

UPPER CREDIT CONSERVATION AREA

Management Plan



UPPER CREDIT CONSERVATION AREA

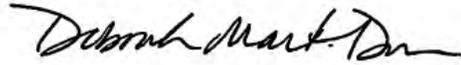
CONNECTING THE NATURAL SPACES, PEOPLE AND COMMUNITIES OF THE UPPER CREDIT RIVER



Hiking on the northern portion of Upper Credit Conservation Area

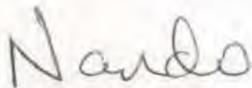
APPROVAL STATEMENT FOR THE UPPER CREDIT CONSERVATION AREA MANAGEMENT PLAN

We are pleased to approve the Upper Credit Conservation Area Management Plan as the official policy for the management and development of this conservation area. The plan reflects Credit Valley Conservation's intent to protect the natural features and functions of Upper Credit Conservation Area and to enhance and maintain high quality opportunities for interpretation, recreation, discovery and enjoyment by watershed residents and visitors.



Deborah Martin-Downs
Chief Administrative Officer
Credit Valley Conservation Authority

September 29, 2016
Date: _____



Nando Iannicca
Chair, CVC Board of Directors
Credit Valley Conservation Authority

September 29, 2016
Date: _____

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Eric Baldin	Eric Mailloux
Dan Banks	Deborah Martin-Downs
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Paul Biscaia	Joana Marques
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Victoria Edwards	Jeff Payne
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Photo Credit: Lisa Reiderer

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HOW TO READ THIS DOCUMENT

This document is the final Management Plan for Upper Credit Conservation Area. A series of reports have been produced to accompany the different phases of the management planning process for Upper Credit Conservation Area, and are outlined below.

The Background Report for the Upper Credit Conservation Area (2013) details the social, cultural and ecological characteristics and attributes of the property. The Background Report contains the baseline information summarized from CVC's monitoring program data, research and other studies and provides the foundation for the identification of opportunities, constraints and recommendations.

The Strategic Directions Report for the Upper Credit Conservation Area (2014) highlights the discussion and comments that were recorded during consultation. The Strategic Directions Report synthesizes the input received from the public, stakeholders, agency representatives and CVC staff and provides the justification and rationale for the selection of management recommendations.

This document, **The Management Plan for Upper Credit Conservation Area (2016)** summarizes and incorporates the results of the Background Report and the Strategic Directions Report and presents the final vision for the Upper Credit Conservation Area. Approval of the Upper Credit Conservation Area Management Plan by CVC's Board of Directors is required before implementation commences.

Three smaller implementation strategies have been prepared to accompany and guide the implementation of the Upper Credit Conservation Area Management Plan. The **Trail Plan** provides an overview of the approximate placement, design and estimated cost of implementing Upper Credit Conservation Area's trail development and enhancement projects. The **Signage Plan** itemizes signage requirements and provides information regarding the approximate location, type and cost of signage at Upper Credit Conservation Area. Finally the **Major Infrastructure Plan** contains location and design information regarding the major infrastructure projects proposed for Upper Credit Conservation Area. These three reports are designed to facilitate the implementation phase of the management planning process.



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A regionally rare species of sedge, Sprengel’s Sedge (*Carex sprenglii*) found on the Safari Parcel

EXECUTIVE SUMMARY

Located within the Towns of Caledon and Orangeville, Upper Credit Conservation Area (UCCA) is one of Credit Valley Conservation's (CVC) newest land holdings. Commencing with the purchase of the Safari Parcel in 2005, the past decade has seen UCCA quadruple in size with the acquisition of additional lands. The securing of these lands was made possible through donations and funding from several sources, including private individuals, provincial and municipal governments, the Nature Conservancy of Canada and Ducks Unlimited. As of early 2016, UCCA spans an area of 162 ha (400 acres) and contains more than 3.5 km of the main branch of the Credit River.

From ecological, social and cultural perspectives, UCCA provides important functions in both local and regional contexts. It contains a diversity of habitats that provide refuge to more than 700 species of flora and fauna, 11 of which are Species at Risk. It is associated with two Provincially Significant Wetlands and encompasses a portion of a candidate Earth Science Area of Natural and Scientific Interest. UCCA is historically tied to three Cultural Heritage Landscapes, as defined by the Town of Caledon, including the historic Town of Melville and the long-retired Toronto Grey & Bruce Railway, the bed of which now functions as part of the trail system. Information collected through CVC's Lands Monitoring Program indicates that visitation to the conservation area has risen steadily over the past several years, largely made-up of a dedicated group of dog walkers and hikers that use UCCA's trail system on a regular basis.

As a component of natural heritage systems for both the Credit River watershed and the Province's Greenbelt, UCCA contributes to a network of natural areas and corridors that provide for the movement of wildlife, ecological goods and services and the long-term evolution of species. In addition to its ecological function, UCCA's situation within two upper-tier municipalities and the potential to one day link a trail system across the entire property, position UCCA as a significant public asset.

While the ultimate goal of a management plan is to develop a framework that will guide the responsible use of resources and the future development of a conservation area, the management planning process also provides the opportunity to identify, understand and advance the current state of a property. In the context of UCCA, potential was recognized in areas with degraded terrestrial and aquatic habitats, the disjointed trail system and the general "blank slate" landscape of the conservation area in terms of public recreation and interpretation opportunities. In addition to fulfilling the goals and objectives identified in CVC's Strategic Plan (2015) and Conservation Areas Strategy (1994), the Plan will facilitate the implementation of policies, projects and programs in order to ensure that UCCA reaches its full potential as an ecologically, socially and culturally unique and valuable part of CVC's conservation area system.

CVC initiated the management planning process for UCCA in 2013. Information was collected and research analyzed from a number of disciplines in order to inform

Phase I of the management planning process, the Background Report.

The Background Report provides the characterization of the conservation area based on relevant plans, policies and reports describing the natural, social and cultural features and functions of the property and identifies potential opportunities and constraints.

Phase II involved public and agency consultation on the content of the Background Report, potential directions and concepts. With a large land mass that crosses two municipalities, members of the general public, special interest groups, and local government agencies all held interest in the process and provided vital insight and input on UCCA's current state and planned future initiatives. The comments and input collected during consultation were analyzed and, where appropriate, have been addressed in the Strategic Directions Report and incorporated into the Plan.

Phase III of the management planning process began with a draft version of the Plan and will end with approval of this Plan by CVC's Board of Directors.

The management planning process is the vehicle by which CVC determines the classification of the conservation area, zones, priorities and management activities. UCCA is classified as a Natural Environment conservation area. Locally and regionally significant natural features and functions present within UCCA are protected through site level zoning and only sustainable activities are permitted. Less sensitive areas specified in this Plan will provide opportunities for access, appreciation and recreation. Special Management Zones

identify areas where major restoration opportunities are proposed or properties subject to special management agreements.

The goals and objectives laid out in CVC's Conservation Areas Strategy are refined in order to address property-specific concerns and opportunities. The long-term protection of UCCA is an objective, and directions and projects outlined in the Plan aim to protect its natural features and functions by directly supporting restoration projects, the sustainable development of infrastructure and land securement. Culturing public appreciation for UCCA and providing opportunities for recreation are objectives which will be achieved through enhanced facilities, the development of a cohesive trail system and interpretive programming. Crafting a visitor experience that supports the protection objective will be accomplished through the promotion of sustainable activities and interests identified through consultation, including self-guided educational opportunities, passive recreation and nature enjoyment.

A progress evaluation will be undertaken for the Upper Credit Conservation Area Management Plan at the five year mark and before the 10 year renewal. Public consultation is necessary where proposed changes affect the vision, goals or objectives for property.

VISION STATEMENT

Credit Valley Conservation's (CVC) vision for Upper Credit Conservation Area:

"To connect and protect the natural landscape of the upper Credit River through land securement and restoration initiatives and to enrich the communities and people of the watershed by providing opportunities to appreciate Upper Credit Conservation Area's diverse ecosystems, scenic vistas and unique rural character through a publicly accessible and continuous trail system."

With its forests, wetlands and cultural communities, Upper Credit Conservation Area (UCCA) contains a diversity of natural features and habitats. Its existing and potential natural and social relationships with the surrounding landscape and communities place Upper Credit Conservation Area in an ideal situation to realize the underlying theme of the UCCA Management Plan (Plan): *to connect the natural areas, people and communities of the upper Credit River.*

The restoration projects, land securement program and stewardship initiatives outlined in the Plan seek to improve existing habitats and establish or enhance functional linkages to the ecosystems both within and surrounding UCCA. The development of structures and programming to support interpretation, appreciation and recreation opportunities aims to physically connect people and communities to the landscape. The directions and recommendations detailed in this Plan aspire to foster and support community stewardship that will assist CVC in achieving its vision of a healthy, sustainable Credit River watershed for future generations.

To help achieve this vision, the goals and objectives of this Plan are designed to support the goals, outcomes and directions set out in CVC's Strategic Plan (CVC, 2015). CVC's Strategic Plan is a reference document that directs business and project planning, organizational objectives and budgeting. The Strategic Plan establishes five-year directions, ten-year outcomes and 20 year goals, several of which directly relate to the planning and management of CVC's conservation area system.

The development of conservation area management plans is a direction under Goal Three of the Strategic Plan:

Goal Three: Manage a Healthy, Resilient Environment through Protection, Restoration and Enhancement

- **Direction Three:** Manage new and existing conservation lands through comprehensive Management Plans

The foundation for decision-making in the context of a management plan process is largely based on data and research collected by CVC's monitoring programs. This aligns with Goal Four of CVC's Strategic Plan.

Goal Four: Develop and Share Scientific Knowledge and Innovative Approaches that Advance Decision-Making and Lead to on-the-ground action

- **Direction One:** Leverage monitoring data and our inventory of natural areas to guide land use, planning and restoration strategies and to advance watershed-based resource management

A variety of objectives identified within the Strategic Plan were incorporated into the policy framework of the UCCA Management Plan and will be realized through its implementation. These include:

Goal Two: Safeguard People, Property and Communities from Hazards

- **Outcome Three:** Conservation areas are managed for staff and visitor safety

Goal Four: Develop and Share Scientific Knowledge and Innovative Approaches that Advance Decision-Making and Lead to on-the-ground action

- **Direction Five:** Develop user friendly and accessible communication materials and channels to share our science with our partners and the community

Goal Five: Connect Communities with Nature to Promote Environmental Awareness, Appreciation and Action

- **Outcome Three:** Conservation areas that provide accessible natural spaces and unique environmental experiences for all to enjoy
- **Direction Seven:** Work with our partners to develop a Credit Valley Trail that connects the waterfront to the headwaters, celebrates our shared local history and creates a strong sense of place and emotional connection to the Credit River and its valley
- **Direction Eight:** Develop and maintain trail systems with accessible options within our conservation areas that connect to other trail systems and features of historic, cultural and environmental importance

Goal Seven: Ensure that CVC is a well-managed, sustainable and service-driven organization

- **Outcome Five:** Leading by example with environmentally, socially and economically responsible infrastructure and practices

The alignment of management plan objectives and the organizational priorities within CVC's Strategic Plan will ensure a comprehensive and holistic approach to the management of CVC's properties.



1.0. INTRODUCTION

1.1. CONSERVATION AREAS STRATEGY

The conservation areas of Credit Valley Conservation (CVC) represent a cross-section of the natural and recreational landscapes that characterize the Credit River watershed. CVC's Conservation Areas Strategy (CVC, 1994) creates a vision for managing these conservation areas as a system and recognizing the interconnectedness of these unique landscapes.

CVC's goal for the conservation areas system is:

To protect the Credit River watershed's significant and representative ecosystems, and offer sustainable natural heritage appreciation and recreational benefits to its residents and visitors.

The statement reflects the importance of protecting the natural heritage features and

functions of the watershed, while recognizing the need to provide high quality, interactive outdoor experiences through appreciation and recreation opportunities.

The goal statement is reinforced by three supporting objectives for managing the conservation area system:

- **Protection:** To protect significant and representative natural heritage features through selective acquisition and resource management.
- **Appreciation:** To provide the public (through various means) opportunities to understand the watershed's natural heritage and role of CVC in its stewardship.
- **Recreation:** To provide opportunities and facilities for selected outdoor recreation activities requiring high quality, sustainable natural environments.

CVC has also adopted several guiding principles that further illustrate the intent of the system goal and objectives. The guiding principles are as follows:

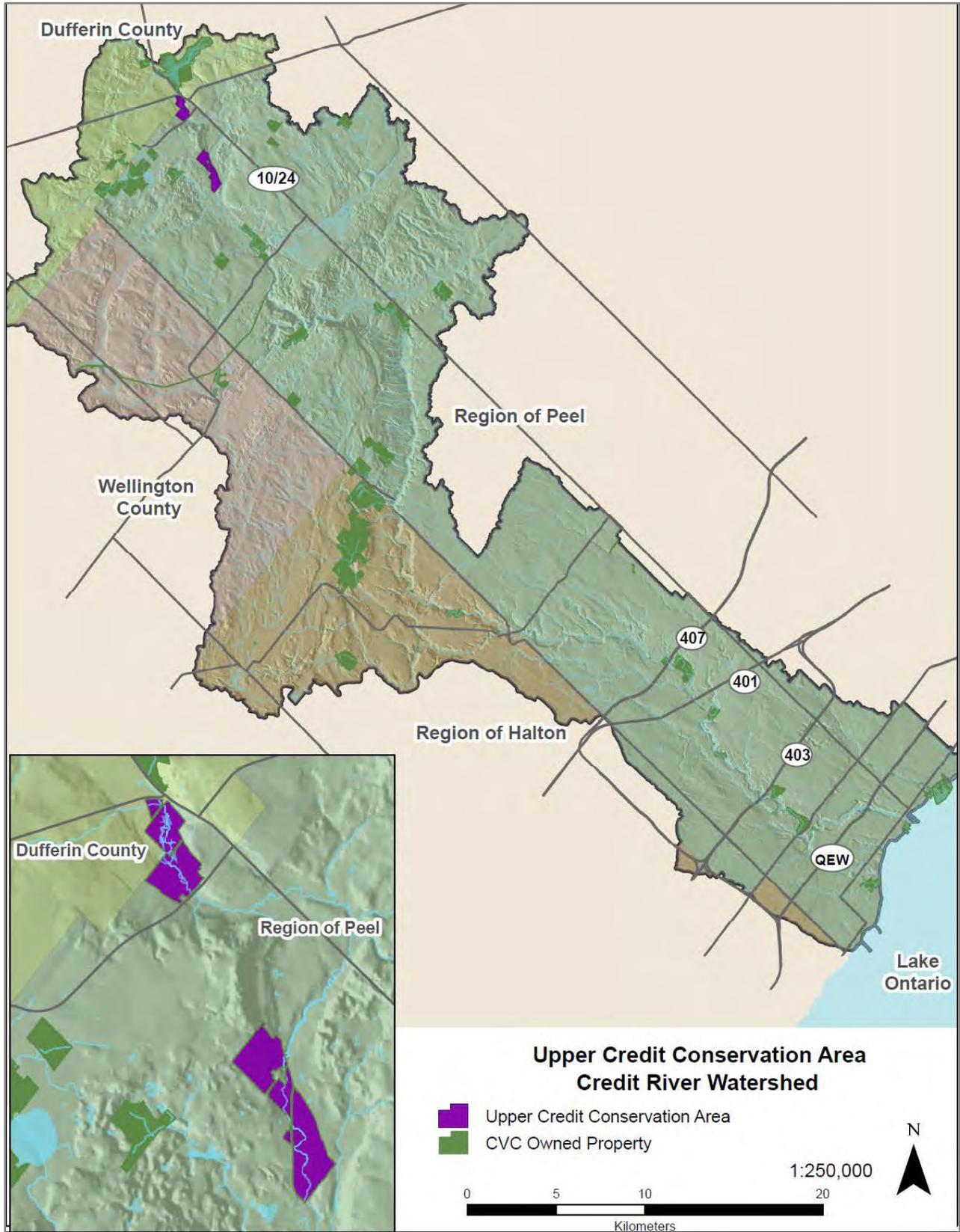
- CVC will endeavour to create a system of conservation areas that contains a cross-section of significant watershed natural heritage features and functions. At a minimum, the features and functions will be significant within the Credit River watershed.
- Conservation area management practices will be based on a systems approach to planning and the concept of environmentally sustainable development and recreation activities.
- CVC will strive to increase public understanding of natural and cultural heritage features and functions present within the Credit River watershed.
- Conservation Area recreational opportunities will be linked to the natural environment and sited appropriately based on the environment's ability to sustain the activity, the demonstrated demand for the program, and CVC's ability to manage the activity effectively within capital and operating budget limitations.

The objectives of protection, appreciation and recreation are important and considered to be the primary, if not only, reason for CVC to own and manage land. The objectives acknowledge that without protection, the quantity and quality of natural heritage features and functions to appreciate diminishes. They also recognize that without public awareness of environmental processes and stewardship, it will be difficult for CVC to maintain conservation areas and permit use on a sustainable basis. Finally, they speak to the fact that conservation areas provide unique settings for outdoor recreation activities that can be enjoyed by local residents as well as visitors to the watershed.

1.2. CONSERVATION AUTHORITIES AND CVC

Conservation Authorities are local, watershed management agencies that deliver services and programs to protect and manage water, hazards and other natural resources in partnership with various levels of government, landowners and other organizations. Conservation Authorities represent a liaison between the Province and municipalities, managing, restoring, and enhancing provincial and regional resources at a watershed level.

Established in 1954 by the Conservation Authorities Act, CVC is one of 36 Conservation Authorities in Ontario. CVC's mandate is to manage and protect the Credit River watershed; an area of 94,890 hectares that extends from Orangeville south to the Lake Ontario waterfront at Port Credit, and from Acton east to just south of Caledon East (Map 1).



Map 1- Credit River watershed and Upper Credit Conservation Area

1.3. UPPER CREDIT CONSERVATION AREA

Situated in the upper watershed, UCCA is part of CVC's Core 10 conservation area system. Beginning with the acquisition of the Safari Parcel in 2005, the past decade has seen UCCA quadruple in size thanks to CVC's Greenlands Securement Program and the support of private landowners and various funding partners. Funding partners include the Region of Peel, Ministry of Natural Resources and Forestry, Ontario Heritage Trust, Nature Conservancy of Canada and Ducks Unlimited. UCCA is now composed of seven unique parcels, connected by the upper Credit River which meanders through the landscape (Map 2):

- MTO Parcel (Leased to Town of Orangeville, also referred to as Dragonfly Park) (1978)
- Safari Parcel (2005)
- Reid Parcel (2008)
- Harbom Parcels (Part I & II) (2009)
- Spears Easement (Conservation Easement Agreement) (2009)
- McIlwraith Parcel (2010)
- Tranmer Parcel (2010)

CVC's Core 10 Conservation Area System

CVC owns and manages 60 properties in the watershed. Within this system are smaller management systems, such as the *Core 10 Conservation Area System*. The 10 properties that make up the *Core 10* represent a cross-section of physiographic regions and are located throughout the watershed. They are the best examples of lands which exemplify the balance of protection and public use. Resources to manage recreation, appreciation and protection objectives are generally focused toward *Core 10* conservation areas.

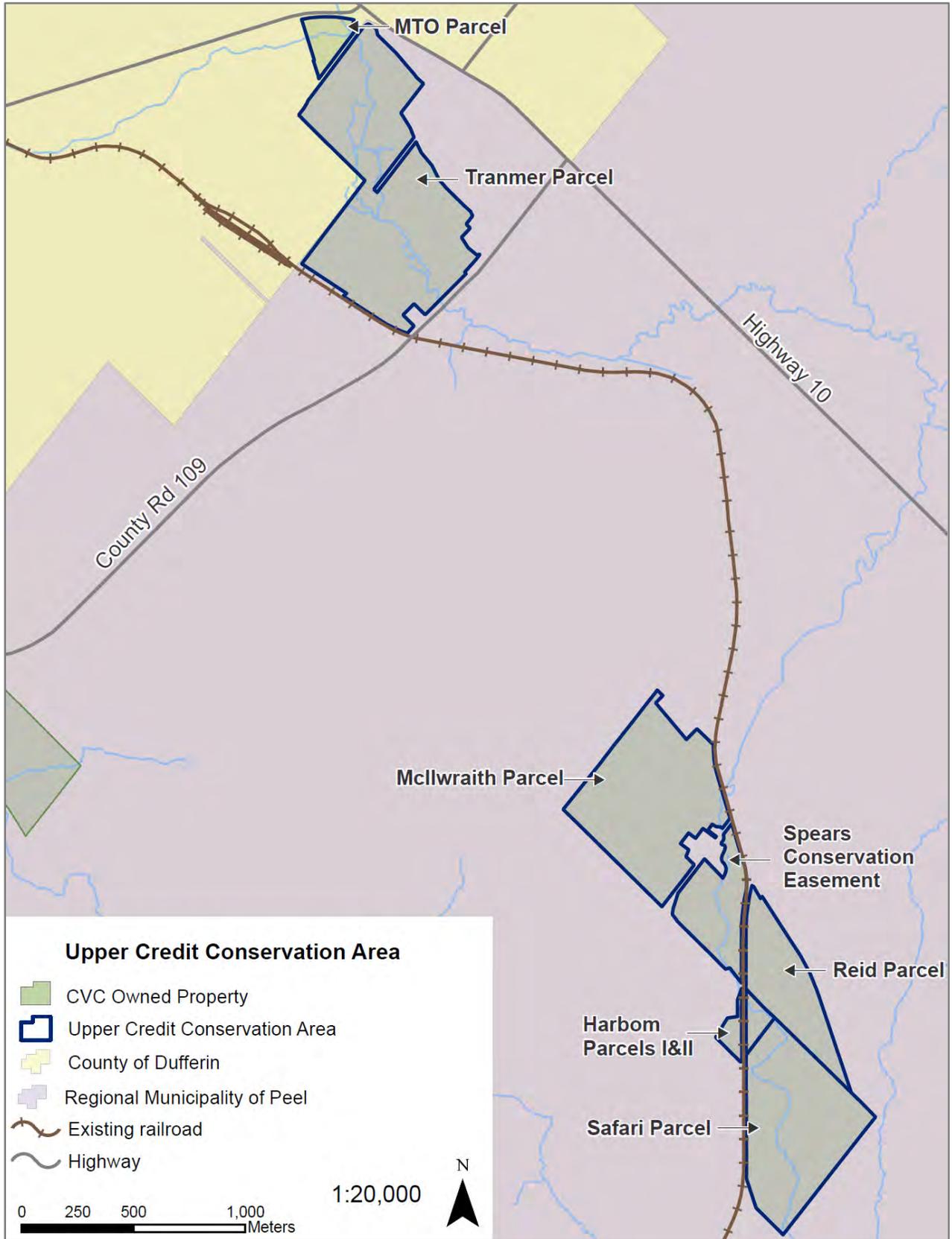
Box 1: Core 10 Conservation Area System

The varied landscape of UCCA acts as an important natural corridor and contributes to the watershed's Natural Heritage System; a network of physically and functionally linked natural areas and green space. Although much of the property was once used for agricultural purposes, many regionally and provincially significant environmental features are also associated with the site, including Provincially Significant Wetlands (PSW), a candidate Earth Science Area of Natural and Scientific Interest (ANSI), the Credit River Valley, and the province's Greenbelt Natural Heritage System. UCCA's expansive area and position near the Headwaters of the Credit River fosters large scale movement and migration of wildlife, helps to maintain biodiversity and supports species habitat. UCCA also provides important public access to the Credit River and offers opportunities for hiking, fishing and nature appreciation. These features, coupled with the potential for restoration and recreational programming advancement, characterize UCCA as a unique and important component within CVC's conservation area system.

Although UCCA is divided into two different portions (which lie between two different subwatersheds and two upper-tier municipalities), planning for the long-term management of these lands as a unit within the context of the Credit River watershed ensures unique features are protected and that large scale attributes are managed as a system. The character of the entire conservation area will also evolve simultaneously and create a distinct identity within the larger conservation areas system. This approach recognizes that UCCA is still a land assembly project in progress and additional parcels will need to be secured to connect the system for protection and public access objectives.

The UCCA Management Plan will guide the long range planning and development of UCCA and ensure appropriate public use and environmental sustainability for years to come.





Map 2 - Upper Credit Conservation Area



2.0. DEVELOPING THE MANAGEMENT PLAN

2.1. WHY COMPLETE A MANAGEMENT PLAN?

Management plans guide the development and management of the natural, social and cultural resources in conservation areas. The goal of the planning process is to develop a vision that balances the protection of natural features and the functions they provide with the development of appreciation and recreation opportunities and the values of the local community and general public. The vision will also identify and delineate the function of UCCA in the context of its role as a Core 10 property within CVC's conservation areas system. Specific projects, programs and directions are designed to realize and achieve the vision.

Ultimately, the management planning process provides the public and CVC with a high level of confidence that development and recreation activities permitted in a

conservation area are appropriate, while adhering to the broader goals and directions set out in the Conservation Areas Strategy and CVC's Strategic Plan.

This is the first Management Plan to be completed for UCCA.

2.2. THE PLANNING PROCESS

The planning process for UCCA saw the completion of three phases of work, which are detailed in the following reports: The Background Report for the Upper Credit Conservation Area Management Plan (2013); The Strategic Directions Report for the Upper Credit Management Plan (2014); and this report, the Management Plan for Upper Credit Conservation Area (2016) (Figure 1). These three reports form a package of information detailing the characteristics of the property, how recommendations were developed and the transformation of those recommendations into directions, projects and programming initiatives.

Phase I – Background Studies and Report: The Background Report compiles baseline investigations and background studies and identifies the opportunities and constraints associated with the study area. The Background Report takes into account all aspects of the study area, including the natural heritage, cultural heritage, infrastructure, existing resources, programming, policies, planning initiatives, and the role of visitors and the local community. The Background Report and its associated technical reports constitute a summary of the investigations and studies conducted in order to inform the Management Plan. It also contains more detailed information on the topics discussed in section 4.0 of this report and should be consulted for additional information.

Phase II – Strategic Directions: Phase II of the planning process involved consultation with the public, stakeholders and various agency representatives. The findings highlighted in the Background Report were presented and discussed and a more informed list of opportunities and constraints was developed. The Strategic Directions Report synthesizes the input received through consultation and provides the justification and rationale for the selection and prioritization of management recommendations.

Phase III – Management Plan: The Management Plan incorporates the results of Phases I and II and presents the final vision for UCCA. The recommendations that are laid out in the Strategic Directions Report are based off of the information in the Background Report and are presented as directions, projects and programs within the Management Plan. Phase III culminates in the approval of the Management Plan by CVC’s Board of Directors.

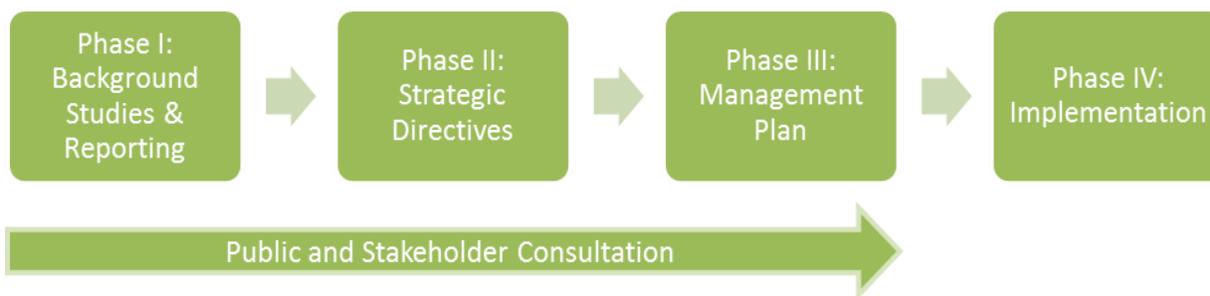


Figure 1: CVC's Management Planning Process

2.3. PUBLIC CONSULTATION

Two public consultations were organized and over thirty attendees provided input and commented on proposed projects and opportunities. The public open houses were attended by a variety of local interest groups, neighbours, conservation area visitors and the general public. Agency consultation was conducted separately and took the format of two half-day meetings and a site visit to UCCA.

2.0. Developing the Management Plan

Although a variety of different personal interests and goals were discussed during consultation, several common themes became evident:

- While not an issue unique to UCCA, **off-leash dogs** are a primary concern and the topic dominated consultations. The majority of visitors to UCCA are dog walkers, and the feasibility and appropriateness of permitting this activity at UCCA was discussed in length and detailed in the Strategic Directions Report. Ecological impacts, health and safety concerns and visitor experience were all important factors in CVC's decision to actively discourage off-leash dog use at UCCA.
- The expansion and management of UCCA's **trail system** as well as the possibility of future connections beyond the conservation area, generated interest and enthusiasm during consultation. The development of new trails and trail connections will provide enhanced opportunities for visitors, while the closure and re-routing of other trails will protect sensitive features and promote a fluid and sustainable trail system.
- The general theme of **passive recreation** was recorded both directly and indirectly through public comment. Passive recreation can take on a different meaning to different groups or individuals, though in the context of the consultations, the loose definition of "trail based activities that support appreciation objectives" was generally accepted. CVC has further refined this definition (Glossary).
- **Environmental interpretation and education** aligns with CVC's appreciation objective and was supported during consultation. Volunteer programs, workshops and passive interpretation (e.g. educational signage) were identified as opportunities for UCCA.
- The **high-level function** of UCCA was discussed throughout consultation in various regards including what UCCA meant to the protection of the river and wildlife, the preservation of ecological function and the appreciation of intrinsic values in the community. The influence of proposed land use changes in the region led to discussions on **landscape impacts**, how UCCA may be affected by land use change on adjacent and nearby properties and how the ecological goods and services provided by UCCA may help mitigate these impacts.
- The importance of **accessible** trails and facilities was discussed both directly and indirectly at consultation and comments regarding the need for trail maintenance were recorded. Opportunities for accessible trails and infrastructure were explored and are incorporated into the Trail Plan for UCCA.

- The importance of **enforcement** to address unsanctioned activities, specifically motorized recreation vehicles and horse access was also made evident during consultation. Environmental degradation, user conflicts and health and safety issues were cited as major concerns. CVC's Lands Monitoring and Enforcement programs will identify and address key issues and problem areas as appropriate.
- UCCA's status as an ongoing **land securement** project and the value of lands under public ownership was recognized and discussed during consultation. Due to the recent acquisition of much of the property, the importance of securing public land was an underlying theme throughout consultation and was generally supported with enthusiasm.
- Concepts and methods for **sustainable funding initiatives** were discussed and included ideas around pay-per-use, workshops and interpretive opportunities. While UCCA will not have an active gatehouse, some of these ideas may be supported through a signature event for the property.

With the exception of the Visitor Information Surveys conducted by CVC's Lands Monitoring Program at UCCA in 2010, this management planning process represented the first time that the public and stakeholders were consulted and had the opportunity to provide input about the future management of UCCA. The themes, desires and initial suggestions that surfaced through consultation have strongly influenced the recommendations of the Plan and are incorporated throughout.



Upper Credit Conservation Area in the Fall



3.0. RELATED STRATEGIES, POLICIES AND LEGISLATION

3.1. PROVINCIAL LEGISLATION AND PLANS

Provincial legislation and plans direct the management of CVC lands from a variety of perspectives. The Conservation Authorities Act (1990) provides the means by which the province and municipalities can join together to form a conservation authority. The Conservation Authorities Act also provides conservation authorities with the powers to make regulations regarding authority owned lands and provides support for enforcement to address unsanctioned uses or activities. The Provincial Policy Statement (MMAH, 2014), issued under the Planning Act, provides the framework for policy protection of significant natural heritage features in Ontario and sets the policy foundation for regulating the development and use of land. The Provincial Policy Statement specifically recognizes the long-term protection of

features and areas, natural heritage systems and cultural heritage features and landscapes. Specific to parks and conservation areas, the PPS also recognizes the importance of publicly accessible natural areas for protecting natural features and functions, as well as contributing to strong, healthy communities.

The Greenbelt Plan provides environmental and agricultural protection to designated lands, which includes most of UCCA, the majority of which is located in the Greenbelt Natural Heritage System. The Greenbelt Plan encourages the sustainable development and wise stewardship of parks and trails as well as the protection of sensitive and significant features.

A variety of other broadly scoped provincial legislation provides high-level guidance as well as specific policies applicable to the Plan. These include the Accessibility for Ontarians with Disabilities Act (2005), the Conservation Lands Act (1990) and the Endangered Species Act (2007), the policies and themes of which have been incorporated into the UCCA Management Plan as appropriate.

3.2. MUNICIPAL PLANNING AND POLICIES

The policies and strategies of municipal documents, such as Official and Strategic Plans have guided the development of the Plan's directions and recommendations. Official Plans provide the long-term strategic policy framework for guiding sustainable growth and development within a community; as well, they interpret and apply provincial legislation and policies within the regional context.

UCCA is located within two upper-tier municipalities, Dufferin County and the Region of Peel, and thus two lower-tier municipalities, the Town of Orangeville and the Town of Caledon. The majority of UCCA is designated within the Peel Greenlands System and the Caledon Environmental Policy Area, both of which have specific environmental policies that UCCA must adhere to. The portions of UCCA that are contained within Cultural Heritage Landscapes are subject to the Town of Caledon's cultural heritage conservation policies. The MTO Parcel is identified an important open space feature in the Town of Orangeville's Official Plan because of its situation at the "main entrance" of the Town.

Municipal strategic plans chart the long-term vision for communities and identify the strategic actions for achieving the vision. UCCA serves nearby local communities as well as the broader region. The directions and recommendations of the Plan align with many of the goals and actions identified in the municipal strategic plans for the Region of Peel (2015–2035), the County of Dufferin (2015-2018), the Town of Caledon (2020) and the Town of Orangeville (2003).

A variety of other municipal reports and strategies were also consulted during the first phase of the management planning process, including the Dufferin County Growth Strategy (2010) The Dufferin County Active Transportation and Trails Master Plan (2010), The Town of Caledon Recreation and Parks Master Plan (2010) and the Trails Master Plan – Town of Orangeville (2008).

3.3. CVC STUDIES, STRATEGIES AND POLICIES

Guiding the planning and management of CVC's conservation areas system are key documents such as the Conservation Areas Strategy (section 1.1) and the Greenlands Securement Strategy (2004) which provide the framework that guides CVC's land acquisition, management and planning programs. The collection of policies and procedures contained within the Conservation Lands Management Manual (CVC, 2012), such as the Hazard Tree Policy and the General Trail Maintenance Policy guide the day to day and long-term management of Authority owned land and ensures the consistent application of management practices and philosophies. Internal guiding documents such as CVC's Strategic Plan, the Credit River Fisheries

3.0. Related Strategies, Policies and Legislation

Management Plan (2002) and the Credit River Watershed's Natural Heritage System (2015) form a foundation of broad goals, objectives and recommendations for the Credit River watershed that can be achieved, in part, through the sustainable and responsible management of CVC's conservation areas.

Ontario Regulation 160/06 - Development, Interference with Wetlands & Alterations to Shorelines & Watercourses, made under Section 28 of the Conservation Authorities Act, prevents or restricts development in areas where the control of flooding, erosion, dynamic beaches, pollution or the conservation land may be affected. CVC's Watershed Planning and Regulation Policies (2010) provide the parameters against which Ontario Regulation 160/06 is administered and guides all development within CVC conservation areas. The trail system and infrastructure projects detailed in this plan align with the Watershed Planning and Regulation policies for development within natural areas and natural hazards. The detailed design and implementation of these projects must also conform with these policies.

Several agreements specific to particular parcels exist for UCCA. The McIlwraith, Reid and Harbom parcels were purchased with assistance from the Ontario Heritage Trust's (OHT) Natural Spaces Land Acquisition and Stewardship Program (NSLASP). All lands acquired through NSLASP are subject to Heritage Conservation Easement Agreements that place restrictions on the property in perpetuity to ensure its wise stewardship. A conservation easement agreement is on the title of the Spears property, meaning that while the property is owned by the Spears family, CVC is responsible for its protection, responsible management and stewardship, thus it has been included as an essential component of UCCA and this Management Plan. Additionally, the Town of Orangeville has managed the MTO parcel as part of their park system since 1979 under a lease agreement.

The multiple, overlapping layers of internal, municipal and provincial policy provide a solid framework on which to structure the goals, recommendations and directions of the UCCA Management Plan.





4.0. CONSERVATION AREA INVENTORY AND ANALYSIS

Information regarding the natural, cultural and social attributes and values associated with UCCA was obtained through baseline studies, research, and data compiled and analyzed by CVC staff. This section is divided into seven broad categories:

- geology and hydrogeology
- terrestrial features and system
- fisheries and aquatic system
- historical and cultural context
- conservation area visitors
- infrastructure
- natural and social linkages

The Background Report for the UCCA Management Plan contains detailed analysis and discussion on the categories identified in this section.

4.1. GEOLOGY AND HYDROGEOLOGY

4.1.1. Physiography and Soils

UCCA is located within three distinctive physiographic regions; the Guelph Drumlin Field underlies the majority of the property, the Horseshoe Moraines are evident in the north and the Hillsburg Sandhills lie beneath the western portion of the McIlwraith parcel (Chapman and Putnam, 1984). Each region has different geological characteristics, with differing capacities to transmit water and provide habitat for vegetation and wildlife.

The Guelph Drumlin Field is a region of low, streamlined drumlins separated from one another by interconnected meltwater channels that create a rolling topography. The former floodplains of the Credit Meltwater Channel encouraged the long-term impoundment of water and created marshes and swamps throughout this region.

The Hillsburg Sandhills is characterized by large, rolling hills of coarse glacial sediments that deeply bury the bedrock.

The northernmost portion of the Tranmer parcel and the entire MTO parcel are located within the Horseshoe Moraines. This region is characterized by north-south trending ridges of sand and silt glacial deposits.

A candidate Earth Science ANSI envelopes the McIlwraith and Harbom parcels along with the Spears Easement. Earth Science ANSIs are defined by features that were created by geologic processes. This candidate ANSI, referred to as the Orangeville Moraine and Caledon Lakes ANSI, contains ice contact margins of the Orangeville Moraine, kettle lakes, and actively depositing marls. Ridges that may represent localized crevasse fillings (materials that once filled the cracks of glaciers) are also present. Kame moraine processes and three kettle holes can be observed within UCCA.

4.1.2. Groundwater

Two distinct aquifers underlie UCCA: a fine sand aquifer of moderate efficiency and a weathered bedrock aquifer of high efficiency. The latter is located in the highly productive Amabel Formation which provides water to several communities located above the Niagara Escarpment including the Town of Orangeville and the Village of Alton.

The hummocky, rolling land and the porous nature of the surficial geological material provides excellent potential for groundwater recharge throughout UCCA. The area is classified as a high recharge area by CVC and has an average recharge of more than 300mm/year.

Groundwater is important for ecological functions: it provides baseflow to streams, improves water quality and supports seepages with high diversity of plant communities and species. Within UCCA, groundwater flows into the Credit River at a very high rate, supporting coldwater fish habitat.

While groundwater quality has not been sampled specifically at UCCA, water testing conducted for CVC's nearby Alton Well confirmed a very high quality. The groundwater in UCCA, however, is likely of lower quality due to the presence of low-lying wetland areas.

4.2. TERRESTRIAL FEATURES AND SYSTEM

UCCA contains a distinctly diverse landscape with roughly one third of the property forested, one third covered by wetlands and one third containing cultural communities. Over 700 unique species have been reported at UCCA. The ecological significance of the area is recognized by local and provincial designations including an Environmentally Significant Area (ESA) and two

Provincially Significant Wetlands (PSW) (Map 3). The natural features and functions of UCCA's terrestrial and aquatic systems are connected to each other as well as to adjacent natural areas. This is demonstrated in both municipal and provincial plans as well as CVC's Natural Heritage System for the Credit River watershed.

4.2.1. Provincially Significant Areas

Two PSW complexes, the Orangeville Complex and the Credit River at Alton Complex exist within UCCA's boundaries.

The Orangeville PSW Complex spans 250 ha in size; it physically and functionally connects the Credit Valley and Nottawasaga watersheds. It is largely composed of marsh and provides flood attenuation services and shoreline erosion control; it also functions as habitat for waterfowl breeding and migration, and acts as spawning and nursery habitat for fish communities. Provincially significant species such as Great Egret (*Ardea alba*) and Black-crowned Night-heron (*Nycticorax nycticorax*) have been observed within this PSW.

The Credit River at Alton PSW Complex encompasses a 56 ha area and is characterized largely by swamp. The majority of the wetland is riverine, deriving a significant portion of flow through overbank flooding and thus plays an important role in flood attenuation. It also provides habitat for locally rare species, including Leatherleaf (*Chamaedaphne calyculata*) and Black Spruce (*Picea mariana*). Additionally, it provides locally significant spawning and nursery habitat for fish.

The candidate Orangeville Moraine and Caledon Lakes Earth Science ANSI discussed in section 4.1.1 is also considered a provincially significant feature.



Orangeville PSW Complex on the Tranmer Parcel



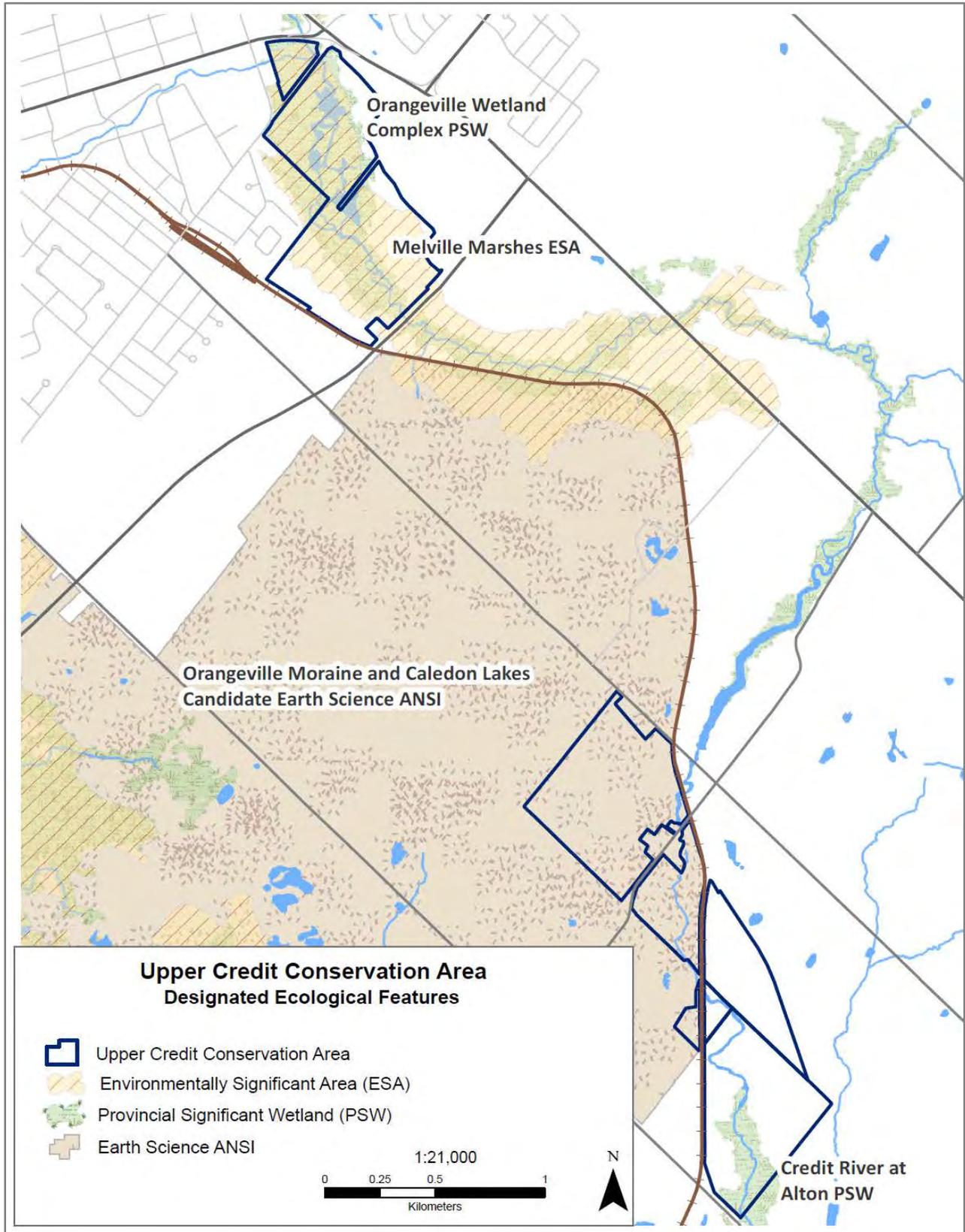
4.2.2. Regionally Significant Areas

UCCA contains portions of the Melville Marshes ESA. ESAs were delineated in the Credit River watershed in the mid-1980s based on rigorous criteria, including:

- distinctive or unusual landform
- hydrologic functions
- provincially and regionally rare, unusual or otherwise significant species
- diversity and amount of habitat and species
- representation of remnant ecosystems
- large size that affords habitat for species that require extensive blocks of habitat
- helps to maintain significant natural biological systems beyond its boundaries
- high aesthetic value

The Melville Marshes ESA is 127 ha in total and is located along the Credit River, receiving outflows from the Island Lake Reservoir. Though the marsh communities are dominated by Reed Canary Grass, the ESA also contains a regionally rare bog community and provides habitat for rare and uncommon species.

Further highlighting the regional significance of UCCA is its inclusion within a Centre for Biodiversity. A relatively new concept used by CVC to identify some of the largest, most biodiverse landscapes in the watershed, 11 Centres for Biodiversity have been identified. These Centres are generally the largest habitat patches in each of the watershed's physiographic regions and contain important aggregations of natural features. The MTO and Tranmer parcels lie within the Island Lake and Shoreline Centre for Biodiversity, which contains the headwaters of the Credit River and a documented 737 native species of flora and fauna.



Map 3 - UCCA: Designated Ecological Features

4.2.3. Corridor Function

Spanning from the Headwaters in the Town of Orangeville to Lake Ontario, the Credit River Valley functions as a major north-south natural corridor within the watershed and connects to major bioregional corridors such as the Niagara Escarpment, Oak Ridges Moraine and the Lake Ontario Shoreline. UCCA represents a significant land holding in the upper watershed and its natural landscape provides the space necessary for species movement and migration. The natural areas associated with UCCA also provide important linkages at a smaller scale. For example, the Orangeville Wetland Complex functionally and ecologically connects the Credit River and Nottawasaga River watersheds.

4.2.4. Vegetation Communities

UCCA represents a diverse landscape and is characterized by large, open fields of meadow, deciduous and coniferous forests, plantations, marsh and swamp. A combined total of 67 vegetation communities have been mapped at UCCA (Map 4 and Map 5).

Open Successional Habitat

For the most part, open meadows and savannah communities identified in UCCA were historically cleared for agriculture or other land uses, and have since been left to regenerate naturally. Early successional communities occupy approximately 10 percent of the Credit River watershed; in comparison, 41 percent of UCCA is composed of successional communities, making them a defining community type.

A number of prairie indicator species were recorded growing at UCCA, which may be indicative of a remnant native tallgrass prairie community.

Large areas of contiguous meadow habitat are becoming increasingly uncommon throughout southern Ontario; their decline is generally attributed to development and habitat fragmentation. Large meadows are important habitat for area sensitive grassland bird species, such as Bobolink (*Dolichonyx oryzivorus*) and Eastern Meadowlark (*Sturnella magna*) which have seen sharp population declines over the past few decades.



Grasshopper Sparrow at UCCA (Photo Credit: Alisa Samuelson)

Forests

Thirty-two percent of UCCA is covered with natural forests or plantations. The majority of the forested areas at UCCA are considered Significant Woodlands both locally and provincially based on size, function, sensitivity and the species composition associated with them.

Tree planting activities have occurred in the cultural communities on the Safari and Reid parcels since 2007. From 2007 to 2011 volunteers have helped plant approximately 14,000 trees, covering 9.3 ha. The majority of this area is currently classified as meadow.

Several coniferous plantation communities exist within UCCA, remnants of activities from previous landowners. Coniferous plantations are generally low in species richness and do not provide high ecological function; however, as plantations mature they tend to succeed to more natural forest conditions. This succession can be supported through forest management activities such as thinning and planting desired species.

A relatively large, mature deciduous forest community is located within the McIlwraith Parcel and relatively small mixed forest communities are present in both the northern and southern portions of UCCA.

A small, isolated Sugar Maple-Rock Elm forest exists in the middle of a meadow community on the Safari Parcel. This community is considered rare in the Credit River watershed. Rock Elm (*Ulmus thomasi*) is at the northern edge of its range in southern Ontario and most often grows on shallow soils over limestone ridges. The groundcover in this forest is dominated by a regionally rare species of sedge, Sprengel's Sedge (*Carex sprenglii*) which is also considered a limestone-loving species.



This White Pine located on the Safari Parcel was nominated as a Caledon Heritage Tree in 2012

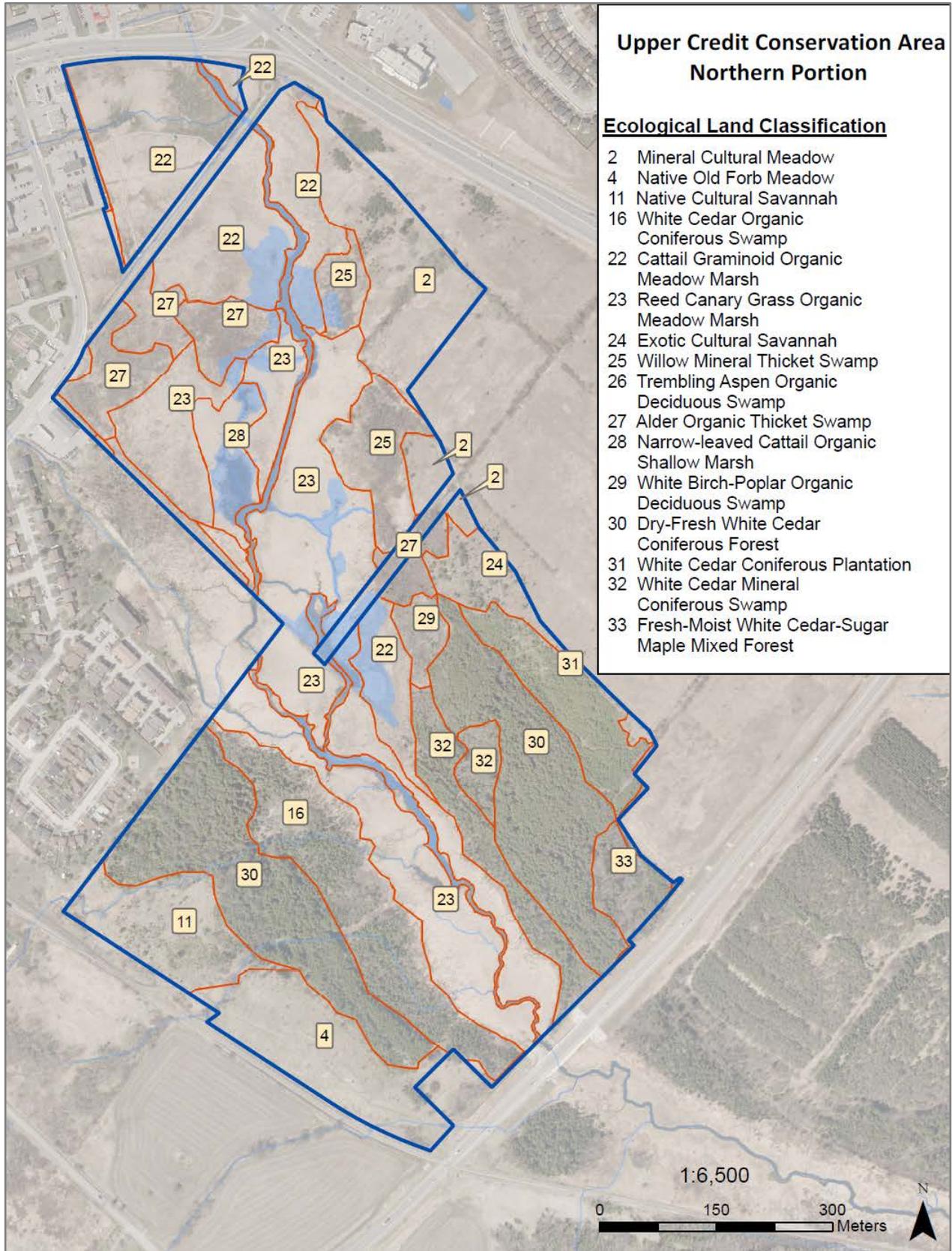
Wetlands

Wetlands comprise 27 percent of UCCA and are considered highly significant in a provincial, regional and local context, providing ecological value as well as hydrological services and social and economic benefits. Two PSW complexes, the Orangeville Complex and the Credit River at Alton Complex exist within UCCA's boundaries.

Riparian

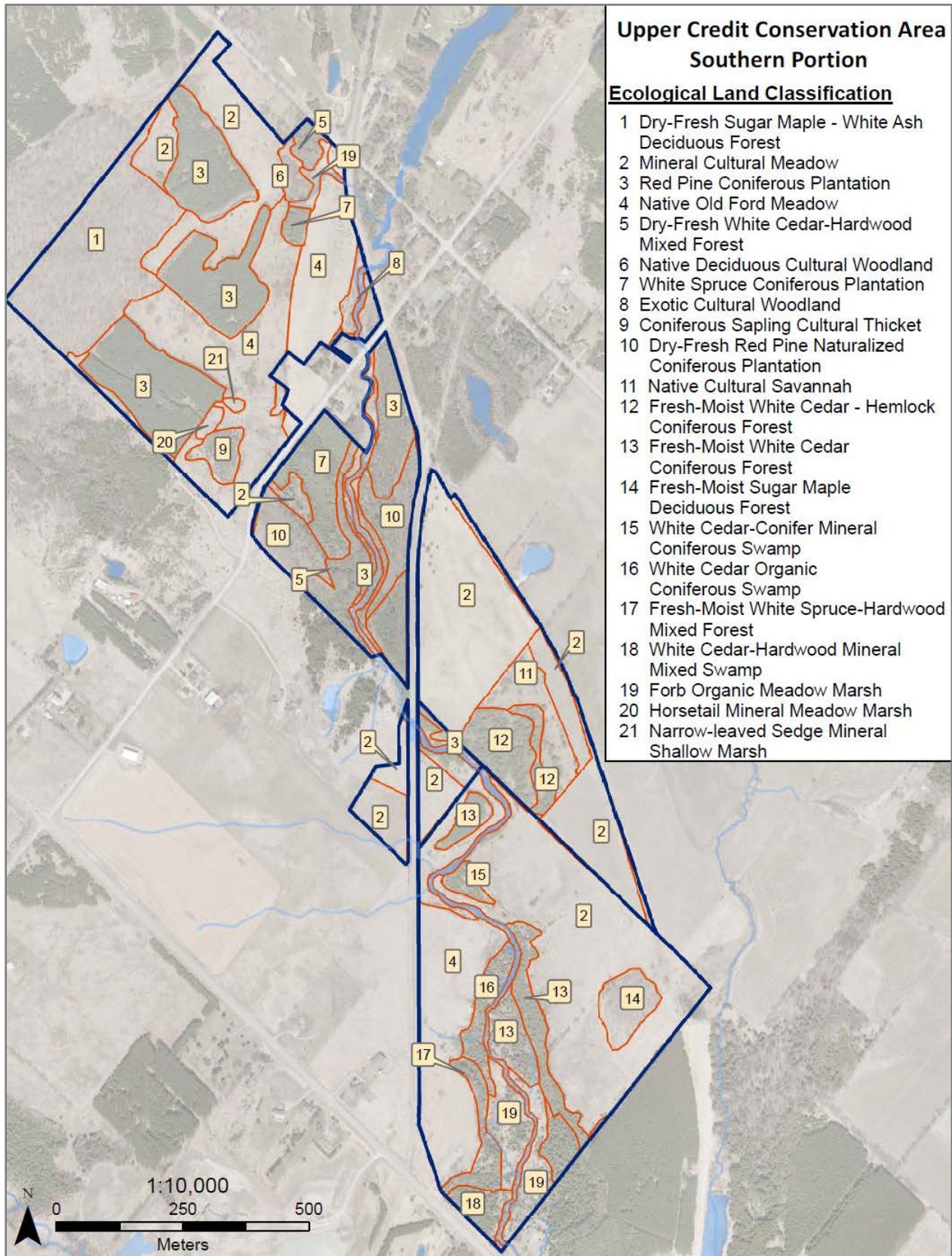
With over 3.5km of the main branch of the Credit River passing through UCCA, riparian areas provide essential buffers throughout the reach. Riparian systems provide habitat for species of plants that can tolerate saturated roots, reduce the risk of flooding and improve water quality by trapping and filtering sediment and contaminants.





Map 4 - UCCA (Northern Portion): Ecological Land Classification

4.0. Conservation Area Inventory and Analysis



Map 5 - UCCA (Southern Portion): Ecological Land Classification

4.2.5. Fauna

The diverse ecosystems and habitats present throughout UCCA are utilized by a wide range of species. Habitat features such as snags, cavity trees, seeps and vernal pools provide shelter and habitat for breeding, nesting and foraging wildlife. Several faunal species have been observed at UCCA, including 11 mammal, nine amphibian, five reptile and 94 bird species.

Within the context of the Plan, both provincial and regional guidelines were used for the identification of Significant Wildlife Habitat. Both confirmed and candidate examples of Significant Wildlife Habitat have been identified within UCCA (Table 1).

Table 1 - Significant Wildlife Habitat within UCCA

Significant Wildlife Habitat Criteria	Southern Portion	Northern Portion
Seasonal Concentration Areas		
Raptor Wintering Areas	Candidate	Candidate
Turtle Wintering Areas		Probable
Rare Vegetation Communities or Specialized Habitats for Wildlife		
Seeps and Springs	Confirmed (Mcllwraith)	
Amphibian Breeding Habitat (Non-forested Sites)	Candidate	Confirmed
Habitat for Area-sensitive/Forest interior breeding birds	Probable	Probable
Habitat for Open Country and Early Successional Breeding Bird Species	Confirmed (Safari, Reid), Candidate (Mcllwraith)	
Raptor Nesting Habitat (Raptors associated with woodland habitats)	Candidate	Candidate
Habitats for Species of Conservation Concern		
Species identified as Nationally Endangered or Threatened by COSEWIC which are not listed as Endangered or Threatened under Ontario's Endangered Species Act	Confirmed (Safari, Reid)	Confirmed
Species Identified as Special of Concern Based on Species at Risk in Ontario List that is Periodically Updated by OMNR	Confirmed	Confirmed
Species that are Listed as Rare (S1-S3) or Historical in Ontario Based on Records Kept by the Natural Heritage Information Centre	Confirmed	Confirmed
Species that are rare within the Region of Peel/Town of Caledon	Confirmed	Confirmed
Animal Movement Corridors		
Corridors and Linkages	Confirmed	Confirmed

4.2.6. Species at Risk

UCCA supports 11 species that have been evaluated by the Committee on the Status of Species at Risk in Ontario (COSSARO) as Species at Risk. Five wildlife species have a provincial status of Threatened and five have a status of Special Concern. Of these species, three were recently evaluated by the COSSARO and designated at risk in June 2014. One tree Species at Risk has been noted within UCCA, its status is currently endangered.

Due to their vulnerability, the presence of Species at Risk increases the importance of conserving the habitats in which they are found, which consequently helps to protect the overall biodiversity within a region.



Monarch Butterfly, one of the many Species at Risk found at UCCA

4.3. FISHERIES AND AQUATIC SYSTEM

4.3.1. Fish Habitat and Biodiversity

Drainage systems are often large and complex and incorporate multiple natural and manmade features and processes. The main channel of the Credit River is the primary watercourse which flows through UCCA and acts as the backbone that connects its various landscapes. Mill Creek and a few small, unclassified tributaries are also located in the northern portion of UCCA, and wetlands are found throughout (Map 6).

There are many variables that drive fish communities and at a landscape level, climate, surficial geology and soils are the main factors influencing fish habitat. The watercourse within UCCA is also influenced by several notable man-made features, including the Island Lake Reservoir and Dam, the Orangeville Waste Water Treatment Plant, and the Melville Dam and development in Orangeville.

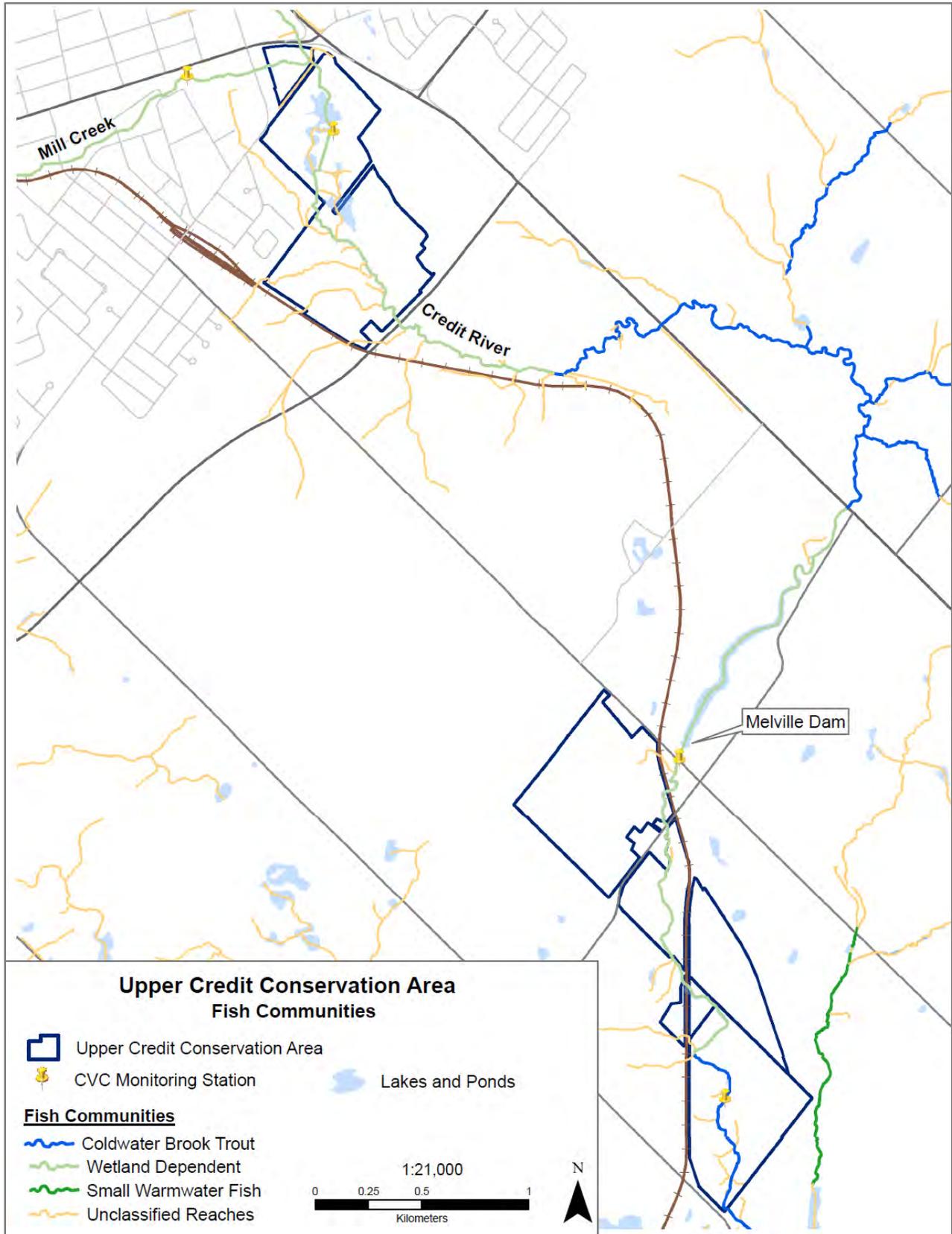
The majority of fish communities within UCCA are classified as wetland associated, though the reach of the Credit River that passes through the Safari Parcel at the southern end of UCCA is identified as a Brook Trout community. Though much of the existing fish community is not classified as a Brook Trout community, it is managed as such due to the presence of Brook



Brook Trout (Photo: Jon Clayton)

Trout (*Salvelinus fontinalis*) both upstream and downstream of UCCA.

Twenty-seven fish species have been identified within UCCA, including wetland associated species such as Iowa Darter (*Etheostoma exile*) and Blacknose Shiner (*Notropis heterolepis*), coldwater species such as Brook Trout and species introduced to the system from the Island Lake Reservoir, such as Northern Pike (*Esox lucius*) and Pumpkinseed (*Lepomis gibbosus*).



Map 6 – UCCA: Existing Fish Communities

Although coldwater habitats are generally lower in diversity and productivity, they are considered highly significant because they contain some of the most habitat-sensitive species within UCCA. The wetland associated communities provide additional biodiversity. The species list for UCCA is higher than historically recorded due to species movement downstream from the Island Lake Reservoir.

4.3.2. Fish Productivity

Fish productivity is monitored by CVC's Integrated Watershed Monitoring Program which has five sampling stations associated with UCCA; four on the Credit River and one on Mill Creek. Productivity is measured using an Index of Biodiversity which has been developed specifically for the Credit River (Morris, 1999). The Index is based on total biomass of fish caught, with weighting of some coldwater and coolwater species according to their sensitivity. Productivity is being tracked to discern trends over time:

- Of the two stations sampled directly within the study area (Downstream of the Waste Water Treatment Plant on the Tranmer Parcel and the Safari Parcel), the Credit River was rated as fair. While Brook Trout were not recorded during sampling on the Safari Parcel, they were observed just downstream of the station.
- The stations associated with the Island Lake Dam and the Melville Dam are both influenced by these structures. The station downstream from Island Lake was rated as fair, though the species diversity was attributed to escapees from the reservoir. The station downstream of Melville Dam has fluctuated from good to poor in recent years, indicating an overall decline in biomass.
- The sampling station located on Mill Creek, approximately 450m west of the MTO Parcel, has been rated as fair and is considered to be representative of Orangeville's urban aquatic system.

4.3.3. Recreational Fishery

The majority of fishing activity associated with UCCA occurs within the most accessible part of the property, the Safari Parcel. Historically the area was a popular site for recreational fishing and in the late 19th and early 20th centuries both the Melville Pond and the Credit River were famous for trout fishing. Creel surveys conducted in 1996 and 1997 classified the river reach throughout the McIlwraith and Spears parcels as experiencing low fishing intensity and the reach at the southern end of the Safari Parcel as experiencing medium fishing intensity.

UCCA is situated in Provincial Fisheries Management Zone 16 and is located between Old Baseline Rd and Highway 9; special regulations apply to this zone. Anglers fishing within UCCA must adhere to additional regulations relating to harvest limits and bait and tackle restrictions.

4.4. HISTORICAL AND CULTURAL CONTEXT

Human populations established in southern Ontario more than 10,000 years ago and while specific details regarding the early settlement and use of the UCCA lands is not known, broad summaries for the watershed exist. Archaeological sites throughout Caledon, and within the general vicinity of UCCA, indicate First Nations presence, possibly as far back as 10,000 years ago.

Since the mid nineteenth century, UCCA has been influenced by the development of several small villages, including Orangeville, Alton and Melville. The abundant natural resources and Credit River provided raw materials and power for the first mills in the area. In the latter half of the 1800s railways facilitated the movement of people and goods, spurring localized population growth and development.

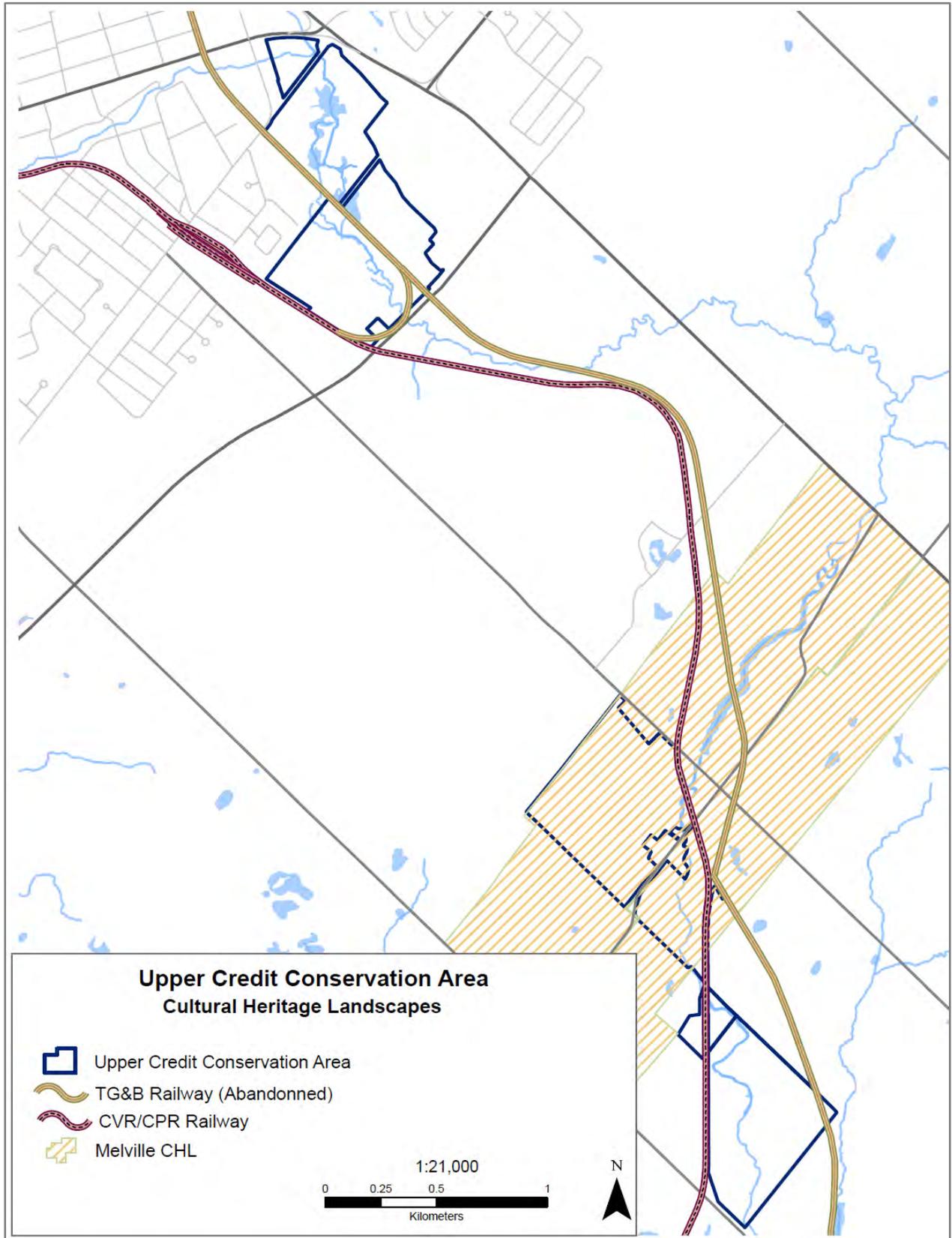
After a shift from direct water power to newer technologies and the closure of the Credit Valley Railway from Melville to Orangeville in 1884 and the Toronto, Grey and Bruce Railway in 1932, the area experienced an overall decline. While much of the infrastructure and features of the time no longer exist, the land use and development patterns of the nineteenth century directly influenced the existing landscape, natural heritage features and their function.

The Town of Caledon has identified Cultural Heritage Landscapes (CHL), landscape scale patterns and features that have been modified, influenced or given special meaning by people, within the Town. UCCA is associated with two CHLs (Melville and the Former Credit Valley Railway) and one potential CHL (Remaining Evidence of the Toronto, Grey and Bruce Railway) (Map 7). The historical context of the area played an influential role in how the larger surrounding landscape developed.

While no known archaeological sites have been registered within UCCA, the potential for locating cultural heritage resources, both pre-contact and EuroCanadian sites, within UCCA is considered high in areas that have not been disturbed.



The long defunct Toronto, Grey and Bruce Railway is now part of UCCA's Trail System



Map 7 – UCCA: Cultural Heritage Landscapes

4.5. CONSERVATION AREA VISITORS

Visitors to UCCA tend to have similar traits in how far they travel to visit, their behaviours and their leisure pursuits. The majority of visitors are from either Orangeville or Caledon and originate within 10 km of UCCA. While almost 75% of visitors have a canine companion with them during their visit, only 55 percent of visitors cited dog walking as their main reason for visiting; 25 percent and 12 percent respectively, stated that hiking and exercise were their primary focus. Regardless of their main purpose for visiting, the majority of visitors use the property on a regular basis, are walking with a dog, by themselves or with one other person and spend between thirty and sixty minutes per visit.

Since monitoring began, visitation at the main access has risen steadily from an estimated 13,000 in 2010 to 34,500 in 2015. UCCA is open year round and tends to have a fairly consistent visitation pattern, indicative of a visiting population that uses the conservation area on a consistent basis, as part of their regular routine. The busiest day of the week at UCCA tends to be Sunday and May and June tend to be the busiest months.

4.5.1. Recreation

The existing recreation activities at UCCA are largely a result of the current amenities on site. The relatively easy, short trail system and picturesque landscape make UCCA an ideal location for local use by hikers and dog walkers. In total, 13 recreational activities have been recorded by CVC's Lands Monitoring Program, five of which are considered unsanctioned: mountain biking, geocaching, horseback riding, hunting and the use of ATVs. In addition to hiking and dog walking, angling, photography and nature appreciation are common activities. Dog walking is considered an unsanctioned activity if certain regulations, such as leash requirements, are not adhered to.

The majority of recreational activities at UCCA are trail-based and as such trail management is both a major issue and opportunity. The accompanying Trail Plan contains detailed trail recommendations for UCCA, including the placement and design of trails, rationale for closing, re-routing and building trails and cost estimates.

4.5.2. Education and Interpretation

Educational and interpretive opportunities are largely self-guided at UCCA. The lack of onsite facilities does not make UCCA an ideal location for programming, although interpretive hikes and nature walks could be encouraged. Improving opportunities for self-directed interpretation and education is recommended.

4.6. INFRASTRUCTURE

Infrastructure within UCCA is largely related to current visitor needs and is thus concentrated in the areas most frequented by visitors. UCCA's infrastructure generally falls into one of two categories:

- *Infrastructure and assets managed and/or installed by CVC:* These features include kiosks, signage, two parking lots and trail improvements that were installed by CVC, or were acquired when a property was purchased.
- *Infrastructure and assets managed and installed by the Town of Orangeville:* This group of structures is reserved for the signs, decorative features, gazebo and boardwalks installed by the Town of Orangeville on the MTO Parcel for the purposes of park management. While these features are located on CVC property and are therefore assets of CVC, they are purchased, installed and managed by the Town of Orangeville.

4.6.1. Buildings

There are no buildings currently located within the boundaries of UCCA and water and hydro facilities have not been established.

4.6.2. Washrooms

Public washroom facilities at UCCA are limited to a single portable washroom unit at the main parking lot on the Safari Parcel.



4.6.3. Access and Parking

The main location for motorized site access to UCCA occurs off of Porterfield Road, where a parking lot installed in 2007 accommodates approximately 20 vehicles. A secondary parking lot located off of Broadway Street in Orangeville provides access to the MTO Parcel and has enough space for approximately six vehicles.

Roadside parking is also thought to occasionally occur on Highpoint Sideroad and County Road 109 by visitors accessing less popular portions of the property.

Pedestrian access occurs at an additional three sanctioned locations on the Tranmer Parcel and several unsanctioned locations throughout UCCA.

4.6.4. Information and Signage

Information and signage are minimal throughout UCCA. Aside from two directional kiosks at the main access locations and regulation signage at the sanctioned pedestrian accesses, there is an overall lack of signage throughout the property. The staging areas at UCCA need to be updated with current information.

4.6.4. Dams and Water Control Structures

Though the Credit River is impacted by dams and water control structures, there are no dams or related structures located within the conservation area.

4.7. NATURAL AND SOCIAL LINKAGES

UCCA is physically and functionally connected to natural and social landscapes at a variety of scales. At a regional level, linkages to natural corridors, such as the Credit River Valley, the Greenbelt Natural Heritage System and other landscape features promote ecosystem connectivity and ecological function. Nearby protected areas such as the Alton Grange, Island Lake Conservation Area and Charles Sauriol Conservation Area provide natural linkages as well as potential recreational connections, such as the route for the future Credit Valley Trail.

From a community development and political perspective, UCCA is situated within two upper-tier municipalities, providing CVC with a unique opportunity for trail development and recreational programming that can reach watershed residents from several communities. The development of a trail system that spans the property as well connects to external trails creates social linkages and provides benefits related to health and wellness, active transportation and tourism.

The backbone of UCCA, the Credit River, directly connects the property to the surrounding landscape and communities. While UCCA's wetlands serve to absorb pollutants and groundwater discharge cools the water of the Credit River as it passes through, upstream influences directly impact the ecological health of the river as well as UCCA. In turn, the lands and river downstream will be impacted by the activities that take place at UCCA. The inherent connective nature of river systems establish deep, complex relationships with the surrounding landscape and its inhabitants.

These natural and social corridors function at a provincial, regional, and local scale. Protecting their function is an important aspect of the Plan.





5.0. MANAGEMENT PLANNING CONTEXT

The research, studies and analysis conducted for the management planning process highlighted a number of opportunities and constraints related to realizing the objectives for UCCA: protection, appreciation and recreation. Sections 6.0 through 9.0 address these opportunities and constraints through policy and design recommendations.

From an environmental and ecological perspective, the unique, diverse landscape should be protected, enhanced and celebrated. Restoration and stewardship projects and directions will be implemented at various scales in order to ensure the continued and improved function of the site. Appreciation and recreation activities will take into account significant features through careful placement and design and by avoiding sensitive areas.

Existing natural and social linkages will be strengthened where they exist and developed where they do not.

Opportunities for land acquisition, trail development and community partnerships will be explored and pursued. Cultural heritage features and history will be interpreted and enhanced where possible.

The diversification and enhancement of the visitor experience will be achieved through increased appreciation and recreation opportunities. The interpretation of natural and cultural features and functions will be facilitated through signage and programming. Additional amenities will encourage activities suitable for a range of ages and abilities and allow visitors to spend more time on site.

The recommendations for each specific discipline are reflected in the directions and recommendations of the Plan. Both broad recommendations, which guide future management and programming, and specific projects are included. Specific projects are discussed in sections 7.0, 8.0 and 9.0 while the Trail Plan, Signage Plan and Major Infrastructure Plan contain information regarding their location, cost and additional parameters for implementation.



6.0. CLASSIFICATION, ZONING, GOAL AND OBJECTIVES

The abundance and diversity of natural heritage features and functions within UCCA illustrates the local and regional significance of the property. It is recognized that while it is important to protect these ecologically sensitive areas, the same areas also hold intrinsic values to visitors and provide opportunities for appreciation and recreation. CVC's objectives of protection, appreciation and recreation can all be achieved through appropriate management. Recreational opportunities will be directed to less sensitive environments that can sustain them, while protection will be the highest priority for features and functions that are particularly sensitive or significant.

6.1. CLASSIFICATION

All conservation areas within CVC's jurisdiction fall into one of five classes: Nature Reserve, Natural Environment, Recreation, Resource Management, or Access (Appendix A). Conservation area classification supports CVC's goal of managing a diverse system of conservation areas by focusing programs and development efforts within appropriate areas, thus allowing each property to fulfil its role in the system.

Through CVC's planning process, Upper Credit has been classified as a Natural Environment Conservation Area. The Natural Environment classification aims to combine protection of representative natural heritage features and functions with high quality passive and appropriate active recreation opportunities.

6.2. ZONING

On a finer scale conservation areas are zoned in order to focus protection, programming and development efforts to the appropriate area.

Each zone within UCCA represents an area that has distinct management needs based on differences in:

- protection of natural and cultural heritage features and values
- permitted uses and allowance for sustainable development
- visitor management needs and recreational activities

CVC's zoning framework was recently re-developed to better reflect current challenges and opportunities associated with conservation area planning (Map 8 and Map 9). Each zone has specific permissible uses and will be managed according to the objectives of the conservation area, CVC policy, and applicable municipal and provincial policy. Zone boundaries have not been verified on the ground. Minor changes to zone boundaries resulting from site level planning will not require amendments to this Plan.

CVC has defined five management zones: Nature Reserve, Natural Heritage Appreciation, Cultural Heritage, Special Management and Development (Appendix A). The Development Zone has further been broken down into three sub-zones; access, operations and recreation, to better reflect the specific attributes and stipulations associated with each.

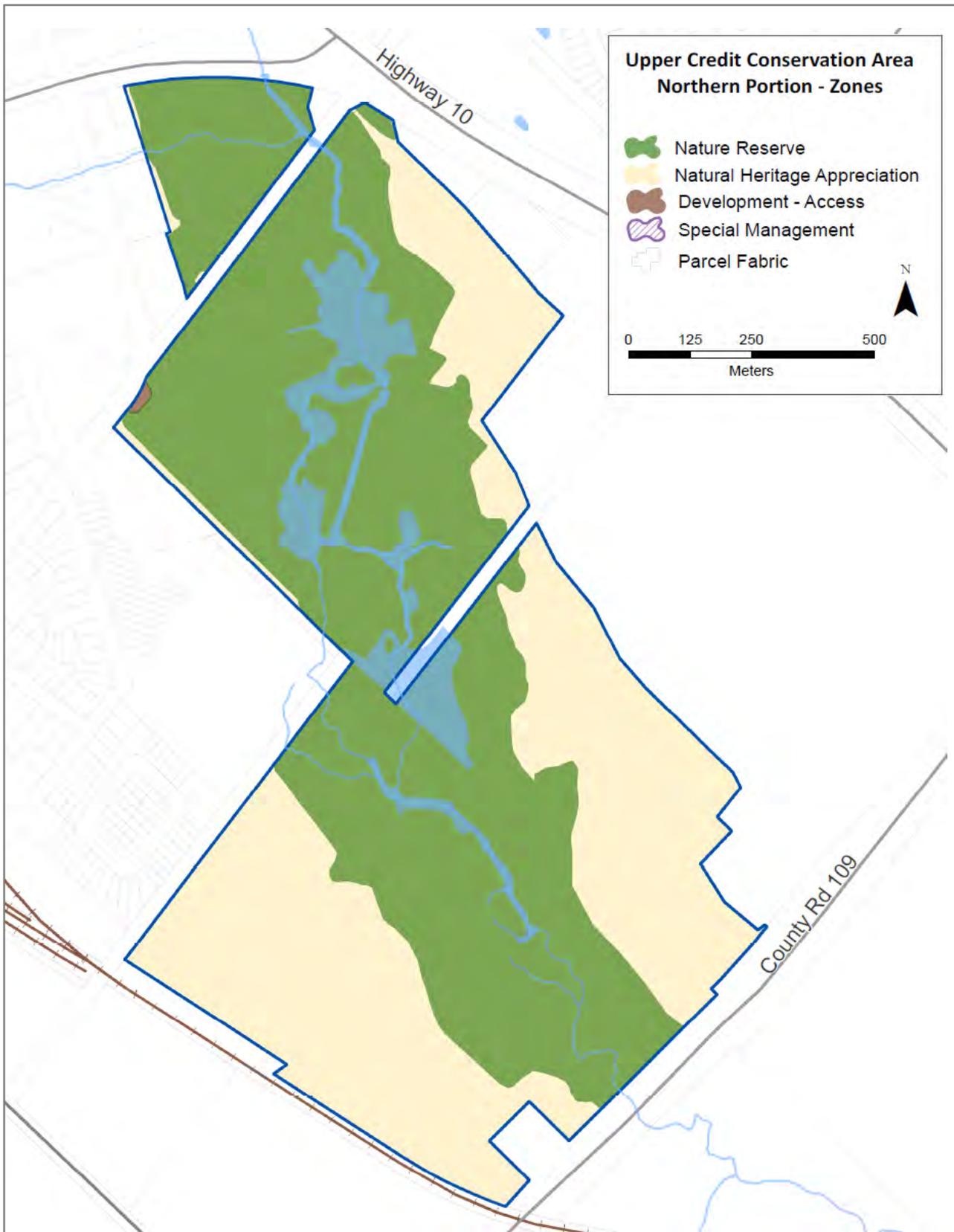
Special Management Zones identify areas that require specific or long-term management. Three (3) Special Management Zones have been identified at UCCA: Grassland Restoration Project (SMZ-1) the Spears Conservation Easement (SMZ-2), and Forest Management Areas (SMZ-3).

Table 2 contains a summary of UCCA's zoning framework; Appendix A contains additional information on zone definitions, attributes and regulations.

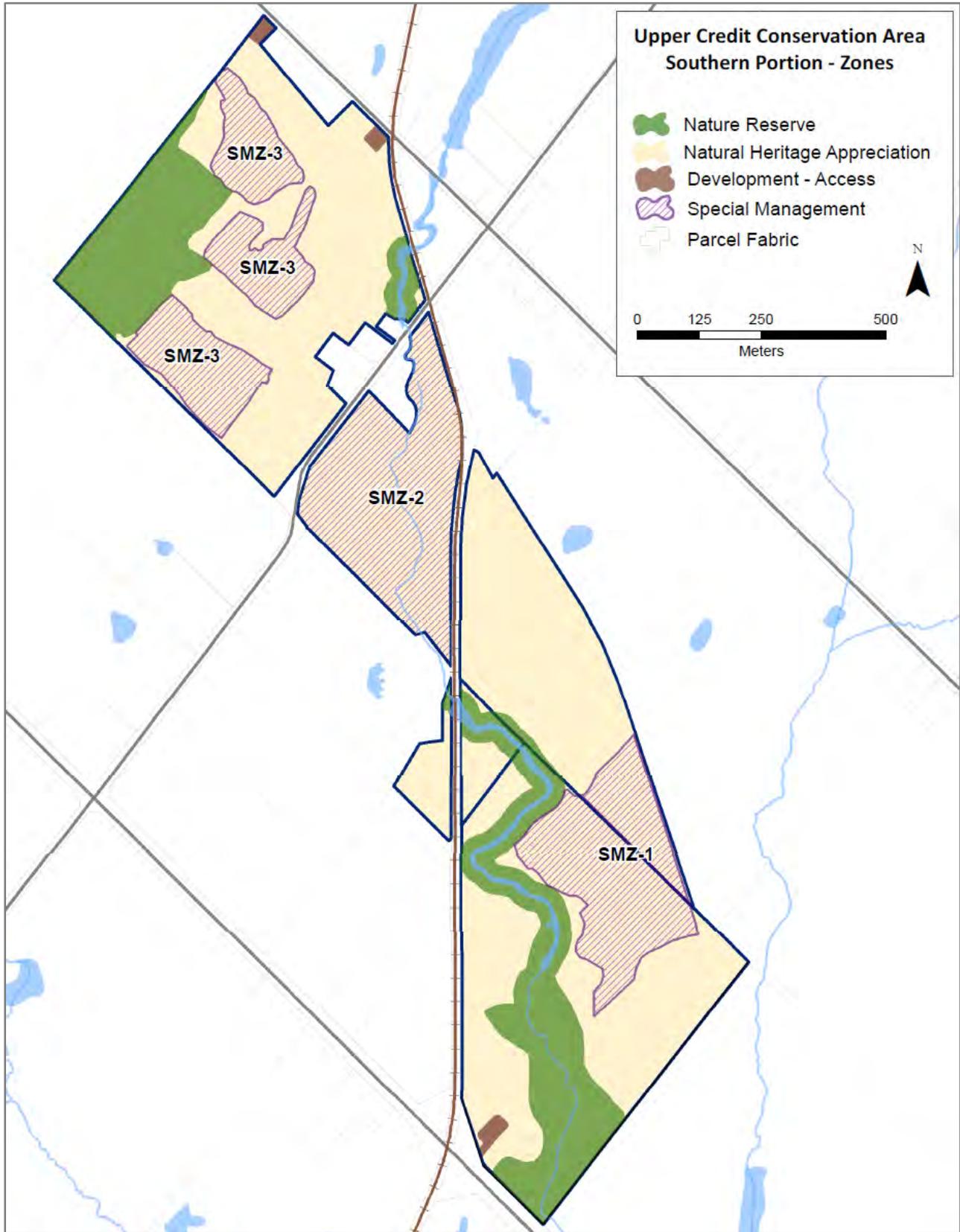
Table 2 – UCCA: Summary of Zoning Framework

Zone Type	Total Size (Acres -%)	Function	Summary of Management Priorities
Nature Reserve	222.6 (56%)	Contains significant natural features that contribute to maintaining a healthy ecosystem	Management activities may include protection and restoration based activities. Passive, trail based recreation and development may be permitted.
Natural Heritage Appreciation	102 (26%)	Contains natural landscapes and representative natural features that provide appropriate locations for limited recreational opportunities	Management activities may include protection and restoration based activities. Passive, trail based recreation and limited active recreation opportunities are permitted. These include multi-use trails and picnicking in areas that are identified for this activity. Development related to recreation and management activities, such as washrooms, is permitted in identified areas.
Cultural Heritage	Generally contains significant cultural heritage features and landscapes that require management. This zone is not included within UCCA's zoning framework.		
Special Management	73.4 (18%)	Includes projects that require their own specific stipulations and policies	SMZ-1 (Grassland Restoration): Management activities are related to grassland restoration and may include the application of pesticides, prescribed burns and the collection and storage of seeds. <i>Natural Heritage Appreciation is the underlying zone. Development may be required for restoration purposes (e.g. small building); trails will not be permitted.</i>
			SMZ-2 (Spears Conservation Easement): Management activities are those described under NHA, but will accommodate the covenants of the Spears Conservation Easement Agreement. <i>Natural Heritage Appreciation is the underlying zone. Activities as per the Spears Conservation Easement Agreement are permitted.</i>
			SMZ-3 (Forest Management Activities): Management activities are related to forestry practices and may include tree removal and the development of forestry roads and ancillary features. Forestry prescriptions and activities will be outlined in a forthcoming Managed Forest Plan. <i>Natural Heritage Appreciation is the underlying zone. Activities related to forestry management, and possibly trail development, may be permitted.</i>
Development - Access	1.2 (.3%)	Areas designated to provide access, orientation facilities	Infrastructure development is concentrated in the development zone. At UCCA, this generally includes parking areas, driveways, washrooms and ancillary facilities.
Development – Recreation, Operations	Generally includes less ecologically significant areas designated to contain recreational or operational facilities. Activities warranting these zones (e.g. operational facilities, splash pad, etc.) are not included within the UCCA Management Plan.		

6.0. Classification, Zoning, Goal and Objectives



Map 8 - UCCA (Northern Portion): Zones



Map 9 - UCCA (Southern Portion): Zones

6.3. VISION

To connect and protect the natural landscape of the upper Credit River through land securement and restoration initiatives and to enrich the communities and people of the watershed by providing opportunities to appreciate UCCA's diverse ecosystems, scenic vistas and unique rural character through a publicly accessible and continuous trail system.

6.4. GOAL

To protect and enhance UCCA's diverse and significant natural heritage features and functions while providing opportunities for meaningful, environmentally sustainable appreciation and recreational opportunities.

6.5. OBJECTIVES

The goal statement is reinforced by three supporting objectives for managing UCCA:

6.5.1. Protection

To protect UCCA's ecological diversity and significant natural heritage features and their functions through appropriate park zoning, research, monitoring, resource management, enhancement, and restoration activities.

6.5.2. Appreciation

To provide unstructured opportunities for appreciating UCCA's natural and cultural heritage features, their functions and the restoration and resource management programs in place to enhance them.

6.5.3. Recreation

To provide visitors with enhanced opportunities for passive and appropriate active recreational activities through minimal infrastructure development while maintaining the integrity of natural features and functions.



6.6. THEME

A theme statement has been developed for UCCA to help shape its identity within CVC's Core 10 Conservation Areas System. The theme will aid in focusing future programming and educational materials. The theme statement for Upper Credit Conservation Area is:

Connecting the natural spaces, people and communities of the upper Credit River.

The meaning behind the theme statement is derived from the following logic:

The Credit River meanders through UCCA, functionally connecting the different parcels that compose the property. Much like the river, remnants of historic rail lines also navigate the landscape, acting as a reminder of the area's lively past. UCCA fills the simple yet complex role of connecting people to nature by providing opportunities for appreciation and passive recreation. Situated within four municipalities, UCCA also physically and socially connects communities by providing a variety of intrinsic values and equitable opportunities for enjoyment. These connections will only be amplified with the development of a unified trail system.



Aerial Photography of Reid and Harbom parcels (Photo Credit: Carl Hiebert)



7.0. RESOURCE PROTECTION AND STEWARDSHIP DIRECTIONS

As the objectives for Upper Credit Conservation Area illustrate, protection of significant natural heritage features and functions is a priority. The protection objective for UCCA not only identifies the preservation of key features and functions, but also identifies opportunities for the restoration of specific habitats. The implementation of programs and projects that promote access to high quality appreciation and recreation opportunities will aim to enhance public commitment and participation in protecting the natural landscape.

Resource protection and stewardship activities within the Complex will adhere to the following principles:

- All protection and stewardship activities will be a coordinated effort between all disciplines, including aquatic, terrestrial, forestry,

fisheries, geology, hydrogeology, and conservation area operations

- Activities will be undertaken using approaches that result in minimal conflict and that help achieve the overall goals and objectives for UCCA
- Natural features and functions will be maintained, enhanced or restored while recognizing linkages between and within terrestrial and aquatic ecosystems and social systems
- Invasive, non-native species that threaten the function of natural systems and/or the components of that system will be controlled where appropriate
- The quality and quantity of appreciation and recreation opportunities will be improved through selective management of species and habitats while maintaining or enhancing existing natural heritage features and functions

The directions described in the following sections will provide the framework for completion of site specific planning. Map 10 indicates the approximate locations of ongoing and future restoration and suggested stewardship projects for the southern portion of UCCA. Specific restoration projects have not been identified for the northern portion; instead, habitat enhancement projects, such as installing owl boxes and turtle nesting sites, are recommended.



The Eastern Snapping Turtle is one of several Species at Risk found at UCCA

7.0. Resource Protection and Stewardship Directions



Map 10 - UCCA (Southern Portion): Restoration and Stewardship Projects

7.1. GEOLOGY AND HYDRGEOLOGY

UCCA has diverse and significant physiographic, geologic and hydrogeologic features. Significant recharge and discharge areas will be protected for the long-term. Unique and interesting features, such as the Orangeville Moraine and Caledon Lakes candidate Earth Science ANSI, will provide opportunities for interpretation through signage and programming.

7.2. TERRESTRIAL AND AQUATIC ECOSYSTEMS

There are a number of issues and opportunities related to the features described in Sections 4.2 and 4.3, including:

- protection and enhancement of the diverse landscapes of UCCA, including its open successional, wetland and forest habitats
- protect and enhance the Credit River and its aquatic and riparian habitat
- protection of significant species, natural features and functions
- promoting the ecological linkages between all portions of UCCA
- implementing restoration and enhancement priorities
- maintaining soil quality and reducing erosion, especially where appreciation and recreation opportunities are planned
- management of non-native invasive species within the Plan area

The following sections describe approaches to be implemented to ensure that management actions maintain and/or enhance ecosystem processes.

7.2.1. General

Provincial and regionally significant areas and features will be protected and restored where possible.

Large habitat patches and natural corridors will be protected and enhanced. The growth and development of natural corridors connected to UCCA will also be encouraged.

A variety of natural succession processes are present within UCCA, including the regeneration of meadow and forest habitats and natural cavity formation as a result of tree mortality. Where possible, successional processes will be allowed to proceed undisturbed.

Small habitat enhancement projects, such as bird boxes, snake hibernacula or turtle nesting habitat may be appropriate in some areas. Land Planning staff are to be consulted before the installation of any habitat enhancement features.

7.2.2. Open Successional Habitat

With the exception of areas specifically identified for infill planting (Map 10), existing successional communities will be permitted to naturally regenerate. Successional communities may be managed to maintain their existing condition if a rare species dependent on successional habitats is identified.

The Grassland Restoration project located in Special Management Zone 1 aims to provide habitat for grassland bird species. The maintenance regime for this area may require the use of pesticides and periodic prescribed burns. Prescribed burns will follow the Prescribed Burn Manual (Ministry of Natural Resources, 2014) and follow CVC protocol in regards to public safety and notification. This area will be managed to support breeding habitat for grassland birds.



Grassland Restoration Project at UCCA

7.2.3. Forests and Forestry

Since 2007, tree planting activities have occurred throughout the Safari and Reid parcels. These plantings will be left to progress naturally and in areas where they are not successful, cultural communities will be allowed to succeed. Map 10 illustrates where infill planting is permitted and encouraged to promote connected forest communities and create vegetated buffers.



Red Pine Plantation on the Spears Easement

All new forestry activities, including the development of a Managed Forest Plan and any tree planting activities, require the approval of CVC staff.

Three plantations on the McIlwraith Parcel will be registered with the Managed Forest Tax Incentive Program (MFTIP) and a Managed Forest Plan will be developed and registered. The Managed Forest Plan will describe the management goals and objectives as well as prescriptions for the plantations, totalling 9.37 ha.

Management of these plantations will be focused on improving forest health, increasing biodiversity and supporting overall forest function. The Managed Forest Plan will contain a Trail Plan outlining forest access routes within the McIlwraith Parcel.

Forestry practices, including the management of risk trees, will continue to be guided by CVC's Conservation Lands Management Manual and other applicable protocols, such as the management of invasive species, such as Emerald Ash Borer.

7.2.4. Wetland Management

The northern portion of UCCA is largely situated within the Orangeville Wetland Complex, a PSW strongly influenced by the outflows of the Island Lake Reservoir and the Town of Orangeville's Waste Water Treatment Plant. These outflows alter natural fluctuations, water quality and the overall function of the PSW. While the Plan does not contain specific recommendations related to restoring the function of this wetland, research and exploratory investigations, especially related to the restoration of the natural flow regime, are encouraged in order to develop a list of restoration opportunities in time for the Management Plan's ten-year review.

The reach of the Credit River that traverses through the Credit River at Alton PSW located in the southern portion of UCCA currently supports a Brook Trout community. Specific recommendations for this PSW have not been formulated and therefore relate to the overall management of the coldwater community and natural system within the property.

7.2.5. Significant Wildlife Habitat

Significant Wildlife Habitat will be protected and projects to enhance corridor functions will be encouraged. Management will only be permitted when actions will help achieve goals and objectives of the conservation area.

Recreation activities, resource management and infrastructure development will avoid the most ecologically sensitive areas.

7.2.6. Species at Risk

Where possible, Provincial Species at Risk Recovery Plans will be followed and implemented.

7.2.7. Invasive Species Control

Three key actions have been identified in order to manage non-native invasive species present at UCCA:

- develop an Invasive Species Management Plan for UCCA
- implement invasive species management based on CVC's Invasive Species Strategy and Conservation Lands Management Manual policies
- incorporate appropriate messages about invasive species into education and interpretive signage

While CVC regards the ecological reconnaissance work conducted to inform the Upper Credit Conservation Area Background Report as thorough and comprehensive, additional site specific work will be necessary in order to implement invasive species management.

7.2.8. Fisheries Management

Management of fisheries resources will focus on habitat protection and restoration with an emphasis on maintaining, expanding and improving the coldwater fishery. CVC's management activities will be based on the principle that a healthy fishery is the result of a healthy ecosystem.

Opportunities for recreational fishing will continue to exist throughout the Credit River and Ontario fishing regulations will continue to apply to this reach of the Credit River.

Monitoring of biomass, spawning areas, and other sensitive aquatic features will continue as part of CVC's Integrated Watershed Monitoring Program or as directed by the Credit River Fisheries Management Plan.

7.2.9. Riparian and Instream Habitat

The upper Credit River has been identified as an important resource from an ecological, social and economic perspective and its health and integrity is critical for the entire watershed. Opportunities for restoration have been identified for both UCCA and surrounding properties and are detailed in the Credit River Fisheries Management Plan, the Upper Credit River Rehabilitation Initiative and the Upper Credit Conservation Area Fluvial Geomorphic Assessment and Restoration Concepts.

Current restoration activities focus on instream and riparian activities on the Safari parcel. Restoration activities have been ongoing for the past several years, and will continue as scheduled.



2009



2011



2014

Restoration of the Credit River on the Safari Parcel

7.3. CULTURAL RESOURCES

While UCCA is influenced by no less than three Cultural Heritage Landscapes (Town of Caledon, 2009), the property does not contain features that warrant the specific management policies described in a Cultural Heritage Zone (Appendix A).

Opportunities to conserve, interpret and where possible enhance cultural heritage features and landscapes will be pursued. This may be achieved through the installation of interpretive signage (see UCCA Signage Plan), and by seeking out partnerships with organizations that have mandates for cultural heritage protection or interpretation, such as historical societies.



Approximate Location of UCCA on the 1859 Tremaine Map

7.4. SCENIC RESOURCES

UCCA contains a diversity of viewsapes, including the Credit River, rolling topography, forested communities and wetlands. Public access to these viewsapes will be provided through the trail system and associated infrastructure. Sustainable design techniques and other measures will be implemented to ensure that the goals and objectives of UCCA are met and the integrity of the natural environment is maintained.

7.5. LAND SECUREMENT AND DISPOSITION

Priority properties for securement have been identified through CVC's Greenlands Securement Strategy. Priority greenlands will be secured in accordance with CVC's Land Securement and Disposition Policies on a willing seller-willing buyer basis. A full set of securement options (e.g. fee-simple; easement; donation) will be explored for each potential acquisition.

Land disposition will only occur where there is a net environmental gain that helps achieve the goals and objectives of the Plan.





8.0. RECREATION, EDUCATION AND INFRASTRUCTURE DEVELOPMENT DIRECTIONS

The recreation directions of this Plan are designed to achieve the objective of protection while enhancing existing appreciation and recreation opportunities. Activities will be located in appropriate zones based on site planning and staff consultation. The directions in this section also aim to support the development of consistent, inclusive visitor experiences by focusing on improving, creating or deterring specific activities or opportunities. The recreation directions developed for UCCA aim to increase opportunities for interpretation, maintain existing trails, develop trail linkages and create facilities and ancillary features that promote accessibility and enable social and group activities for all ages and skill levels.

8.1. PERMITTED RECREATIONAL USES

Delineating management zones within a conservation area enables managers to more effectively manage and protect an area's natural, recreational, and cultural resources by recognizing ideal locations for specific programs and activities. As such, CVC has developed a matrix of permissible recreational uses by management zone specific to UCCA (Appendix B).

Each recreational activity, whether pre-existing or proposed, will be evaluated on a number of criteria including:

- environmental impacts (real and potential)
- social impacts (real and potential)
- infrastructure needs
- ability to manage (current and future)
- activity demand (based on market analysis)
- cost-benefit analysis (including forgoing action on other priorities)
- liabilities and hazards
- appropriateness (does the activity fit within the vision for UCCA; where else could the activity be offered)

Additional detail on this evaluation process can be found in CVC's Public Use and Access policies in the Conservation Lands Management Manual. Recreation opportunities will be allocated to management zones based on the type of recreation proposed (passive or active). Definitions for these activities can be found in Appendix D. Enforcement of unsanctioned activities will be undertaken as per CVC's Enforcement Program.

8.1.1. Motorized Use

Motorized use of any kind is not permitted within UCCA, except where necessary by CVC staff to facilitate management and maintenance activities. Additional signage and barriers may be installed to prevent and discourage this activity.

8.1.2. Cycling and Mountain Biking

Mountain biking is a prohibited activity in all CVC conservation areas. However, CVC will permit cycling on some sections of the future multi-use trail system proposed for UCCA (see Trail Plan for UCCA). Revisions to include cycling on specific sections of trail will not require a change to the Plan. CVC will continue to assess its ability to offer mountain biking at appropriate conservation areas within the watershed.

8.1.3. Equestrian Uses

Equestrian use is a prohibited activity at all CVC conservation areas with one exception, the Elora-Cataract Trailway. Additional signage and barriers may be installed to prevent and discourage this activity.



The Milksnake, a Species at Risk, is one of four species of snake found at UCCA

8.1.4. Hunting/Trapping

Hunting and trapping as a recreational activity is prohibited in all CVC conservation areas. In circumstances where there is a potential for damage to person or property to occur or there is a science-based justification for the activity, CVC may consider requests as per CVC's Hunting and Trapping Policy.

8.1.5. Camping

Camping is not permitted at UCCA.

8.1.6. Canoeing/Boating

As a crown resource, canoeing is technically permitted on the Credit River; however, the reach that passes through UCCA is not well-suited to this activity. Canoe access will not be offered at UCCA. Motorized boat use is not feasible and will not be permitted.

8.1.7. Fishing

The rules and regulations related to fishing within UCCA are detailed in the Ontario Fishing Regulations. Rules and regulations will be posted where appropriate. Formal river access is not currently offered at UCCA, though as use increases, identifying a special access for this activity may be preferable. Revisiting the topic of a formal access for anglers is a recommendation for the ten-year review of the Management Plan.

8.1.8. Geocaching

Geocaching is not permitted at UCCA.

8.1.9. Special Events

Special events are not generally held at UCCA due to the lack of essential infrastructure such as sufficient parking, washroom facilities, electricity and water. The development of a signature event, one that could be promoted and designed specifically for UCCA, is recommended.

8.1.10. Research

Research is permitted in all conservation area classes and zone types, provided that a CVC permit is obtained and that the research assists CVC in achieving the goals and objectives for the conservation area. Permits are issued through the Lands Department Permitting Process outlined in the Conservation Lands Management Manual.

8.1.11. Dog Walking

Dogs are permitted within UCCA provided they are on a leash 2m in length or less and they are picked up after. This direction is consistent with section 28 of the Conservation Authorities Act.

Opportunities for providing an off-leash area, as well as an off-leash trail were requested during public consultation and explored during the management planning process. Several factors contributed to CVC's decision to not permit dogs off-leash at UCCA, including:

- vulnerability of wildlife, including Species at Risk and ground nesting birds
- safety of visitors, staff and other dogs
- transmission of invasive species (which is accentuated by dogs travelling off trail)
- lack of staff onsite to manage this activity

While off-leash dogs are not permitted at UCCA, CVC will encourage its partner agencies to offer this activity and explore opportunities to permit off-leash dogs at nearby conservation areas in the future.

8.1.12. Trail System

The development, connection and enhancement of UCCA's trail system will provide a multitude of benefits to both trail users and the local community and will be a significant component of the Credit Valley Trail. Trails provide opportunities for the interpretation and education of natural and cultural features within the landscape. They promote holistic health and wellness by providing facilities for outdoor physical activity and connections to the natural environment.

The careful placement of trails within a natural area controls public access and encourages support for conservation while protecting sensitive features. Trail development and enhancement is a key component of the UCCA Management Plan.

The Trail Plan that accompanies the Plan itemizes each trail project and guides the development of trails at UCCA. This document identifies:

- objectives for the management and development of trails at UCCA
- the rationale and approximate location of new trails
- trail type (single use, multi-use, accessible)
- trail closures and re-routes
- estimated implementation costs and priorities

Credit Valley Trail

The Credit Valley Trail will one day stretch the length of the Credit River, from the headwaters in Orangeville to the mouth in Port Credit. It will function as a continuous pedestrian corridor and connect and highlight the significant natural and cultural resources of the watershed.

Still in the planning phase, CVC staff and its partners are currently in the process of preparing a Master Plan for the Credit Valley Trail.

Trails will be continued to be maintained according to CVC's Trail Maintenance Policy, found in the Conservation Lands Management Manual.

8.1.13. Trail Naming

Trail names have been developed as per CVC's Asset and Event Naming Policy and correspond with the natural, social and cultural features and history of the site. The sections of trail identified as part of the Credit Valley Trail may have an additional name as part of UCCA's internal trail system. In these instances, the trail section will be identified as components of both trail systems (Appendix D).

8.2. INFRASTRUCTURE DEVELOPMENT DIRECTIONS



Walking the Trail on the Spears Easement

With the exception of the bridge on the Safari Parcel, all of the major infrastructure at UCCA has been installed by CVC since its acquisition. As such, most of the infrastructure is less than a decade old and considered to be in fair to excellent condition. To realize the goals and objectives for UCCA, however, upgraded and new infrastructure will be necessary.

The development of UCCA's trail system will require new material for trail construction as well as related infrastructure, such as bridges, boardwalks, rest areas and signage.

Structures designed to improve or add value to the visitor experience are also required. This includes a covered pavilion and improved washroom facilities.

Infrastructure required to facilitate or improve conservation area operations includes staff-only accesses and storage areas as well as fencing in some areas.

Continuous care of existing infrastructure, such as the parking lots, is required. A schedule shall be developed to ensure maintenance is budgeted for and occurs on a regular basis. The central direction of all development within UCCA is the demonstration of minimal, sustainable structures that blend into the landscape.

Maps 11 and 12 illustrate the future vision for UCCA. Trail system, signage and infrastructure requirements and details are outlined in the Trail Plan, Signage Plan and Major Infrastructure Plan, respectively.



Map 11 - UCCA (Northern Portion): Recreation Infrastructure Plan

8.0. Recreation, Education and Infrastructure Development Directions



Map 12 - UCCA (Southern Portion): Recreation Infrastructure Plan

8.2.1. Site Access

While the access points are considered adequate given current use levels, two new access locations will be developed to facilitate visitor and staff access to the McIlwraith Parcel. A public parking lot will be developed on the lower northeast side of the McIlwraith Parcel and a maintenance access will be constructed at the northern corner.

CVC will continue to monitor site access conditions as use levels change, through the Lands Monitoring Program. Should increased use levels justify improvement to existing, or development of new access points, alterations will only be implemented as UCCA's carrying capacity and environmental conditions allow.

Unsanctioned access points will be closed and monitored for future violations or formalized.

8.2.2. Signage

While existing signage is in generally good condition, informational, wayfinding and interpretive signage is lacking throughout UCCA. The Signage Plan for UCCA:

- describes the rationale, need and purpose for signage
- identifies the number, type and location of signs to be installed throughout UCCA
- provides guidance regarding themes and topics for interpretive signage
- provides estimated costs for implementation and identifies priorities

Additional signage related to the Credit Valley Trail may be installed when trail development is initiated.



8.2.3. Staging Areas

Primary and secondary access locations have been identified in the Trail Plan and appropriate signage, pursuant to CVC's draft Signage Policy, has been recommended for these sites.

Self-serve, voluntary donation systems will be provided at the main entrance on the Safari Parcel as well as the new McIlwraith Parcel parking lot.

8.2.4. Trail Related Infrastructure

Look-outs, benches and other rest areas will be installed at appropriate locations throughout the trail system. Locations and estimated costs of look-outs have been incorporated into the Trail Plan. Locations for benches and rest areas have not been pre-determined and will be incorporated into the trail system pursuant to CVC policy.

8.2.5. Bridges and Boardwalks

The Trail Plan and the Major Infrastructure Plan for UCCA identify several bridge and boardwalk features that are required as part of the new trail system. The existing bridge on the Safari Parcel requires updating to meet CVC's technical guidelines and to support vehicular access. Vehicular access at this location is required for the implementation of restoration projects and for general maintenance purposes. A new pedestrian bridge on the McIlwraith Parcel and the construction of a significant boardwalk on the Tranmer Parcel have also been identified as major components of the trail system.

All bridges will be built to meet the requirements of CVC's Technical Guidelines for Pedestrian Bridge Crossings (CVC, 2007). Bridge and boardwalk design should take into account the rural and natural character of UCCA and be designed to blend into the landscape.

8.2.6. Parking Areas

Two main parking areas currently exist at UCCA: the main Safari Parcel parking lot can accommodate 20 vehicles; the Tranmer Parcel parking lot, about six. While the main parking lot can accommodate the current use levels, it should be monitored to assess the need for future expansion. The expansion of the Tranmer parking lot is not feasible due to site constraints.

The expansion of the main parking lot on the Safari Parcel may be considered when:

- health and safety conditions justify the need;
- use levels necessitate additional parking facilities; and
- where additional parking facilities help to support the goal and objectives for the conservation area.

Two additional parking facilities are proposed for UCCA: a small publicly accessible lot (8 to 10 vehicles) that will serve the new trail system on the McIlwraith Parcel and a small maintenance access on the northeast corner of McIlwraith that will provide access for conservation area staff and facilitate forestry operations. The new parking facilities will incorporate low impact design concepts, such as bioretention and swales, where feasible.

Detailed plans for the parking areas will be reviewed by CVC staff prior to implementation.



Main Parking Lot on the Safari Parcel

8.2.7. Pavilion

A location near the Credit River on the Safari Parcel that would be suitable for the installation of a pavilion was identified. A pavilion would provide a covered rest area for trail users and could also be used or rented out for small events, such as picnics and educational programming.

A 625m² area used by the previous landowner as a fenced pasture provides an ideal location for a large, open-air pavilion. The selected location will minimize visual distractions from nearby scenic vistas. The pavilion will be designed to be unobtrusive and blend in with the rural character of the property. A natural, rustic style will be incorporated into the design, which may encourage additional activities, such as small weddings or outdoor exhibits. The pavilion will be approximately 9m x 9m, large enough to accommodate between 40 to 60 people. Sustainable infrastructure design principles, such as the addition of a green roof and alternative foundation materials that facilitate drainage, should be explored and implemented where feasible.

The surrounding area will be continued to be mown to facilitate picnic and day-use activities.

Detailed plans for the pavilion will be reviewed by CVC staff prior to implementation.

8.2.8. Washroom Facilities

Washrooms are considered necessary to support current visitor use and promote a family-friendly, accessible atmosphere. New washroom facilities are recommended to accompany the new pavilion (section 8.2.7.) and the new public parking lot on the McIlwraith Parcel. Upgrading the existing portable facilities near the Safari parking lot is also recommended.

Due to the lack of an established water supply, vault, waterless or compost washroom facilities should be considered. The design of the facilities should blend into the rural character and natural environment of UCCA and complement any adjacent infrastructure (e.g. the pavilion). Environmentally sustainable practices and low impact design features will be incorporated into the structure as much as possible.

Detailed plans for the washroom facilities will be reviewed by CVC staff prior to implementation.

8.2.9. Dams and Water Control Structures

Though there are not any dams or water control structures located within UCCA, the upper Credit River is impacted by several dams. Dam Safety Reviews and Emergency Preparedness Plans prepared for major dams upstream of UCCA, such as the South Dam at Island Lake Conservation Area, will consider potential impacts to UCCA, including visitor use and safety.

8.2.10. Additional Development

New development outside of the projects listed in section 8.0 will not occur without an amendment to this Management Plan.

8.3. EDUCATION DIRECTIONS

Self-guided interpretation and education opportunities will be improved on-site through the installation of interpretive signage as part of the Signage Plan. A wide variety of restoration projects, both ongoing and future, provides educational opportunities and may act as demonstration sites. Guided hikes that focus on restoration initiatives and landscape and species diversity would be well suited to UCCA.

8.4. NATURAL AND SOCIAL LINKAGES

Natural connections will be improved or enhanced through the implementation of restoration projects and through ongoing land securement initiatives. The development and identification of the Credit Valley Trail across UCCA and within the surrounding area will provide direct social linkages and effectively connect the communities of Caledon and Orangeville.



Reid Parcel



9.0. OPERATIONAL DIRECTIONS

As per policies outlined in the Conservation Lands Management Manual, Upper Credit Conservation Area will be identified as a non-operational, non-active conservation area. UCCA will be open to the public during daylight hours only.

9.1. PROPERTY MONITORING AND ENFORCEMENT

Resolution of issues related to unsanctioned uses, encroachments and security will be identified and addressed through CVC's Lands Monitoring Program and Enforcement Program. Where feasible, enforcement tactics will focus on an "education first" approach to correct

unsanctioned activities and behaviours, before a more regimented approach, such as ticketing, is employed.

9.2. CONSERVATION AREA PERMITS

CVC conservation area permits will be required for the following activities:

- commercial photography and/or filming
- access to conduct work and/or research
- special events
- other activities as deemed necessary by CVC

Permits are issued through CVC's permitting process for conservation areas; fees are determined by the type and size of activity. CVC retains the right to accept or deny any permit application.

9.3. MARKETING

An appropriate marketing strategy will be developed for UCCA within the context of the conservation areas system. The following considerations will be taken into account:

- permitted uses
- visitor experience and expectations
- conservation area theme (section 6.5)
- Credit Valley Trail

9.4. PARTNERSHIPS AND THE CVC FOUNDATION

Wherever possible, CVC will work towards establishing partnerships with groups that share CVC's mandate and could help achieve the goals and objectives for UCCA. CVC will pursue grants, fundraising and volunteer opportunities as much as possible to support the implementation of this Plan.

A 'Friends of' group does not currently exist for the property. The development of one, however, could assist with fundraising and establish awareness and support of the facilities, programs and projects identified for UCCA.



Event to Celebrate the Acquisition of the Tranmer Parcel in 2011



10.0. MANAGEMENT PLAN IMPLEMENTATION

Sections 7.0, 8.0 and 9.0 include a number of directions, management and development recommendations. Some projects are essential and must be completed as soon as possible. Other projects must be coordinated and completed together or in sequence. Identified projects are to be completed to coincide with the ten-year review and evaluation of this Management Plan. As resources become available, projects will be completed in order, once the designs are finalized and the required permits are obtained.

Appendix C contains a detailed breakdown of the projects, estimated costs and timelines associated with specific projects. The Trail Plan, Signage Plan and Major Infrastructure Plan should be consulted for specific details regarding the implementation of each project.

Phase One (2016 – 2017): *Address immediate needs and concerns*

- Mitigate all identified health and safety issues
- Mitigate environmental concerns, such as unsanctioned trails and activities that are actively causing environmental degradation
- Develop access areas on the McIlwraith Parcel
- Continue with the implementation of restoration projects

Phase Two (2018 – 2019): *Address existing needs and lay the foundation for the trail system*

- Repair and resolve issues with existing infrastructure, including re-grading the parking lot and installing a new bridge on the Safari Parcel
- Focus on the development of trails on the McIlwraith and Safari parcels
- Install access and signature signage
- Continue with the implementation of restoration projects

Phase Three (2020 – 2021): *Continue trail improvements and install ancillary features*

- Complete five year progress evaluation
- Focus on the development and repair of trails on the Reid Parcel and Spears Conservation Easement
- Install pavilion, washrooms and additional major infrastructure projects
- Establish road and railway crossings at applicable secondary access points
- Continue with the implementation of restoration projects

Phase Four (2022 – 2023): *Continue trail development and improvements*

- Focus on the development of an accessible loop trail on the Tranmer Parcel
- Install interpretive signage, rest areas and benches

Phase Five (2024 – 2026): *Finalize trail connections*

- Complete final, large-scale trail connection projects



Event at UCCA



11.0. MANAGEMENT PLAN REVIEW AND EVALUTATION

The Management Plan for Upper Credit Conservation Area is a 10 year plan. The Plan will be reviewed by the project team as issues or conditions dictate; however, a formal evaluation of the Plan’s progress will take place five years from the Plan’s approval, and at the ten year mark, before the Plan is renewed.

The review process will assess a series of performance indicators (Appendix F) to determine if the objectives have been achieved. The evaluation and review process will also:

- assess the success of the projects implemented to date;

- provide a statement on the Plan objectives and whether they are being achieved;
- make recommendations for ensuring that the implementation of the Plan continues on target.

In addition to the points above, the ten-year review will include the following items to set the stage for the 2026 Management Plan:

- identify the necessary inventories, research and studies that need to be undertaken;
- provide a discussion on current opportunities and constraints;
- provide initial recommendations and direction.

The Conservation Area Management Plan Technical Steering Committee will meet once a year to monitor and discuss plan progress and implementation.

APPENDICES

Appendix A – Conservation Area Classes, Zones, and Development Regulations

Appendix B – Permitted Recreational Uses (Upper Credit Conservation Area)

Appendix C – Project Implementation

Appendix D – Glossary

Appendix E – Trail Names

Appendix F – Management Plan Evaluation

Appendix A – Conservation Area Classes, Zones, and Development Regulations

CLASSIFICATION

Within CVC's conservation areas system there are five different conservation area classes:

Nature Reserve:

Conservation areas dominated by large undisturbed natural heritage features which are, as a minimum, considered regionally significant. Management of these areas will ensure long-term protection of features and natural processes for which the reserve was established.

Natural Environment:

Conservation areas that encompass a variety of high quality natural heritage features representing the regional character of the watershed. Management will be directed toward protection of these features and may provide high quality passive and limited appropriate active outdoor recreation opportunities.

Recreation:

Conservation areas that provide the Authority's best recreational environments. In general, they are suitable for moderate to high intensity (active) outdoor recreation opportunities, linked to the conservation area's natural setting. Management will be directed toward developing and operating sustainable outdoor recreation programs.

Resource Management:

Conservation areas managed primarily to provide natural resource related benefits such as forest products, fish and wildlife, erosion control and flood protection. They may also provide passive recreation opportunities and protection to significant or representative natural features.

Access:

Conservation areas that provide appropriate public access to a variety of sites within the watershed that are not part of the Conservation Area System. These Areas provide access to a number of the regional trail systems, the Credit River and its tributaries and other publicly owned lands.

ZONING FRAMEWORK FOR CVC CONSERVATION AREAS

CVC owns almost 60 properties within the Credit River watershed. These natural spaces support a variety of benefits to local communities, the public and visitors. CVC's conservation areas contribute to the natural environment on a number of scales, from providing habitat for native species to contributing to the healthy functioning of the region through the provision of ecological goods and services such as climate regulation and sustaining clean water. CVC's conservation areas also provide opportunities for outdoor appreciation and recreation opportunities which are widely acknowledged to contribute to personal well-being and an improved quality of life. From an economic perspective, natural areas also contribute to increased property values and local tourism, as well as non-market benefits such as societal satisfaction in knowing that natural areas will exist for future generations. A comprehensive management approach to CVC's conservation areas system is essential for ensuring that these special areas continue to protect natural features and functions and provide opportunities for appreciation and sustainable outdoor recreation.

The development and management of CVC's conservation areas are guided by individual management plans for each property. As a holistic decision making process, management planning balances a science-based approach with a community-driven approach. It is designed to engage municipal and provincial agencies, partner groups and the public in determining the priorities and future management of a conservation area. This transparent process ensures that recommendations are founded on the best science available and that those individuals and groups that have a vested interest in the property can contribute their thoughts and values to the development of management goals.

A key component of the management planning process is determining the classification and zoning for each property. The classification is determined during the management planning process and sets the general direction for property management. Zoning organizes the conservation area into geographic units that have similar management philosophies. Zoning ensures that management policies are customized to reflect the significant natural, cultural and recreational resources within an individual property while also providing a consistent approach for management across the conservation area system.

"Within the context of a park's classification, zoning is essential to its orderly and effective management. A park's land and water resources are allocated on the basis of their significance for protection and potential for recreation."

- Ontario Provincial Parks – Planning and Management Policies (1992, updated 2009)

Decisions regarding the zoning of conservation areas, and thus their future management, require detailed inventories focused on the natural, cultural and social environment of each individual property. Zoning decisions are developed based on several factors (Figure 1):

- Conservation area classification, vision, goals and objectives
- Significant natural and cultural features
- Existing and future visitor needs
- Restoration and resource management opportunities
- Existing management agreements

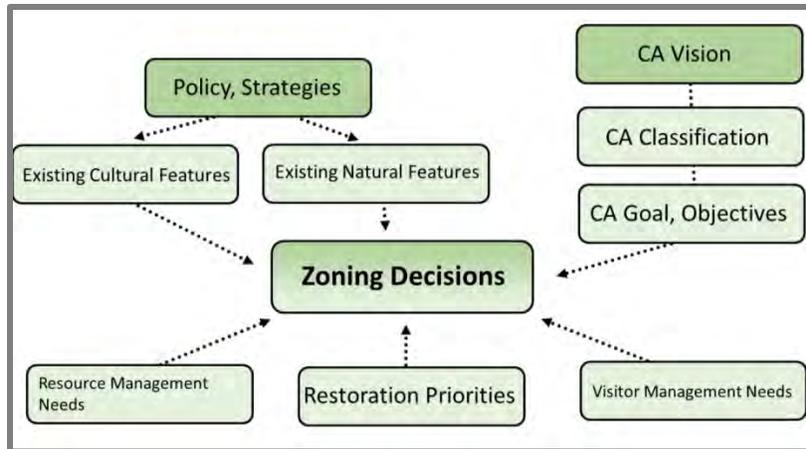


Figure 1: Factors and Contexts that Inform Zoning Decisions

Input and feedback from CVC’s partner agencies, stakeholders and the public are considered throughout the management planning process. This information contributes to the identification of strengths, weakness, opportunities and threats that exist for a conservation area and provides context on how to manage a combination of values and objectives for a property.

Conservation area zoning supports the implementation of an approved management plan by providing a framework which organizes site specific objectives and focuses the application of policies, programs and activities. Conservation area zoning supports the development of a transparent management plan that provides agency partners, stakeholders, the public and CVC with confidence that conservation areas will be planned for and managed in an appropriate and responsible manner.

ZONING DEFINITIONS, ATTRIBUTES AND REGULATIONS

Nature Reserve Zone:

Zones designated to contain relatively undisturbed natural features which are at a minimum considered to be locally or regionally significant or are sites containing sensitive natural features that contribute to maintaining a healthy ecosystem. These zones only permit use that is non-intensive and compatible with the natural values and functions of the feature or resource. Management activities are limited to those that ensure the long range protection of natural values.

Development Regulations: Development and repair or replacement of essential services will be permitted. New infrastructure development not related to essential services is not permitted; however, repair or removal of existing infrastructure will be permitted. Recreation infrastructure is limited to environmentally appropriate trails and facilities necessary for passive recreation (see Glossary). Temporary facilities for research may be permitted.

Restoration and Resource Management: Environmental restoration and enhancement activities are permitted provided they are consistent with the goal and objectives of the conservation area and other applicable land management policies.

Visitor Experience: Visitor activities are limited to passive recreation opportunities. The visitor experience will be directed toward the perception of solitude and immersion within a natural landscape.

Natural Heritage Appreciation Zone:

Zones designated to include aesthetic natural landscapes and representative natural features for the region. A minimum of development is permitted to support environmentally based recreational activities that are keeping with the natural character of the site. Resource Management is permitted to the extent that it rehabilitates sites impacted by human activity, enhances the natural character of the landscape and does not interfere with other permitted uses.

Development: Development and repair or replacement of essential services will be permitted. New infrastructure development will be permitted. Repair or removal of existing infrastructure not related to essential services will be permitted. Recreation infrastructure and amenities to support passive recreation and appropriate active recreation opportunities may be permitted. Temporary facilities for research may be permitted.

Restoration and Resource Management: Environmental restoration and enhancement activities are permitted provided they are consistent with the goal and objectives of the conservation area and other applicable land management policies.

Visitor Experience: The visitor experience will vary depending on the characteristics and theme of the conservation area, but Natural Heritage Appreciation Zones provide interactive opportunities for appreciation and interpretation and may accommodate active recreational activities.

Cultural Heritage Zone:

Zones designated to include significant archaeological or historical features which require management that will ensure the long-term protection of significant values.

Development Regulations: Development and repair or replacement of essential services will be permitted. New infrastructure development not related to essential services may be permitted. Repair or removal of existing infrastructure will be permitted. Stabilization, restoration, or dismantling of historical features is also permitted.

Recreation infrastructure development is limited to trails with associated signage, interpretive and educational facilities including signage and displays, and additional facilities or ancillary structures such as staging areas that are necessary to support passive and appropriate active recreation opportunities. Temporary facilities for research may be permitted.

Restoration and Resource Management: Environmental restoration and enhancement activities are permitted provided they are consistent with the goal and objectives of the conservation area and other applicable land management policies.

Visitor Experience: Visitor experience will focus on opportunities to appreciate and interpret cultural heritage features within the zone as well as the surrounding natural landscape.

Development Zone:

Zones designated to provide access, orientation and operation facilities that support appreciation, recreation and resource management activities of the conservation area. Development zones are separated into three main, broad categories:

- **Access:** *Areas that serve as public staging areas and provide facilities such as roads and parking lots, gatehouses.*
- **Operational:** *Areas and features that serve conservation area operations. This may include workshops, out buildings and parking lots that are not open to the public.*
- **Recreation:** *Areas designated to provide facilities for recreation purposes. This may include large, publicly accessible buildings and other infrastructure necessary for active recreation opportunities, for example splash pads, swimming pools or high-intensity camping areas.*

Development Regulations: Both essential and non-essential infrastructure development is permitted, including, but not limited to: roads; parking lots; service facilities including outfitting areas for recreation activities and interpretive/educational facilities; visitor amenities; conservation area management facilities; storage facilities; washrooms; and, essential services.

Restoration and Resource Management: Environmental restoration and enhancement activities are permitted provided they are consistent with the goal and objectives of the conservation area and appropriate for the zone.

Visitor Experience:

- **Access:** Access Development Zones may provide orientation, education and general maintenance facilities (e.g. garbage removal). Visitor flow will be directed to specific staging areas.
- **Operational:** Operational Development Zones serve CVC staff and operations; visitors are not generally be permitted to these areas.

- **Recreation:** Recreation Development Zones facilitate active recreation opportunities and are areas where visitors tend to congregate to participate or observe an activity. Depending on the facilities, visitors may experience interactive education and interpretive opportunities or participate in a specific leisure activity, sport or game.

Special Management Zone:

Special Management Zones are applied to a specific large scale project or area that falls outside of the scope of the other zones. These projects are most likely resource management or restoration projects but may include other types of areas that require their own specific stipulations and regulations.

Development Regulations: Development requirements and permitted activities will be described for each individual Special Management Zone

Restoration and Resource Management: Specific activities will be described for each individual Special Management Zone

Visitor Experience: These zones are generally not focused on providing a specific visitor experience; however they may provide opportunities for passive recreation, education or interpretation.

Special Management Zone – Grassland Restoration Project (SMZ-1)

SMZ-1 is designated for a tallgrass prairie restoration project containing approximately 10 ha of land. In addition to providing enhanced habitat for grassland species, the project will also function as a demonstration site and will be used to encourage bird-friendly agricultural practices. SMZ-1 requires long-term and involved management practices, including seed harvesting, prescribed burns and ongoing monitoring and evaluation.

- **Development:** Infrastructure development is minimal in this zone. A small storage shed may be permitted within the zone for storing seeds and equipment for research purposes.
- **Restoration and Resource Management:** Activities are limited to the direct management of the grassland restoration project, and may include pesticide application, cutting of the field, seed collection and prescribed burns. Native seeds harvested at this site may be sold or moved off-site to benefit other grassland projects.
- **Visitor Experience:** The activities in this zone will be accompanied by interpretive signage, which will explain the objectives, benefits and purpose of the Grassland Restoration Project. Educational programming, such as focused walks and tours will be encouraged to promote the site.

Special Management Zone – Spears Conservation Easement (SMZ-2)

SMZ-2 encompasses the Spears Conservation Easement in its entirety. While this Parcel has been fully incorporated into the management planning process, the specific covenants of the Spears Conservation Easement Agreement require a specific conservation area zone. Specific covenants of the Agreement include:

- No subdivision of land
- No hunting or fishing
- No soil removal or alteration
- No public access except on main trail
- No forestry practices except those approved within a Forest Management Plan

With the exception of adhering to the specific covenants of the Spears Conservation Easement Agreement, the development regulations, restoration and resource management policies and visitor experience recommendations for SMZ-2 will align with the Natural Heritage Appreciation Zone.

Special Management Zone – Forestry Management Areas (SMZ-3)

SMZ-3 encompasses three Red Pine plantations that will be managed for forest health, environmental protection and biodiversity. Thinning will occur at specified intervals over the next several decades. The management goal for this zone is eventual conversion to and establishment of a hardwood forest.

- **Development:** Infrastructure development is minimal in this zone. In addition to adapting a portion of the existing trail system to accommodate forestry activities, two separate forestry roads will be developed for the sole purpose of implementing forestry management activities.
- **Restoration and Resource Management:** Activities within SMZ-3 will focus on forestry management activities, including thinning, stocking and non-native invasive species management. Habitat enhancement projects may be appropriate in some areas.
- **Visitor Experience:** The activities in this zone will be accompanied by interpretive signage, which will explain the objectives, benefits and purpose of forestry management.

Appendix B – Permitted Recreational Uses (Upper Credit Conservation Area)

Activities	Conservation Area Zones								
	Nature Reserve	Natural Heritage Appreciation	Special Management (SMZ)			Cultural Heritage	Development (D)		
			SMZ-1	SMZ-2	SMZ-3		D - Access	D - Operations	D - Recreation
Adventure Races	N	M	N	M	M	M	M	M	M
Astronomy	N	M	N	M	M	M	Y	Y	Y
ATV's*	N	N	N	N	N	N	N	N	N
Birding	Y	Y	Y	Y	Y	Y	Y	Y	Y
Boating - Motorized	N	N	N	N	N	N	N	N	N
Camping – primitive sites	N	N	N	N	N	N	N	N	N
Camping – group sites	N	N	N	N	N	N	N	N	N
Camping – yurts	N	N	N	N	N	N	N	N	N
Canoeing / Kayaking	M	M	N	N	N	M	N	N	N
Cross Country Skiing	N	M	N	M	M	Y	Y	Y	Y
Cycling	N	M	N	M	M	M	M	M	M
Dog walking – on leash	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dirt Bikes / Mini Bikes*	N	N	N	N	N	N	N	N	N
Educational / Interpretative Programming	Y	Y	Y	Y	Y	Y	Y	Y	Y
Environmental Appreciation – self guided	Y	Y	Y	Y	Y	Y	Y	Y	Y
Research	M	Y	Y	Y	Y	Y	Y	Y	Y
Fishing	Y	Y	N	N	N	Y	N	N	N
Geocaching*	N	N	N	N	N	N	N	N	N
Hiking	Y	Y	Y	Y	Y	Y	Y	Y	Y
Historical Appreciation – self guided	Y	Y	Y	Y	Y	Y	Y	Y	Y

Appendix B – Permitted Recreational Uses (Upper Credit Conservation Area)

Activities	Conservation Area Zones								
	Nature Reserve	Natural Heritage Appreciation	Special Management (SMZ)			Cultural Heritage	Development (D)		
			SMZ-1	SMZ-2	SMZ-3		D - Access	D - Operations	D - Recreation
Horseback Riding	N	N	N	N	N	N	N	N	N
Hunting*	N	N	N	N	N	N	N	N	N
Ice Skating	N	N	N/A	N/A	N	N	N	N	N
Ice Fishing	N	N	N/A	N/A	N	N	N/A	N/A	N/A
Mountain Biking*	N	N	N	N	N	N	N	N	N
Orienteering	N	N	N	N	N	M	M	M	M
Painting / Photography (non-commercial)	Y	Y	Y	Y	Y	Y	Y	Y	Y
Picnicking	M	Y	N	N	N	M	Y	Y	Y
Snowmobiling	N	N	N	N	N	N	N	N	N
Snowshoeing	Y	Y	Y	Y	Y	M	Y	Y	Y
Special Events	N	M	N	N	M	M	Y	Y	Y
Swimming	N	M	N	N	N	M	M	M	M
Wildlife Viewing	Y	Y	Y	Y	Y	Y	Y	Y	Y

*Considered to be an unsanctioned activity at all CVC conservation areas

Appendix C: Project Implementation

Project	Parcel(s)	Year										Est. Cost
		1	2	3	4	5	6	7	8	9	10	
Trail Development												
Trail Closures and re-routes	Mcllwraith, Tranmer	✓	✓									\$72,000
Trail Development	Mcllwraith		✓									\$64,000
Trail Development	Mcllwraith			✓								\$40,000
Trail Development	Safari			✓	✓							\$155,000
Trail Closures and Re-development	Reid, Spears					✓						\$7,000
Trail Re-development	Spears, Reid						✓					\$57,000
Trail Development	Mcllwraith, Tranmer							✓	✓			\$205,000
Trail Development	Tranmer									✓	✓	\$530,000
Est. Trail Costs											\$1,130,000	
Signage												
Access, Regulation Signage	UCCA, Tranmer		✓									\$12,000
Core 10 Signage, Access Signage	Safari, Mcllwraith			✓								\$13,000
Speciality Signage	Safari				✓							\$3,000
Access Signage	Reid					✓						\$3,000
Access Signage, Specialty Signage	Spears						✓					\$7,000
Regulation, Access Signage	Mcllwraith, Harbom							✓				\$3,000
Interpretive Signage	UCCA							✓	✓			\$15,000
Wayfinding Signage	UCCA		✓		✓		✓		✓		✓	\$4,000
Est. Signage Costs											\$60,000	
Infrastructure Development												
Parking Lot, Fencing, Operational Access	Mcllwraith	✓	✓									\$40,000
Washroom	Mcllwraith, Safari			✓								\$40,000
Bridge Replacement	Safari				✓							\$75,000
Re-grade Parking Lot	Safari					✓					✓	\$5,000
Rail Crossing, Gate	Reid					✓						\$5,000
Pavilion, Look-out, Rail Crossing	Safari, Spears, Harbom						✓					\$75,000
Washroom	Safari							✓				\$20,000
Bench Program	UCCA								✓			\$15,000
New Bridge	Mcllwraith									✓	✓	\$75,000
Est. Infrastructure Costs											\$350,000	

Restoration and Stewardship												
Forest Management Plan	Mcllwraith		✓	✓								TBD
Invasive Species Management Plan	UCCA			✓	✓							TBD
Terms of Reference: Water Regime Renewal Study	Tranmer, UCCA	✓	✓	✓	✓	✓						TBD
Forest Management Plan Activities	Mcllwraith					✓					✓	TBD
Grassland Restoration Project, ongoing management	Safari, Reid	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	TBD
Undertake the Water Regime Renewal Study	Tranmer, UCCA						✓	✓	✓	✓	✓	TBD
Credit River Restoration	Safari	✓	✓	✓	✓	✓	✓					TBD
Implement Invasive Species Management Plan	UCCA	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	TBD
Restoration and Stewardship Project Costs												TBD
Operations												
Enforcement of off-leash dogs and other unsanctioned activities	UCCA			✓	✓							TBD
Enforcement of off-leash dogs and other unsanctioned activities	UCCA					✓	✓					TBD
Operational Costs												TBD
Total Estimated Cost												\$1,540,000
<i>*Defined project scope and cost have not been determined for many of the Restoration and Stewardship projects. Project planning and implementation may be tied to current budgets, grants and in-kind donations and volunteer time.</i>												

Appendix D – Glossary

Accessible Trail: a trail that complies with legal standards for access by people with disabilities.

Areas of Natural and Scientific Interest (ANSIs): areas of land and water containing natural landscapes or features that have been identified as having life science or earth science values related to protection, scientific study or education.

Cycling: is classified as a low intensity activity that is characterized by travelling at a moderate pace on well-defined, low gradient multi-use trails. This activity is inclusive to a broad range of user groups of varying ages and abilities.

Development: the results of a land or resource use change as evidenced by the introduction or alteration of buildings and structures, modification of a landform and/or alteration or removal of vegetation and topsoil.

Environmentally Appropriate Trail: A trail that provides visitors with an opportunity to appreciate and passively recreate in a natural setting and does not cause significant negative environmental impacts.

Essential Services: Servicing infrastructure, such as power transmission, telecommunications, oil and gas, water and wastewater that is critical to the functioning of the community, municipality, province or country and which cannot be reasonably located elsewhere. 'Essential Services' does not include roads, highways, railways or other such transportation routes.

Mountain Biking: is classified as an unsanctioned use within CVC conservation areas. Mountain biking is a high intensity activity, characterized by the use of challenging terrain that generally exceeds that capacity of CVC's trail system. Mountain biking tends to create significant negative impacts to the condition of CVC's sanctioned trails and surrounding ecological features, and notably this activity has caused the creation of numerous ad hoc trails in CVC conservation areas.

Multi-use Trail: a recreational trail that is designed to accommodate more than one user group at any given time, such as hikers, joggers, dog walkers and cyclists.

Recreation (passive): A trail-based, non-competitive leisure activity which contributes relatively low environmental, economic and social impacts. Does not require the presence of staff and involves a low level of management. Examples of passive recreation include hiking, photography and wildlife viewing.

Recreation (Active): is defined as a leisure activity that may contribute moderate to high environmental, economic and/or social impacts. May include competitive or organized events and involve a variety of facilities or natural settings. May require a higher level of staff presence and a greater degree of management. Examples could include cross-country skiing, organized races, cycling, ice fishing and camping.

Resource Management: A set of actions guided by overall policy that seeks to maintain or achieve a given or desired condition valued by humans to provide specific social, environmental or economic benefits.

Restoration: The process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed. Restoration provides ecological benefits, may provide social and/or economic benefits and produces measurable results.

Valleyland: a natural area that occurs in a valley or other landform depression that has water flowing through or standing for some period of the year.

Watershed: an area that is drained by a river and its tributaries.

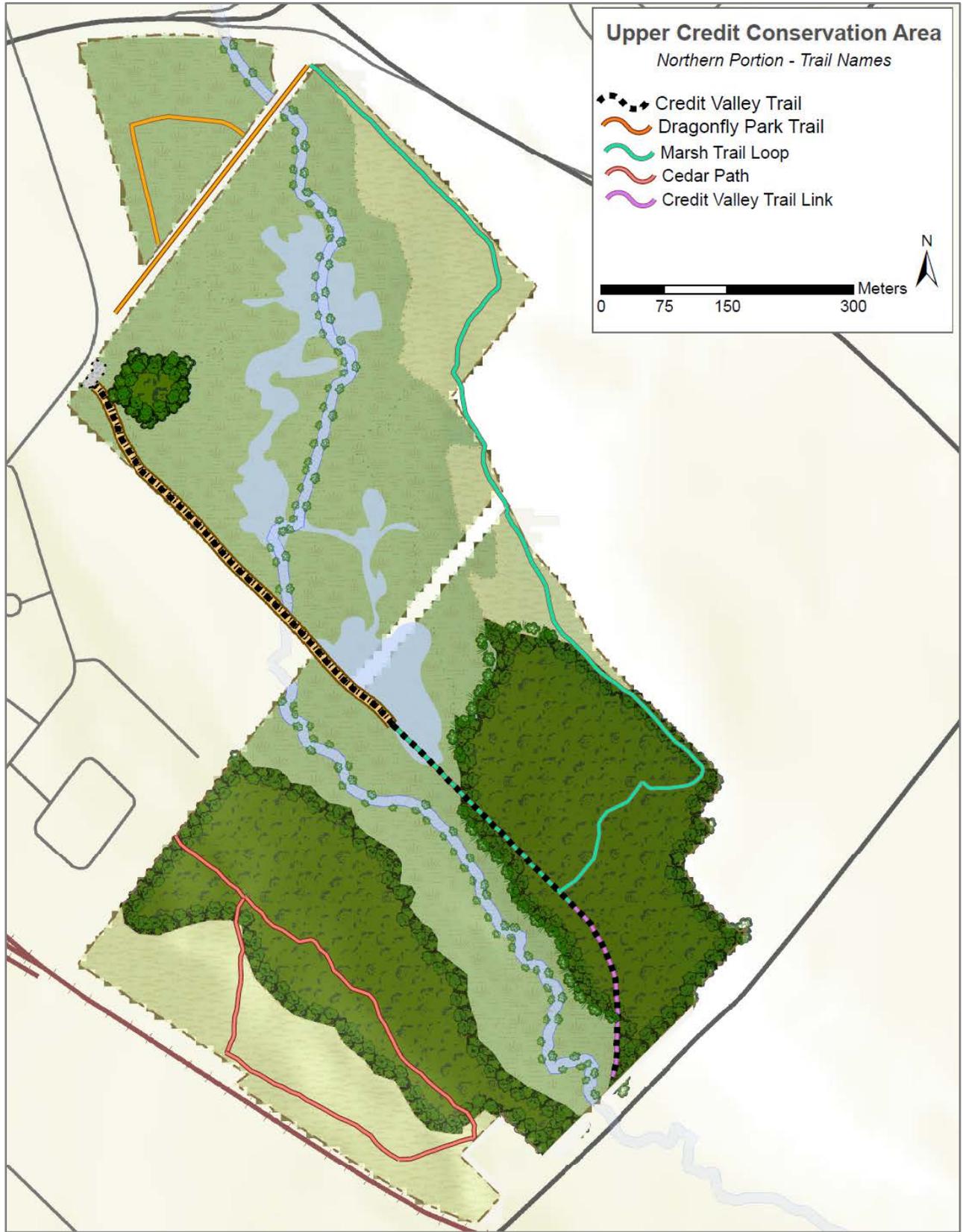
Wetlands: lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. In either case the presence of abundant water has caused the formation of hydric soils and has favoured the dominance of either hydrophobic plants or water tolerant plants. The four main types of wetlands are swamps, marshes, bogs, and fens.

Significant Wildlife Habitat: areas where plants, animals and other organisms live, and find adequate amounts of food, water, shelter, and space needed to sustain their populations. Specific wildlife habitats of concern may include areas where species concentrate at a vulnerable point in their life cycle, and areas which are important to migratory or non-migratory species.

Acronyms

ANSI	Area of Natural and Scientific Interest
COSSARO	Committee on the Status of Species at Risk in Ontario
CHL	Cultural Heritage Landscape
CVC	Credit Valley Conservation
ESA	Environmentally Significant Area
NHS	Natural Heritage System
NSLASP	Natural Spaces Land Acquisition and Stewardship Program
OHT	Ontario Heritage Trust
PSW	Provincially Significant Wetland

Appendix E – Trail Names





Appendix F – Management Plan Evaluation

An evaluation of the Upper Credit Conservation Area Management Plan will be undertaken at the five year mark and again before the Plan is renewed at the 10 year mark. The evaluation will include determining the completion of projects outlined in the Management Plan as well as measuring performance indicators to determine if the objectives of the Management Plan have been achieved. Monitoring programs, inventories and updated surveys may be required to determine if a desired result or outcome has been achieved. The five and 10 year summary reports will determine if the goal and objectives of the management plan have been met, and if not, provide recommendations for ensuring future success.

Protection Objective

To protect UCCA’s ecological diversity and significant natural heritage features and their functions through appropriate park zoning, research, monitoring, resource management, enhancement, and restoration activities.

The following performance indicators will be evaluated or measured at the five and 10 year timeframes to determine if management objectives are being met.

1. UCCA’s ecological diversity and natural heritage features and functions have been maintained or enhanced

Five Year Evaluation	10 Year Review
A forestry management plan for the coniferous plantations on the McIlwraith Parcel has been developed	The coniferous plantations on the McIlwraith Parcel are being managed for ecological health and succession to a mixed forest
The grassland restoration area is being managed to encourage grassland bird breeding	The grassland restoration area is being managed to encourage grassland bird breeding – monitoring indicates successful use by target species
Instream and riparian restoration activities have been completed for the Credit River in the Safari Parcel	Monitoring data indicates that restoration activities have supported a healthier Credit River in the Safari Parcel
If habitat enhancement projects have been implemented (e.g. bird boxes, turtle nesting habitat etc.), a program is in place to monitor and care for the features that require it	If habitat enhancement projects have been implemented (e.g. bird boxes, turtle nesting habitat etc.), a program is in place to monitor and care for the features that require it
An Invasive Species Management Plan has been developed and priority areas are being managed	Priority areas for invasive species management are being successfully managed
Areas identified for tree planting or infill planting have been planted and are being monitored for success	Areas identified for tree planting are being monitored; infill planting is occurring as appropriate

Areas not identified for tree planting or restoration activities, have been allowed to naturally succeed	Areas not identified for tree planting or restoration activities, have been allowed to naturally succeed
	Water Regime Renewal Study has been undertaken and recommendations for the next Management Plan have been made
Long-term trends of the aquatic and terrestrial environment are being monitored and impacts addressed	Long-term trends of the aquatic and terrestrial environment are being monitored and impacts addressed
	Monitoring results indicate that biodiversity of native species has been maintained or has increased
Priority properties have been identified and opportunities for acquisition are being pursued	Priority properties have been identified and opportunities for acquisition are being pursued

2. Appropriate activities are taking place in the appropriate conservation area zones

Five Year Evaluation	10 Year Review
Development aligns with the directions and recommendations of the UCCA Management Plan	Development aligns with the directions and recommendations of the UCCA Management Plan
Encroachments have been inventoried, prioritized and managed	Ongoing monitoring and management of encroachments is taking place
Impacts from unsanctioned activities are being rectified; ongoing monitoring tracks trends and impacts of unsanctioned activities	Impacts from unsanctioned activities are being rectified; ongoing monitoring tracks trends and impacts of unsanctioned activities

Appreciation Objective

To provide unstructured opportunities for appreciating UCCA's natural and cultural heritage features, their functions and the restoration and resource management programs in place to enhance them.

The following performance indicators will be evaluated or measured at the five and 10 year timeframes to determine if management objectives are being met.

3. UCCA provides a variety of opportunities to appreciate its natural and cultural significance

Five Year Evaluation	10 Year Review
The many ecological, social, and culturally significant aspects of UCCA are communicated and promoted onsite through interpretive signage	The many ecological, social, and culturally significant aspects of UCCA are clearly communicated and promoted onsite and elsewhere, such as through special events or guided walks
UCCA is promoted as a Core 10 Conservation Area through marketing initiatives	UCCA is promoted as a Core 10 Conservation Area through marketing initiatives
	Data indicates that appreciation of UCCA is an integral part of the visitor experience
Opportunities to showcase the restoration projects at UCCA, such as guided or virtual hikes, are being explored	Opportunities to showcase the restoration projects at UCCA, such as guided or virtual hikes, are being undertaken regularly

Recreation Objective

To provide visitors with enhanced opportunities for passive and appropriate active recreational activities through minimal infrastructure development while maintaining the integrity of natural features and functions.

The following performance indicators will be evaluated or measured at the five and 10 year timeframes to determine if management objectives are being met.

4. A variety of permitted passive and appropriate active recreational activities are occurring at UCCA

Five Year Evaluation	10 Year Review
Recreation within UCCA is characterized as mostly passive with a low impact on the natural environment	Recreation within UCCA is characterized as mostly passive with a low impact on the natural environment
Implementation plans for trail development, signage and major infrastructure are on schedule	Implementation plans for trail development, signage and major infrastructure are completed
Impacts from recreational activities, such as the development of unsanctioned trails, is being monitored and mitigated	Impacts from recreational activities, such as the development of unsanctioned trails, is being monitored and mitigated
Impacts from sanctioned visitor activities are at sustainable levels for the zone in which they occur	Impacts from sanctioned visitor activities are at sustainable levels for the zone in which they occur
Accessible features ensure that people of all ages, backgrounds and abilities are able to visit UCCA	Accessible features ensure that people of all ages, backgrounds and abilities are able to experience a variety of trail options and recreational opportunities at UCCA

Works Cited and Referenced

- Chapam, L.J. and Putnam, D.F. 1984. The Physiography of Southern Ontario, 3rd Ed. Ontario Geological Survey Special Volume 2. Ministry of Natural Resources. Government of Ontario, Ontario, Canada.
- Cowell, D.W. and Webster, D. 2013. Draft: Earth Science Inventory Checklist: Orangeville Moraine and Caledon Lakes ANSI. Compiled May 2004, updated January 2013. Ontario Ministry of Natural Resources. Peterborough. Ontario.
- Credit Valley Conservation. 1994. A Conservation Areas Strategy for the Credit River Watershed.
- Credit Valley Conservation. 2004. Greenlands Securement Strategy.
- Credit Valley Conservation. 2007. Technical Guidelines for Pedestrian Bridge Crossings.
- Credit Valley Conservation. 2010. Lands Monitoring Program: Upper Credit Conservation Area 2010 Visitor Survey Report.
- Credit Valley Conservation. 2010. Watershed Planning and Regulation Policies.
- Credit Valley Conservation. 2011. Towards a Natural Heritage System for the Credit River Watershed: Summary report on watershed characterization and Landscape Scale Analysis.
- Credit Valley Conservation. 2012. 2010 Trail Counter Findings Report. Credit Valley Conservation Technical Report. 98pp.
- Credit Valley Conservation. 2012. Conservation Lands Management Manual: Policies, Procedures and Programs for Managing CVC Lands.
- Credit Valley Conservation. 2015. Fluvial Geomorphic Guidelines.
- Credit Valley Conservation. 2015. Our Future to Shape – Strategic Plan 2015 – 2019.
- Morris, R.J. 1999. A Methodology for Assessing the Biological Integrity of Fish Communities of the Credit River Watershed. Credit valley Conservation.
- Ontario Ministry of Municipal Affairs and Housing. 2005. Greenbelt Plan.
- Ontario Ministry of Municipal Affairs and Housing. 2014. Provincial Policy Statement.
- Ontario Ministry of Natural Resources. 2012. Niagara Escarpment Parks and Open Spaces System Planning Manual.
- Ontario Ministry of Natural Resources. 2014. Prescribed Burn Manual.



Credit Valley Conservation
1255 Old Derry Road
Mississauga ON L5N 6R4
1-800-668-5557