

# Bowmanville/Westside Marshes Conservation Area Management Plan



*Central  
Lake Ontario  
Conservation*

June 2006

In co-operation with the Municipality of Clarington

**Clarington**  
*Leading the Way*

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# **Bowmanville/Westside Marshes Conservation Area Management Plan Executive Summary**

## **Chapter 1: Existing Conditions**

### **Background**

There are eight coastal wetlands in Central Lake Ontario Conservation Authority's (CLOCA's) jurisdiction, four of which are under CLOCA's ownership and management, including Bowmanville and Westside marshes as well as Cranberry and Lynde Creek marshes. Across the Great Lakes basin, many coastal wetlands have been filled in or drained for agriculture, residential and industrial development, and recreational facilities. As well, land-use intensification has negatively impacted our coastal wetlands through loss of natural areas, both adjacent to the wetlands and further up the watershed. Conservation Authorities have recognized this alarming trend and are working to protect and restore coastal wetlands for future generations.

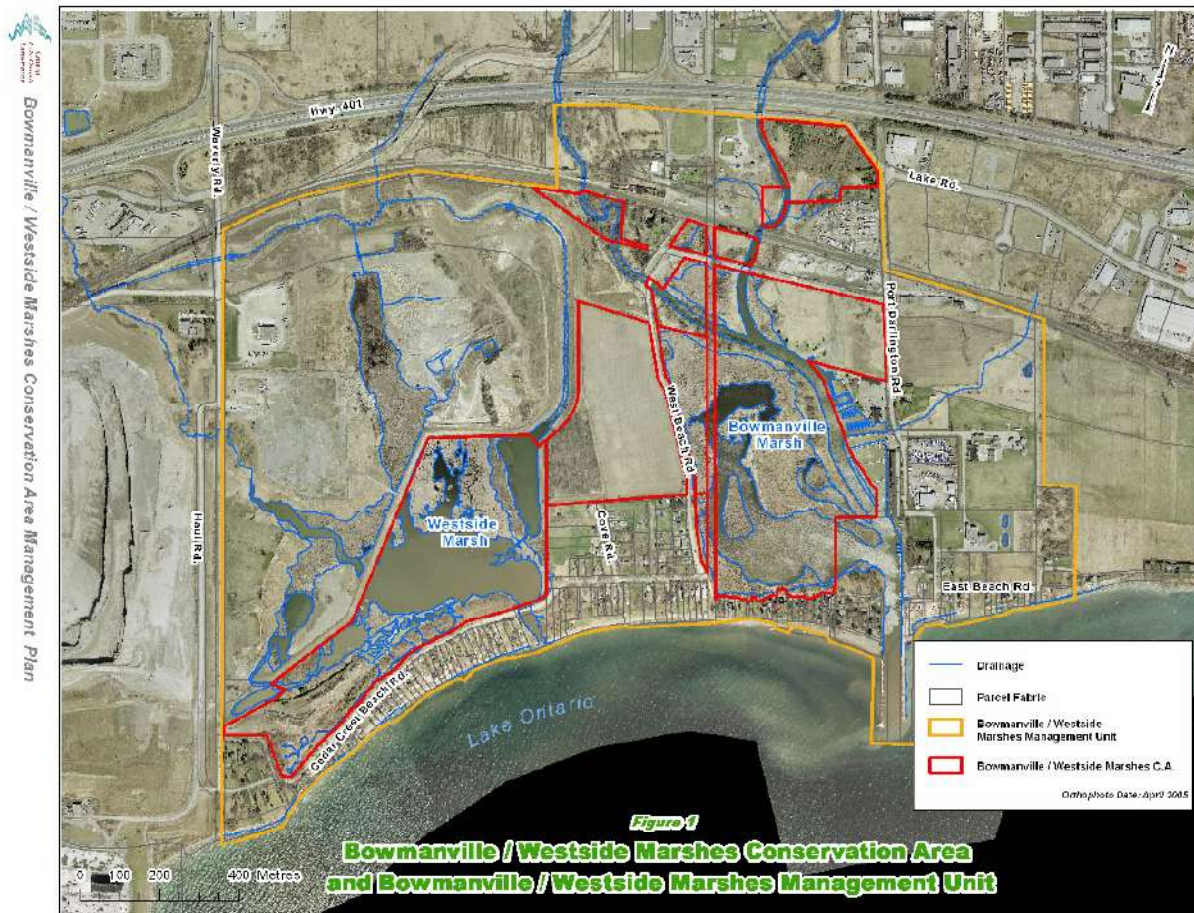
Since 1996, less emphasis has been placed on maintaining and upgrading existing recreational facilities and more emphasis has been placed on assessing environmental impacts and overall watershed health. Today, Conservation Areas within the CLOCA jurisdiction are primarily managed to protect the natural heritage system located within and around them, while only providing recreational activities that are complementary to that system. However, a rapidly growing population within the Regional Municipality of Durham has meant that pressure on these conservation lands has increased dramatically as a result of changes in surrounding land uses and a greater demand for recreation that comes with larger populations. For these reasons, long-term management planning within these conservation lands is a priority for CLOCA.

In 2000, CLOCA and the Municipality of Clarington established a terms of reference for the development of a Conservation Area Management Plan. Working with the community, the Plan would provide for the long-term management and enhancement of the reconfigured Westside Marsh and Bowmanville Marsh and the associated lands owned by CLOCA. This Management Plan provides a summary of the multi-stakeholder negotiations with St Marys Cement and the recommendations provided by the Waterfront Regeneration Trust that preceded the development of the terms of reference.

### **Study Area**

As confirmed in a public meeting in October 2005, the primary focus for this Conservation Area Management Plan is on all lands owned or leased by CLOCA in the Port Darlington area. These lands, now known as Bowmanville/Westside Marshes Conservation Area, are 82 ha (202 acres) in size and include two provincially significant coastal wetlands, Westside Marsh and Bowmanville Marsh, the upland connector between the two wetlands, portions of both the Bowmanville and Soper Creek valleylands south of Highway 401, and the boat ramp and associated lands immediately north of the Bowmanville Marsh (Figure 1).





The surrounding lands are also discussed in order to understand the constraints and opportunities that exist relative to the future management of Bowmanville/Westside Marshes Conservation Area. The area including these surrounding lands is referred to as the Bowmanville/Westside Management Unit (i.e. the area within which future land uses and stewardship activities will have a direct influence (both positively and negatively) on the future health and management of the Bowmanville/Westside Marshes Conservation Area (Figure 1).

### **The Plan: Vision, Goals, Objectives**

The community came together through several public workshops (beginning in May 2001), to develop a vision for the protection and management of the area.

**VISION 2026: *The Marshes are Clean, Green, Blue, Peaceful, Accessible and Spiritually Enriching.... (Clean, Green and Serene)***

*All living things enjoy the protected, tranquil areas of the Bowmanville/Westside Marshes. The wooded, old field and wetland areas of the Bowmanville/Westside Marshes provide attractive habitat for abundant wildlife, and a diversity of trees and plants. Water quality improvements have been made upstream. Neighbours are implementing effective plans to minimize disruption and noise. Recreational activities are compatible with natural system function and people have access to beautiful vistas over the marshes from well-placed footpaths.*

*The Marshes have become a beautiful and serene natural preserve within a developed urban and recreation area, and are a significant natural asset to the community, and visitors who use the area.*

In keeping with the community's vision for the Bowmanville and Westside marshes, the **goals** of the Bowmanville/Westside Marshes Conservation Area Management Plan are:

- 1) To identify, protect and enhance the current and potential natural heritage features, attributes, functions and linkages of Bowmanville/Westside Marshes Conservation Area
- 2) To provide the public with enjoyable recreational and educational opportunities that will not threaten the health of the area
- 3) To acknowledge the cultural and heritage significance of the area as it relates to the future management of the Conservation Area

Several **objectives** were identified for the Management Plan and are generally grouped into Protection, Recreation, and Community.

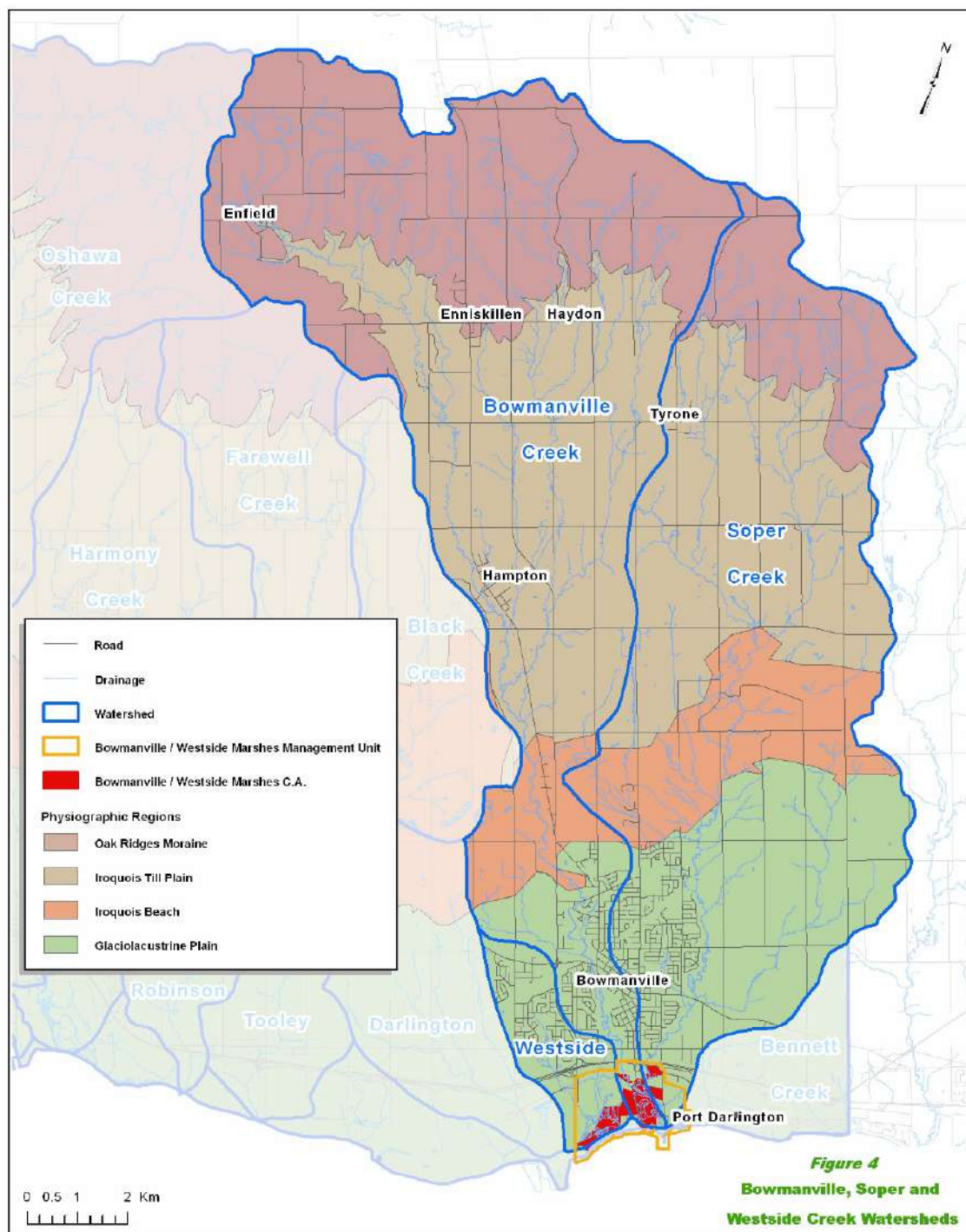
### **Historical Overview**

The Management Plan provides a brief historical overview of the Port Darlington area from glacial times to Aboriginal/pre-European settlement to European settlement with an industrial focus to a recreational focus to acquisition of conservation lands.

### **Regional Context**

The Management Plan provides background information regarding the climate, the Lake Ontario coastal landscape, the watersheds that drain into these two coastal wetlands and the role that the Conservation Area has within this landscape context. With regard to the watershed context, the Bowmanville and Westside marshes receive drainage from two very different watersheds; the Bowmanville/Soper and Westside watersheds respectively (Figure 4). Size, along with level of development, dominant land uses, and amount of natural vegetative cover, are all factors that influence watercourses which, in turn, affect the coastal wetlands with which they are associated. These influences are reviewed in this section.

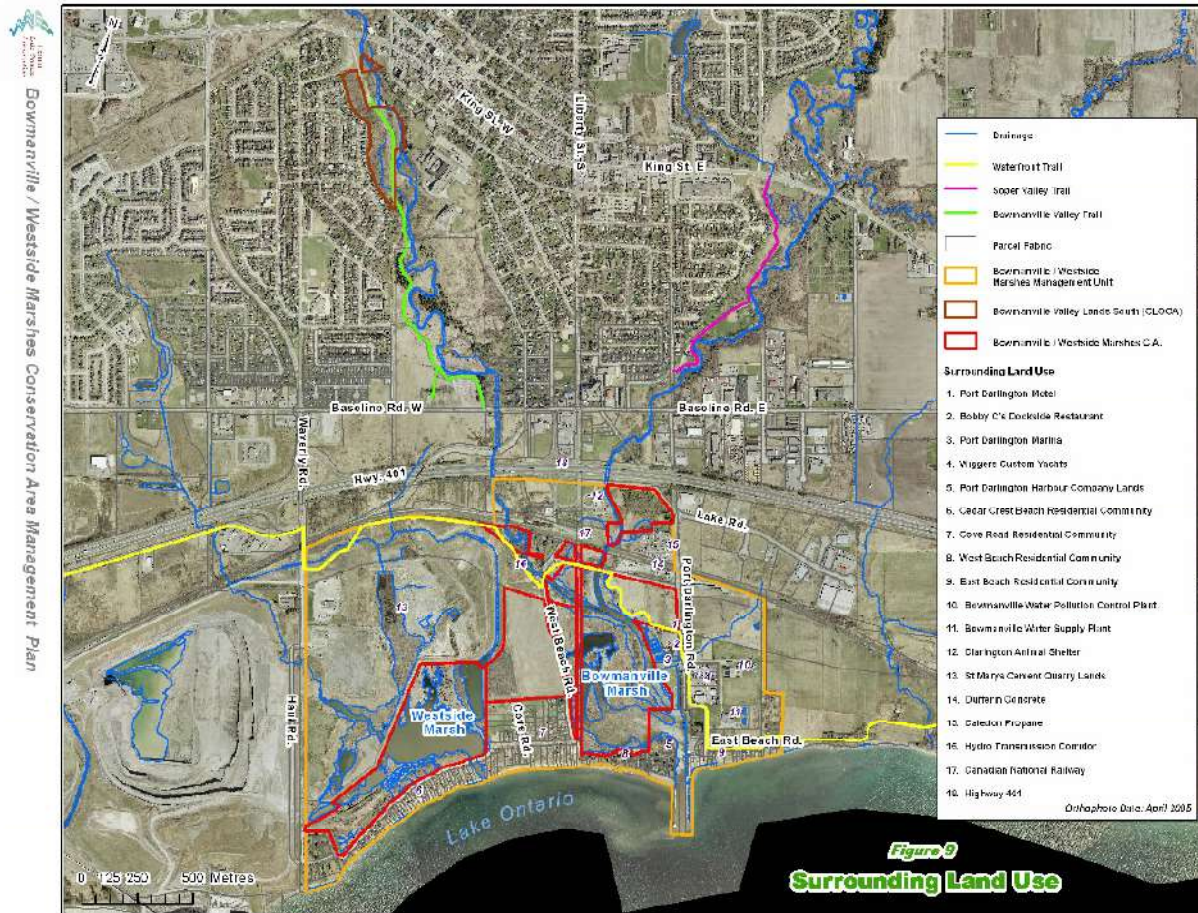




Bowmanville / Westside Marshes Conservation Area Management Plan

## Local Context

Brief descriptions are provided of the existing surrounding land uses, natural hazards and public uses that are present in the Management Unit (Figure 9).



### Conservation Area – Current Conditions

Bowmanville/Westside Marshes Conservation Area, at approximately 82 ha (or 202 acres), represents a rather small land base when compared to some other Conservation Areas managed by CLOCA. The difference, however, is that there is a tremendous amount of diversity in this small area. The two provincially significant coastal marshes, together with their associated valleylands, connecting uplands, and interactions with the adjacent Lake Ontario create a diverse mix of vegetation communities and habitats that are extremely important to many different resident and migrating wildlife populations. The current conditions within the boundaries of the conservation area are summarized, including: vegetation, aquatics, wildlife, water quality, public use, and infrastructure. This section also provides a detailed description of the Westside Marsh reconfiguration.

### Natural Heritage Evaluation

Conserving, enhancing or restoring the natural heritage features and systems within Bowmanville/Westside Marshes Conservation Area are the primary goals of this management plan. The most difficult challenge faced by all natural area managers charged with developing long-term management plans for conservation lands is the task of determining, among other things, which habitats require increased protection, which areas require enhancements so that they can reach their true potential, and which areas currently contribute little to the surrounding natural heritage system but have the potential to become an integral component of that system if properly restored.

It is quite clear from previous sections of this document that Bowmanville/Westside Marshes Conservation Area is:

- very dynamic (the two wetlands are subjected to regular fluctuations in both water quantity and quality as a result of direct influences from Lake Ontario and two drastically different watersheds);
- diverse (the conservation area contains many different habitats in various stages of succession including natural wetland/forest, reconstructed wetland, post-agricultural upland); and,
- highly disturbed (the conservation area is completely surrounded by varied land uses including major industrial, commercial/recreational, and urban residential).

The Natural Heritage Evaluation for the Bowmanville/Westside Marshes Conservation Area was completed by incorporating the results of four separate evaluation methods and data sets. These included: Natural Heritage Component Data Report (Niblett Environmental Associates, 2003), Natural Heritage Evaluation System For Conservation Area Management Planning (CLOCA), Durham Region Coastal Wetland Monitoring Project (CLOCA, Environment Canada), and Wetland Evaluation System For Southern Ontario (OMNR, 1984; 2005).

The evaluation is described in detail in this section of the Management Plan with accompanying appendices of detailed technical information. The key results are highlighted in the Management Strategy table (pp 101-129).

## **Chapter 2: Potential Long-Term Impacts**

Knowing the potential long-term impacts that may positively or negatively affect the Bowmanville/Westside Marshes Conservation Area and surrounding lands within the Management Unit ensures that management strategies for the Conservation Area can anticipate and, where appropriate, accommodate these future land uses/influences. This section provides a summary of influences such as climate change, Lake Ontario Water Level Regulation study, Greenbelt Plan, Regional Official Plan, Clarington Official Plan, St Marys Cement Long-term Extraction and Quarry Rehabilitation plan, Port Darlington Neighbourhood Secondary Plan, Clarington Land Acquisition Strategy, and Waterfront and Valleys 2000 trail development. In undertaking this review, it was recognized that there are numerous, long-term, “conceptual plans” surrounding the conservation area lands in which the details are subject to change. For this reason detailed responses to these plans have not been developed. Comments will be provided through CLOCA’s plan review/regulatory review role.

## **Chapter 3: Management Strategy**

Finally, a Management Strategy is outlined through a series of tables. Considerable data and information have been gathered through fieldwork, research, public consultation, and subsequently evaluated so that CLOCA will be adequately equipped to manage Bowmanville/Westside Marshes Conservation Area over the long-term. The issues, concerns, and areas of interest identified through this natural heritage evaluation and management planning process are outlined in the Management Strategy tables that follow and are categorized under the following: wetland status, vegetation, aquatics, wildlife, water quality, public use, and adjacent use. Where appropriate, recommendations are made to address the issues and the timing of management actions are outlined. In general, consistent with the Plan’s objectives for Protection, Recreation and Community, CLOCA’s management actions focus on:



Research: monitoring work that will improve our understanding of the health of the area, with a particular emphasis on the coastal wetlands, so that the best management actions can be determined.

Invasive Species: development of a management strategy to control invasive species that can have a huge impact on a natural area by out-competing native populations

Minimizing Disturbance: planting of natural buffers, between high activity areas and sensitive zones in the conservation area; signage

Habitat Restoration: planting of forest corridors and meadows in the upland areas

Public Use: trail and viewing and interpretative infrastructure

Plan Review/Regulatory Review: reviewing development applications within the Westside and Bowmanville/Soper watersheds with a view to minimizing downstream impacts to the coastal wetlands, as well as, providing comments on applications for adjacent areas with a view to protecting the ecological integrity of CLOCA's holdings while promoting appropriate public use and education

Community Involvement: promotion of volunteer opportunities e.g., plantings, monitoring.

Specific Actions are identified in the Management Strategy table (pp. 101-129) according to five different management zones that have been identified within the Conservation Area. The outside edges of these zones have been defined by the Conservation Area boundaries.

Although nature knows no "boundaries", distinctly different processes and disturbances influence certain zones within the Bowmanville/Westside Marshes Conservation Area. For example, Westside Marsh lies adjacent to a limestone quarry and receives water inputs from a small but very urbanized watershed; whereas, Bowmanville Marsh lies adjacent to a marina/harbour and industrial land uses and receives water inputs from a very large watershed that contains a mix of urban and agricultural land uses. Because of these very different influences within the Conservation Area, different zones require different approaches to management. For this reason, the lands owned/managed by CLOCA that make up the Bowmanville/Westside Marshes Conservation Area have been broken into different management zones based on differences in adjacent land use, watershed inputs, land tenure, and natural heritage features.

The following sections summarize the highlights from each Zone.

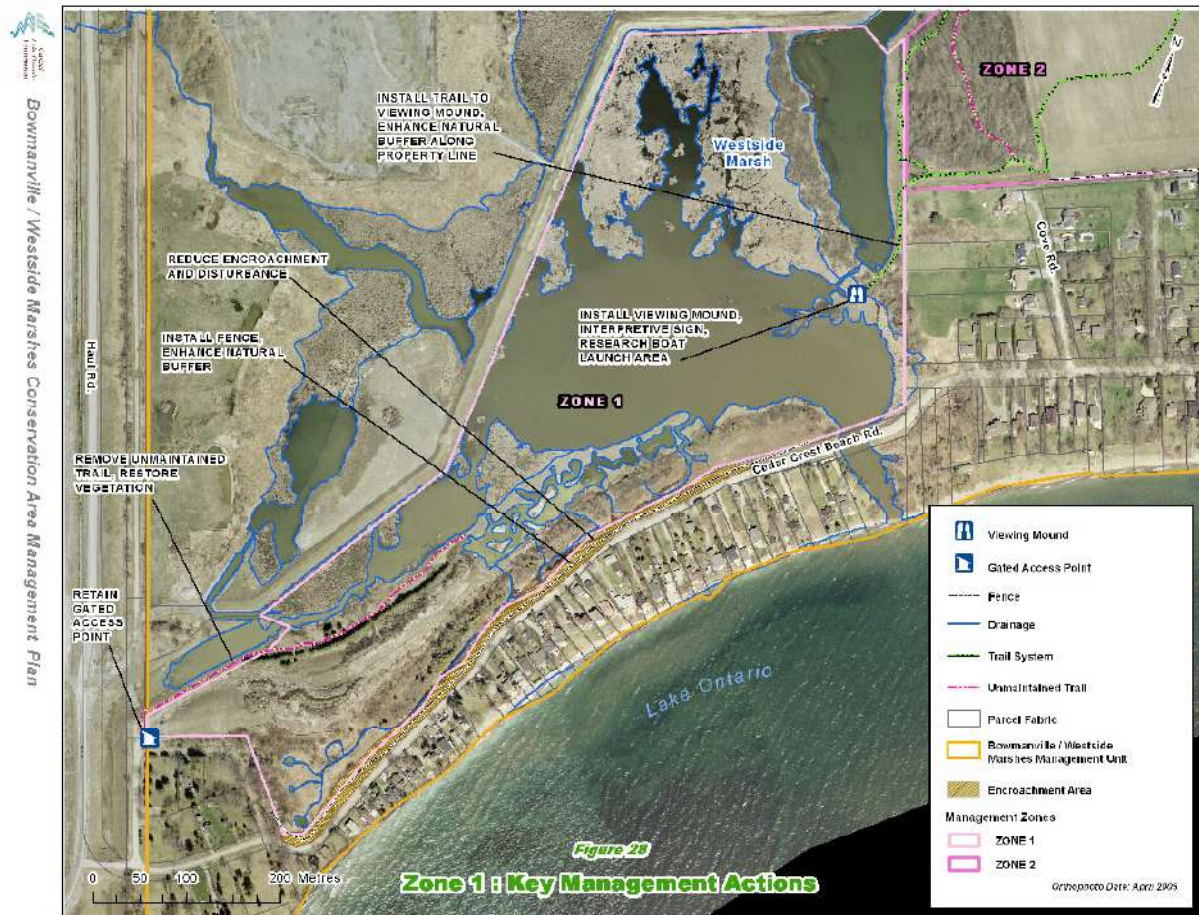
### **Zone 1: Westside Marsh**

The primary objective for Zone 1 (Figure 28) is to maintain and enhance the ecological integrity of the marsh and minimize disturbance.

This zone includes Westside Marsh, the new outlet of Westside Creek, and the uplands along the southern boundary of the wetland. In the Conservation Authority Natural Heritage Evaluation, Zone 1 was identified predominantly as being of high ecological importance, poor to good health, and high sensitivity relative to other areas in the Conservation Area.

Westside Marsh was evaluated as a provincially significant wetland in 1984 and has seen significant disturbance over the past number of years due to the reconfiguration of the marsh to

accommodate neighbouring quarrying activities. The majority of the reconfiguration work as outlined in the Management Plan was completed as of the winter of 2005/2006 such that during development of this Plan the existing conditions within this area were changing rapidly and data collection was difficult. This is one reason there are limited recommended Management Actions that may further disturb this zone in the short-term. Future Management Actions will be assessed against the results of two major monitoring initiatives currently underway in Westside Marsh: i) Durham Region Coastal Wetland Monitoring Project, and ii) St Marys Cement 5-year post restoration monitoring report. Once the Marsh re-establishes itself, a future re-evaluation by MNR to update the significance of this wetland will be requested.



## Zone 2: Upland Connector

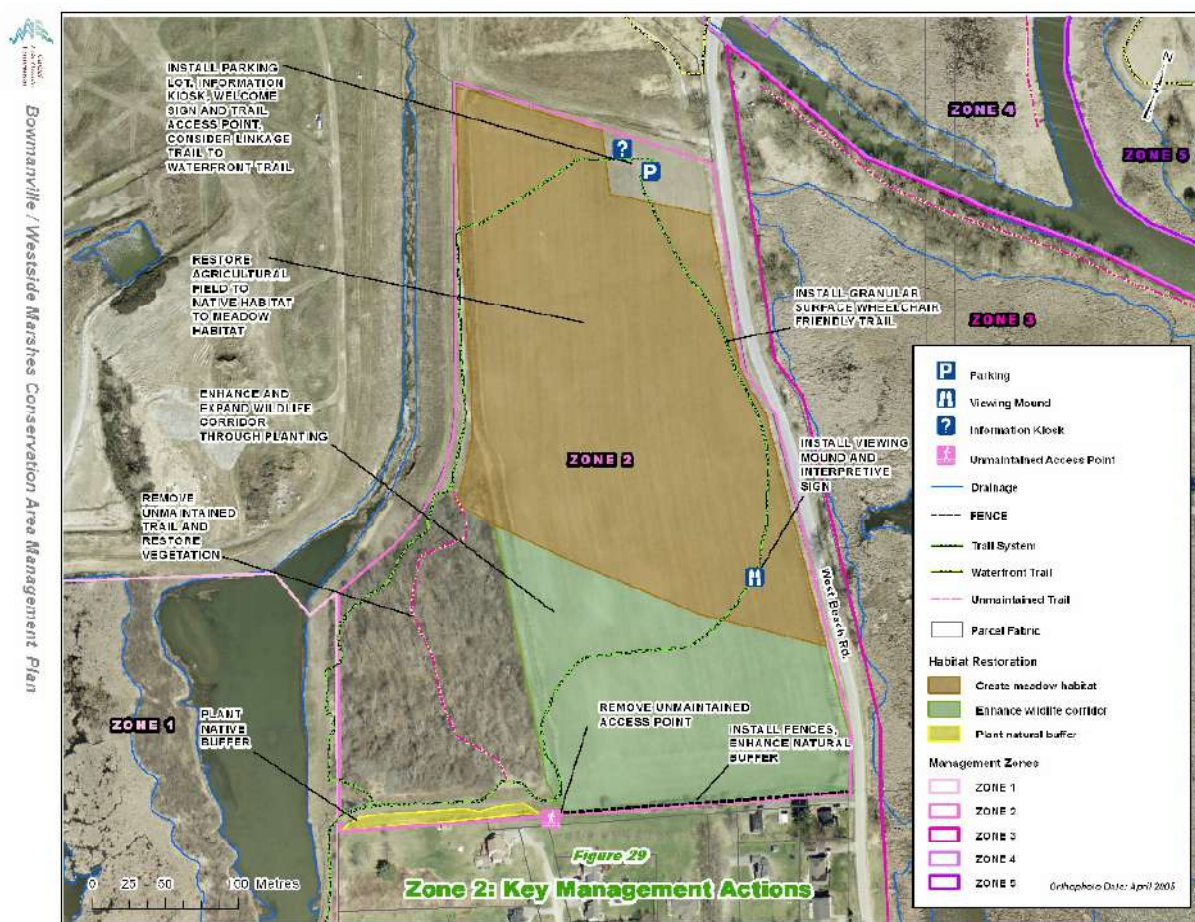
The primary objective for Zone 2 (Figure 29) is to provide the public with enjoyable recreational and educational opportunities while restoring an appropriate upland corridor to complement the ecosystems of the Bowmanville and Westside marshes (building upon the ecological importance and sensitivity of the Westside Woods).

This Zone includes connecting uplands between Westside and Bowmanville marshes, bounded to the east by West Beach Road, the north by the hydro corridor, the west by the diverted Westside Creek, and the south by the Cove Road Community. This zone also includes “Westside Woods”, the mature woodlot adjacent to Westside Marsh. In the Natural Heritage Evaluation for Conservation Areas, Zone 2 was identified predominantly as being of medium



ecological importance (with the exception of the Westside Woods which ranked high), medium health, and less sensitive (again with the exception of the Westside Woods which ranked high) relative to the wetland areas in the Conservation Area.

Management Actions are based upon a funding proposal submitted by CLOCA to the Ducks Unlimited Canada *Healthy Wetlands...Healthy Communities Initiative*. The project was approved for funding by Ducks Unlimited Canada and the Ontario Ministry of Natural Resources in 2004. The infrastructure improvements including a 20 car parking facility (pay and display), an information kiosk, a 1.5 km trail loop, two raised viewing mounds, and the installation of several interpretive signs were initiated in 2005 and will be completed by the middle of 2006. CLOCA's intent is that this public use system will complement surrounding trail opportunities (e.g. Waterfront Trail, Valleys 2000). Additional Management Actions for this Zone include the establishment of a treed wildlife corridor and upland meadow as part of the long-term plan. The planting of the wildlife corridor was initiated in the spring of 2005 with help from the local community and it is anticipated that the natural restoration work will be completed over the next several years.



### Zone 3: Bowmanville Marsh

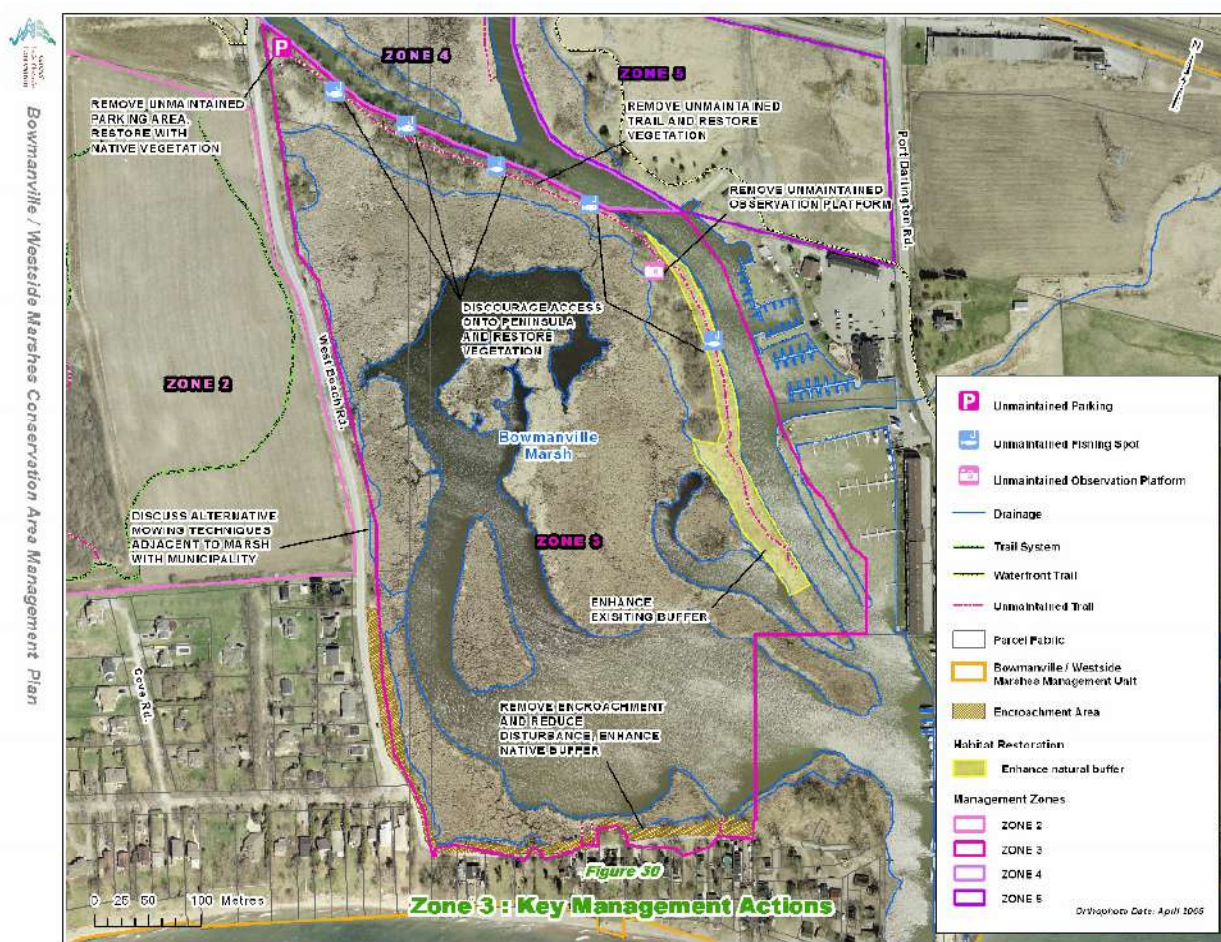
The primary objective for Zone 3 (Figure 30) is to maintain and enhance the ecological integrity of the Marsh and minimize disturbance.



This zone includes Bowmanville Marsh which represents a significant portion of the provincially significant Bowmanville Wetland Complex. In the Natural Heritage Evaluation for Conservation Areas, Zone 3 was identified predominantly as being of high ecological importance, poor to good health, and high sensitivity relative to other areas in the Conservation Area.

Management Actions include removal/rehabilitation of unmaintained infrastructure including a parking lot, trail, and observation platform along the upper edge of the provincially significant Bowmanville Marsh (Note: these public uses are being redirected to less sensitive areas, specifically to maintained infrastructure in Zone 2). Other Management Actions are focused on minimizing disturbance along the edges of the Marsh so that its habitat functions are maximized. Future Management Actions will be assessed against the results of the Durham Region Coastal Wetland Monitoring Project and its restoration recommendations.

The Municipality of Clarington is currently pursuing the acquisition of lands adjacent to the conservation area boundary along the south side of Zone 3. CLOCA supports the efforts by the Municipality of Clarington to put additional hazard lands and wetland areas into public ownership where appropriate. Where the Municipality of Clarington is successful in acquiring additional lands, CLOCA will provide the municipality with technical advice as required regarding the long-term management of these lands.

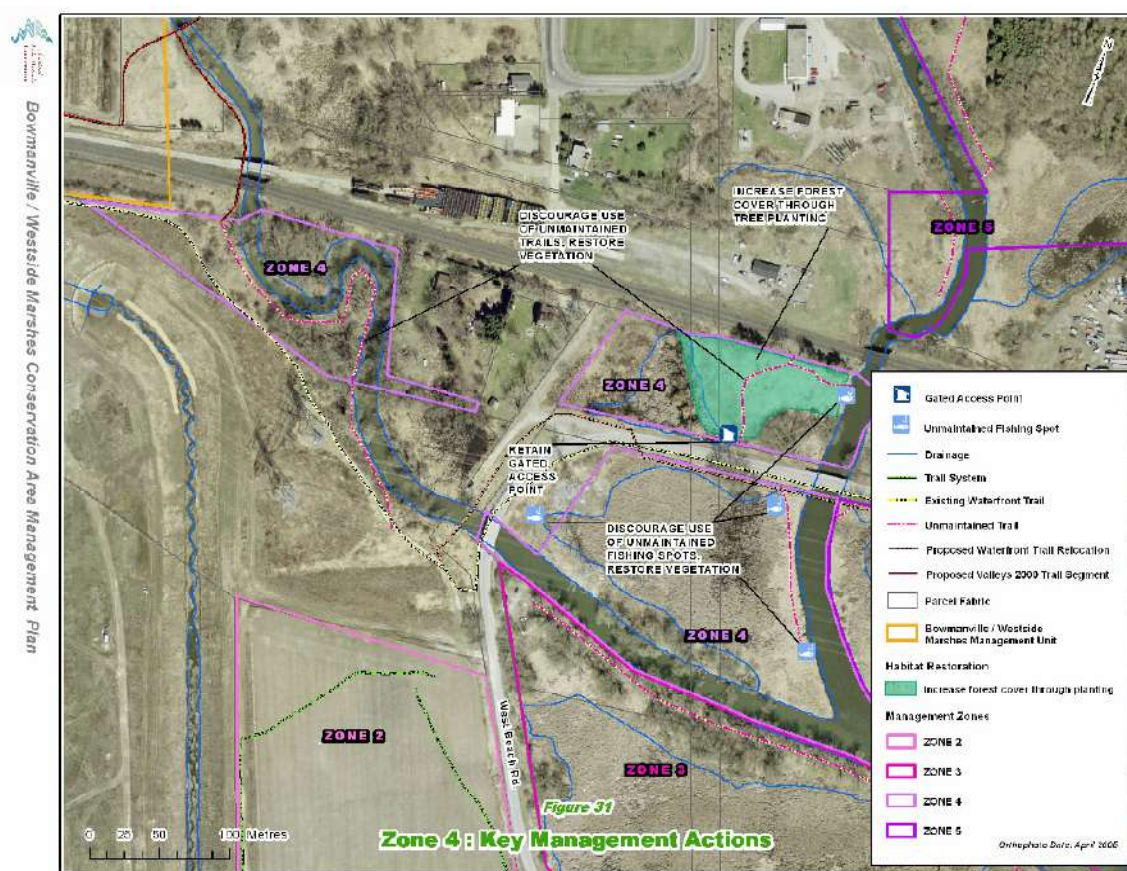


#### Zone 4: Lands North of Bowmanville Marsh

The primary objective for Zone 4 (Figure 31) is to maintain and enhance the ecological integrity of, and minimize disturbance to, the adjacent Bowmanville Marsh.

This zone includes all lands north of Zone 3 that are owned or leased by CLOCA. It includes wetland communities that are part of the provincially significant Bowmanville Wetland Complex. In the Natural Heritage Evaluation for Conservation Areas, Zone 4 was identified predominantly as being of high ecological importance (with the exception of the cultural meadow community in the Zone which ranked medium), low health, and generally high sensitivity for the wetland communities relative to other areas in the Conservation Area.

Management Actions focus on restoration of areas disturbed by unmaintained trails and unmaintained fishing spots as well as increasing forest cover through tree planting. CLOCA will review the Municipality of Clarington's design plans for upgrading the Waterfront Trail with pedestrian crossings and along the road right-of-ways in Zone 4.



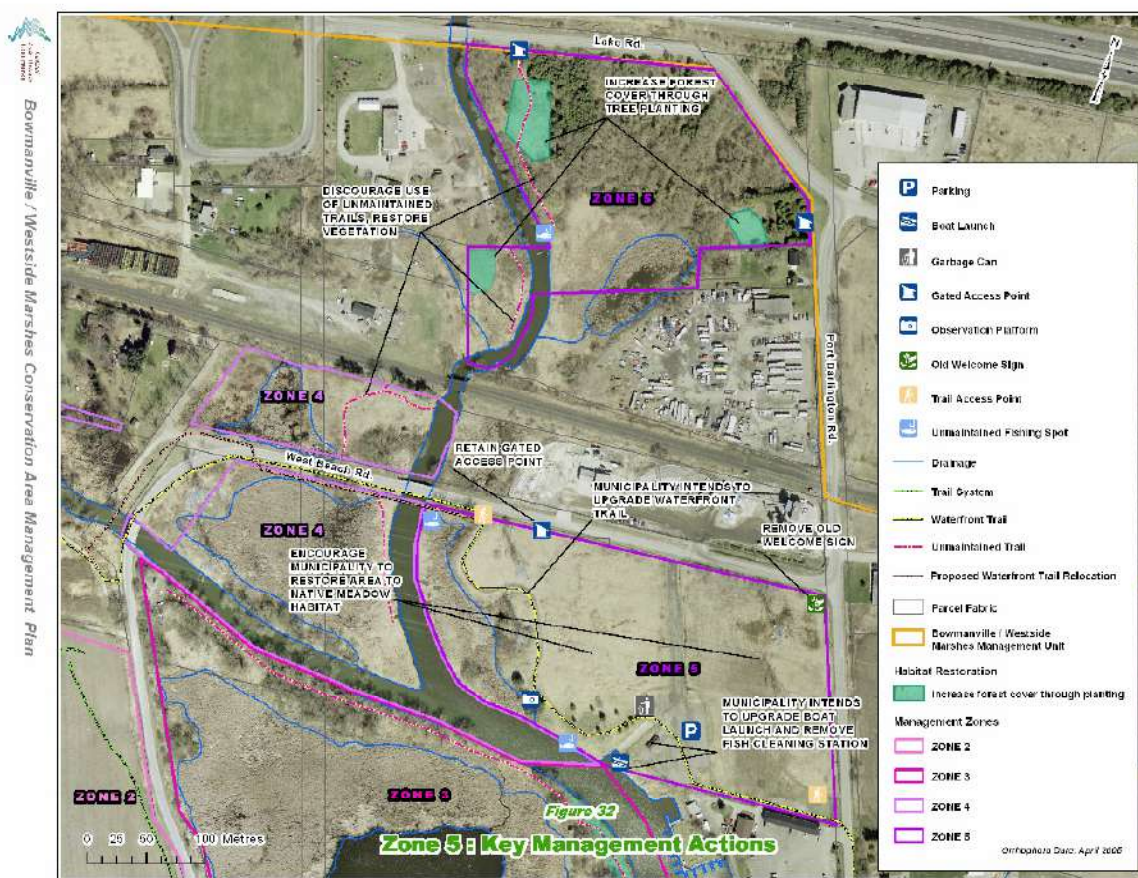
#### Zone 5: Lands Leased by Clarington

The primary objective for the southern portion of Zone 5 (Figure 32) is to provide the public with enjoyable recreational opportunities that will not threaten the health of this Zone, while minimizing disturbance to the adjacent Bowmanville Marsh. The primary objective for the northern portion of Zone 5 is to maintain and enhance the ecological integrity of the forest and wetland communities adjacent to Soper Creek by enhancing the vegetation communities within this area through restoration and protection (e.g. by minimizing disturbances where appropriate).



This zone includes all the lands north of Zone 3 that are owned by CLOCA, but leased to the Municipality of Clarington. It includes wetland communities that are part of the provincially significant Bowmanville Wetland Complex. In the Natural Heritage Evaluation for Conservation Areas, Zone 5 upland communities were ranked as high, medium and low in the ecological importance category, medium to high health (only 3 communities evaluated), and high to medium sensitivity for the upland communities relative to other areas in the Conservation Area. In general, the portion of Zone 5 below West Beach Road is a highly disturbed area that supports a parking lot and boat launch. The portion of Zone 5 north of West Beach Road supports forest and wetland that is disturbed, but of high ecological value.

Management Actions focus on increasing forest cover through tree planting and restoring vegetation in disturbed areas and recommending maintained fishing spots after a review of the recommendations put forward in the Bowmanville/Soper Creek Fisheries Management Plan (CLOCA and OMNR, in prep.). Generally, actions in this Zone are subject to the Municipality of Clarington's design plans being finalized for implementation on these lands.



### Management Plan Review and Updates

The life span of this Management Plan is intended to be 20 years from the date of approval by the CLOCA Board of Directors with 5-year reviews. The recommendations found within this Management Plan are subject to change over the 20-year life span as a result of updated information (e.g. see Chapter 2 – Long-term Potential Impacts) or improved science, and changes in public demand and pressure. This includes amendments to the plan that may be required to reflect changes in land tenure and management agreements. Many of the recommendations will be subject to available funding resources and partnerships.