style="list-style-type: none"> – leave a small area open for human access • expand the width of buffer strips around wetlands or wildlife ponds <ul style="list-style-type: none"> – a continuous ribbon of buffer between cropland and wetlands or wildlife ponds is preferred – buffer strips should be at least 5–16 m (16–52 ft) wide, as the effectiveness of a buffer strip improves with width • choose grasses (preferably native) and wildflowers, shrubs or trees that will compete and establish readily • link, where feasible, the wetland and wildlife pond buffers to adjacent woodlots by using grasses, swales, fencerows etc. • ensure that trees and shrubs are located away from any nearby tile drainage systems. <p>Set management objectives based on knowledge of the site and plant materials before establishing a buffer strip of native plants. Decide whether it is to be mowed for hay, left untouched, or grazed (and if so, determine supply of alternative watering). Make sure you do not plant non-native or noxious invasive species. If there is any doubt, consult a wildlife or wetland biologist.</p>



Protect wetland areas and the animals that use them by maintaining a natural buffer strip around the wetland. The wider the buffer, the better.

When planning a buffer strip, choose buffer plants with great care. Never plant non-native or noxious invasive species. Choose plants according to the site and your goals. Consult a wildlife or wetland biologist before establishing plantings.



Well-managed buffer strips go a long way to filtering farmland runoff before it enters streams, wetlands, ponds and lakes. This has many benefits for water quality, erosion prevention, soil water-holding capacity, fish and habitat quality, livestock health, and drain maintenance.

This BMP book explains how to establish, maintain, and improve buffer strips according to the topography and land uses on your property.

22-2. Buffer strip management

BACKGROUND

Buffer strips are critical for the creation of habitat for wildlife such as ground-nesting birds and waterfowl, and for the maintenance of the health of the wetland/pond.

If the perimeter is only partly protected, any contaminated surface flows may enter directly through gaps in the buffer. Farming practices such as tillage and application of nutrients and pesticides on lands adjacent to the wetlands and ponds also play a critical role in determining the water quality.

A buffer strip can be effective in filtering out sediments and other contaminants carried in the runoff water before they can reach a wetland or wildlife pond. Surface water quality can also have an impact on ground water quality.



A good buffer design includes trees and shrubs for shade and bank stabilization with a grassed buffer for filtration and separation.

WHAT CAN YOU DO?

OPTION 1 – ACTION

Manage existing buffer strips to maximize effectiveness:

- limit livestock access to the buffer
- if taking hay, delay mowing of hay until mid-July and use a flushing bar
- otherwise, don't disturb, e.g., no spring burn – leave for wildlife
- don't apply fertilizer or pesticides to the buffer.

OPTION 2 – COMPENSATING FACTOR


Use good field crop management techniques as discussed in Worksheet #19, such as no-till or reduced tillage on fields beside a wetland/pond buffer:

- leave over 30% of the soil surface covered with crop residue after planting
 - residue helps restrict the movement of sediments, nutrients and pesticides to the wetland/pond – excess nutrients result in algal blooms, which lower oxygen levels and impact water quality and wildlife survival
- minimize potential conflicts with wildlife by growing forages or hay adjacent to wetlands and wildlife ponds when possible
- reduce soil erosion and the movement of sediments with grassed waterways, water and sediment control basins, contour and strip cropping etc. – see Worksheets #15 and #21
- recognize that wildlife within some wetlands may use some planted crops as a seasonal source of food and cover.



Ponds are fragile ecosystems and could be directly connected to the quality of the drinking water for your family and livestock. Livestock access to wetlands or ponds should be restricted.

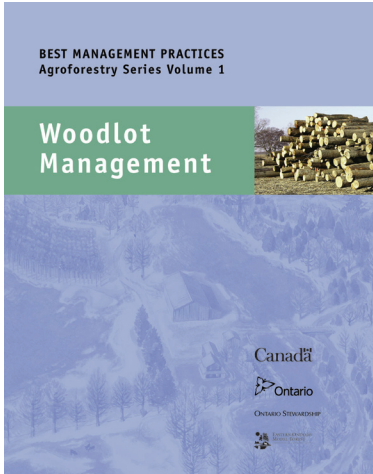
22-3. Sustainable management of forest resources in wetlands

BACKGROUND	WHAT CAN YOU DO?
<p>Poor stewardship caused by an exploitative or destructive use of a forested wetland will limit its benefits and could cause permanent damage.</p> <p>Wisely managed, the resources of a wetland or wildlife pond will be renewable. A healthy undisturbed wetland should be left alone.</p>  <p>This healthy wetland has been left to function on its own. It requires no maintenance, costs very little, and produces high ecological benefit.</p>	<p>OPTION 1 – ACTION</p> <p>Leave wetland and wildlife pond resources untouched where possible. In most cases, this is preferred.</p> <p>If harvesting, manage forest resources in a renewable and responsible manner:</p> <ul style="list-style-type: none"> • harvest timber, plants, fish, wildlife, and water for livestock from swamps and marsh wetland types in a manner that minimizes damage to the wetland <ul style="list-style-type: none"> – do it in a way that allows regeneration, either naturally or through restocking or replanting • limit the area surrounding wetlands or ponds that can be accessed by livestock, or preferably install an alternative watering system • harvest forest resources, such as fuel wood, cedar posts and selected hardwoods, when the soil and drainage conditions will minimize damage, e.g. when the ground is frozen • leave some larger-diameter quality trees throughout the wetland and forest to provide a seed source <ul style="list-style-type: none"> – rotting trees and logs will act as habitat for wildlife • follow good forestry management principles to ensure optimal tree species composition in wetlands, permitting future sustainable harvests • use smaller equipment or horses as opposed to heavy machinery such as skidders to avoid rutting of soils. <p>The harvesting of trees may be limited through bylaws passed under the Municipal Act, 2001 (section 135-141) and/or Forestry Act (1998).</p> <p>The harvesting of wildlife and fish is managed through the Fish and Wildlife Conservation Act, 1997. Consult the Ministry of Natural Resources and Forestry website at www.ontario.ca/mnr regarding regulations, restrictions, licensing, and information about harvesting of wildlife and fish.</p>

MANAGEMENT


For more tips, see these OMAFRA factsheets:

- Alternative Livestock Watering Systems, Order no. 04-027
- Livestock Access to Watercourses, Order no. 08-013



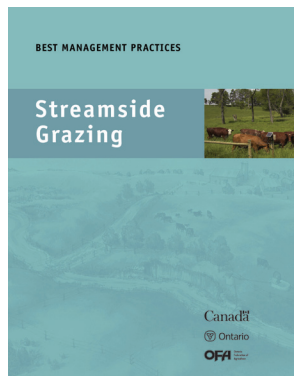
Lowlands (treed swamps) offer potential for timber, fuel wood, income in-kind, as well as important environmental and wildlife benefits. It takes planning and management to make the most of them, and this BMP book will show you how.

22-4. Wetlands and ponds – wildlife management

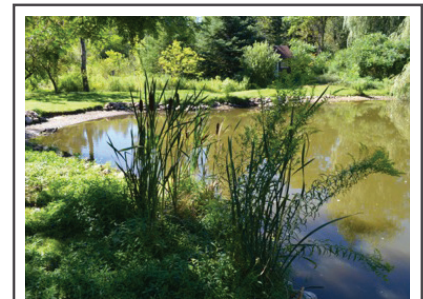
BACKGROUND	WHAT CAN YOU DO?
<p>Fish and wildlife need living space (habitat). They can only survive if the habitat provides food, shelter and water. This is why healthy wetlands should be left undisturbed.</p> <p>It is a violation of provincial legislation to degrade them by drainage. Improper drainage can change the quantity/quality of water entering wetlands, which can negatively impact their health.</p> <p>Once wetlands and ponds are adequately protected with buffers, there are additional opportunities to enhance them. Recognize the value of natural wetlands and ponds, practise informed land stewardship, and enjoy their many functions and characteristics.</p> 	<p>OPTION 1 – ACTION</p> <p>After wetlands and ponds are adequately buffered, focus on enhancing the quality of water coming into wetlands and ponds.</p> <p>Remove excessive nutrients and sediment. Options include:</p> <ul style="list-style-type: none"> • grassed waterways • restricting livestock access to watercourses draining to the wetland or pond. <p>Note that some enhancement activities may require the cooperation of farmers/landowners upstream and downstream from the wetland or pond.</p> <p>Increase the biodiversity of wetlands and ponds:</p> <ul style="list-style-type: none"> • cut channels through dense cattail stands to create a mix of open water and plant cover that is self-sustaining and productive • create rock piles adjacent to the shore and add floating logs <ul style="list-style-type: none"> – both will be used by waterfowl, shorebirds, frogs, snakes and turtles. <p>These two actions will require some expert advice and may require permits from your local Conservation Authority.</p> <p>OPTION 2 – ACTION</p> <p>Enhance the health of wetlands and ponds:</p> <ul style="list-style-type: none"> • control nuisance species such as purple loosestrife and carp • avoid highly sensitive habitats and critical times such as reproductive periods of wildlife <ul style="list-style-type: none"> – be aware that some farming practices (e.g. excess water withdrawal) may be more detrimental than others and cause negative impacts • use wetland drain restoration projects where feasible.

Limit water-taking from ponds during low water periods.

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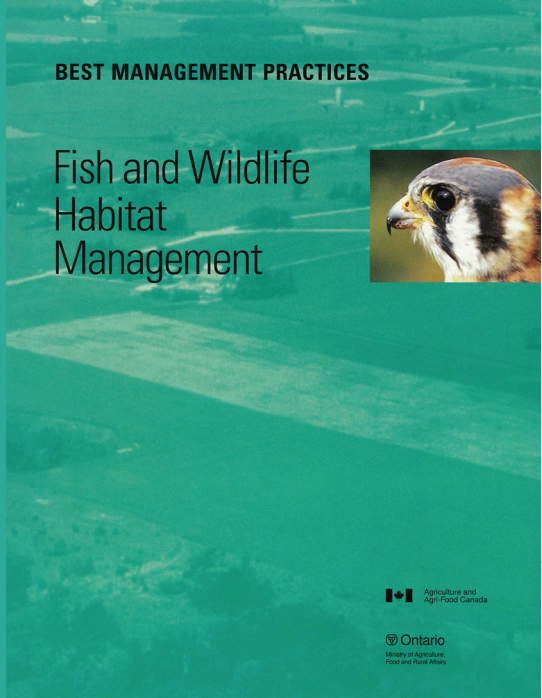
For options and tips to restrict livestock access and provide alternative water sources, see this BMP publication.



Naturalized ponds offer good wildlife habitats but are very sensitive to continual access by livestock.

MANAGEMENT

22-4. Wetlands and ponds – wildlife management (continued)

BACKGROUND	WHAT CAN YOU DO?
<p>(See page 5.)</p>  <p>The image shows the cover of a book titled "Fish and Wildlife Habitat Management: Best Management Practices". The cover features a green-tinted photograph of a wetland with a bird of prey, likely a falcon, in the foreground. The text on the cover includes the title, the subtitle "BEST MANAGEMENT PRACTICES", and logos for Agriculture and Agri-Food Canada and the Ontario Ministry of Agriculture, Food and Rural Affairs.</p>	<p>OPTION 3 – ACTION</p> <p>Enhance the potential for habitat in wetlands and ponds:</p> <ul style="list-style-type: none"> • implement a habitat plan, possibly including features such as waterfowl nesting structures and desirable wetland/pond plant species. <p>OPTION 4 – ACTION</p> <p>Enhance personal awareness and knowledge of wetlands and ponds:</p> <ul style="list-style-type: none"> • review methods of problem wildlife management control annually • attend meetings and read information on managing problem wildlife and wetland habitat for species at risk or species that rely on wetlands for survival • refer to Infosheet #23 for other possible actions. <p>Some wetland enhancement or restoration activities may require a permit before starting (e.g. a Permit to Take Water). Contact Ontario Ministry of the Environment, Conservation and Parks, the Ministry of Natural Resources and Forestry, or your local Conservation Authority.</p> <p>Don't use aquatic plant control chemicals unless you are certified to do so.</p> <p>Keep in mind that draining a wetland or pond, causing degradation and negatively affecting habitat, is a violation of provincial legislation.</p>

Healthy fish and wildlife habitat offers many benefits. This comprehensive BMP book can help you better understand and manage natural areas on your property. Fish and Wildlife Habitat Management is full of options and tips for farmlands, woodlands, wetlands, transitional areas, and aquatic areas. Prevention and control of nuisance wildlife are also covered.

For farmers, the good news is that many of the BMPs in place around the farm operation (e.g. for erosion control) will benefit natural areas as well.

22-5. Wetlands and pond restoration (water management)

BACKGROUND

Unrestricted water use or drainage may adversely affect fish and wildlife populations and can damage plant and soil resources of the wetland or pond.

Legislation addresses many activities concerning wetlands and wildlife ponds. It is advisable to contact your local Conservation Authority before taking any action.



This pond has been restored by the landowner in consultation with conservation organizations to enhance wildlife habitat and water quality.

WHAT CAN YOU DO?

OPTION 1 – ACTION

Limit or refrain from taking water from wetlands and ponds:

- refrain from taking excessive irrigation water or restrict water usage during times of fish or wildlife reproduction or during the normal low period
- do not artificially drain water from wetlands or wildlife ponds
- if you are planning to use water, remember that a Permit to Take Water from the Ministry of the Environment, Conservation and Parks is required if more than 50,000 L of water are to be taken in a 24-hour period
- restrict water use during dry/drought conditions.

OPTION 2 – ACTION

Consult your Conservation Authority regarding the need for permits before modifying, enlarging, redesigning, or re-establishing wetlands and ponds:

- verify any proposed modifications to a wetland or pond
- manage and optimize water levels, vegetation and habitat conditions for waterfowl and other wildlife in wetlands and ponds
 - use water-level control structures such as beaver baffles to minimize excessive flooding caused by beavers.

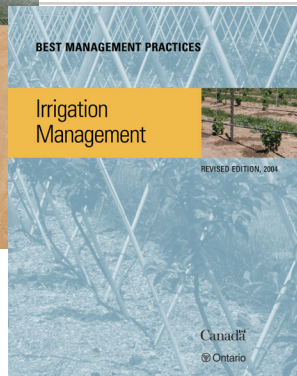
Optimizing water levels is not necessarily the same as maximizing or maintaining high water levels. Annual fluctuations in water levels in a wetland are normal.

OPTION 3 – ACTION

Eliminate or minimize external sources of contaminants in wetlands and ponds:

- ensure that any water entering these areas from surrounding land is of good quality
- control livestock access to wetlands or ponds by providing hard-surfaced controlled access points and/or alternative watering devices
- exclude livestock access to wetlands or ponds and their contributing watercourses and provide an alternative watering system.

Use the process set out in the Drainage Act and consult the Ministry of Natural Resources and Forestry when modifying existing drains to restore wetlands, which enhance water storage and water quality.



Irrigation Management and Cropland Drainage offer the latest information to help you make the most efficient use of these technologies, while minimizing environmental impacts. All BMP publications present an array of options.

FOR MORE INFORMATION

Ontario Ministry of Agriculture, Food and Rural Affairs

Many sources of supplementary information are available. Most can be found online at www.ontario.ca/omafra or ordered through ServiceOntario.

BEST MANAGEMENT PRACTICES

BMP publications are excellent sources to better understand on-farm environmental issues and discover a range of proven, practical options to address them. BMP materials are available at no charge to Ontario farmers. Below are a few sample titles. To order, see ServiceOntario information.

A Phosphorus Primer
 Buffer Strips
 Controlling Soil Erosion on the Farm
 Cropland Drainage
 Establishing Tree Cover
 Field Crop Production
 Fish and Wildlife Habitat Management
 Irrigation Management
 No-Till: Making it Work
 Soil Management
 Streamside Grazing
 Water Management
 Water Wells
 Woodlot Management

Inquiries to the Ontario Ministry of Agriculture, Food and Rural Affairs

Agricultural Information Contact Centre
 Ph: 1-877-424-1300
 Email: ag.info.omafra@ontario.ca
 Web: www.ontario.ca/omafra

Ontario Ministry of Natural Resources and Forestry

The harvesting of wildlife and fish is managed through the Fish and Wildlife Conservation Act, 1997. Consult the ministry website at www.ontario.ca/mnr regarding regulations, restrictions, licensing, and information about harvesting of wildlife and fish.

Order through ServiceOntario

Online at ServiceOntario Publications – www.ontario.ca/publications

By phone through the ServiceOntario Contact Centre
 Monday–Friday, 8:30 am–5:00 pm
 416-326-5300
 416-325-3408 TTY
 1-800-668-9938 Toll-free across Ontario
 1-800-268-7095 TTY Toll-free across Ontario

Additional Resources

Conservation Ontario
www.conservationontario.ca
 Contact your local Conservation Authority

Ducks Unlimited Canada
 705-721-4444 or www.ducks.ca

Environment Canada
www.ec.gc.ca
 How Much Habitat is Enough? 2013
 Working Around Wetlands?:
 What You Should Know, 1997

Best Management Practices publications present in-depth explanations, tips and advice for Ontario farmers.

ACKNOWLEDGEMENTS

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