

Lynde Creek Management Zone Strategy



***Lynde Shores C.A.
Management Plan
A Plan For Two Dynamic
Coastal Wetlands***



This report has been produced by the staff of
The Central Lake Ontario Conservation Authority
with recognition to all participants
who provided their time, expertise,
knowledge, information and support.

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Introduction

Background

The Central Lake Ontario Conservation Authority approved “The Web of Life, A Plan for Two Dynamic Coastal Wetlands” as a Management Plan for the Lynde Shores Conservation Area in March of 1999. This Plan identified the forms, functions and linkages of the two Provincially Significant Coastal Wetlands located within the Conservation Area’s boundaries, evaluated the current health and sensitivities of the area and examined appropriate locations for public access and use. The Management Plan also addressed restoration and rehabilitation requirements, opportunities for recreation and resource interpretation, strategic direction for additional land acquisitions, as well as public stewardship and community partnering.

Vision for Lynde Shores

To help guide the development of the Management Plan, the following vision statement and goals were developed by the public, through their participation in workshops held throughout the early part of 1998.

Vision Statement

Lynde Shores Conservation Area is a dynamic natural legacy, which we will continue to restore, expand and protect.

Through education, interpretation and managed access, our community will gain respect and appreciation for the intrinsic value of our natural heritage. This respect and appreciation will be fostered through the stewardship of owners, users and the community at large.

We will achieve this through balanced and managed access for all living things. This peaceful refuge will bring the community together with nature in a way that honours the spiritual, cultural and natural treasures of this very special ecosystem.

The Management Plan Goal is to identify, protect and enhance the current and potential natural heritage attributes, functions and linkages of Lynde Shores Conservation Area in conjunction with public use.

Natural Heritage Goal:

The Natural Heritage Goal is to maintain and enhance the ecological integrity of the Lynde Shores Conservation Area. The plan will consider the interaction of the two coastal wetlands, the upland meadow and forested habitats as well as connections north to the watershed, south to Lake Ontario, and east/west along the coast.

Recreation Goal:

The Recreation Goal is to evaluate and to accommodate recreational and educational uses within

the Lynde Shores Conservation Area compatible with the natural heritage goal.

Community Goal:

The Community Goal is to identify and to encourage opportunities for public and private land and water stewardship in the Lynde Creek Watershed and its east/west linkages.

Development of Management Zones

The Lynde Shores Conservation Area has been divided into management zones for the purposes of future planning. Boundaries have been determined to ensure that management options are examined in an ecosystem context.

The five zones include:

Cranberry Marsh

This management zone was determined based on the area of the watershed drainage (the drainage area for Cranberry Marsh is separate from that of the Lynde Creek), opportunities for upland waterfowl nesting within 250 m of the wetland boundary, wildlife corridors and areas of public use.

Lower Lynde Creek Marsh

This management zone was determined based on upland waterfowl nesting opportunities within 250 m of the wetland boundary, hydrology of the creek corridor and Lake Ontario, the fish corridor, and the width and characteristics of natural vegetation adjacent to the wetland and Creek.

Upper Lynde Creek Marsh

This management zone was determined based on the extensive and healthy habitat for area sensitive species, terrestrial wildlife corridors, and opportunities for upland waterfowl nesting within 250 m of the wetland boundary.

Woodlot

This management zone was determined based on its focus of human activity, interpretative opportunities and potential to rehabilitate the woodlot.

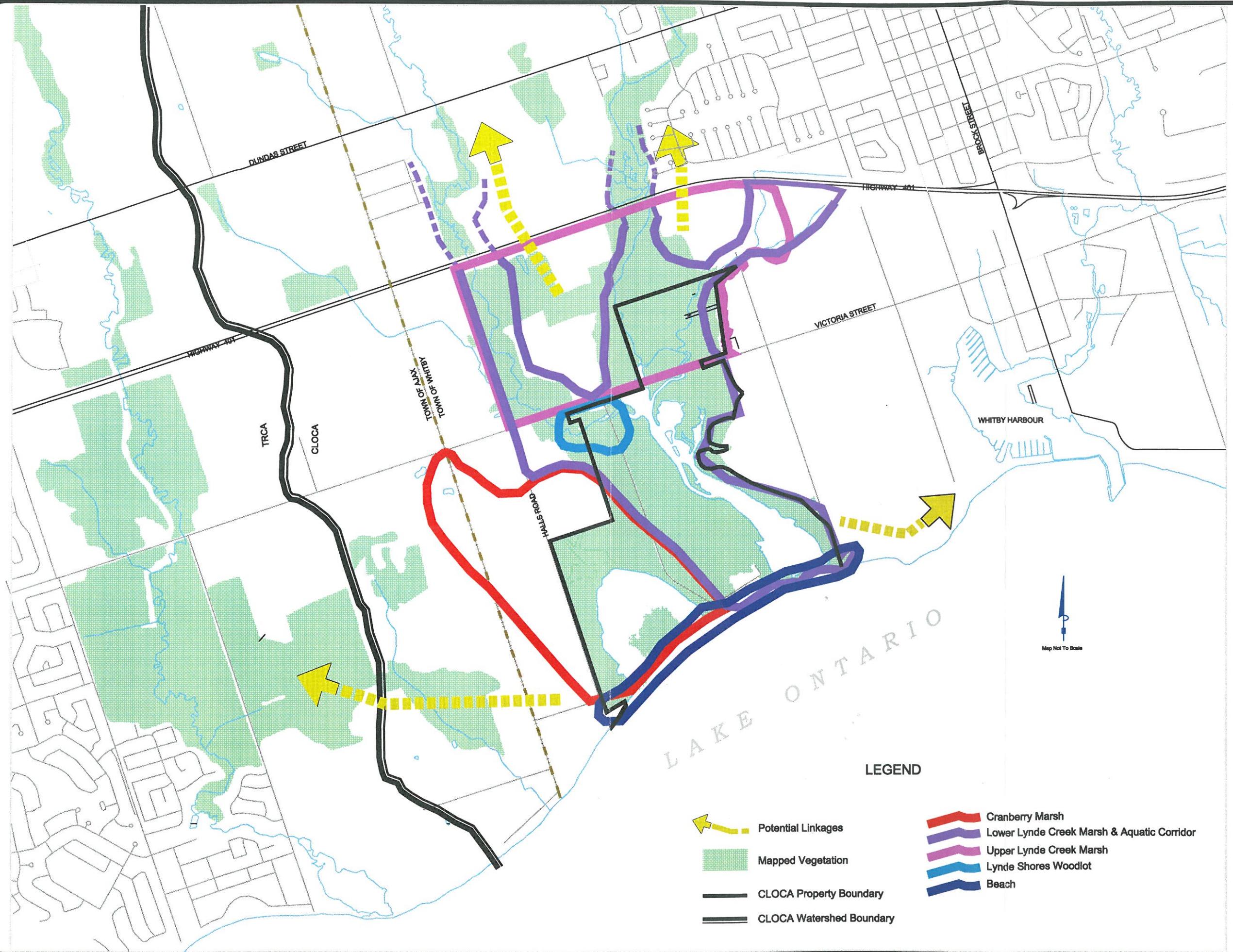
Beach Area

This management zone was determined based on its distinctive vegetation and environmental characteristics, including active shoreline processes, unique vegetation and habitat.

The Cranberry Marsh Management Zone Strategy was approved in September of 1999. The Lynde Creek Management Zone Strategy, contained herein, outlines the management strategy for

the remaining management zones including, the Upper and Lower Lynde Creek Marsh, the Woodlot and the Beach Area.

Lynne Shores Management Plan Lynne Creek Management Zone Strategy Management Zones





Aerial View of Lynde Creek - Looking North from Lake Ontario (1999)

Context

Lynde Shores Conservation Area constitutes one of the largest contiguous areas of natural waterfront within the Greater Toronto Area. The types of habitats represented include beach, forest, meadow, thicket, plantation, swamp, marsh and open water.

As well as its Provincially Significant Wetland status, Lynde Creek Marsh has been designated as a regional “Area of Natural and Scientific Interest”.

The Conservation Authority presently owns the majority of this land but additional properties have been included in the acquisition plan for the Conservation Area. These properties will allow for the development and enhancement of corridors and linkages to the west of the property with the Warbler Swamps and also assist in protecting environmentally sensitive lands by allowing for the location of facilities such as parking and trails outside of the sensitive areas. Other lands that lie within the zone are targeted for future stewardship activities.



Birdfeeder Trail

Current Public Uses

Lynde Shores Conservation Area is presently used for passive recreational activities. At least 60,000 visits to the Conservation Area were recorded in 1997 and 1998. Many schools reserve the Conservation Area for outdoor interpretative programs.

Within these management zones, facilities presently provided include the main parking lot, picnic area, boardwalk to Lynde Creek, canoe launch, and trail system including the Birdfeeder trail (a short loop through the Victoria Woods) and LeVay's Lane Trail which travels south to the shore of Cranberry Marsh and Lake Ontario.

A user survey was conducted in September 1997 to assist with identification of current uses. Those identified through the survey and the consultation process include nature interpretation, bird watching, photography, canoeing, picnicking, dog-walking, bird-feeding, fishing, Raptor-Watch, beach use and skating.

Interim Management

The Conservation Authority's approval of the Management Plan for Lynde Shores led to several interim management strategies being undertaken throughout the Conservation Area. Those that have affected these Management Zones include:

Trails and Trail Usage:

Direction:

Management must include proper restrictions on recreational activities throughout the entire Conservation Area in order to respect the site's sensitivity. In this regard, continued use of unauthorized trails will be prohibited through a combination of barrier plantings and signage. The public will be made aware of the rationale for trail closings through the use of signage, postings at the information kiosk and through interpretative programs.

Lack of trail facilities has led visitors to use the existing private road located on the property. This has resulted in a safety issue for users. Use of the road must be restricted, and therefore pedestrian access will have to be provided from the parking lot to the authorized trails and an alternate interim trail system developed in the least sensitive areas.

Action Taken:

- ❖ Alternate interim trail system has been designed, trail improvements are underway and trail resurfacing planned to start in near future
- ❖ Pedestrian access over the creek is completed
- ❖ Road is closed to pedestrian traffic
- ❖ Developing interpretive signage to be located at the entrances to the trails that will identify sensitivities and attributes of the area

Dog Ban:

Direction:

The current (1998) use of the area for dog walking has provided an identified stress. As there are other nearby areas that are able to accommodate this activity, dog walking will be prohibited throughout the property. The public will be made aware of the rationale for walking restrictions through the use of signage and through information postings at the kiosk

Action Taken:

- ❖ As of May 1st, 1999 dogs have been banned from the Conservation Area
- ❖ Appropriate signage has been posted

Garbage Facilities:

Direction:

Garbage facilities will be provided to limit litter within the area.

Action Taken:

- ❖ Garbage facilities have been provided in the main parking lot

Seasonal Canoe Launching:

Direction:

Within the Lower Lynde Management Zone, canoe launching from the Conservation Area will be limited to a seasonal activity to reduce the disturbance to waterfowl during their breeding and brooding seasons. Signage will be provided indicating this restriction.

Action Taken:

- ❖ Canoe launching is permitted between July 15th and September 15th.
- ❖ Appropriate signage has been posted

Restricted Access North of Victoria Street:

Direction:

Within the Upper Lynde Management Zone, the restriction on public access will be maintained until recommended land acquisitions have occurred. This restriction will continue to respect the sensitivity of this area and the unique wildlife habitat that it contains.

Action Taken:

- ❖ Access restrictions remain in place

Rehabilitation of Birdfeeder Trail:

Direction:

Efforts will be focused on rehabilitating the Bird Feeder Trail and Woodlot.

Action Taken:

- ❖ Location of the trail has been clearly identified through the placement of woodchips and snowfence has been erected to deter people from entering sensitive areas
- ❖ Specific access points to the feeders have been identified and some feeders relocated
- ❖ Developing interpretive signage to be located at the entrance to the trail that will identify sensitivities and attributes of the area

Beetle Release - 1999

Direction:

Efforts be made to control invasive species.

Action Taken:

- ❖ In 1999, 5000 *Galerucella* beetles were released on Loosestrife plants in Cranberry Marsh to act as a bio-control for the invasive Purple Loosestrife (*Lythrum salicaria*).

Policy for Access to Sensitive Areas

Through consultations with the public in preparation of the Management Plan for Lynde Shores, and the Cranberry Marsh Management Strategy there have been requests for permission for individuals to enter specific areas, not accessible by the trail system, for the undertaking of scientific or nature study pursuits.

In order to address these users, a policy has been developed to review requests for access to sensitive areas. This policy and the application form are found in the appendices.

In general, the user will be responsible for ensuring that there is no damage to the property as a result of their activity, and that data collected be shared with the Conservation Authority.

Strategy Development

Issues

In developing a management strategy for this zone there are several issues that need to be addressed including:

Natural Heritage Resource Planning:

- Establish rehabilitation plans for those areas determined to be in low health
- Establish stewardship targets and methods to achieve these
- Consider implications of plans to widen Victoria Street

Public Use:

- Determine compatibility of recreational and interpretative opportunities with Natural Heritage Goal
- Determine desired extent and location of visitor facilities (example access trails and viewing platforms)
- Determine extent of linkages with the Lake Ontario Waterfront Trail
- Consider implications of plans to widen Victoria Street

Workplan and Schedule

The following outlines the workplan and schedule used in the preparation of the Lynde Creek Management Zone Strategy.

| Tasks | Jan | Feb | Mar | Apr | May | June | July |
|--|-----|-----|-----|-----|-------------------|--------|--------|
| Understanding of Condition and Function (further research undertaken) | | | | | | | |
| Determine Desired Conditions and Alternative Actions Available Evaluate Alternative Management Concepts | | | | | Public Open House | | |
| Determine Details of Preferred Management Concepts Determine Means of Meeting Public Use Requirements | | | | | | | |
| Approval of Strategy by CLOCA Board of Directors | | | | | | Shaded | |
| Initiate Action to Achieve Preferred Management Concept | | | | | | | Shaded |

Consultation

As indicated in this workplan, a public open house was held in May 2000. Invitations were sent in advance to a mailing list of 324 individuals, groups and agencies. Notices were placed at the Conservation Area, in the watershed newspapers and on notice boards within the watershed.

During this open house, draft documents outlining the Natural Heritage Resource Management Options and Public Use Management Options were available for review. Worksheets on each of these topics were also provided to elicit comment (see appendices).

Following this open house an additional mailing to 40 individuals, groups and agencies was prepared. This provided the draft documents and worksheets and requested reviewer comments.

Comments received from reviewers are provided in the appendices.

Natural Heritage Resource Management

The Lynde Creek Management Zone was divided into 13 areas for the purpose of examining the natural heritage attributes and formulating recommendations for the management of these areas. Each area represents a portion of the landscape that is considered relatively homogeneous by form and function. The following figure illustrates the management areas addressed within this strategy, as listed below:

- 1) Victoria Swamp
- 2) Meadow Marsh
- 3) Cattail Marsh
- 4) Buffer
- 5) Beach
- 6) Eastbourne
- 7) Riparian
- 8) Cultural Meadow
- 9) Cultural Woodland
- 10) Victoria Woods
- 11) Agricultural
- 12) Deciduous Swamp
- 13) Open Water

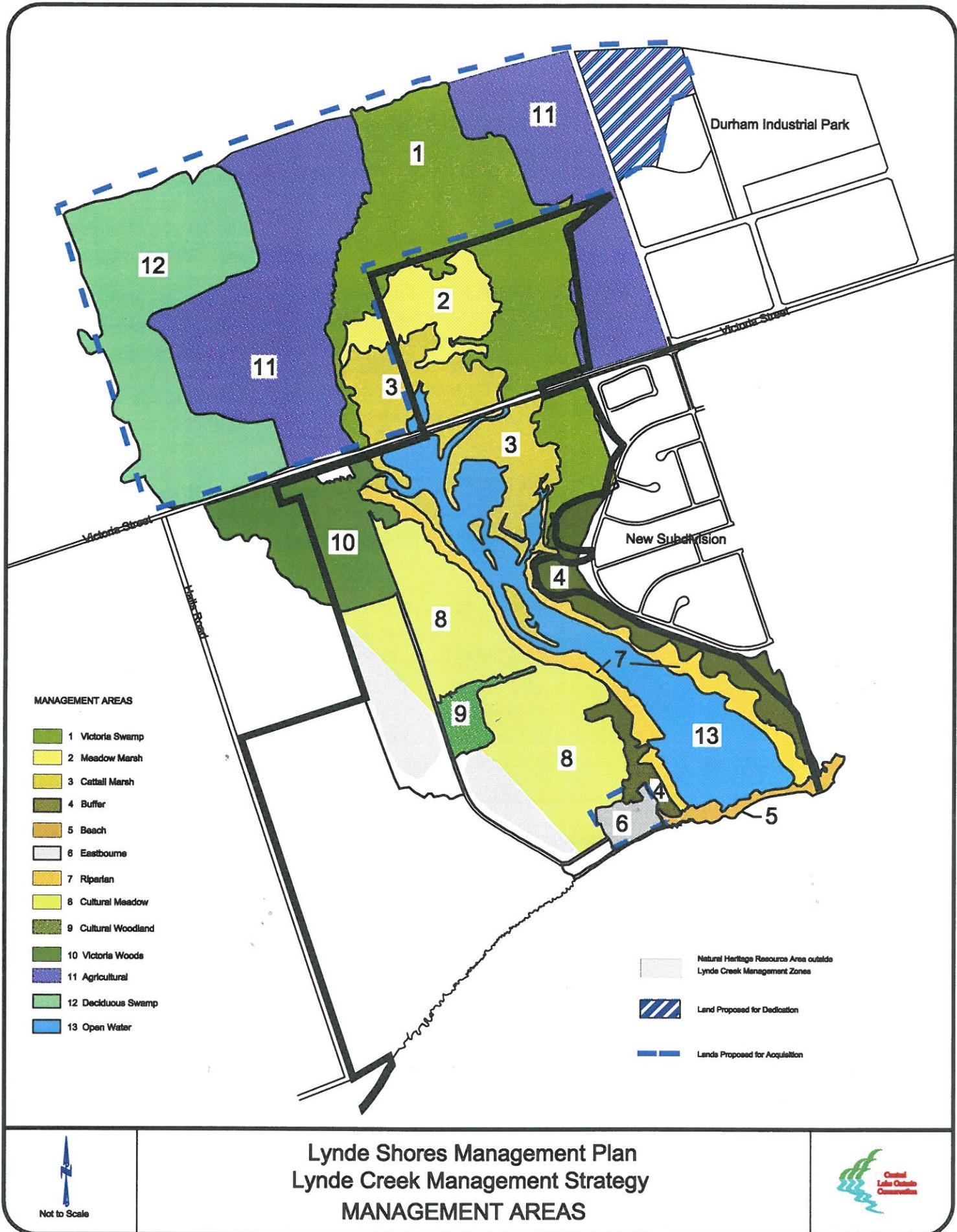
For each area, a description of the natural heritage conditions is presented, along with management alternatives and considerations. The preferred management options were presented to the public for review and discussion at an open house in May of 2000. Comments received from the public regarding the management options have been incorporated into the management plan descriptions, and clarifications to the strategy were made where necessary.

AREA 1 – VICTORIA SWAMP

This is largely a deciduous treed swamp composed of Green Ash (*Fraxinus pennsylvanica*), Crack Willow (*Salix fragilis*), Manitoba Maple (*Acer negundo*) and Red Osier Dogwood (*Cornus stolonifera*). Two smaller vegetation communities also form part of this management area: a meadow marsh, composed of Reed Canary Grass (*Phalaris arundinacea*) and Canada Bluejoint (*Calamagrostis canadensis*) and a White Birch (*Betula papyrifera*) upland forest.

Natural Heritage Conditions

A vegetation and wildlife sensitivity evaluation of this area, undertaken in the Web of Life, deemed this area to be one of the most sensitive based upon nine criteria ranging from “tolerance to site conditions” to “reproductive viability”. This large swamp is adjacent to land developments and major transportation corridors causing disturbance to the area. However, the deciduous swamp continues to provide a complex habitat for numerous species of wildlife.



Areas of excellent cover ensure the continuance of resident and wintering bird species such as Great Horned Owl (*Bubo virginianus*), White-breasted Nuthatch (*Sitta carolinensis*) and Downy Woodpecker (*Picoides pubescens*). The proximity of this area to quality foraging habitats is also important for resident raptors such as the Red-tailed Hawk (*Buteo jamaicensis*).

The seasonally flooded areas provide cover and nesting habitat for some waterfowl such as Mallard (*Anas platyrhynchos*). These flooded areas are also valuable for the maintenance of local amphibian populations. Pockets of alternate vegetation (i.e. Meadow Marsh) provide habitat for grassland species as well as valuable edge.

Small mammals such as eastern cottontail (*Sylvilagus floridanus*), beaver (*Castor canadensis*), muskrat (*Ondatra zibethicus*), raccoon (*Procyon lotor*) and fox (*Vulpes vulpes*) utilize the area frequently for foraging and travel. White-tailed deer (*Odocoileus virginianus*) are also known to utilize the area in conjunction with the adjacent agricultural areas. The main channel of the Lynde Creek and associated tributaries flow through this area, providing fish migration and spawning habitat. The frequent flooding and organic laden, heavy clay loams of this area help to support the vegetative species associations found here.

Although this area is currently quite large, it functions as a population “sink” rather than “source”. Specifically, the physical size combined with the degree of habitat edge disturbance renders the area as insufficient to produce viable wildlife populations for colonization of other habitats.

Despite the posted restrictions on public access, people manage to find their way into the swamp; garbage and unauthorized trails are the tell tale signs of human presence. A large part of this area extends beyond the present day Conservation Area boundary and is bordered by agricultural and Prestige Industrial development lands.

Management Alternatives and Considerations

A: Expand the Physical Size of the Existing Habitat

| Pros | Cons |
|--|---|
| Increases the amount and quality of habitat for wildlife | Could lead to expansion of opportunistic wildlife populations |

B: Manage to Maintain the Area as It Is

| Pros | Cons |
|---|---|
| Natural processes are left to operate within the area | Habitat will continue to function as a “sink” |

Proposed Option (A)

To best address the current habitat concerns for Area 1, the Authority proposes to increase the physical size of Victoria Swamp. In conjunction with management options for adjacent lands (refer to Area 11), this approach will increase the amount of habitat available while decreasing

the overall edge disturbance in the area. It is hoped that these actions will contribute to the area functioning as a habitat “source”. Until such time as the appropriate lands are acquired to implement this plan, stewardship options will be pursued.

Resource Management Plan

CLOCA currently owns only a small portion of Area 1. As a result, the plan to increase the physical size of the area cannot proceed until the appropriate lands are acquired. At that time, the portion of Victoria Swamp that borders the agricultural lands will be allowed to regenerate naturally. The vegetation will be allowed to succeed naturally, and barrier plantings will be undertaken at habitat edges to aid in the mitigation of light, wind and noise. In addition, potential fish habitat improvement projects will be considered for Lynde Creek.

Public comments in favour of this management option include “*I feel it is very important to try to acquire the whole area identified as Area #1. This would allow better control options to the most sensitive area of the existing marsh.*” and “*If this is a deciduous area, some clumps of Spruce and Cedar would provide shelter for some species.*” Edge plantings will include conifer species to maximize the interception of light, wind, and noise while providing additional wildlife habitat.

In the mean time, the Authority will pursue stewardship opportunities with the current owners of the proposed acquisition lands. CLOCA will also continue to enforce the restriction on public access to this sensitive area. Efforts will be made to remove the waste and refuse from the unauthorized trails throughout this area. Public comments concerning this area indicated that the reasons for restricting public access north of Victoria Street were unclear. To clarify, public access will continue to be restricted for the following reasons:

- Lynde Shores is a highly visited area, and wildlife currently have few refugia from disturbance. Disturbance is very costly to wildlife (energy-wise), therefore CLOCA wishes to maintain the area with minimal disturbance.
- The sensitive organic based soils of the swamp are prone to compaction, thereby putting the growth of understorey plants at risk.
- There is no safe access point for the public to enter the area, and no opportunity to create one.

The need for wildlife crossing structures will be incorporated into CLOCA recommendations on the plan for the widening of Victoria Street. In addition, recommendations regarding compensation for habitat loss will be made.

AREA 2 – MEADOW MARSH

This area is dominated by the native Canada Bluejoint (*Calamagrostis canadensis*) and is periodically inundated with water. The higher concentrations of organic soils determine the vegetation that will thrive in this area. Meadow marshes represent the wetland and terrestrial

interface.

Natural Heritage Conditions

The Meadow Marsh is the largest one of its kind within the Conservation Area. It is considered to be a sensitive seasonal concentration habitat for meadow marsh specialists and other avian species. The dense grasses are also valuable as cover and refuge for a variety of small mammals (i.e. mice, voles, etc.). The prey production value of this habitat is beneficial for predatory wildlife residing within adjacent habitats.

The Meadow Marsh is in a late successional stage and has not been subject to a shift in vegetative composition for more than 50 years. Although technically a marsh, the Meadow Marsh is only periodically flooded and the soils have a deeper organic layer. It is buffered on all sides by other large vegetation communities and is currently considered to be in good health. The Meadow Marsh has been subjected to minimal human disturbance over the years, largely due to its inaccessibility.

Management Alternatives and Considerations

No Active Management is Required

Proposed Option

It is not necessary to actively manage the Meadow Marsh at this time. The area is currently in good health, and is surrounded by other habitats that act as a buffer from adjacent land disturbances. Moreover, the proposed management plan for the areas surrounding the Meadow Marsh will augment the existing buffer capabilities of the adjacent vegetation communities.

Resource Management Plan

The active and future management of Areas 1 and 11 will benefit the Meadow Marsh by increasing their potential to buffer light, wind and noise to the marsh. The Authority will continue to monitor the health of the Meadow Marsh, and undertake future management options if deemed necessary. Public comments in favour of this management option include “*We should try to continue the inaccessibility to this area to avoid problems developing in the future.*”

AREA 3 – CATTAIL MARSH

This area is dominated by cattails and more specifically, the pollution tolerant Narrow-leaved Cattail (*Typha angustifolia*). Standing water up to 2 metres in depth is present for all of the growing season. Organic soils up to 40 cm in depth are characteristic of this type of marsh.

Natural Heritage Conditions

This large cattail marsh is bisected by Victoria Street into discrete north and south sections. The presence of the causeway and associated disturbances detract from the quality of the habitat along

the road allowance. However, the more northern and southern sections are relatively undisturbed, as the standing water and deep organic soils render these areas undesirable for human use. The area has become quite stable over time, but there are concerns regarding potential invasive species.

Interior cattail specialists predominantly use the area for breeding; the marsh has been documented as a breeding area for sensitive species such as the vulnerable Least Bittern (*Ixobrychus exilis*), rare Black Tern (*Chlidonias niger*) and Marsh Wren (*Cistothorus palustris*). These species require areas of dense cattail vegetation, and tend to be quite sensitive to disturbance. Aquatic mammals such as muskrat (*Ondatra zibethicus*) also use the area for foraging and as an aquatic corridor. The cattails are also seasonally important for amphibians, reptiles and aquatic insects. Turtles are seasonally dependent upon areas of suitable nesting substrate. There is evidence of the gravel shoulders of Victoria Street being used for this purpose.

During spring and fall flooding events, the Cattail Marsh becomes possibly the most important area for fish. These flooded vegetated areas provide spawning and rearing areas for a multitude of fish species. During these times and the summer months, the cattail vegetation provides shade and cover to predacious fish such as pike (*Esox lucius*) and forage fish such as fathead minnow (*Pimephales promelas*). Invertebrate production is also dependent upon this type of vegetative cover.

During some spring flood events the Meadow Marsh (Area 2) has the potential to flood and serve the same fish habitat functions as the Cattail Marsh. Both the Cattail and Meadow Marshes contribute to a natural filtration of contaminants that may otherwise reach the open water, resulting in poor water quality.

Management Alternatives and Considerations

A: Monitor Over Time to Protect Habitat Attributes

| Pros | Cons |
|---|------|
| Protects critical attributes of sensitive habitat for wildlife and vegetation | None |

B: No Active Management

| Pros | Cons |
|--|---|
| Allows the area to be regulated by natural processes | Negative environmental changes may not be identified or addressed |

Proposed Option (A)

The size and composition of the Cattail Marsh is highly dependent upon natural water level fluctuations and the overall hydrology of the Lynde Creek. Thus opportunities for expansion or rehabilitation of this area are limited. The Authority therefore proposes to monitor the Cattail Marsh in an effort to ensure that the most critical attributes of its function are maintained: filtering capability and habitat provision.

Resource Management Plan

The Authority does not currently own the entire area of Cattail Marsh. Until such time as acquisition of these lands proceeds, several management actions will be undertaken. Most imminent will be the mitigation of the widening of Victoria Street. Recommendations will be made to ensure that the causeway is permeable to wildlife. This includes installation of appropriate wildlife crossing structures. In addition, recommendations will be made for the positioning of Victoria Street to minimize the overall loss of habitat. Appropriate compensation for these losses will be sought.

Opportunities for creation of turtle nesting habitat will be investigated, to reduce the use of roadside gravel areas leading to high rates of mortality. The most appropriate locations for these alternative nesting areas will be determined for the whole of the causeway. Areas 1 and 3 will be the focus areas for this effort. Public comments in favour of this management option include “*I would like to see the full widening process completed in one operation and before paving is needed. Sand strips [for turtle nesting] should be provided.*” and “*Alternate turtle nesting habitat is critical*” and “*Agriculture to the west could be considered appropriate for turtle nesting as upland habitat*”.

Purple loosestrife (*Lythrum salicaria*) will continue to be monitored within the area as a measure to protect the existing vegetation community. On August 5th of 1999, 5000 Galerucella beetles were released at Cranberry Marsh to act as a biocontrol for the invasive Purple Loosestrife. The beetles were released on loosestrife plants along the east shore of Cranberry Marsh (the old “LeVay” property). The highest loosestrife concentration of about 1000 stems was noted in the alder island within the Marsh. A yearly monitoring program has been developed to track the progress of these beetles.

Management of the eastern shoreline is carried out in conjunction with the Lynde Shores Environmental Monitoring Committee. In this regard, management options will be considered as they present themselves.

AREA 4 – BUFFER

The Buffer consists of two narrow strips of vegetation on either side of the Lynde Creek riparian area. The Buffer is composed of several different vegetation communities including swamp, forest and thicket. The Buffer strips continue for the entire length of the Broken Front Concession (BFC) from Victoria Street south to the beach.

Natural Heritage Conditions

Currently, the linear strips of vegetation alongside the riparian zone of Lynde Creek are insufficient to adequately buffer the Marsh. Yet, coupled with the riparian zone it is the interface of aquatic and terrestrial habitats and is therefore one of the most diverse and valuable

components of the ecosystem.

The buffer habitat is diverse for wildlife, as a result of the many vegetation communities of which it is composed. The Buffer Area is used by a wide variety of avian and mammalian species that are usually associated with riparian and/or marsh habitats. It is likely that some of the rare species identified in the adjacent habitats use this area as well. Opportunistic predators such as coyote (*Canis latrans*) travel along the edges of this unit for hunting and foraging opportunities. The most prevalent use by predators is along the western boundary between the Buffer Area and the Cultural Meadows.

Unauthorized public trails are very apparent through this area on the west side, and the clay based soils are very compacted. On the east side of the marsh, human activity has been eliminated with the erection of a 6 foot fence that also extends the entire length of the BFC. The fence is in place as a result of the Whitby Shores sub-division agreement and a requirement of the Ontario Municipal Board. The natural vegetation inside of the fence has been augmented with in excess of 40 000 native shrubs; a requirement of the Environmental Management Plan prepared for the Whitby Shores Development area. The area is managed in conjunction with the Lynde Shores Environmentally Monitoring Committee, a committee with membership from the public, municipality and conservation authority, established by the Ontario Municipal Board to work cooperatively over a ten year period.

Management Alternatives and Considerations

A: Increase the Physical Size of the Western Buffer

| Pros | Cons |
|--|--|
| Protects sensitive habitat and contributes to good water quality | Decreases the size of adjacent habitat areas |
| Reduces disturbance to the marsh | |

B: No Active Management

| Pros | Cons |
|-------------------------------------|---|
| Maximizes area of adjacent habitats | The Marsh will continue to exist with minimal buffering |

Proposed Option (A)

The most obvious way to improve the function of this area is to increase its physical size and vegetation density. The Authority proposes to encourage a more uniform band of vegetation along the western side of the Marsh to increase the buffering capabilities, and reduce disturbance pressures from both the public and predators.

Resource Management Plan

The Buffer Area along the west side of the Marsh will be allowed to regenerate an additional 15 metres beyond its current limit. This will be achieved in conjunction with restricted mowing techniques used for Area 8 (Cultural Meadow). The aim is to make the buffer strip a more uniform width along the entire west side of the Marsh. This will protect the sensitivity of the

marsh, and provide additional edge habitat for wildlife and vegetation communities. The types of vegetation that establish themselves will be monitored, and undesirable species will be removed as the area matures.

Public comments in favour of this management option include: “*Buffer could be improved by more impenetrable vegetation.*” and “*Monitoring species would be advisable to make sure it becomes diverse and not only one species.*”

The east Buffer will be left to rehabilitate itself within the zone bounded by the Whitby Shores sub-division fence. Management of the east Buffer is carried out in conjunction with the Lynde Shores Environmental Monitoring Committee.

AREA 5 – BEACH

Located at the interface between Lake Ontario and the mouth of the Lynde Creek the beach supports patchy vegetation cover. The beach is subject to active shoreline processes and extreme fluctuations in moisture and temperature.

Natural Heritage Conditions

This dynamic barrier beach supports a variety of unusual vegetation, including the rare Bushy Cinquefoil (*Potentilla paradoxa*). The amount of vegetation that the beach supports varies from year to year dependent on lake levels. The location of the mouth of Lynde Creek varies spatially and temporally, generally within a 30 m area. This phenomenon is especially apparent during spring flood events. The soils at the mouth of the Lynde Creek are composed of sand and gravel.

The beach, mud flats, and associated waterfront habitat is an important loafing area for waterfowl and other migratory birds. It also serves as a link between marsh, riverine and lake environments for fish. The beach is part of a larger linear corridor feature, connecting the aquatic environments of coastal Lake Ontario. Aquatic wildlife are dependent upon the integrity of the habitats along this coastal corridor.

The Beach receives minimal human traffic as a result of the fence along the east side of the Lynde Creek mouth. The Whitby Shores sub-division fence thereby restricts potential human interference with this delicate ecosystem.

Management Alternatives and Considerations

No Active Management is Required

Proposed Option

Because the Beach is dynamic and dependent upon natural processes, active management is inappropriate. The area is sensitive and hosts known rare plants, and is in good health for fish and wildlife needs. Surrounding land use effects are minimal, and the area is best left alone. Monitoring of public use will continue over time.

Resource Management Plan

Although no formal management plan will be implemented, stewardship with the Eastbourne Beach residents will be promoted. The intent is to raise awareness for the sensitivity of the Beach, and to maintain the integrity of the natural heritage features. Comments received from the public support this decision: “*Monitoring of ‘people use’ [is the] only thing necessary to protect natural heritage features.*”

AREA 6 – EASTBOURNE

During the 1930’s a proposed subdivision, Eastbourne Estates, was planned stretching from the Lynde Creek to Cranberry Marsh. At this time, 12 summer cottages were constructed west of Lynde Creek.

The Conservation Authority began land assembly for Lynde Shores Conservation Area in 1972. The Eastbourne Estates property was purchased in 1975 with the exception of seven lots that continue in residential use, connected to Victoria Street by a private road that bisects the Conservation Area from north to south.

Resource Management Plan

Long term, the Eastbourne Estates and the private roadway will be incorporated into the LSCA lands as per the Long-Term Concept Plan for Lynde Shores Conservation Area (2000). Until such time that these lands are acquired, stewardship with present landowners will be the method of natural heritage management for this area.

Because of the residential locations, there is the potential for management activities to be undertaken on these properties that directly or indirectly affect the future health of the Conservation Area. Contact will be made with present owners to inform them of how management of their properties may affect the health of the Conservation Area.

Public comments in favour of this management option include: “*Cooperation is a priority and stewardship with present landowners can provide a ‘watchdog’ on this area until ownership is possible.*” and “*I am sure that these property owners are aware of some stewardship responsibilities.*”

AREA 7 – RIPARIAN

The Riparian Area occurs between the Lynde Creek and the Buffer Area on either side of the creek. Marsh, thicket, swamp, and upland forest are the main vegetative communities of this area. The Riparian area is a thin strip of land where the aquatic and terrestrial habitats meet.

Natural Heritage Conditions

The Riparian area is dominated by communities of vegetation that are associated with the hydrological regime of the Lynde Creek Marsh. The cover and habitat created by this vegetation is complex and of high quality for wildlife. Avian species typically utilize the Riparian area the most, followed by generalist wildlife such as coyote (*Canis latrans*) and raccoon (*Procyon lotor*) that forage there.

The Riparian area is also important to fish in several ways. Tree and shrub cover provide shade to the Marsh, act as a protective buffer and provide direct cover in the forms of living and dead plant material (branches and leaves). The Riparian zone also incorporates an area of cattail marsh at the interface of the open water and terrestrial habitat. This area provides the same fish habitat characteristics as previously described for Area 3.

Ultimately, a Riparian zone functions best when its width adequately buffers the water feature from adjacent disturbances and pressures. The riparian zone is subject to increased disturbance, as a result of limited buffer vegetation in critical areas.

Management Alternatives and Considerations

No Active Management is Required

Proposed Option

No active management is required, as the management of Unit 4 (Buffer Area) will achieve the desired functional results. However, monitoring of the health of this area will continue.

Resource Management Plan

The Authority proposes to widen the Buffer strip adjacent to the Riparian area, along the west side of the marsh and at other appropriate locations as determined through further field investigations. The increased width of the Buffer area will serve to increase the overall habitat for riparian communities of plants and animals. As well, it will contribute to the buffer capabilities along the Marsh.

As the health of the Riparian Area increases, opportunities to create ephemeral amphibian breeding ponds will be investigated. In addition, recommendations from the Lynde Shores Environmental Monitoring Committee will be considered annually. Public comments to date have favoured these management options.

AREA 8 – CULTURAL MEADOW

Originating from or maintained by anthropogenic or culturally based disturbances having both tree and shrub cover less than 25% each. Cultural meadows often have a large proportion of introduced species.

Natural Heritage Conditions

This community occurs outside of the wetland boundary and partially within the management zone. Management alternatives for this area were considered in the development of the Cranberry Marsh Management Zone Strategy.

This area consists of upland habitat composed of grasses and small trees/shrubs, presently suitable for both waterfowl and interior grassland nesting species such as Mallard (*Anas platyrhynchos*), Blue-Winged Teal (*Anas discors*), Northern Harrier (*Circus cyaneus*) and Eastern Meadowlark (*Sturnella magna*). Prior to 1993, the cultural meadow was in agricultural production; the Conservation Authority held a lease agreement with a local farmer to grow crops including corn and soya bean. In 1992 farming on these lands ceased, and as many as 20,000 seedlings were planted the following spring (most of which are within the Cultural Meadow within the Lynde Creek Management Zone). The long grasses flourished in the area since the lands have been rehabilitated. The soil type is heavy clay, which provides ideal conditions for the heavy growth of goldenrod and asters in the area.

Management Alternatives and Considerations

A: Continue the Current Management Regime with Reduced Mowing Area

| Pros | Cons |
|--|---|
| Habitat provided for waterfowl and inland grass species | Periodic decrease in suitable habitat for waterfowl and inland grass species due to cutting |
| Increases habitat size of the buffer area and reduces disturbance to the riparian area and marsh | Decreases the size of this habitat area |

B: No Change in Current Management

| Pros | Cons |
|---|---|
| Maximizes area available for waterfowl and inland grass species | Does not address the sensitivities of the riparian area and marsh |

Proposed Option (A)

It has been decided through the Cranberry Marsh Management Zone Strategy that the Cultural Meadow be managed in the future for waterfowl nesting and interior grassland nesting species. However, the management will be modified to allow for regeneration of the Buffer area adjacent

to the western side of the Lynde Creek Marsh.

Resource Management Plan

A complete mowing of the cultural meadow was undertaken in the fall of 1999 after frost. Cyclic mowing will occur every five years. A post-frost mowing will ensure that most species utilizing this area during the growing season have had opportunity to do so.

The young plantation that exists in the north-west will remain and the Pine and Spruce saplings will act as a nurse crop for the young Red Oaks emerging in the area. Long term management (+60 yrs.) of the plantation will result in an Oak Savannah-type ecosystem.

The Authority proposes for the long-term management of the area that the establishment of warm season native grasses be further researched, and opportunities for partnerships with grassland managers be recognized.

Public comments in support of this management option include: “*Add Bobolink (Dolichonyx oryzivorus) to the species to be encouraged.*” and “*Mowing from time to time is no doubt helpful. This is a great area to experiment with native food-source shrubs and grasses.*”

AREA 9 – CULTURAL WOODLAND

The Cultural Woodland is an area that has been exposed to past disturbance through human activity. Located at the mid-point of the Broken Front Concession (BFC), the woodland is surrounded on all sides by Cultural Meadow.

Natural Heritage Conditions

The Cultural Woodland has a large proportion of non-native species and tree cover less than 60%. The woodland area was historically the location of a farm residence with associated out-buildings. An old barn and silo foundation are all that remain. This woodland is composed of deciduous thicket and conifer windbreak with the occasional large diameter tree in between. A portion of LeVay’s Lane trail meanders through this management area.

A snake hibernaculum occurs within the cobble located at the old silo and owls roost in the large Norway Spruce that line the historic laneway. The Woodland is used as a connector to other habitat systems by several species including coyote (*Canis latrans*), fox (*Vulpes vulpes*) and small mammals. The corridor function of this area is currently impaired by the small size and fragmentation from adjacent habitats.

Management Alternatives and Considerations

A: Increase the Size of the Woodland

| Pros | Cons |
|---|---|
| Allows for a functional corridor connecting Cranberry and Lynde Marshes | Decreases the size of adjacent habitats (Cultural Meadow) |
| Provides additional habitat for wildlife species utilizing the area | |

B: No Active Management

| Pros | Cons |
|---------------------------------------|------------------------------------|
| Adjacent habitats are not compromised | Provides minimal corridor function |

Proposed Option (A)

The Authority proposes to expand the width of the current woodland to augment the corridor function between Cranberry and Lynde Marshes. This can be achieved by producing a forested area of uniform width parallel to the natural woodland edges.

Resource Management Plan

To increase the corridor function of this area, some adjacent meadow habitat will be converted to forest. The forested corridor will be approximately as wide as the largest part of the existing woodland. This area will connect Cranberry Marsh to Lynde Creek Marsh.

Suitable tree species will be planted along the outermost boundary of the proposed corridor to accentuate the feature's distinctiveness from the adjacent Cultural Meadows. The interior of this area will be allowed to regenerate naturally. The area will be monitored as it regenerates and undesirable, aggressive species will be removed as necessary.

LeVay's Lane will be re-routed to the outer boundary of the proposed corridor to reduce the amount of disturbance to the area. The Authority received one comment in disagreement: "*I think there has been enough tree planting. Maintaining diversity of habitats and preserving grassland is important too. Corridor effect is probably already present.*" Public comments in support of this management option include: "*A good place to introduce better native 'food' trees and shrubs. A lot more biodiversity is needed in the whole area!*" and "*Superb! Starting when?*"

AREA 10 – VICTORIA WOODS

The Victoria Woods management area includes the Bird Feeder trail and surrounding lands. A loop of LeVay's Lane also travels through this area. This area largely consists of upland deciduous forest with a large diversity of herb cover. There are adjacent units of swamp, marsh, thicket and plantation all contained within this management area. Birds and small mammals are very common in this area due to the abundance of food sources.

Natural Heritage Conditions

The woodlot is composed largely of upland deciduous forest, with a rich diversity of herb cover. A swamp occurs in the southwest portion of this management area and is defined by its sensitive organic soils and its hydrophytic vegetation. Compaction of soils from expanding trails within this woodlot is very evident and as such, natural regeneration of woody species is a difficult process. This area is thus considered to be in low health.

A Reed Canary Grass (*Phalaris arundinacea*) meadow marsh is located in the north-west of this area and a Red Oak (*Quercus rubra*) – White Pine (*Pinus strobus*) plantation occurs in the southeast of this area. In terms of human use, Victoria Woods remains the busiest management area within the Conservation Area.

The abundance of bird feeders located here provide opportunities for close interaction with some of the wildlife found at Lynde Shores. However, the sensitivity of the habitat must also be respected. This habitat can be considered valuable for wildlife as a reliable foraging area.

The west tributary of the Lynde Creek (refer to Area 13) flows through this area. Wooded areas (forests) are important to fish as they provide cover and shade, serve as a buffer zone, promote stable stream banks and contribute to contaminant filtering. Turtles using the habitat within this tributary are known to also utilize the nesting substrate of the existing parking lot.

Management Alternatives and Considerations

A: Manage the Areas in Low Health

| Pros | Cons |
|---|--|
| Reduces habitat damage and increases overall health of the area | Management strategy may conflict with public use of area |

B: No Active Management

| Pros | Cons |
|------|---|
| None | Habitat will continue to degrade and be damaged |

Proposed Option (A)

Area 10 will continue to be in poor health if no management action is taken. The areas that are most susceptible to damage can be repaired quite easily, and the overall health of the area can be quickly enhanced.

Resource Management Plan

The Authority proposes to improve upon the existing trail system to protect the vegetation and wildlife habitat of the area. This includes restriction of use beyond the trails, and methods for rejuvenating the trampled vegetation and compacted soils.

In addition, the potential for creation of alternative turtle nesting areas will be investigated. This will reduce human-wildlife interactions and increase the success of the nests. Public comments in favour include: “*Some fencing of trails is a good thing here. The trails get wider every year. The Blackberry bushes seem to provide a barrier in some places.*” and “*It is still necessary to provide an area for humans to interact with nature, but we need to educate them to avoid destroying the natural habitat they have come to see. Public awareness is always needed.*”

AREA 11 – AGRICULTURAL

There are several areas north of Victoria Street which are currently or have previously been utilized for agricultural practices. These areas have been identified by the Authority as a level three acquisition priority. A parcel of land owned by the Ontario Realty Corporation forms part of the proposed commercial/industrial development to the east of Jeffrey Street. Given its inclusion within this plan of subdivision, it is the desire of the Authority to secure ownership of this block through the development process.

Future development potential of these areas are limited due to the fact that the majority of these lands are within the regulatory floodplain of the Lynde Creek.

Natural Heritage Conditions

Crops currently grown on these lands include corn and soya bean; the crops provide a food source for the local deer population. Wildlife movement occurs across the agricultural area connecting Victoria Swamp to the area of deciduous swamp to the west. Within the Management Zone, resource considerations include the development of future linkages and corridors between the marsh and surrounding forested areas, and potential recreation uses in less sensitive areas.

A small tributary of the Lynde Creek (refer to Area 13) flows through the agricultural lands surrounding Jeffrey Street. Agricultural crops, depending upon the type, and streamside vegetation can provide cover and shade to the creek while promoting stable stream banks and contaminant filtering. However, this particular tributary does incorporate a vegetated (tall grass) riparian zone.

Resource Management Plan

Until such time as acquisition of these agricultural lands is possible, stewardship options will be pursued. Initial indications are that there are no significant natural heritage concerns relating to the present agricultural practices.

As these lands are acquired, the Authority will reforest key areas and let natural succession occur in others to create a large continuous vegetated area as outlined within the Long-Term Concept Plan for Lynde Shores Conservation Area (2000). The Authority received supportive comments

from the public such as: “*Crop monitoring should continue to discourage contaminants to the watercourse.*”

AREA 12 – DECIDUOUS SWAMP

The Deciduous Swamp occurs on the north side of Victoria Street, west of the Lynde Marsh. This area contains approximately 50% deciduous forest. This area is not currently in CLOCA ownership, but is part of a long term acquisition plan.

Natural Heritage Conditions

This swamp is composed largely of Green Ash (*Fraxinus pennsylvanica*), Crack Willow (*Salix fragilis*) and Poplars (*Populus spp.*). This area has been fragmented from the Victoria Swamp (Area 1) by an agricultural field. This area remains relatively undisturbed with no apparent evidence of human interference. The habitat serves a similar wildlife function as provided in Area 1, and wildlife movement between the patches is noted.

The west tributary of the Lynde Creek (refer to Area 13) flows through this area. Wooded areas (forests) are important to fish as they provide cover and shade to the creek, act as a buffer, promote stable stream banks and contribute to contaminant filtering.

Resource Management Plan

Until such time that these lands are acquired, the Authority will establish contact with the current landowners and pursue opportunities for area enhancement through stewardship. As acquisition occurs, fragmented portions of the landscape will be restored to successional forest cover and the health of the area will be monitored.

The public was in general agreement with the Authority’s resource management plan.

AREA 13 – OPEN WATER

This area occurs throughout the centre portions of the Lynde Creek Marsh, including those areas north of Victoria Street, the main east and west branches of the Lynde Creek and a small tributary which bisects Jeffery Street. It is defined by those areas of permanent open water of any depth in both stream and marsh environments during low flow (summer) conditions. It is important for fish, migrating birds, aquatic mammals, amphibians and reptiles.

Natural Heritage Conditions

According to Ministry of Environment test results from 1965 onward, the open water area has become more turbid, slightly warmer (based on summer averages), and displays less vegetation. 18 fish species have been captured within the marsh that utilize the open water habitat year round for nursery, rearing and food supply. Most of the fish species captured from within the marsh

and tributaries are representative of warm to cool water habitat. Anadromous species such as rainbow trout (*Oncorhynchus mykiss*) and Chinook salmon (*Oncorhynchus tshawyscha*) utilize the main east branch of the Lynde Creek during spring and fall migrations to upstream spawning areas. Several species of aquatic mammals, reptiles and amphibians are also dependent upon the open water for habitat. Areas of bank erosion have been noted above Victoria Street, in addition to a lack of instream woody debris.

Management Alternatives and Considerations

A: Monitor Over Time to Protect Habitat

| Pros | Cons |
|--|------|
| Habitat remains “as is” and recommendations from established monitoring protocol can be followed | None |
| Water quality issues can be addressed | |

B: No Active Management

| Pros | Cons |
|-------------------------------|-------------------------------|
| No change to existing habitat | Habitat may degrade over time |

Proposed Option (A)

To best maintain the important functions of the Open Water habitats, the area should be monitored over time. This may include water quality, temperature and vegetation cover analysis. Best storm water management practices throughout the watershed will also be encouraged.

Resource Management Plan

The area of open water will be monitored, and watershed-wide water quality protection measures will be promoted. Stream habitat improvements north of Victoria Street will be addressed with stewardship until such time as lands are acquired. Fish passage conditions will be monitored over time and appropriate actions taken as required.

Continued protection and monitoring of the open water is proposed. Due to bio-accumulation and the river continuum, protection is imperative not only at the Marsh itself, but all upstream areas. Water quality protection usually takes the form of storm water and riparian vegetation management. The retrofit of storm water management ponds from older subdivisions within the watershed should be encouraged. Water quantity protection however, is more complex as large areas of groundwater recharge and discharge (Iroquois Beach, Oak Ridges Moraine) and water taking issues must be addressed. Monitoring will be necessary to ensure that any change in water quality and quantity is detected. Initiation of an Aquatic Resource Management Plan (ARMP) for the entire Lynde Creek watershed is proposed for the year 2001, to address aquatic management on a watershed basis. In the interim, water quality testing by other agencies (MOE, Lynde Shores Monitoring Committee) is ongoing. Stream bank erosion north of Victoria Street will be reviewed through landowner contact and stewardship.

With the proposed widening of Victoria Street, an inevitable loss of fish habitat will occur,

requiring compensatory measures. Recommendations will be made to ensure that creek and marsh crossing structures are designed to maintain or enhance fish passage. Open bottom structures that span the creek and include bank habitat on both sides are ideal.

The public was in general agreement with the proposed resource management plan.

Victoria Street Widening

Future widening of Victoria Street will inevitably affect the lands, resources and management of the Lynde Shores Conservation Area. The road is designated as a Type A arterial road, representing a potential 6-lane causeway. Although a 4-lane causeway is obviously less intrusive upon a landscape, a properly designed 6-lane road may be accommodated. However, to be compatible with the natural heritage planning for the LSCA, three main concerns must be addressed: 1) hydrological stability of the Lynde Creek and Marsh; 2) road permeability for wildlife; and 3) compensation for loss of habitat. If these issues cannot be satisfactorily resolved within the 6-lane plan, it may be necessary to consider an alternative combination of mitigation techniques for a 4-lane plan.



Victoria Street Crossing Lynde Creek Marsh

1) Hydrological Stability of the Lynde Creek and Marsh

Lynde Creek flows under the Victoria Street causeway towards Lake Ontario, through a defined channel and associated sections of marsh. The form and function of this aquatic system has changed over time with the presence of the causeway spanning the entire aquatic habitat of the Lynde Creek and Marsh. Historically, the upstream area would have been stream channel habitat with associated riparian forest. After the construction of Victoria Street, the stream habitat changed to a marsh environment, which may have been caused by attenuation of water during high flow conditions. Over the past several decades, the Lynde Marsh ecosystem has equilibrated, and the design of the Victoria Street widening must not affect the existing hydrological stability of this system. Specifically, the integrity of the defined channel must be preserved, and the area of open water and marsh should remain relatively constant. To accomplish this, creek crossing structures should be designed to accommodate the natural channel while maintaining the existing areas of open water. These structures should also be suitable for passage of aquatic wildlife and fish.

2) Road Permeability for Wildlife

Wildlife mortality along wetland causeways is a well-documented problem (Ashley and Robinson 1996). For the LSCA, there are three main groups of wildlife that will be greatly affected by the road widening: small mammals (including aquatic mammals); amphibians and reptiles; and waterfowl with dependent young. Other species groups, such as ungulates and canids, are highly mobile and typically experience moderate road mortality rates in comparison.

Small terrestrial mammals often utilize roadside habitats, and move frequently among habitat patches on either sides of roads. However, road width has been identified as the limiting factor for small mammals. Divided highways with clearances of 90 m or more may effectively preclude dispersal of small mammals (Oxley *et. al.* 1974). Thus, crossing structures built into a roadway for passage of small mammals can greatly reduce localized mortality. To perforate the causeway, bottomless concrete box culverts can be built into the fill, allowing passage underneath the road. Size and configuration of these culverts is dependent upon road design variables. Directional fencing can be incorporated into the plans to increase successful use of these perforations.

Aquatic mammals and waterfowl with young are likely to travel along waterways wherever possible. The building of a water crossing structure that accommodates the natural channel meander will by default allow for passage of these wildlife groups as well. Incidental mortality along the roadway can be mitigated with directional fencing in strategic locations.

Reptile mortality is often associated with the thermoregulatory requirements of this group of wildlife. Turtles and snakes for example will utilize paved surfaces for basking in the sun or as a residual heat source. Alternative basking sites should be created to mitigate this mortality factor. Alternative sand and gravel sites will also create suitable nesting areas for turtles currently using the gravel shoulders. Directional fencing can be constructed to increase use of the road perforations by reptiles as well.

Amphibians typically experience road mortality at night, when peak movements occur. Mortality

can be reduced by utilization of the road perforations and directional fencing. Amphibians are good candidates for use of the concrete culverts, due to their size and activity patterns at night.

3) Compensation for Loss of Habitat

By extending the road allowance to a maximum of 50 m, loss of habitat is inevitable. The four main habitats lost will be cattail marsh, meadow marsh, open water and deciduous forest. For the long-term, the amount of deciduous forest will increase, and the overall habitat change will be positive. The two marsh habitats however, are regulated by natural water level fluctuations and are not expandable. These vegetation types are known to provide habitat for rare avian species. To compensate for the loss of these specific habitats, restoration work will be required within adjacent wetlands. Specifically, additional areas of appropriate marsh vegetation will need to be created. The open water habitat compensation will need to be considered as per the requirements relating to the Federal Fisheries Act.

Victoria Street Alignment

From a natural heritage perspective, the general alignment of the proposed Victoria Street widening also needs to be considered. Ideally, the road expansion would be aligned to the north rather than built on centre. Currently there is an approximate 30 m road allowance, yet the proposed widening requires up to 50 m. Thus, it would best satisfy the natural heritage requirements if additional lands were purchased from the north rather than south.

Although the lands to the north are considered sensitive, they are more easily compensated for if lost. Future plans for expansion of Section 1 will ultimately increase the physical size of the area, and replace some of the habitats that will be lost. The habitat units that cannot be expanded, such as the cattail marsh, can be compensated for in other marsh habitats in Section 2. Moreover, the existing breeding bird records show that rare species are using the southern cattail marsh more than the north. Additionally, the natural meander of the Lynde Creek immediately south of the existing boundary of Victoria Street will be less affected from a northern crossing than one on centre.

Public Use Management

Proposed Public Use Opportunities

In keeping with the direction to provide recreational and educational opportunities that are compatible with the Natural Heritage Goals for the property, the area has been evaluated based upon its potential to accommodate various types of public uses.

The results of user surveys undertaken in developing the “Web of Life” master plan and observations of present public use of the site have been analyzed. Although it will not be possible to meet all expectations due to resource concerns and operational constraints, the following proposed actions will accommodate the majority of users.

A summary of the proposed public use opportunities is as follows:

| Location | Facilities provided |
|---|--|
| Main Parking Lot (Victoria Street) | Parking, garbage containers, picnic tables |
| Boardwalk Trail | Trail access to Marsh Boardwalk |
| Canoe Launch | Trail access to launching area (launching may occur between July 15 th and September 15 th only) |
| LeVay's Lane Trail | Interpretative signage, trails system including safe access to the Lake Ontario beach |
| Birdfeeder Trail | Interpretative signage, trail system, birdfeeders |
| Access to Cranberry Marsh Management Zone | Trails from Levay's Lane to stations overlooking Cranberry Marsh |

As land acquisition occurs additional opportunities include:

| Location | Facilities provided |
|--|--|
| Parking Facility North of Victoria Street | Parking, garbage containers |
| Trails North of Victoria Street | Trail system |
| Angling Platforms | Angling platforms accessible from the Waterfront Trail |
| New Parking Facility/Public Use Area (Hall's Road) | Parking, Interpretative Signage, Trail access, Picnic tables Others to be determined based upon future demand |
| Additional Trails | Trail linkages from Hall's Road Parking Lot to LeVay's Lane , Birdfeeder Trail and Cranberry Marsh Lookouts |
| Waterfront Trail Linkages map | Access to Waterfront Trail |

Lynde Creek Management Zone Strategy Current & Proposed Public Use

Lynde Shores Conservation Area

Map not to scale.

LEGEND

- Lynde Shores C.A. Boundary
- Proposed Trail
- Current Trails
- Proposed Waterfront Trail
- Proposed Angling Platforms
- Viewing Facilities
- Angling/Viewing Platform
- Lynde Creek Boardwalk
- Seasonal Canoe Launch (open: July 15 - Sept. 15)
- Private Residences
- Information Kiosk
- Farm Silo
- Parking
- Water Control Structure



Signage

There is a need for additional interpretative signage throughout the site. Signage will be upgraded to include information regarding the natural heritage attributes of the property including its history and archaeological attributes, as well as the restrictions of use. The following mapping identifies locations of additional signage. Proposed topics and details to be contained are provided in the appendices.



Information Kiosk



Lynde Creek Boardwalk

Interpretative Programs

Interpretative programs will continue to be offered to the public and to school groups in partnerships with local interest groups. A wetland interpretation program is presently being developed based on current curriculum requirements to be delivered on site. Additional on site programming such as bird watching and bird banding will be offered as special events throughout the year.

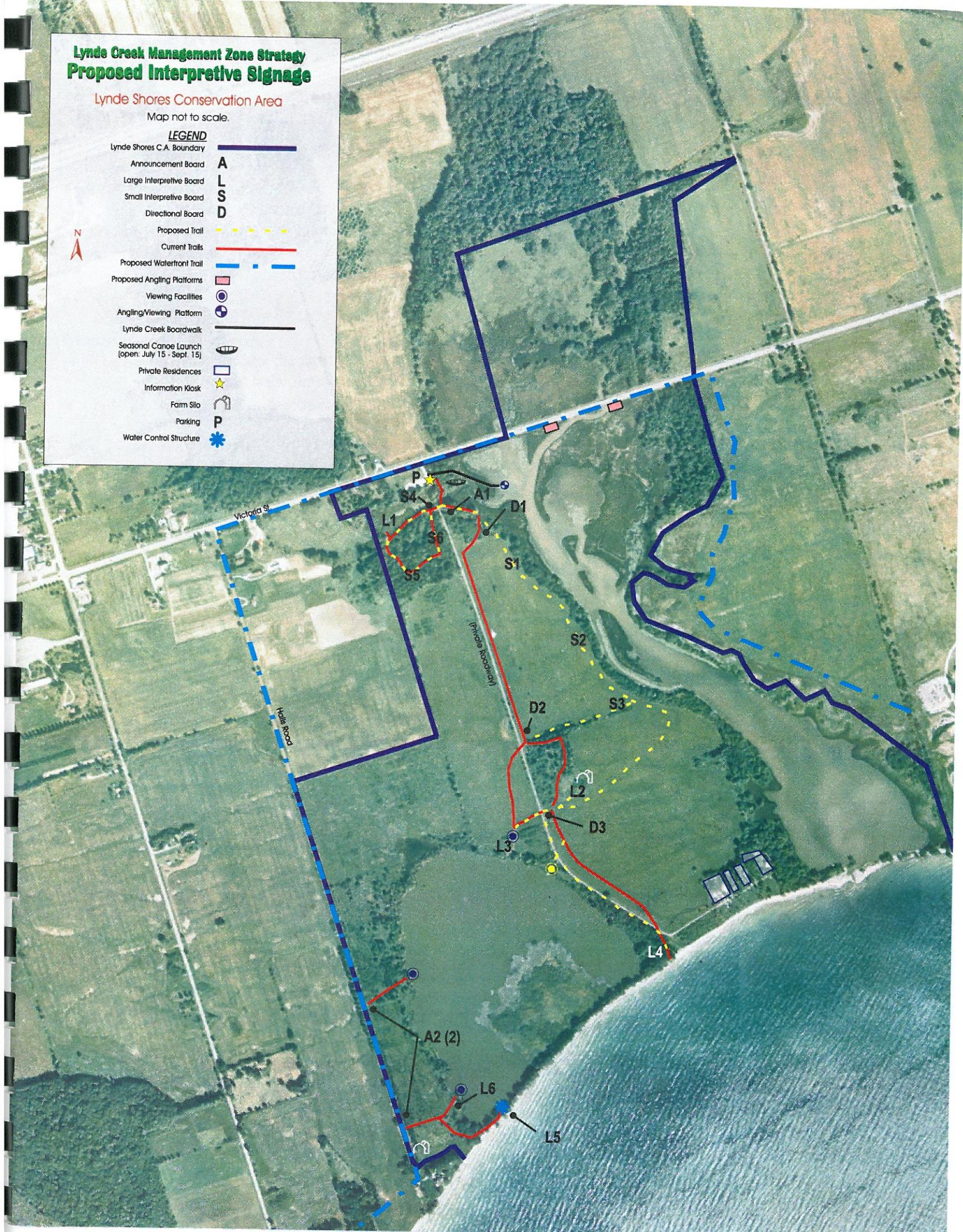
Lynde Creek Management Zone Strategy Proposed Interpretive Signage

Lynde Shores Conservation Area

Map not to scale.

LEGEND

- Lynde Shores C.A. Boundary
- A Announcement Board
- L Large Interpretive Board
- S Small Interpretive Board
- D Directional Board
- Proposed Trail
- Current Trails
- Proposed Waterfront Trail
- Proposed Angling Platforms
- Viewing Facilities
- Angling/Viewing Platform
- Lynde Creek Boardwalk
- Seasonal Canoe Launch
(open: July 15 - Sept. 15)
- Private Residences
- Information Kiosk
- Farm Silo
- Parking
- Water Control Structure



Summary of Recommendations

Natural Heritage Resource Management:

Area 1 – Victoria Swamp

Until such time as the appropriate lands are acquired:

- ◆ Stewardship options will be pursued
- ◆ A cleanup of debris in area will be undertaken
- ◆ Continue to enforce the restriction on public access to this sensitive area.
- ◆ Need for wildlife crossing structures and recommendations regarding compensation for habitat loss will be incorporated into CLOCA recommendations on the plan for the widening of Victoria Street.

Following acquisition:

- ◆ The portion that borders the agricultural lands will be allowed to regenerate naturally
- ◆ Barrier plantings will be undertaken at habitat edges to aid in the mitigation of light, wind and noise
- ◆ Potential fish habitat improvement projects will be considered for Lynde Creek.

Area 2 – Meadow Marsh

- ◆ Continue to monitor the health of the Meadow Marsh

Area 3 – Cattail Marsh

- ◆ Monitor in an effort to ensure that the most critical attributes of its function are maintained
- ◆ The need for wildlife crossing structures and recommendations regarding compensation for habitat loss will be incorporated into recommendations on the plan for the widening of Victoria Street.
- ◆ Opportunities for creation of turtle nesting habitat will be investigated
- ◆ Purple loosestrife will continue to be monitored within the area
- ◆ Action recommendations from the Lynde Shores Environmental Monitoring Committee

Area 4 – Buffer

- ◆ The Buffer Area along the west side of the Marsh will be allowed to regenerate an additional 15 metres beyond its current limit in conjunction with restricted mowing techniques used for Area 8
- ◆ The east Buffer will be left to rehabilitate itself within the zone bounded by the Whitby Shores subdivision fence.
- ◆ Action recommendations from the Lynde Shores Environmental Monitoring Committee.

Area 5 – Beach

- ◆ Monitoring of public use will continue over time.
- ◆ Stewardship with the Eastbourne Beach residents will be promoted.

Area 6 – Eastbourne

- ◆ Stewardship with the Eastbourne Beach residents will be promoted.

Area 7 – Riparian

- ◆ Monitoring of the health of this area will continue.
- ◆ Opportunities to create ephemeral amphibian breeding ponds will be investigated
- ◆ Action recommendations from the Lynde Shores Environmental Monitoring Committee

Area 8 – Cultural Meadow

- ◆ Restrict mowing to allow for regeneration of the Buffer area adjacent to the western side of the

Lynde Creek Marsh.

- ◆ The young plantation that exists in the north-west will remain and the Pine and Spruce saplings will act as a nurse crop for the young Red Oaks emerging in the area.
- ◆ The establishment of warm season native grasses be further researched, and opportunities for partnerships with grassland managers be recognized.

Area 9 – Cultural Woodland

- ◆ The Authority proposes to expand the width of the current woodland to augment the corridor function between Cranberry and Lynde Marshes.
- ◆ Suitable tree species will be planted along the outermost boundary of the proposed corridor
- ◆ The interior of this area will be allowed to regenerate naturally.
- ◆ The area will be monitored as it regenerates and undesirable, aggressive species will be removed as necessary.
- ◆ LeVay's Lane will be re-routed to the outer boundary of the proposed corridor to reduce the amount of disturbance to the area.

Area 10 – Victoria Woods

- ◆ Improve the existing trail system to protect the vegetation and wildlife habitat of the area.
- ◆ Restriction of use beyond the trails, and implement methods for rejuvenating the trampled vegetation and compacted soils.
- ◆ The potential for creation of alternative turtle nesting areas will be investigated.

Area 11 – Agricultural

- ◆ Until such time as acquisition of these agricultural lands is possible, stewardship options will be pursued.
- ◆ As these lands are acquired, the Authority will reforest key areas and let natural succession occur in others to create a large continuous vegetated area

Area 12 – Deciduous Swamp

- ◆ Until such time as acquisition of these agricultural lands is possible, stewardship options will be pursued.

Area 13 – Open Water

- ◆ Monitor over time including water quality, temperature and vegetation cover analysis.
- ◆ Best stormwater management practices throughout the watershed will also be encouraged.
- ◆ Stream habitat improvements north of Victoria Street will be addressed with stewardship until such time as lands are acquired.
- ◆ Fish passage conditions will be monitored and appropriate actions taken as required.
- ◆ Watershed-wide water quality protection measures will be promoted.

Victoria Street Widening

Future widening of Victoria Street will inevitably affect the lands, resources and management of the Lynde Shores Conservation Area. To be compatible with the natural heritage planning for the LSCA, three main concerns must be addressed: 1) hydrological stability of the Lynde Creek and Marsh; 2) road permeability for wildlife; and 3) compensation for loss of habitat.

Public Use

A summary of the proposed public use opportunities is as follows:

- ◆ Main Parking Lot (Victoria Street) [Parking, garbage containers, picnic tables]
- ◆ Boardwalk Trail [Trail access to Marsh Boardwalk]
- ◆ Canoe Launch [Trail access to launching area (launching may occur between July 15th and September 15th only)]
- ◆ LeVay's Lane Trail [Interpretative signage, trails system including safe access to the Lake Ontario beach]
- ◆ Birdfeeder Trail [Interpretative signage, trail system, birdfeeders]
- ◆ Access to Cranberry Marsh Management Zone [Trails from Levay's Lane to viewing stations overlooking Cranberry Marsh]

Interim management directions regarding seasonal canoe launching, dog ban, and restricted access north of Victoria Street will continue to apply. The policy for access to sensitive areas will continue to be followed as outlined.

As land acquisition occurs additional opportunities include:

- ◆ Parking Facility North of Victoria Street [Parking, garbage containers]
- ◆ Trails North of Victoria Street [Trail system]
- ◆ Angling Platforms [Angling platforms accessible from the Waterfront Trail]
- ◆ New Parking Facility/Public Use Area (Hall's Road) [Parking, Interpretative Signage, Trail access, Picnic tables, others to be determined based upon future demand]
- ◆ Additional Trails [Trail linkages from Hall's Road Parking Lot to LeVay's Lane , Birdfeeder Trail and Cranberry Marsh Lookouts]
- ◆ Waterfront Trail Linkages [Access to Waterfront Trail]

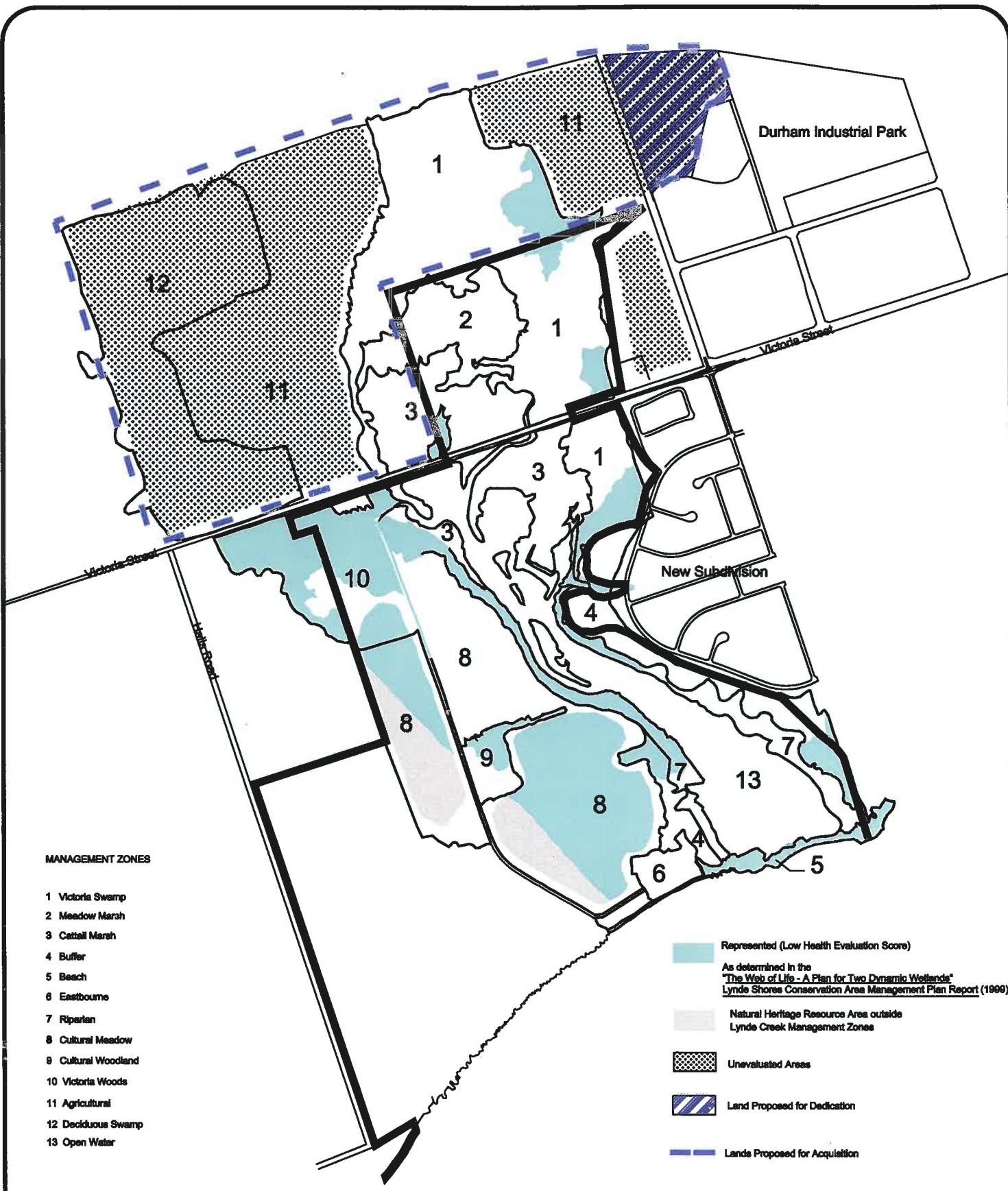
It is recommended that action begin, pending available funding, immediately following approval of this strategy.

Appendices

Lynde Creek Marsh - A Chronology

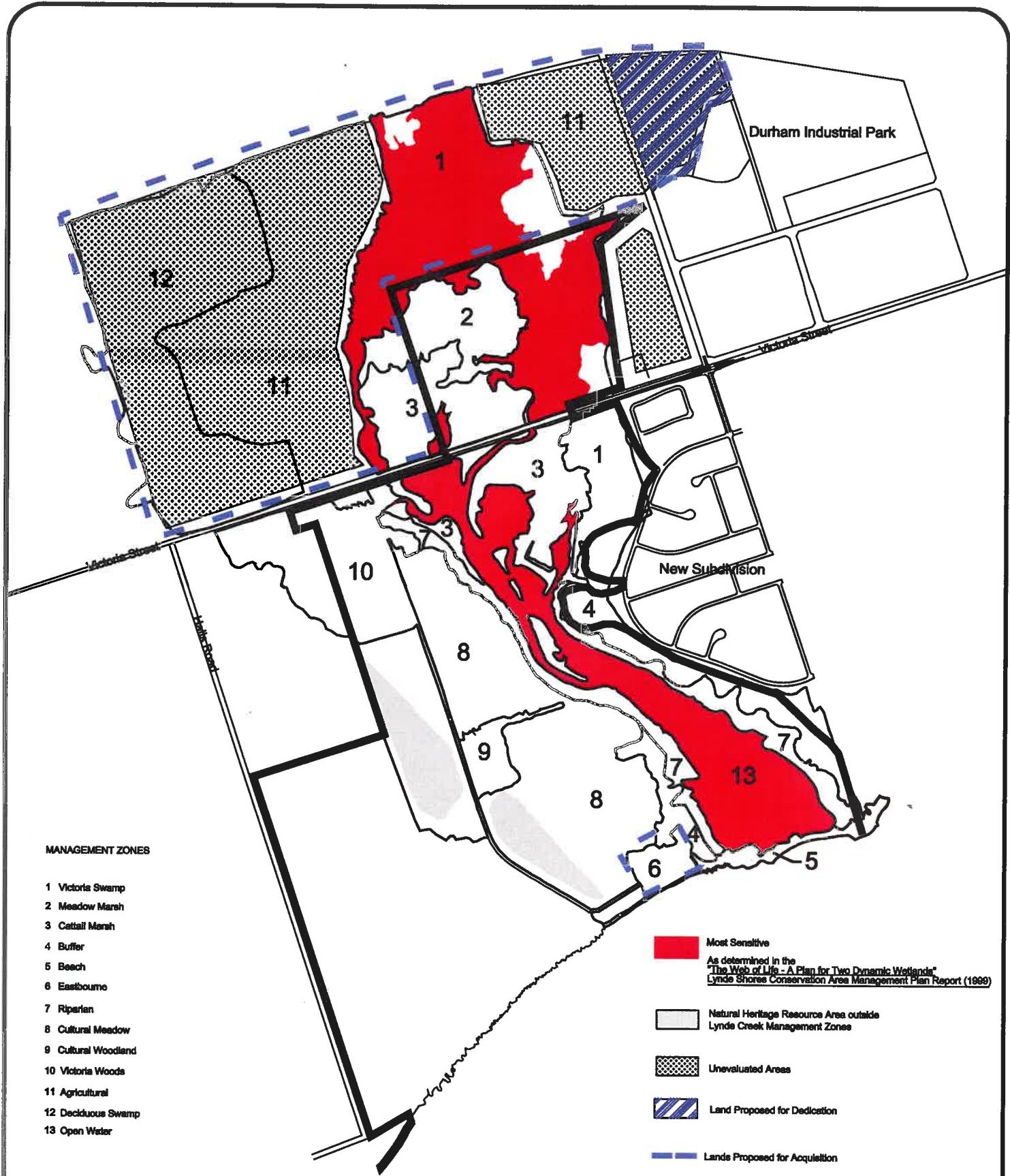
| Date | Event or Observation | Source | Comments |
|--|--|--|---|
| Paleo-Indian Period (10,000 - 9900 B.P.) | Native netting complex and campsites noted in the 1970's | Archaeological Services Inc. | Evidence of native campsites and netting operations observed along the creek within the C.A. Artifacts include; serrated and point tips, scrapers, ceramics, gouges and blades. |
| 1790 | First homesteaders arrive (Jabez Lynde) in the area, mainly Loyalists and Quakers from the U.S. | Ontario Archives | Land clearing for agricultural and residential purposes commences. |
| 1795 | First survey of Whitby | Whitby Archives | Property owners for Lynde Creek listed as; J. & R. Storey, F.A. Richardson, A.W and H. Jeffrey, J. Smith, N. DeHart and J. Willis. Lynde Creek noted as Storey Marsh. |
| 1812 | Cannonball found on east side of Lynde Creek | Whitby Archives | Gives credence to legends of minor naval skirmishes off Whitby Harbour during the War of 1812. |
| 1900's | Steel Company | Whitby Archives | A German steel company purchased the property north of Victoria Street. Their plan to build a plant on the property was never realized. |
| 1914 | Commercial Fishing Operations | T. Henstock | A commercial carp fishing operation was started by W. Ellis and J. and W. Valentine at the mouth of the Lynde Creek. Gates were installed at the mouth and a holding crib was placed on the east side of the marsh. The venture lasted seven years. |
| 1916 | Whitby Mental Health Centre | Ontario Archives | Construction completed on the "Ontario Hospital of the Insane", which became a Military Convalescent Hospital during W.W.I. and later the Whitby Psychiatric Hospital with the building of a new facility in 1968. |
| 1920's | Onion Farming | Whitby Archives | The German steel company sells the land north of Victoria to Mr. Collins for \$500.00. The property, a farmhouse and a barn were rented to the Gelech Family who grew cooking onions in the north end of Lynde Marsh. |
| 1920's | Rum running during Prohibition | H. Muckle | The conservation area was used as a drop off point for rum running activities during the 1920's. |
| 1921 | Hunting Camp | T. Henstock | The buildings from the fishing operation were used as a Hunting Lodge. A second hunting camp was erected on the west side of the creek until it was purchased by Eastbourne Estates, at which time the two clubs amalgamated - Lakeshore Rod and Gun Club. |
| 1933 | "Massive" plan of subdivision that stretched from Lynde Creek to Cranberry Marsh (Eastbourne Estates) was submitted. | Ontario Archives | Approximately a dozen summer cottages (including one on Cranberry Marsh) were erected in the area, which became a popular resort complete with concession stands and pavilions. The Marsh would have been subject to residential stresses. |
| 1943 | Eastbourne Estates lands purchase | Cranberry Marsh Management Zone Strategy | 10 years after first plan of subdivision, Eastbourne Estates purchased lands in lots 32 & 33 BF conc. from Charles R. Puckerin for \$10,600. |
| 1950's | Fish and Frog farming | Whitby Archives and C. Dewey | The Collins property, north of Victoria St is sold to a entrepreneurial Polish couple for \$2,000 They undertook onion farming, commercial fishing and bullfrog culture. Maintenance proved impossible and buildings were soon burned and the property abandoned. |
| 1954 | Hurricane Hazel | Ontario Archives | Some flood damage reported in the Town of Whitby. |

| Date | Event or Observation | Source | Comments |
|-------------|--|--|--|
| 1965 | Water Quality Sampling Commences | Ontario Ministry of the Environment | 44-parameter chemical and physical water quality testing begins by the Ministry of the Environment at Victoria Street and continues, somewhat sporadically to the present day. |
| 1966 | Hunting prohibited within the marshes by a Town Bylaw | Whitby Archives and Bylaws | Lakeshore Rod and Gun Club discontinues, relieving hunting pressures within the marsh. |
| 1966 | Recommendations to preserve Lynde Creek Marsh | Spiers and Sparling | Recommendations to protect Lynde Creek Marsh with a "Wildlife Preserve" tabled by Dr. Spiers. |
| 1970 | CLOCA Wetlands Policy | Authority Resolution NO. 54, July 28, 1970 | Afforded protection and conservation improvements by CLOCA to wetland areas. |
| 1971 | IBP survey conducted by Mr. Ron Tozer | Dr. Spiers, Dept. of Zoology, U of T. | Marsh deemed invaluable as habitat for a large variety of species. |
| 1971 | Land Acquisition | CLOCA Files | Central Lake Ontario Conservation Authority commences land acquisition within the area |
| 1980 | CLOCA Purchases | CLOCA | The Authority purchases the lands north of Victoria Street. |
| 1980 | Life Science ANSI Inventory | OMNR | Ian McDonald surveyed the area over 5 field days from June 22 to September 15. Marsh classed as Regional Life Science Area of Natural and Scientific Interest. |
| 1983 | Wetland Evaluation | OMNR | Wetland classed as "Provincially Significant" giving the Marsh Provincial recognition and protection. |
| 1997 | "Web of Life" Lynde Shores Management Plan | CLOCA | A Management Plan process for the Conservation Area was undertaken late 1997, the project was completed in 1999, identifying Management Zones and varying degrees of sensitivities and health. |
| 1998 | Report to the Province of Ontario on Lynde Creek Marsh | Waterfront Regeneration Trust | The Waterfront Regeneration Trust report cites findings concerning means available for protecting the health of Marsh. |
| 1998 | Development | CLOCA | Ground is broken for a residential development immediately to the east of Lynde Marsh, south of Victoria Street. Treated stormwater to be discharged into the Marsh. |
| 1999 | Development | CLOCA | Ground is broken for an industrial development to the east of Lynde Marsh north of Victoria Street. Treated stormwater to be discharged into the Creek. |
| 1999 | Management Plan | CLOCA | The Authority completes the Cranberry Marsh Management Zone Strategy. |
| 2000 | Management Plan | CLOCA | Work commences on the Lynde Marsh Management Zone. |



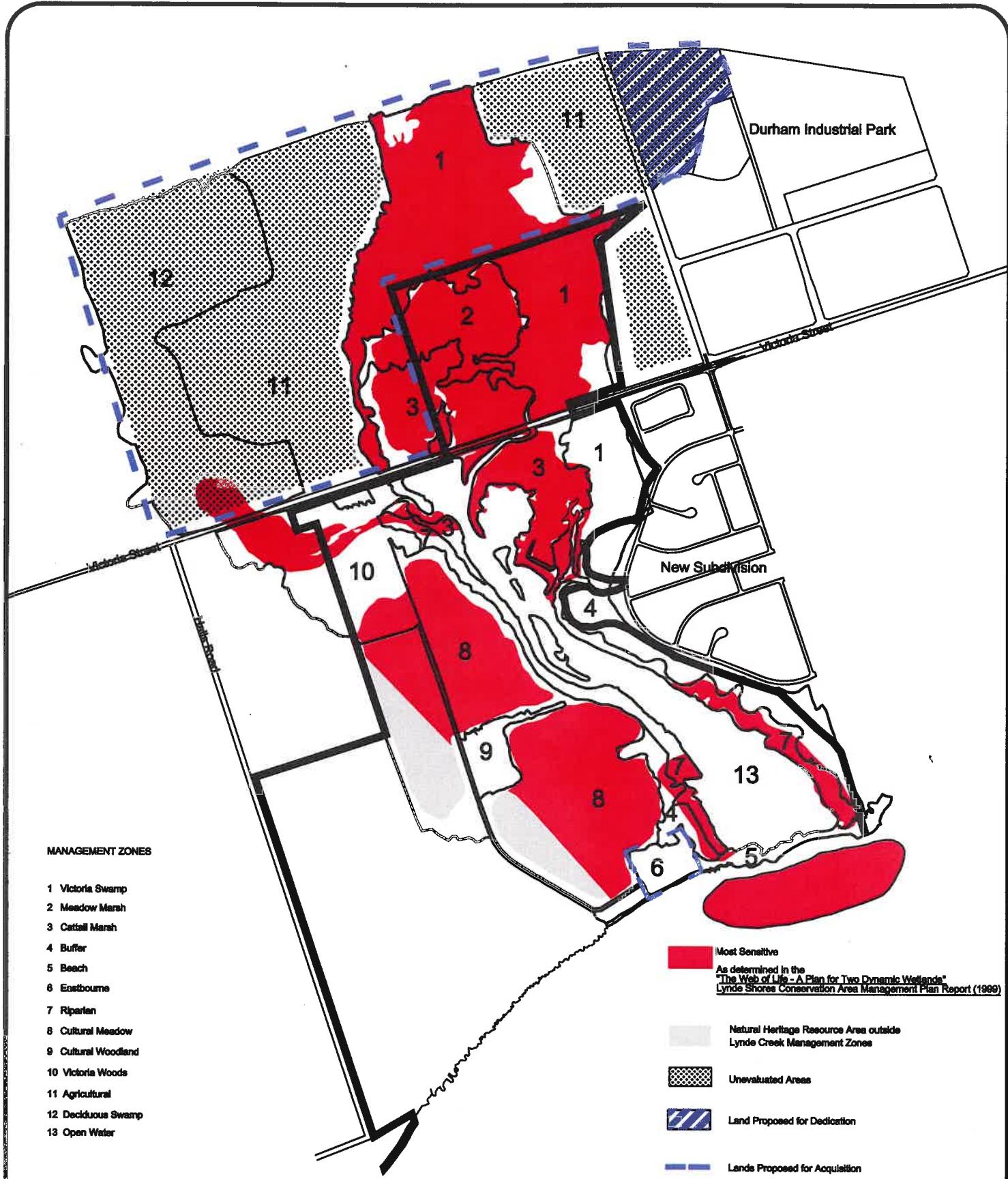
**Lynde Shores Management Plan
Lynde Creek Management Strategy
HEALTH ISSUES - Vegetation and/or Wildlife**





Lynde Shores Management Plan Lynde Creek Management Strategy SENSITIVITY ISSUES - Vegetation





Not to Scale

Lynde Shores Management Plan Lynde Creek Management Strategy SENSITIVITY ISSUES - Wildlife



**Central Lake Ontario
Conservation Authority**

*Lynde Creek Management Zone
Lynde Shores Conservation Area*

**Natural Heritage Resource
Management Options**

WORKSHEETS

May 4, 2000

Participant Name: _____

Date: _____

Please Note: Responses must be received by May 31st 2000

Area 1 – Victoria Swamp

A: Expand the Physical Size of the Existing Habitat

Do you agree with CLOCA's management option? Yes No

Comments:

Area 2 – Meadow Marsh

No Active Management is Required

Do you agree with CLOCA's management option? Yes No

Comments:

Area 3 – Cattail Marsh

A: Monitor Over Time to Protect Habitat Attributes

Do you agree with CLOCA's management option? Yes No

Comments:

Area 4 – Buffer

A: Increase the Physical Size of the Buffer

Do you agree with CLOCA's management option? Yes No

Comments:

Area 5 – Beach

No Active Management is Required

Do you agree with CLOCA's management option? Yes No

Comments:

Area 6 – Eastbourne

Future Acquisition Plan

Do you agree with CLOCA's management option? Yes No

Comments:

Area 7 – Riparian

No Active Management is Required

Do you agree with CLOCA's management option? Yes No

Comments:

Area 8 – Cultural Meadow

A: Continue the Current Management Regime with Reduced Mowing Area

Do you agree with CLOCA's management option? Yes No

Comments:

Area 9 – Cultural Woodland

A: Increase the Size of the Woodland

Do you agree with CLOCA's management option? Yes No

Comments:

Area 10 – Victoria Woods

A: Manage the Areas in Low Health

Do you agree with CLOCA's management option? Yes No

Comments:

Area 11 – Agricultural

Future Acquisition Plan

Do you agree with CLOCA's management option? Yes No

Comments:

Area 12 – Deciduous Swamp

Future Acquisition Plan

Do you agree with CLOCA's management option? Yes No

Comments:

Area 13 – Open Water

A: Monitor Over Time to Protect Habitat

Do you agree with CLOCA's management option? Yes No

Comments:

Natural Heritage Resource Management Options - Comments Received

May 2000

Area 1 - Victoria Swamp

Do you agree with CLOCA's management option? - Unanimous agreement.

Comments:

- I presume that the CNR forms the northern boundary and therefore is not likely to be an entrance point for people. If this is a deciduous area some clumps of spruce and cedar would provide shelter for some species. More "sensitive area" signs needed?
- I feel it is very important to try to obtain the whole area identified as Area 1. This would allow better control options to the most sensitive area of the existing marsh.
- In general, I agree with most of the management options outlined, however the sensitivity issues and public access restrictions need to be clearer.
- In principle. Need to consider reality of restricting public access - policing or fines will require more \$ resources, but likely establish your commitment to protecting this attribute. Need to consider the impacts of Victoria Street widening in your option vision. How much will you lose? What will the compensation ratio be? What is the ideal area of acquisition to create a source -need some measurable tangible goals.

Area 2 - Meadow Marsh

Do you agree with CLOCA's management option? - Unanimous agreement.

Comments:

- We should try to continue "the inaccessibility" to this area to avoid problems developing in future.
- This site provides benefits to Cattail marsh that does not occur south of Victoria Street.

Area 3 - Cattail Marsh

Do you agree with CLOCA's management option? - Unanimous agreement.

Comments:

- The expanded roadway scares me. Hopefully persistent monitoring will take place.
- I would like to see the full widening process completed in one operation and before paving is needed. North and south sides should be fenced. Perhaps a very wide shoulder on the north side could accommodate a tree barrier of willow plus shrubs. Yes, sand strips should be provided for turtles. This is a good opportunity for long-range planning and implementation at no cost to CLOCA. A public fishing strip could be included in the fenced south side of the road.

eliminating this?

- Alternate turtle nesting habitat critical.
- Consider diversification of vegetation community through the re-establishment of native aquatics. Area 11 - Agriculture to the west could be considered appropriate for turtle nesting as upland habitat.

Area 4 - Buffer

Do you agree with CLOCA's management option? - Unanimous agreement.

Comments:

- I'm not sure how the east buffer will be able to "rehabilitate itself". I feel the word "corridor" is a better term than "buffer"; but if stewardship/monitoring can be achieved it looks good. This will be hard to do given the building of roads and houses which has already occurred. Buffer area could be improved by more impenetrable vegetation.
- Did the developer plant the agreed number and type of plants on the east side? Did they live? How are unauthorized trails possible? Did the Town of Whitby not assure protesters that this would not happen? Are you following this up?
- Monitoring of species would be advisable to make sure it becomes diverse and not only one species.
- Be careful how you use the word historically. BFC? What is that? 40,000 shrubs were planted: Did they all survive? Width of buffer more important than number of shrubs planted. Buffer enhancement/widening and creation of an irregular edge will benefit both areas. 15 metres - what are RAP targets for habitat guidelines? 30m?

Area 5 - Beach

Do you agree with CLOCA's management option? - Majority in agreement - 2 responses undecided.

Comments:

- The proposed option "monitoring of public use will continue over time"!! What is meant? Who does it? What is done?
- Monitoring of "people use" only thing necessary to protect natural heritage features.
- What about access from the west side? Stewardship is necessary in maintaining integrity.

Area 6 - Eastbourne

Do you agree with CLOCA's management option? - Unanimous agreement.

Comments:

- I am sure that these property owners are aware of some stewardship responsibilities. They may, at this time, be an asset to the area.
- Co-operation is a priority and stewardship with present land owners can provide a "watchdog" on this area until ownership is possible.

Area 7 - Riparian

Do you agree with CLOCA's management option? - Unanimous agreement.

Comments:

- Monitoring should still be considered.

Area 8 - Cultural Meadow

Do you agree with CLOCA's management option? - Unanimous agreement.

Comments:

- "... management will be modified to allow for buffer regeneration . . . " ?
- Important to maintain grassland habitat as well as replanting trees.
- Yes, mowing from time to time is no doubt helpful. This is a great area to experiment with native food - source plants and grasses (and low shrubs).
- Native grasses partnership sounds interesting.
- Add Bobolink (*Dolichonyx oryzivorus*) to the species to be encouraged.
- What is the ratio of native to alien plant species? May want to consider introducing native grasses etc.

Area 9 - Cultural Woodland

Do you agree with CLOCA's management option? - Majority in agreement - 1 response in disagreement.

Comments:

- I think there has been enough tree planting maintaining diversity of habitats and preserving grasslands is important too. Corridor effect is probably already present.
- Superb. Starting when? How achieved?
- A good place to introduce better native "food" trees and shrubs. A lot more bio-diversity is needed in the whole area!

Area 10 - Victoria Woods

Do you agree with CLOCA's management option? - Majority in agreement - 1 response undecided.

Comments:

- Hate the snowfencing. Couldn't the trails be defined by planting shrubbery instead?
- Some "fencing" of trails is a good thing here. The pathways get wider every year. The blackberry bushes seem to provide a barrier in some places. This area is very educational for children (chipmunks and tame chickadees etc.)
- Needs to be shown on map with number at its location. Looks like it's part of Area 1. How will you deal with squirrels vs. birds? Need a strategy to determine if they are limiting natural regeneration of woodlot.

- It is still necessary to provide an area for humans to interact with nature, but we need to educate them to avoid destroying the natural habitat they have come to see. Public awareness is always needed.

Area 11 - Agricultural

Do you agree with CLOCA's management option? - Majority in agreement - 1 response undecided.

Comments:

- Good luck!
- Stewardship with existing owners and crop monitoring should continue to discharge contaminants to the watercourse, i.e. fertilizer
- Deer and goose population, re: agricultural landuse. Not sure if there are "no natural heritage concerns relating to the present use . . ." Consider upland habitat in these areas as important as expanding the swamp through reforestation. Need both.

Area 12 - Deciduous Swamp

Do you agree with CLOCA's management option? - Unanimous agreement.

Comments:

- A greater diversity of trees would make this area more interesting and probably improve its bio-supportability.

Area 13 - Open Water

Do you agree with CLOCA's management option? - Majority in agreement - 1 response undecided.

Comments:

- Signs and boat barriers?
- I feel that the last paragraph is key.
- Storm water management critical as is stewardship with public and private landowners.

Additional Comments

- Great work and excellent open house. Many thanks.
- I'm pleased to note signage restricting canoeing to specific dates. Also, "no dogs". Local service clubs in Whitby who run bingos spend tens of thousands of dollars in the Heydenshore Park area. I'm sure that they would be pleased to pay for signage at Lynde Shores (and trail markers at Heber Down).
- I would like to congratulate CLOCA on the thoroughness and depth of their study and the clarity with which it has been presented to the public.

s:/lyndeshor/lyndcrk/worksum.doc

**Central Lake Ontario
Conservation Authority**

*Lynde Creek Management Zone
Lynde Shores Conservation Area*

**Public Use
Management Options**

WORKSHEET

May 4, 2000

Participant Name: _____

Date: _____

Please Note: Responses must be received by May 31st 2000

Additional Public Use Requirements

In addition to the locations/facilities proposed are there additional areas you wish to access?

Yes _____

No _____

If yes ,

Please identify on the accompanying map the location you wish to access.

For what purpose (e.g. walking, photography)?

What type of facility do you require to undertake this activity?

Public Use Management Options - Comments Received

May 2000

Additional Requirements

The portion of Victoria Swamp north of Victoria street east of the creek which was formerly accessible by a well marked trail. This area is very interesting to birdwatchers in migration times and in winter when it harbours owls. Maintaining a short loop trail here would allow access to a restricted portion of area 1 with minimal impact on the habitat and wildlife.

Concern regarding trail access along west side of Lynde Creek –setback to allow riparian and buffer habitat to function.

Fishing platforms should only be incorporated if safety i.e., proper public access/speed reduction/stop lights etc. are considered.

Lynde Creek Management Zone Strategy Proposed Interpretive Signage

Below are proposed topics for the interpretive trail signage within Lynde Shores Conservation Area. The signage will be implemented as funds become available. Board locations are indicated on the corresponding map.

If anyone has any suggestions regarding topics or features they would like included please add your comments to the open house questionnaire.

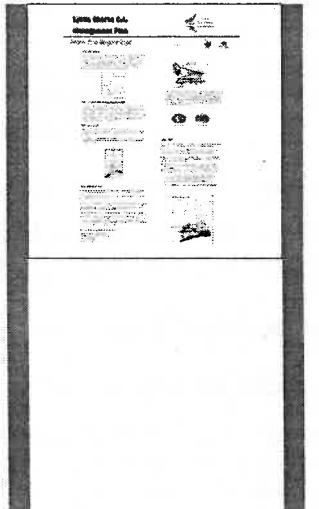
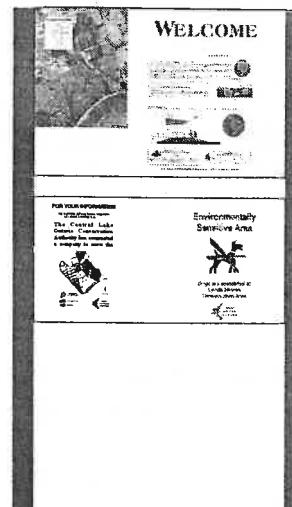
Announcement Boards (A) →

(Height 150cm, Width 90cm)

This sign features a lower section where current information such as newsletters and news releases may easily be posted.)

A1 - Directional & Announcement Board (Map, User Rules, Historical, News Items)

A2- Announcement Boards - (2 required) (Maps, User Rules, Features, News Items)



Large Interpretive Board (L) ←

(Height 150cm, Width 90cm)

L1 - Platform Display (Lynde Marsh)

(Ecosystem of Marsh, Importance of Wetlands, Maintaining Health)

L2 - Historical

(Display of aboriginal use and farm history)

L3 - Marsh Viewing Platform

(Maintaining a healthy Marsh, Water levels, Alder Island, Nesting Areas, Various Waterfowl pictures)

L4 - LeVays & Lake Ontario

(LeVays contribution to conservation, Purple Loosestrife Control, History, Migration)

L5 - Water Control Structure (Function and Benefits)

L6 - Raptor Viewing (Cranberry Marsh Raptor Watch)

Small Interpretive & Directional Boards (S,D) →

(Height 90cm, Width 30cm)

S1 - Meadow (Ecosystem)

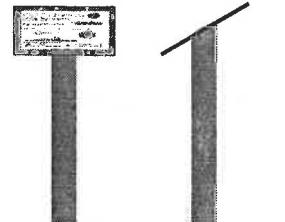
S2 - Meadow (Ecosystem)

S3 - Woodlot (Wildlife & Ecosystem)

S4 - Bird Feeder Trail (Introduction)

S5 - Bird Feeder Trail (Operating a bird feeder program, Feed)

S6 - Spring Vegetation (Native Plants)





Central Lake Ontario Conservation Authority

Lynde Shores Conservation Area

Policy for Access to Sensitive Areas

Lynde Shores Conservation Area

Lynde Shores Conservation Area is a 511-ha property located at the mouth of Lynde Creek on the Lake Ontario shoreline. The property contains two provincially significant wetlands referred to as Cranberry Marsh and Lynde Creek Marsh.

Lynde Shores Conservation Area is presently used for passive recreational activities attracting approximately 60,000 visitors per year. A user survey was conducted in September 1997 to assist with identification of current uses. Those identified include outdoor-interpretative programs for schools, nature interpretation, bird watching, photography, canoeing, picnicking, dog-walking, bird-feeding, fishing, raptor-watch, beach use and skating.

Management Plan

The Central Lake Ontario Conservation Authority approved "*The Web of Life, A Plan for Two Dynamic Coastal Wetlands*" as a Management Plan for the Lynde Shores Conservation Area in March of 1999.

The Vision Statement developed by the public through their participation in workshops is:

"Lynde Shores Conservation Area is a dynamic natural legacy which we will continue to restore, expand and protect. Through education, interpretation and managed access, our community will gain respect and appreciation for the intrinsic value of our natural heritage. This respect and appreciation will be fostered through the stewardship of owners, users and the community at large. We will achieve this through balanced and managed access for all living things. This peaceful refuge will bring the community together with nature in a way that honours the spiritual, cultural and natural treasures of this very special ecosystem."

The Management Plan Goal is:

"The Management Plan Goal is to identify, protect and enhance the current and potential natural heritage attributes, functions and linkages of Lynde Shores Conservation Area in conjunction with public use."

The three accompanying goals are:

NATURAL HERITAGE GOAL:

The Natural Heritage Goal is to maintain and enhance the ecological integrity of the Lynde Shores Conservation Area. The plan will consider the interaction of the two coastal wetlands, the upland meadow and forested habitats as well as connections north to the watershed, south to Lake Ontario, and east/west along the coast.

RECREATION GOAL :

The Recreation Goal is to evaluate and to accommodate recreational and educational uses within the Lynde Shores Conservation Area compatible with the natural heritage goal.

COMMUNITY GOAL:

The Community Goal is to identify and to encourage opportunities for public and private land and water stewardship in the Lynde Creek Watershed and its east/west linkages.

cont'd.....2

This Plan identified the forms, functions and linkages of the two wetlands, evaluated the current health and sensitivities of the area and examined appropriate locations for public access and use. The Management Plan also addressed restoration and rehabilitation, opportunities for recreation and resource interpretation, strategic direction for additional land acquisitions, as well as public stewardship and community partnering.

The Conservation Authority's approval of the Management Plan led to several management strategies being undertaken. This includes reducing disturbances during waterfowl breeding and brooding seasons by placing a seasonal ban on canoeing, to reducing disturbances to wildlife through placing a ban on dogs using the property, and an increased effort to protect environmentally sensitive areas by limiting public access to authorized trails. Trail information is displayed at the kiosk in the main parking lot outlining the sensitivities of the site and identifying the location of public trails. Interpretative signage is being developed for display at the entrances to the trails to identify sensitivities and attributes of the area. Barrier plantings will be undertaken where appropriate at the earliest opportunity to deter access into sensitive areas.

Cranberry Marsh Management Zone Strategy

Following the approval of the Management Plan, the Authority undertook the preparation of the "*Cranberry Marsh Management Zone Strategy*" which was approved in September of 1999. This study examined this portion of the property at a greater level of detail and provided direction concerning natural heritage restoration and public use.

In keeping with the direction to provide opportunities for public use compatible with the natural heritage goals the Conservation Authority undertook a survey to determine the requirements for access of users including the desired extent and location of visitor facilities. Through this exercise there have been requests for permission for individuals to enter specific areas for scientific or nature study pursuits.

It was agreed that it be Conservation Authority policy that individuals may apply for a permit to access specified areas for scientific or nature appreciation purposes on the understanding that data collected from these activities be shared with the Conservation Authority.

In order to action this direction, the following protocol will be used to deal with requests for access to sensitive areas.

The permitting process

- ◆ Requests for access to areas not serviced by the authorized trail system will be reviewed through the main office of the Conservation Authority.
- ◆ The user will provide the Conservation Authority with the following information:
 1. Purpose of visit(s)
 2. Detailed description of the activity being undertaken
 3. Proposed locations to be accessed
 4. Dates and times of required access
 5. Names of all participants
 6. Intended use of results
- ◆ Requests will be reviewed by the technical staff of the Conservation Authority.
- ◆ Requests may be accepted, rejected or accepted with modifications.
- ◆ All authorizations will require the user to sign a written agreement to provide CLOCA with copies of all data obtained while undertaking the approved activity.
- ◆ Depending upon the request a refundable deposit may be requested by the Conservation Authority.
- ◆ A permit will be issued to the user that will outline the approved activities and dates of access. This will be carried by the user as proof of authorization if approached by staff or other members of the public.



Central Lake Ontario Conservation Authority

Application to Access Sensitive Areas

APPLICANT INFORMATION

Name: _____ Address: _____

Phone: _____

PURPOSE OF VISIT

DETAILED DESCRIPTION OF ACTIVITY (please attach page if more space is required)

PROPOSED LOCATION

DATES AND TIMES OF ACTIVITY

LIST OF ALL PARTICIPANTS

INTENDED USE OF RESULTS

I agree to provide the Central Lake Ontario Conservation Authority with copies of all data obtained while undertaking the above outlined activities

Applicant Signature: _____ Date: _____

All permitted use of the Conservation Area shall be at the client's own risk. During the period of usage, the client will indemnify and save harmless the Central Lake Ontario Conservation Authority and its staff and agents against and from any and all claims including, without limitation, all claims for personal injury or property damage arising from the conduct of any work or by or through any act or omission of the client or any assignee, invitee or licensee of the client, and against and from all costs, counsel fees expenses, and liabilities incurred in or about any such claim or any action or proceeding brought thereon.

The information on this form is being collected, under the Conservation Authorities Act (RSO 1990) and used only for the purposes of this agreement. This application and supporting documents and any other documentation received relating to this application, may be released, in whole or in part, to other persons in accordance with the Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990 c. M.56, as amended.

References

- Ashley, E.P. and Robinson, J.T. 1996. Road mortality of amphibians, reptiles and other wildlife on the Long Point causeway, Lake Erie, Ontario. *Can. Field. Nat.* 110(3):403-412.
- Central Lake Ontario Conservation Authority, 1999, *The Web of Life, A Plan for Two Dynamic Coastal Wetlands*
- Central Lake Ontario Conservation Authority, 2000, *Cranberry Marsh Management Zone Strategy*,
- Central Lake Ontario Conservation Authority, 2000, *Long Term Concept Plan, Lynde Shores Conservation Area, as derived from The Web of Life, A Plan for Two Dynamic Coastal Wetlands*
- Oxley, D.J., Fenton, M.B. and Carmody, G.R. 1974. The effects of roads on populations of small mammals. *J. Appl. Ecol.* 11:51-59.