A.W. Campbell Conservation Area

Master Plan

Last Management Plan: March 1981

Date Updated: May 2025

Acknowledgements

The A.W. Campbell Conservation Area is the product of Mr. Archibald (Archie) W. Campbell's passion for conservation which led to the forethought to provide the first right of purchase of the land to the St. Clair Region Conservation Authority. The wishes of Mr. Campbell were that the land be used in perpetuity for a park, a recreation area or for reforestation. The St. Clair Region Conservation Authority continues to honor those wishes and preserve the natural features and park for its visitors and future generations to come.

Executive Summary

This plan provides direction for the management of A.W. Campbell Conservation Area for the next 10 to 20 years. Updates may be completed during this time on an as needed basis. [To be completed following public consultation]

Table of Contents

List of Figures

List of Tables

Goals and Objectives

This master plan will serve to direct staff in forecasting the necessary upgrades and maintenance for the property. It will prioritize the protection, management and enhancement of habitats on the property and benefit wildlife within the watershed as a whole. This plan will also encourage public safety, environmental education, passive and active recreation and a healthy environment within our watershed for the next 10-20 years. The plan will align with the St. Clair Region Conservation Authority's core values.

Vision

- *A healthy and sustainable natural environment in the St. Clair Region.*

Mission

- *to provide leadership through coordination of watershed planning, implementation of resource management programs and promotion of conservation awareness, in cooperation with others.*

This plan supports the following goals and objectives as outlined in SCRCA's strategic plan.

Goal 1. Provide recreation and education opportunities for the public to enjoy, learn from, and respect our natural environment

Through the lands we manage and own, as well as the educational programs we deliver, the SCRCA provides opportunities for our citizens to understand and appreciate the value of their natural environment as well as the social and economic benefits of protecting that environment.

Objective

- *Ensure the conservation lands remain valuable assets to the community and can withstand the pressures of growth and climate change*

Goal 2. Protect, manage and restore our woodlands, wetlands and natural habitat.

Because what we do on land is reflected in our water and ecosystems, the SCRCA develops programs that protect our land resources and promotes watershed stewardship practices that lead to healthy, sustainable communities and industries.

Objective

- *Manage Authority owned lands through a balance of revenue production and effective management of woodlands, wetlands and biodiversity*

Purpose of the Plan

The A.W. Campbell Conservation Area Master Plan has been prepared as a reference document to guide the use, management, operation and development of this property while meeting the goals and objectives of the St. Clair Region Conservation Authority (SCRCA). This master plan provides broad context direction for day-to day operation and includes existing management practices and recommendations for the property while integrating input from stakeholders and the public.

Existing Conditions

General Description

The A.W. Campbell Conservation Area consists of 331 acres (134 ha) and is made up of forest, two engineered reservoirs, meadowland, and recreational area including 130 seasonal and overnight campsites, and three small group campsite areas. Facilities include a workshop, two washroom buildings with showers and flush toilets, laundry facility, pool, 3 picnic pavilions, two playgrounds, and a recreation center for the use of the campers. The property boasts over 4.5 km of nature trails highlighting the biodiversity on the property. Morrough Creek and its floodplain winds through the property adding to its aesthetic.

Location Details

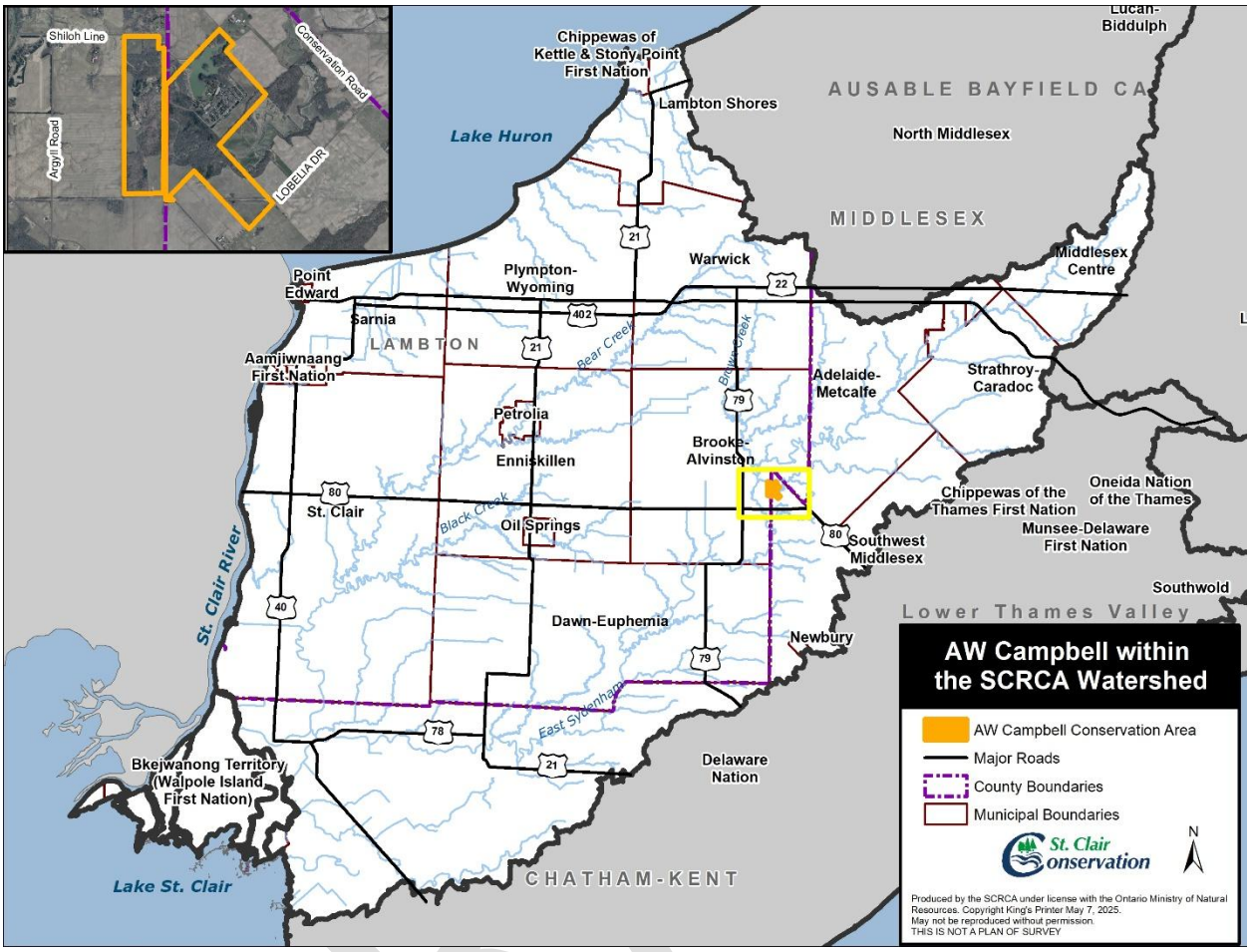


Figure 1 Regional Context Map

The A.W. Campbell Conservation Area is located on Shiloh Line approximately 4km east of the village of Alvinston Ontario and situated on the border of the Municipality of Brooke-Alvinston, County of Lambton, and the Municipality of Southwest Middlesex, County of Middlesex, at the peak of Mosa. The next closest communities are Inwood (14km west), Glencoe (15km south), Watford (17km north), and Strathroy (28km northeast).

Area	331 acres (133.98 ha)
Address	8477 Shiloh Line, Alvinston ON
Lot and Concession	Pt Lot 23, Con 6, and Pt Lot 1, Lot 2-4 Con 11
Municipality/Town/City	Municipality of Brooke Alvinston (Brooke Twp), and Municipality of Southwest Middlesex (Mosa Twp)
County/Region	Lambton County, County of Middlesex
Watershed	Upper Sydenham River Sub-Watershed
Ecodistrict	7e-2
Latitude **Longitude**	42.8237920000000 -81.8304790000000 42.8246770000000 -81.8376700000000
Zoning of the Property	Locally Significant Natural Area, Open Space

Table 1: Location Details

Site Acquisition

The St. Clair Region Conservation Authority purchased the property in 1967 from the estate of Archibald (Archie) W. Campbell. The St. Clair Region Conservation Authority was willed the first right of purchase to the property at a predetermined rate. Specific conditions were attached to the purchase including that the land be used in perpetuity for a park, a recreation area or for reforestation. Archie's determination to practice conservation and promote public awareness assisted the preservation of numerous large trees on the property. The SCRCA's reinforcement of these ideals has enabled the public to appreciate viable conservation procedures over the years.

Site History

Pre-Acquisition

The A.W. Campbell Conservation lands were originally acquired by Neil Campbell as part of his Crown Land grant in 1868. Originally from Argyllshire on the west coast of Scotland, he immigrated to New Glasgow along the shore of Lake Erie before settling in Alvinston. The 50-acre hilly property was covered in hardwood forest containing trees up to 8 feet in diameter. Land was cleared to construct a log cabin and for crop planting, roughly 2 to 5 acres were cleared for production each year. Due to the risk of spring flooding, the Campbell's sought higher and safer land for the final location of the homestead which is why it was constructed on the top of the hill.

The family was largely self-sufficient growing crops, raising livestock and planting an orchard around the house to feed the family.

Post Acquisition

After the purchase of the property in 1967, the property was formally named the A.W. Campbell Conservation Area. The initial goals for the A.W. Campbell Conservation Area were to provide a location to demonstrate proper resource conservation and management procedures, develop an intensive recreational area and initiate an educational program compatible with the area's natural ecosystem. The SCRCA has completed 47 acres (19 hectares) of reforestation since the time of acquisition, the majority of which occurred in the late 1970's and 80's.

Immediate development activities that took place in the late 60's through to the 70's consisted of the creation of three water impoundments to store spring runoff, the development of nature trails, tree planting, development of an education center, roads, a parking lot, picnic and camping facilities.

Impoundments

The largest earth berm dam forms an 18-acre lake having a maximum depth of 5.5m, constructed in 1968 and composed of compacted impervious clay fill and grassed to prevent erosion. The dam is controlled by a bottom draw valve. This structure is inspected by a third party every 5-10 years. The second smaller earth berm dam was constructed to maintain a

2-acre impoundment northwest of the old Campbell House, this is also controlled by a bottom draw valve. The third and smallest dam was constructed out of wood, lined with plastic and is located along the abandoned trail.

Camping

Camping facilities were first established on the west side of the property which consisted of 12 15-amp sites, 3 30-amp sites, an un-serviced group area that accommodated small scouting groups, the CN train station served as the safety area for the scouts during poor weather conditions. A dump station and septic system were installed but has since been decommissioned. Water came from the well at the Campbell House and a small water tower was constructed on site but has since been removed. The 18-acre lake served as the main swimming location for the property and surrounding area for many years.

By the mid 1970's, with the great demand for camping on the property, the eastern side of the park was developed for seasonal and overnight camping. This was also largely due to the limitation of drinking water on the property's west side. The well on the west side was removed from service in 2000-2001 following the Walkerton tragedy. To improve visitor experience and expand camping on the east side of the property, facilities including a visitor center (originally a concession booth), pool (2001, after reservoir was determined to be unsafe for swimming), washroom and shower facilities, septic system, water treatment system (2000) and well were developed. Over the years, other recreational features and improvements have been constructed on the property to provide activities for campers and visitors alike, including playgrounds and sport facilities.

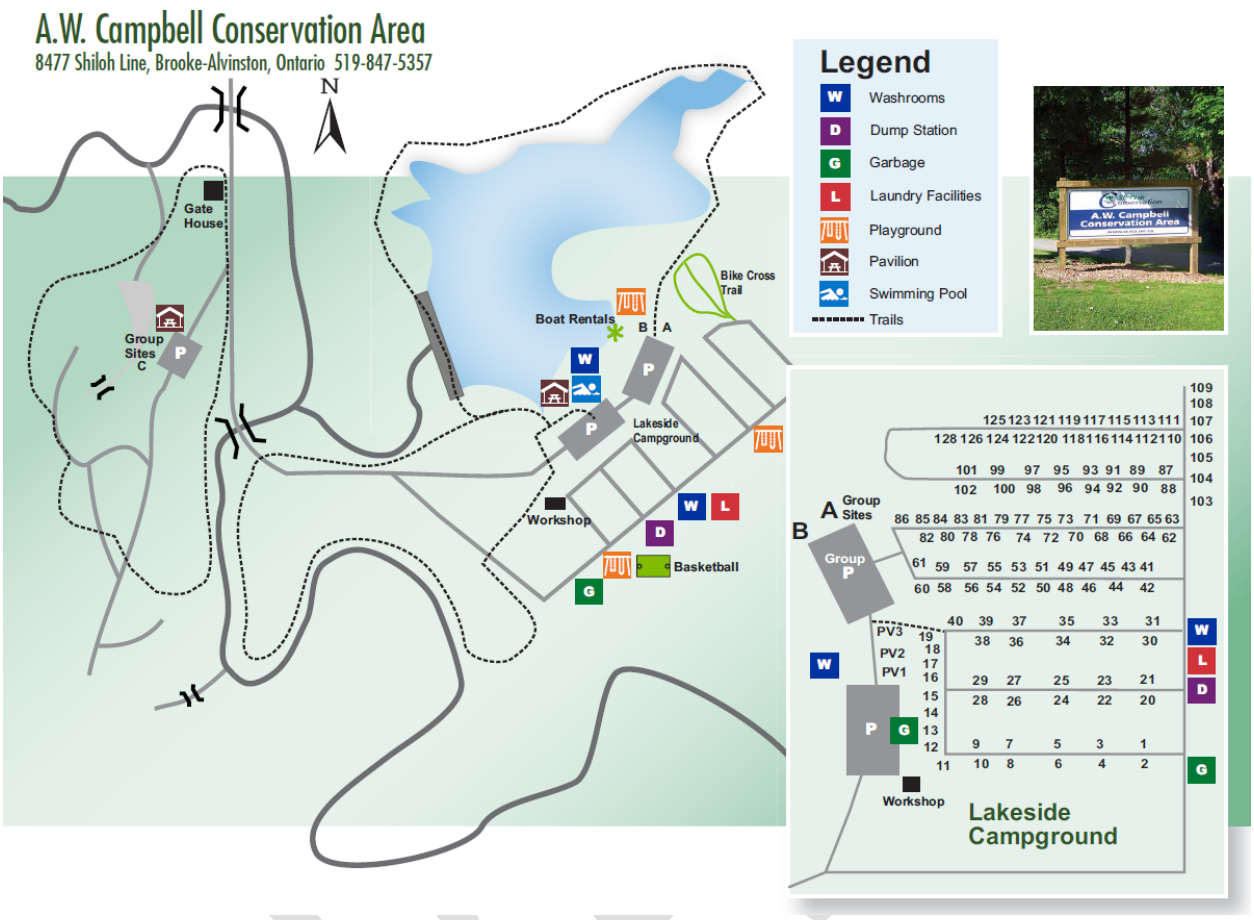


Figure 2 Current Map depicting campsites at A.W. Campbell Conservation Area

Education

Education was a prominent activity planned as part of the acquisition of the property. The initial concept for the property was to develop an outdoor education school consisting of studies in natural sciences with topics such as agriculture and land use, hydrology and meteorology, forestry and ecology, wildlife identification and recreation. In 1969, the Authority acquired the Newbury CN Rail Station which served as the outdoor education school from 1969 until the mid-90's when a new outdoor classroom was constructed at the Lorne C. Henderson Conservation Area. With the Lorne C. Henderson classroom located closer to schools in Sarnia and Petrolia, programming ceased at A.W. Campbell CA, the building fell into disrepair and was removed from the property in 2015. A plaque stands in the location of the old railway station commemorating the building. Another program that ran early after acquisition was the Maple Syrup program where students learned about the methods of maple syrup production. For many years the Authority used a Sugar Shack on-site to host demonstrations. However, in 2015, it was removed due to the poor condition of the building.

Education programming ran on site until the early 2000s before transitioning fully to Lorne C. Henderson Conservation Area. The Maple Syrup program is still active on the property seeing students attend one week in March each year and open to the public during the Maple Syrup Festival, an annual event for visitors to learn about the methods of maple syrup production.

Campbell House Museum

The original homestead of Archie Campbell was left on-site at the time of acquisition. Constructed between 1875 and 1880 the structure consists of a board and batten siding on a wood frame. The house was raised on footings with a small cold cellar dug under the kitchen. From the 1970's to the early 80's the farmhouse was operated as a museum. The idea behind the museum was to showcase the typical farmhouse of the era and provide a step back in time for visitors. The museum was laid out as though the residents had stepped out for the day with many artifacts of the period donated by local residents. By the late 1980's through to early 2000's the museum operation was reduced to one weekend a year during the Maple Syrup Festival. In 2001, the museum was broken into, and many artifacts were stolen. Since 2001 the Campbell House Museum has remained closed to the public. As of 2024, due to safety concerns and structural integrity of the building, the Authority made the difficult decision to remove it. In 2024, SCRCA received approval from the Municipality to remove the building.

Conservation Authority Programs/Services

Due to changes under section 21.1(1) and (2) to the *Conservation Authorities Act* R.S.O. 1990, c.27 as amended and prescribed through Ontario Regulation 686/21 Mandatory Programs and Services, the SCRCA is required to categorize all programs of the authority into three categories (Category 1, 2 and 3). The dams located on the property fall within Category 2. Category 2 programs and services are those that a conservation authority provides at the request of a Municipality. The funding is provided by the benefiting Municipality.

The A.W. Campbell Conservation Area's camping program is a Category 3 program under Ontario Regulation 686/21 of the *Conservation Authorities Act* for Mandatory Programs and Services. Category 3 programs and services are those that the conservation authority determines are advisable to provide, to further the purposes of the Act. Revenue for this Category 3 program is self-generated through fees for use including:

- Camping fees (seasonal and overnight)
- Day-use fees
- Seasonal passes
- Pavillion Rentals
- Firewood sales

Fees are adjusted annually, for current fee information go to the SCRCA website at www.scrca.on.ca/conservation-lands/

Environmental Features

Ecological/Zoning Designations

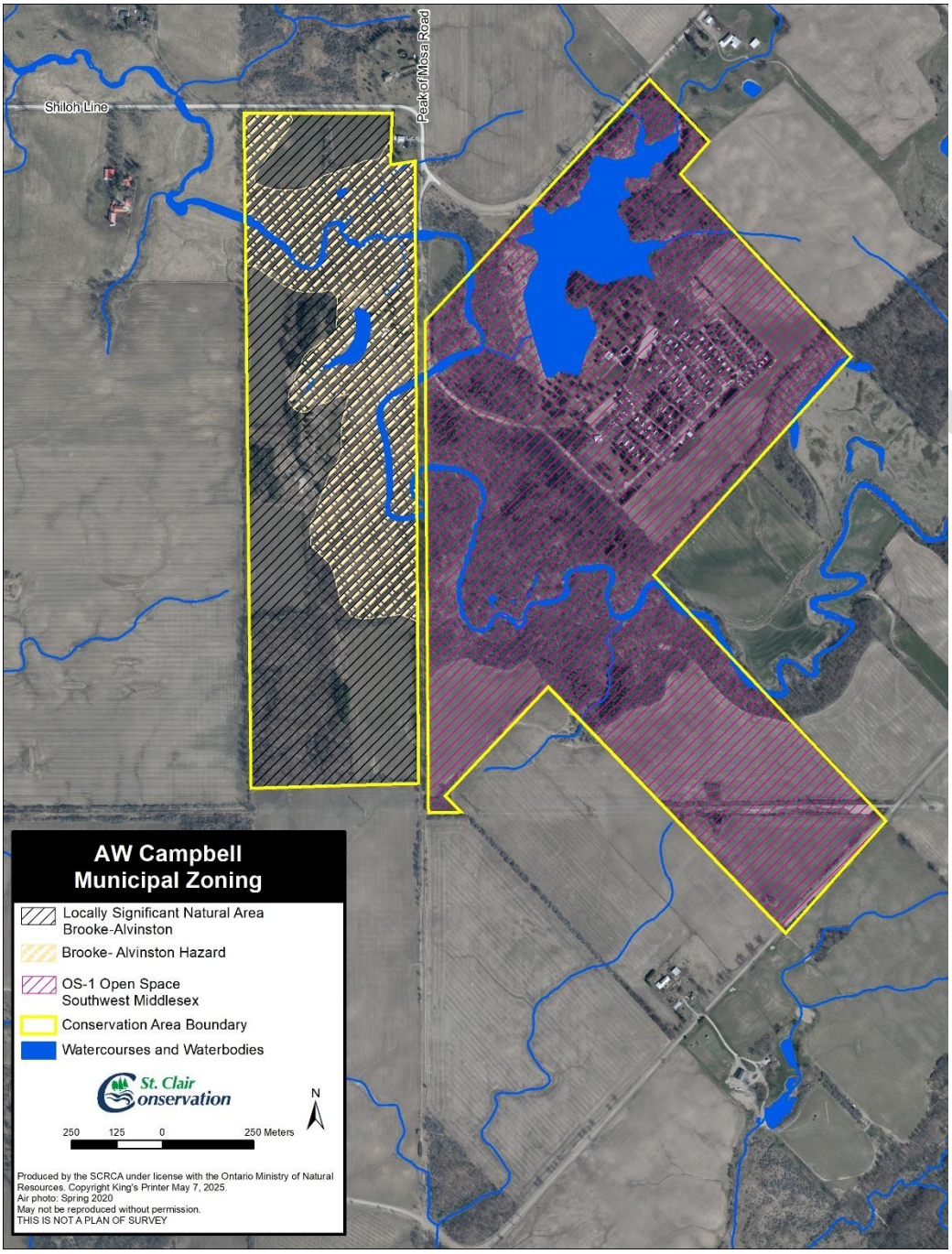


Figure 3 Zoning Designations Map

The A.W. Campbell Conservation Area is part of the following environmental designations:

The Lambton County Official Plan and Municipality of Brooke-Alvinston zoning designate the property as

- Locally significant natural area
- Open Space

The Middlesex County Official Plan and Natural Heritage Study designate the property as

- Open Space
- Significant meadow
- Thicket
- Mixed woodland
- Wetland swamp
- Valley land

Figure 2. Zoning Designations Map shows the zoning information for Middlesex and Lambton Counties where Figure 3. Natural Heritage Designations map highlights the natural heritage features identified.

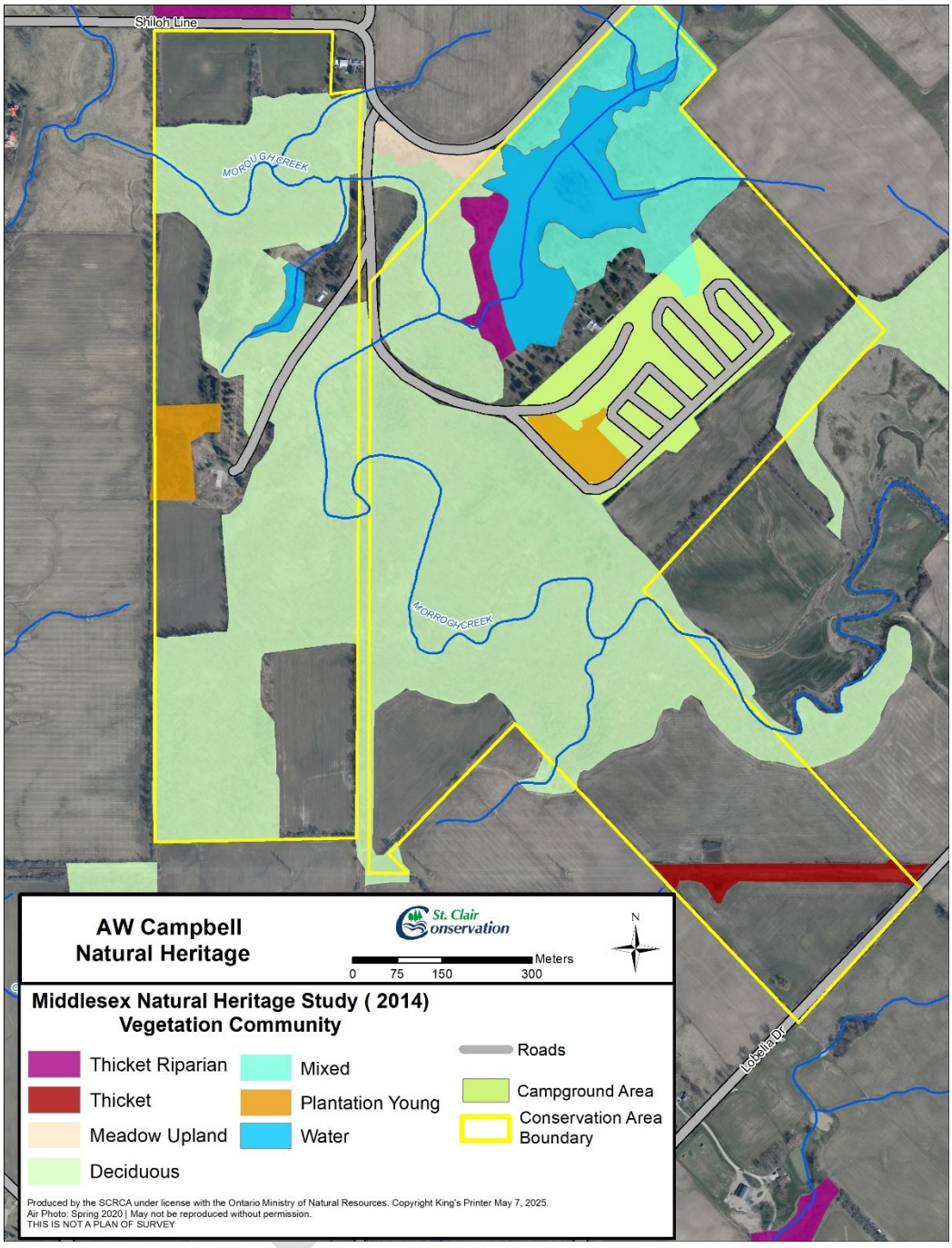


Figure 4 Natural Heritage Designations Map

Portions of the property are designated Community Conservation Lands (CCL), a category under the Conservation Land Tax Incentive Program. This is a voluntary program to recognize, encourage and support the long-term stewardship of specific categories of conservation land by offering a tax exemption to those landowners who agree to protect the natural heritage values of their property. To continue participating in this program, it is required that SCRCA does not commercially harvest the woodlands included in the program. (https://www.ontario.ca/page/community-conservation-lands-guide)

Natural Hazards and Hydrology

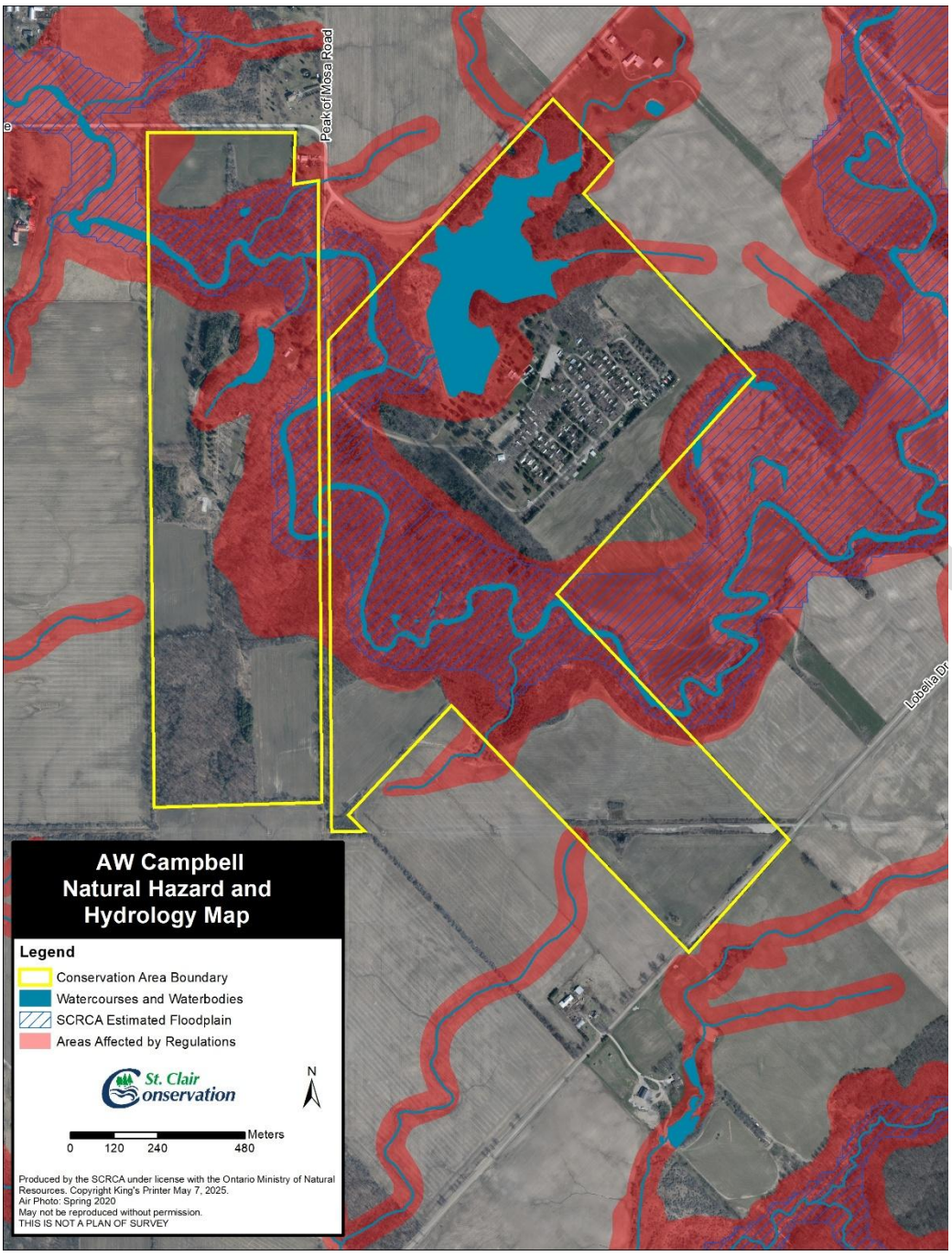


Figure 5 Natural Hazards and Hydrology Map

The A.W. Campbell Conservation Area properties are traversed by Morrogh Creek, a meandering watercourse with an average width of 15m. During the summer months, the river is low and slow moving, but its velocity and volume increases greatly during spring flooding and large flashy storms. Morrogh Creek receives water from many grassed channels and intermittent streams adjacent to the cultivated fields, tablelands and valley

slopes. Approximately 48% of the property is within the area regulated by the Conservation Authority.

Several localized depressions of standing water filled with marsh and grass vegetation demonstrate the floodplain's low soil permeability and poor drainage. As is characteristic of meandering streams, the outside valley slopes of Morrogh Creek's meanders are naturally most susceptible to erosion. The meandering actions of the creek, reinforced by annual spring and minor flash flooding could potentially erode steep banks along the outside of meander curves. Removal of vegetation that presently stabilized these slopes should be carefully avoided.

ELC Inventory

The Ecological Land Classification system (ELC) is a hierarchical system that identifies and describes areas of land with similar physical features. The purpose of the ELC is to help classify land, through mapping, into ecological units for planning and resource management.
Ecological Land Classification surveys were completed by staff in May of 2024. The property is located in:

Ecozone	Mixedwood Plains
Ecoregion	Lake Erie-Lake Ontario
Eco District	7E-2, St. Thomas

A total of 11 vegetation communities were identified on the 134-hectare property, including four forested communities, one woodland community, one mixed meadow community, open water, plantations and communities with cultural influence consisting of row crop agriculture, parkland and trailer park/campground. Locations are displayed on the map below and further described in the following table (Figure 5).

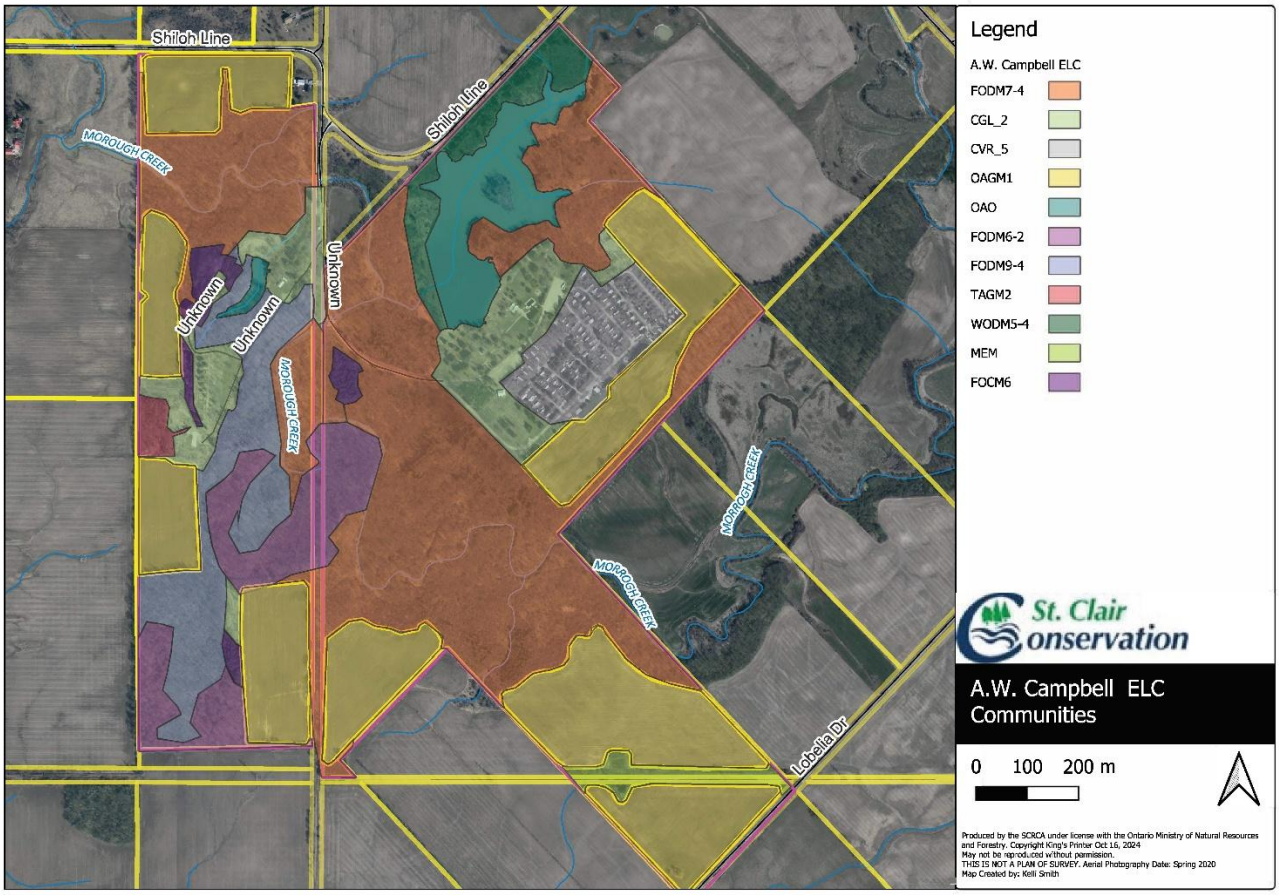


Figure 6 ELC Vegetation Communities Map

Vegetation Community sizes

Vegetation Community	ELC Code	Vegetation	Environment	S-Rank	Size (ha)
Fresh-Moist Black Walnut Lowland Deciduous Forest	FODM7-4	Not given	- Typically associated with riparian zones and terraces; stream and river banks and floodplains	S2, S3	39.26
Fresh-Moist Shagbark Hickory Deciduous Forest Type	FODM9-4	- Shagbark hickory with red maple, white ash and green ash - Blue beech and running strawberry bush - Wild geranium, with avens, jack-in-	- Moist clays>> fine loams - Lower topographic positions and bottomlands - Absence of really wet species suggests a drying of soil during the season	Not listed	9.42

		the-pulpit and violets			
Naturalized Coniferous Plantation	FOCM6	Not given	Not given	Not listed	1.87
Fresh-Moist Sugar maple-Black maple Deciduous Forest Type	FODM6-2	Not given	- Moist yet well drained sites, often along floodplains	S3?	8.44
Fresh-Moist Hawthorn/Apple Deciduous Woodland Type inclusion Dry-Fresh White Pine Naturalized Coniferous Plantation Type	WODM5-4 incl FOCM6-1	Not given	Not given	Not listed	4.40
Medium Mineral Mixed Plantation Type	TAGM2	Not given	- Loamy substrates	Not Listed	0.72
Mixed Meadow	MEM	- Mix of grass-like and broadleaf species	Not given	Not listed	1.74
Open Aquatic	OAO	Not given	Not given	S5	6.51
Annual Row Crop - Agriculture	OAGM1	Not given	Not given	Not listed	35.24
Parkland	CGL_2	Not given	Not given	Not listed	4.97
Trailer Park	CVR_5	Not given	Not given	Not listed	10.85

Table 2 Vegetation Community Description and Size

Two of the vegetation communities are made up of provincially significant ecosites. The Fresh-Moist Black Walnut Lowland Deciduous Forest Type (FODM7-4) has an S-rank of S2, S3 which is Rare to Uncommon in Ontario with an estimated less than 100 occurrences and an estimated areal extent of less than 1000 ha and is considered to have a very small range in the province (less than 3%). The Fresh-moist Sugar maple-Black maple deciduous forest type (FODM6-2) has an S-rank of S3? Meaning this type of community is ranked as Rare to Uncommon but not enough numeric data is known. It is estimated there are less than 100 occurrences in the province of this community and an estimated areal extent of less than 25000ha and it is considered to have a very small range (less than 3%).

Reference: *Natural heritage resources of Ontario: S-ranks for communities in site regions 6 and 7* https://www.ontario.ca/document/significant-wildlife-habitat-technical-guide/appendix-j-natural-heritage-resources-ontario-s-ranks-communities-site-regions-6-and-7#section-7

Species – Flora and Fauna

The following table provides a list of species that were witnessed incidentally during the 2024 site visits. Supplemental surveys and research have been conducted on the property by other organizations and academic institutions resulting in additional species records (see Appendix ?). SCRCA staff have identified two provincially rare flora species on the property, one of which is a species at risk. The habitat for these species

should be protected and supported and is further described in the final management recommendations section.

Flora

Floral Inventory							
Scientific Name	**Common Name**	**CW**	**GRank**	**COSEWIC**	**Nrank**	**SARO**	**SRank**
Rubus x neglectus (Rubus idaeus ssp. strigosus X Rubus occidentalis)	Black, Red, and Hybrid Raspberry		GNA		NU		SNA
Tilia americana	American Basswood	3	G5		N5		S5
Fagus grandifolia	American Beech	3	G5		N5		S4
Calystegia sepium ssp. americana	American False Bindweed	0	G5T5		N5		S5
Phragmites australis ssp. americanus	American Reed	-3	G5T5		N5		S4?
Elaeagnus umbellata	Autumn Olive	3	GNR		NNA		SE3
Carya cordiformis	Bitternut Hickory	0	G5		N5		S5
Prunus serotina	Black Cherry	3	G5		N5		S5
Acer nigrum	Black Maple	3	G5		NNR		S4?
Juglans nigra	Black Walnut	3	G5		N4		S4?
Sanguinaria canadensis	Bloodroot	3	G5		N5		S5
Fraxinus quadrangulata	Blue Ash	3	G5	THR	N3	THR	S2?
Carpinus caroliniana	Blue-beech	0	G5		N5		S5
Ranunculus hispidus	Bristly Buttercup	0	G5		NNR		S3
Quercus macrocarpa	Bur Oak	3	G5		N5		S5
Circaea canadensis ssp. canadensis	Canada Enchanter's Nightshade	3	GNR		NNR		S5
Prunus virginiana	Choke Cherry	3	G5		NNR		S5
Galium aparine	Cleavers	3	G5		N5		S5
Sanicula odorata	Clustered Sanicle	0	G5		N5		S5
Rhamnus cathartica	Common Buckthorn	0	GNR		NNA		SE5
Arctium minus	Common Burdock	3	GNR		NNA		SE5
Taraxacum officinale	Common Dandelion	3	G5		N5		SE5
Cerastium fontanum	Common Mouse-ear Chickweed	3	GNR		NNA		SE5
Lysimachia nummularia	Creeping Jennie	-3	GNR		NNA		SE5
Rumex crispus	Curly Dock	0	GNR		NNA		SE5
Cardamine concatenata	Cut-leaved Toothwort	3	G5		N5		S5
Crataegus mollis	Downy Hawthorn	0	G5		NNR		S4S5
Ostrya virginiana	Eastern Hop-hornbeam	3	G5		N5		S5
Juniperus virginiana	Eastern Red Cedar	3	G5		N5		S5
Pinus strobus	Eastern White Pine	3	G5		N5		S5
Lonicera periclymenum	European Honeysuckle		GNR		NNA		SEH
Alliaria petiolata	Garlic Mustard	0	GNR		NNA		SE5
Fraxinus pennsylvanica	Green Ash	-3	G5		N5		S4
Apocynum cannabinum	Hemp Dogbane	0	G5		N5		S5

Geranium robertianum	Herb-Robert	3	G5		N4		S5
Ranunculus recurvatus	Hooked Buttercup	-3	G5		NNR		S5
Arisaema triphyllum	Jack-in-the-pulpit	-3	G5		N5		S5
Lemna minor	Lesser Duckweed	-5	G5		N5		S5?
Podophyllum peltatum	May-apple	3	G5		N5		S5
Typha angustifolia	Narrow-leaved Cattail	-5	G5		N5		SE5
Ribes rubrum	Northern Red Currant	5	G4G5		NNA		SE5
Alisma triviale	Northern Water-plantain	-5	G5		N5		S5
Matteuccia struthiopteris	Ostrich Fern	0	G5		N5		S5
Toxicodendron radicans	Poison Ivy	0	G5		N5		S5
Ribes cynosbati	Prickly Gooseberry	3	G5		N5		S5
Cornus sericea	Red-osier Dogwood	-3	G5		N5		S5
Vitis riparia	Riverbank Grape	0	G5		N5		S5
Onoclea sensibilis	Sensitive Fern	-3	G5		N5		S5
Carya ovata	Shagbark Hickory	3	G5		N5		S5
Acer saccharinum	Silver Maple	-3	G5		N5		S5
Dryopteris carthusiana	Spinulose Wood Fern	-3	G5		N5		S5
Geranium maculatum	Spotted Geranium	3	G5		N5		S5
Geum vernum	Spring Avens	3	G5		N4		S4
Acer saccharum	Sugar Maple	3	G5		N5		S5
Malus coronaria	Sweet Crabapple	5	G5		NNR		S4
Galium triflorum	Three-flowered Bedstraw	3	G5		NNR		S5
Parthenocissus quinquefolia	Virginia Creeper	3	G5		N4N5		S4?
Hydrophyllum virginianum	Virginia Waterleaf	0	G5		N5		S5
Fraxinus americana	White Ash	3	G5		N5		S4
Populus alba	White Poplar	5	G5		NNA		SE5
Picea glauca	White Spruce	3	G5		N5		S5
Erythronium albidum	White Trout-lily	3	G5		N4		S4
Verbena urticifolia	White Vervain	0	G5		N5		S5
Fragaria virginiana	Wild Strawberry	3	G5		N5		S5
Agrimonia striata	Woodland Agrimony	3	G5		N5		S4
Betula alleghaniensis	Yellow Birch	0	G5		N5		S5

Table 3 Flora species observed on the property

Fauna

The following table lists the fauna species observed during the 2024 field surveys. SCRCA staff identified four species at risk fauna on the property, three of which are designated as Special Concern provincially and federally and one has been designated as Threatened. The habitat for these species should be protected and supported and is further described in the final management recommendations section.

Fauna Species Inventory				
Common Species Name	**Scientific_Species_Name**	**Srank**	**COSEWIC**	**SARA_STATUS**

Eastern Gray Squirrel	Sciurus carolinensis	S5	0	0
white-tailed deer	Odocoileus virginianus	S5	0	0
Red-winged blackbird	Agelaius phoeniceus	S5	0	0
midland painted turtle	Chrysemys picta marginata	S4	SC	Special Concern
wood frog	Lithobates sylvaticus	S5	0	0
red admiral	Vanessa atalanta	S5B	0	0
american bullfrog	Lithobates catesbeianus	S4	0	0
canada goose	Branta canadensis	S5	0	0
yellow warbler	Setophaga petechia	S5B	0	0
song sparrow	Melospiza melodia	S5	0	0
mourning dove	Zenaida macroura	S5	0	0
warbling vireo	Vireo gilvus	S5B	0	0
rose-breasted grosbeak	Pheucticus ludovicianus	S5B	0	0
snapping turtle	Chelydra serpentina	S4	SC	Special Concern
field sparrow	Spizella pusilla	S4B, S3N	0	0
gray catbird	Dumetella carolinensis	S5B, S3N	0	0
american crow	Corvus brachyrhynchos	S5	0	0
blue jay	Cyanocitta cristata	S5	0	0
american robin	Turdus migratorius	S5	0	0
red-eyed vireo	Vireo olivaceus	S5B	0	0
wood thrush	Hylocichla mustelina	S4B	THR	Threatened
american toad	Anaxyrus americanus	S5	0	0
eastern chipmunk	Tamias striatus	S5	0	0
red-bellied woodpecker	Melanerpes carolinus	S5	0	0
Eastern Towhee	Pipilo erythrophthalmus	S4B, S3N	0	0
Baltimore Oriole	Icterus galbula	S4B	0	0
Brown-headed cowbird	Molothrus ater	S5	0	0
Yellow-rumped warbler	Setophaga coronata	S5B, S4N	0	0
house wren	Troglodytes aedon	S5B	0	0
Great Crested Flycatcher	Myiarchus crinitus	S5B	0	0
eastern wood-pewee	Contopus virens	S4B	SC	Special Concern
indigo bunting	Passerina cyanea	S5B	0	0
European Starling	Sturnus vulgaris	SNA	0	0
Common yellowthroat	Geothlypis trichas	S5B, S3N	0	0

Table 4 Fauna species observed on the property

Forest Management

Plantations have been established at various locations within the property as noted in the ELC designation. SCRCA staff completed a forest inventory in 2006, and mapping

was updated in 2012. This inventory looked at the forested areas, woodlands, and plantations throughout the property and identified management actions and noted damage caused by insects, disease and pests (see Appendix B). Although there is currently no active harvesting planned, woodland management in the form of tree removal may occur. Updated forest inventories, forest health monitoring and climate change may suggest a more active management role of the woodlands.

There are currently no proposed planting projects on the property, however, infill plantings of existing plantations may occur as required. The SCRCA may also investigate other planting opportunities if/when appropriate which could include future reforestation of areas that are not currently in natural cover. This would align with the overall goals and objectives of the property since the time of acquisition.

It is also noted that as the effects of a changing climate become more prevalent the growth and health of the forests will be affected. One anticipated change is the lack of available moisture as temperatures increase. This will put certain native woody species outside of their current and historic growth zones. To mitigate these impacts, the SCRCA will ensure species diversity is maintained or increased in the forest communities and encourage or introduce drought tolerant species or those with the greatest climatic range for planting or reforestation projects to ensure the sustainability of these forests.

Site Use

Current Land Uses

The A.W. Campbell Conservation Area provides active recreation in the form of seasonal and overnight campsites, supervised swimming and outdoor education opportunities. Passive recreation is also available in the form of nature trails. Additional facilities and programs are on site to serve the needs of visitors to this property. There are 80 acres of agricultural land on the property leased to a tenant farmer through a 5-year lease agreement. The following table identifies the permitted uses on the property.

Permitted Site Uses			
Activity	**Permitted** (Yes/No)	**Occurring** (Yes/No)	**Notes:** (e.g. Conditions, Parties Involved, Start/End Date)
Passive Recreation			
Dog Walking	Yes	Yes	Dogs must be on a leash and under control of the owner at all times
Fishing	Yes	Yes	Must follow Provincial regulations and guidelines

Foraging (Food Gathering)	No	No	Where requested, collaboration with indigenous communities is encouraged
Motorboat Use	No	No	Not permitted on the reservoirs
Paddling	Yes	Yes	Paddling is permitted on the reservoir and is encouraged through the rental of canoes and kayaks, or visitors are welcome to use their own.
All-Terrain Vehicle Use	No	Yes	Damage is occurring to property including on trails and in the riverbed
Horseback Riding	No	No	
Hunting	No	No	
Mountain Biking	Yes	Yes	Bikes are permitted on marked trails but should remain aware of other users and travel at a modest speed
Hiking	Yes	Yes	Permitted only on marked trails
Snowmobiling	No	No	
Observing/Photographing Nature	Yes	Yes	
Swimming	Yes	Yes	Only in pool, reservoir is unsafe for swimming and posted as such
Recreational Drone Use	No	No	Permission may be available by permit.
Active Recreation			
Soccer	No	No	
Frisbee Golf	Yes	Yes	Older style course, no basket on poles and poles in close proximity
Mini Golf	No	No	Historic course removed in 2016 due to flooding issues, investigate re-development
Snow Shoeing	Yes	No	
Playgrounds	Yes	Yes	
Camping			
Overnight Camping	Yes	Yes	34 overnight camping sites including three group (16) campsites
Seasonal Camping	Yes	Yes	112 seasonal campsites

Campfires	Yes	Yes	In designated fire pits on campsites and in Group C pavilion fireplace

Table 5 Permitted site uses

***Some unpermitted activities may be assessed on a case by case basis and special permission can be granted in certain circumstances.*

Land and Resource Management Activities

The SCRCA may conduct a variety of activities to improve the land and natural resources of the property. These activities are described below.

Fish Stocking – fish stocking has occurred on the property in the past when funding for such activities was available. Although there is no current fish stocking occurring it is an activity that may be done where the SCRCA feels the activity will improve the natural ecosystem function and/or improve recreational opportunities.

Forestry (reforestation, harvesting) - these activities are not active on a yearly basis but could be completed when recommended through the Forest Management Plan.

Planting (native species, other) - this activity occurs minimally throughout the property and generally consists of infill planting in low numbers through the SCRCA memorial tree program.

Invasive Species Management – ongoing activity, use of manual and/or chemical control when needed. The scope of the project varies depending on funding.

Herbicide Application – in general herbicide is not used on the property (with the exception of agricultural areas), limited spot spraying for poison ivy or for invasive species control may be completed where necessary.

Prescribed Fire – although prescribed fire is used as a management activity on some properties particularly in prairie or pollinator habitat the use of prescribed fire is not a control method used or recommended at this property.

Adjacent Land Use

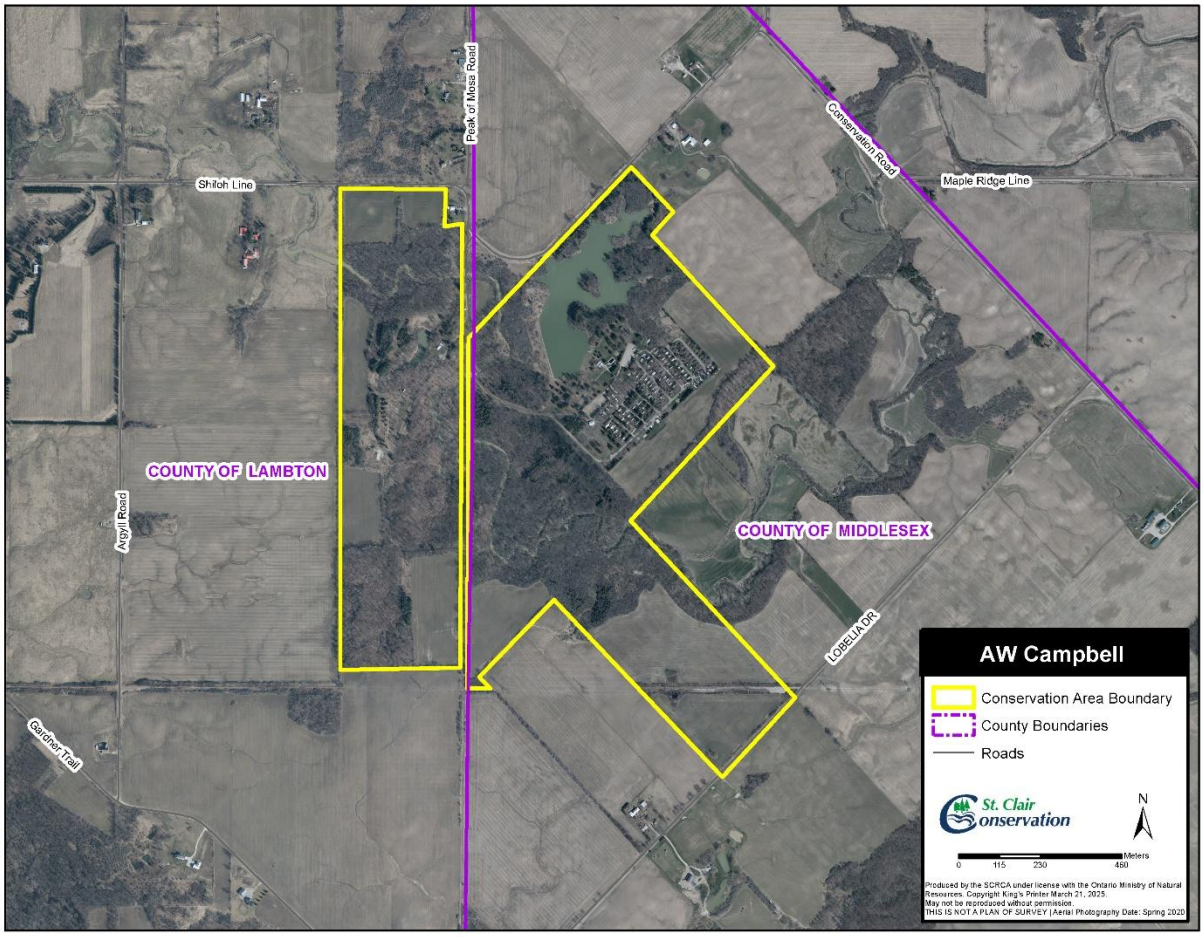


Figure 7 Adjacent land use surrounding A. W. Campbell CA

The A.W. Campbell Conservation Area is in a rural area, adjacent land uses consist predominantly of agricultural land and a few rural residential properties. Pastureland and row crop are the predominant forms of agriculture in the area. The closest urban area is Alvinston.

The boundaries indicated on this map are approximate and not to survey grade.

Development and Infrastructure

Buildings and Structures

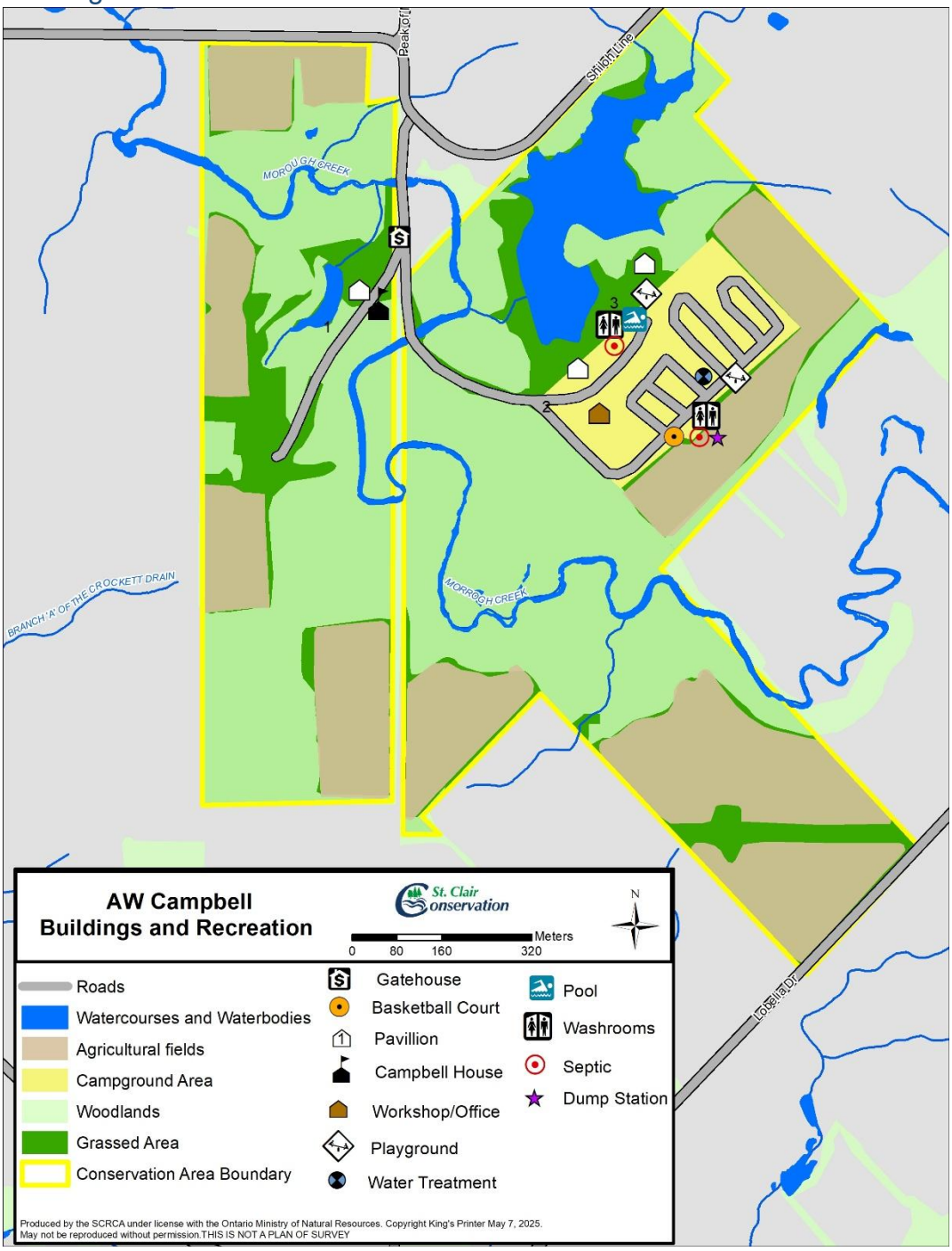


Figure 8 Buildings and Structures

Description	Comments
Rectangular Pavilion #1 - 22’ x 40’ with steel roof, concrete floor, and 6”x6” wood posts. Includes stone fireplace and steel chimney; located in Group C camping on west side of property	Popular feature of Group C camping area. Not available for pavilion rentals as it is connected/included with Group C camping. Located next to small pond/reservoir. Chimney and fireplace were repaired in 2023, this repair has extended the life of the firepit in the short term. Some repairs/upgrades will be required in the near future.
Gatehouse - 12’x12’ vinyl sided building with steel roof on cement pad; located at property entrance	Currently it does not function as a gatehouse but could again in the future. It would require computer/internet connection and staffing resources to operate as a gatehouse. Without controlled access, day-use revenue does not accurately reflect visitation, honor system is ineffective. Automated gate would be beneficial.
Workshop - 45’x32’ pole structure with steel clad roof and walls. Two bay workshop with attached office, staff lunchroom and storage located centrally on east side of property	Workshop constructed in 2008 Office and lunchroom added in 2015. It is sufficient for staff needs.
Hexagonal pavilion (#2) - 30’ diameter with steel roof and steel posts on cement pad in central day use area, across from workshop	In fair condition Used occasionally for bands and other campground events (generally low use) The relatively small pavilion can host a limited number of visitors.
Hexagonal pavilion (#3) - 30’ diameter with steel roof and posts on cement pad located within Group Camp B	Desirable feature for Group Camping patrons. Concrete in rough shape, heaves and cracks. For continued use, it will require new concrete.
Visitor center and Pool Washroom - 24’ x 24’ block wall washroom and shower area, 22’ x 40’ board and batten pine sided visitor center including kitchenette, 40’ x 18’ covered porch with wood posts, entire building has steel clad roof and concrete floor	Visitor center is well used but limitations due to size. Used for Bingo, bands (exterior), cards, etc. Accessibility issues - Step up in building not accessible to everyone. Showers are necessary for pool operation. Showers also used by Group A and B campers. Showers re-done in 2001. Investigate unisex showers with exterior entry Some repairs/upgrades to the covered porch will be required in the near future for continued use.

Main washroom building - 22’ x 30’ block wall with steel clad roof and concrete floor located to the south of the main campground, east side of the property; includes laundry facilities (freestanding 8’x 8’ pine sided garden shed)	Building last renovated in 2007/08 and was fully renovated at that time. Includes both men’s and women’s washrooms and showers. This is considered the main washroom building and is used by both transient and seasonal campers. The current location of water heaters (in maintenance corridor) is crowded and difficult to access for maintenance. Can not be replaced in current location. Investigate exterior showers (unisex) and consider reconfiguring the building when next renovated. More than one machine for laundry may be beneficial as demand increases. Investigate a larger building for laundry and potentially including space for water heaters.
Water Treatment Building - 8’ x 12’ steel clad walls and roof on cement pad; includes water treatment System (chlorination system) drinking water well located adjacent to the building.	Constructed in 2000, not much has changed since. Multiple staff trained as small drinking water systems operators. Not wired for a generator, it does not function during power outages.
Dumping Station and septic system - (septic tank, gravity feeds to leaching bed) located on southern boundary of seasonal camping area	Station and septic system currently being designed for replacement and environmental compliance approval. Occasionally has congestion as trailers line up to use dump station on common departure days.
Campbell House - Board and batten siding on wooden frame, cold cellar under Kitchen. Located on the western portion of the property across from Group C camping. This is the original homestead of Archie Campbell.	Approved by Municipality for demolition in near future, based on safety concerns/structural engineer’s report.

Table 6 Description of Building and Structures

Roads and Trails

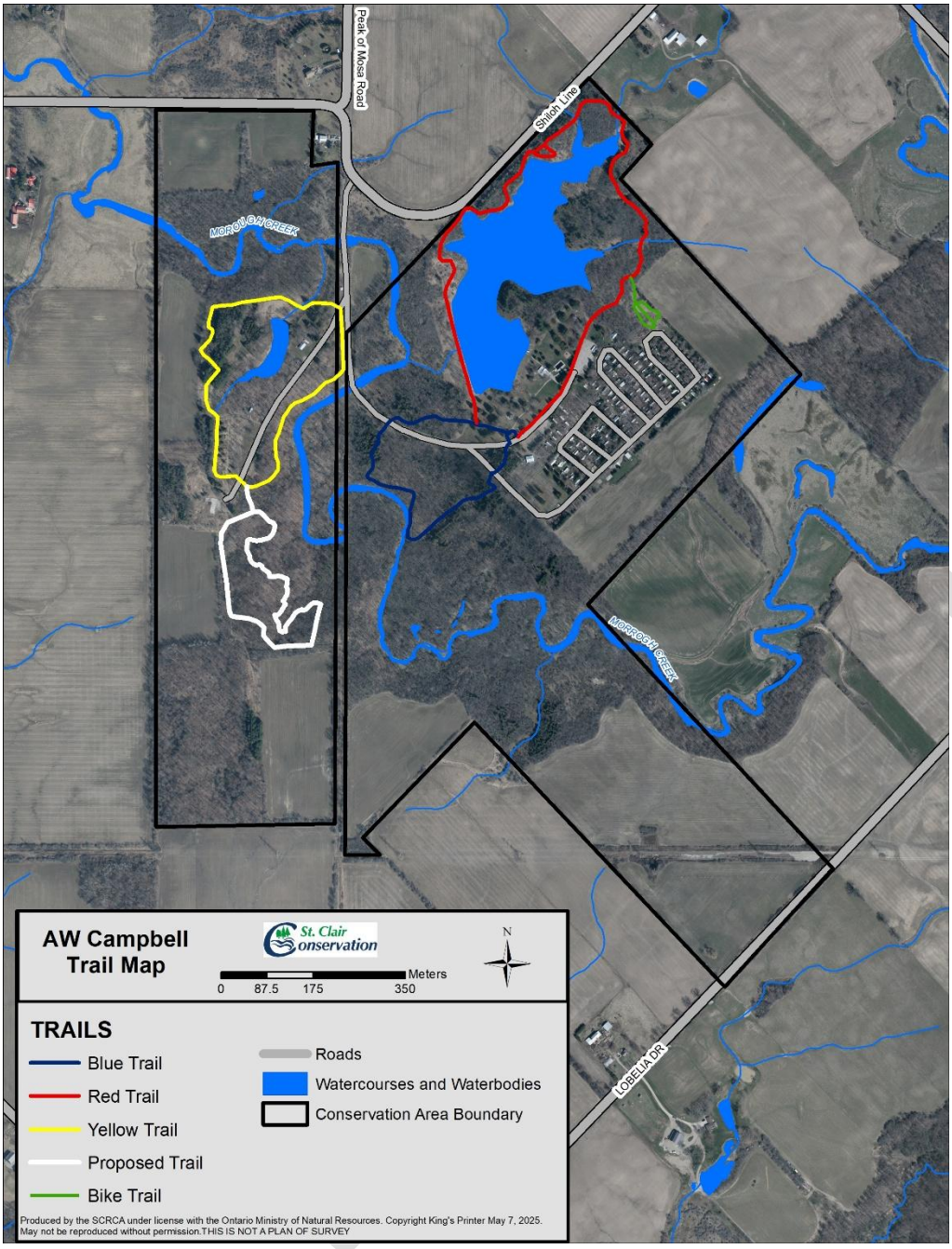


Figure 9 Trails, Roadways and Recreational Infrastructure

Description	Comments
Campbell trail (yellow) – 1.1km loop on west side of property from gatehouse, along Morrough Creek, across road, north through plantation and around 2-acre reservoir.	Trail provides viewing access to Morrogh Creek, Sugar Maple Bush, Plantation, and a small reservoir. Natural trail surface.

	There are some wet sections along low lying areas next to the river. Portion adjacent to roadway (by gatehouse) is not well defined. Dock at 2-acre reservoir for fishing and nature viewing. Commonly used by day-use and dog walkers as trail runs past gatehouse parking area.
Lake Trail (red) – This 1.7km trail generally circles the large reservoir.	Provides aesthetic views of the reservoir. Used for fishing access to reservoir. Top of earthen berm (dam) makes up a portion of the trail. Trail surface material is natural with some areas of stone dust. A portion of this trail has permitted golf cart use. Multiple small boardwalks are located along the lake trail. No signage indicating trail head, some visitors have had difficulty locating trail access.
River Trail (blue) – This 0.9km trail is found just west of the main campground and day-use area. It takes visitors through a black walnut lowland area.	Trail within rare Black Walnut Lowland Deciduous Forest, lots of wildlife noted in the loop. Trail is well used, centrally located in the park. A large section of trail lies within the floodplain. ATV use noted along and through river, causing damage.
Proposed white trail (Wilderness trail) – Located south of the yellow trail through a Maple Forest. The proposed route is 1.0km.	Original loop had significant ATV damage (ruts) and aging bridges prompting the Authority to no longer maintain or map this trail. ATVs often enter from end of Junction Road, hard to control access along this property line.

	Two bridges in poor condition, one was removed in spring 2024, the other removed in spring of 2025 Was a popular trail when open and in better condition. If restored, new route should avoid the need for large bridges.
Main Parking lots - located in the day-use area across from the workshop and adjacent to the pool, gravel surface	Generally sufficient space for current uses. Narrow often leaving cars parking on only one side.
Kid's Bike course - along eastern boundary of property	Small course, suitable for young riders. Chip and dust course prone to erosion on slope. Can lead to rills on trail. No obstacle features along trail.

Table 7 Description of Roads and Trails

Power Lines, Pipelines and Easements

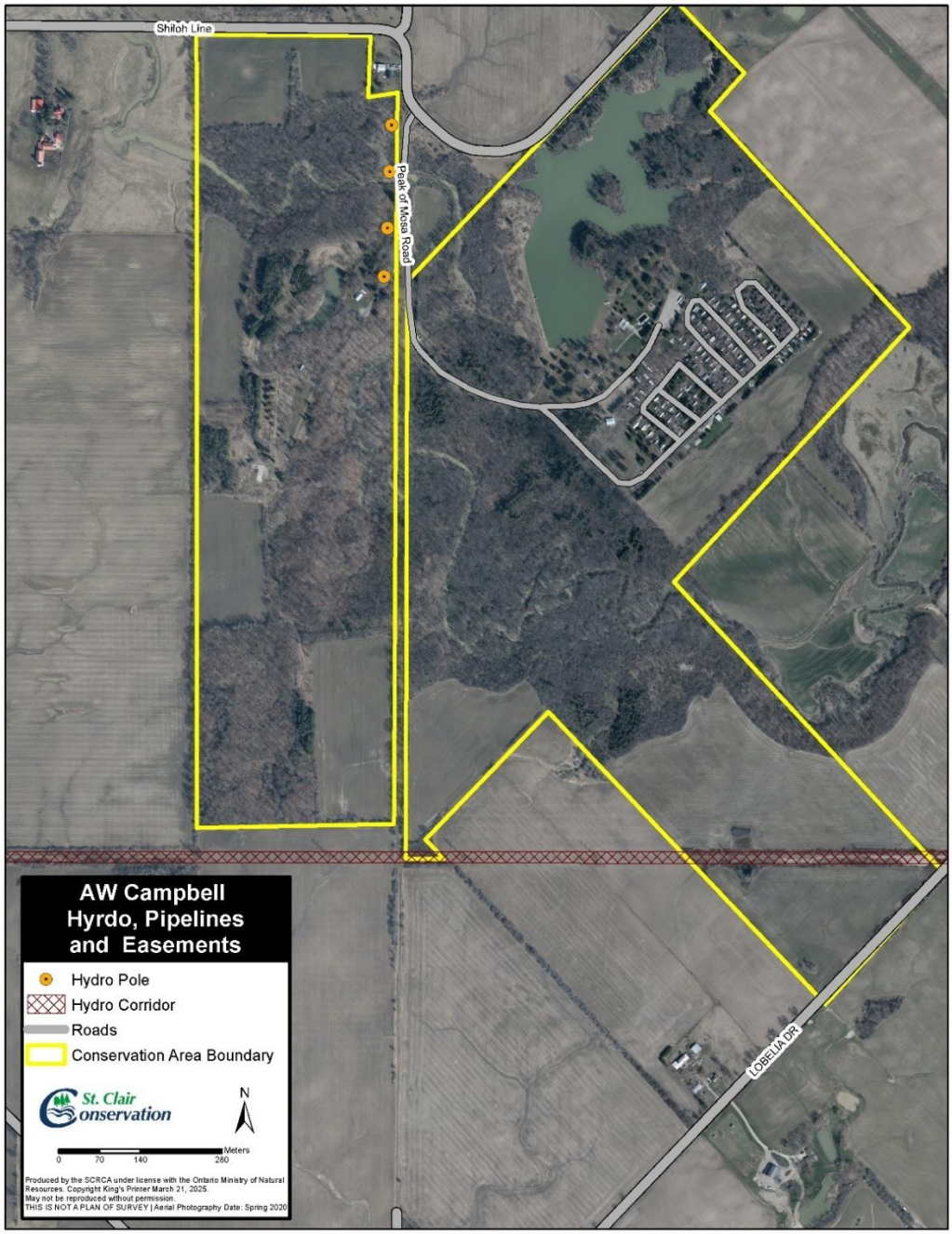


Figure 10 Hydro Line and Hydro Corridor locations on the property

Description	Comments
Hydro Corridor	Large corridor with steel structure runs along the southern end of the property through the agricultural field.
Hydro Poles	Four hydro poles run into the property from Shiloh Line.

Table 8 Description of Hydro Lines and Corridor

Recreational Infrastructure

(see Figure 7)

Description	Comments
25 x 50 inground pool – ~5' max depth with 10' x 12' steel clad pool shed on cement pad	Pool is well used on weekends. Popular feature for both transient and seasonal campers. Typically, open July and August when lifeguard on duty 11am – 7pm. Some use by adults, largely used by kids. Significant repairs/upgrades required in the near future (tile replacement, plaster repair, concrete resurfacing, safety cover, pumps) Significant challenges in recent years to attract and retain lifeguards. Have had reduced operating hours over the past two seasons due to lifeguard shortages. Class A pool requires lifeguards to operate.
Playground – located in day-use area adjacent to the pool	Equipment in fair condition, installed in 2010. Designed for users ages 18 months to 12 years.
Playground – little tikes brand, located south of seasonal camping	Installed in 2002, equipment in fair condition but with some compliance issues. Designed for users ages 5 to 12 years old. Swing set replaced in 2024.
Kayak and Canoe rentals - located in day use area adjacent to the reservoir. Dock is 5'x15' with a 5'x10' ramp to shore.	New aluminum pole dock with cedar decking installed in spring of 2025. Canoes and kayaks provide visitors an opportunity to explore the reservoir. Low rental revenue, many visitors bring their own canoe/kayak.
Beach Volleyball court - located east of day use area adjacent to Group B campsite	Poorly used in the current location as it is behind group camping. Visitors are hesitant to use it due to proximity to group camping. Located in a heavily shaded area, sand is slow to dry out.
Horseshoe pits (2) - located at the south end of seasonal camping area	In fair condition, minimal use by campers.
Basketball court - cement 40'x20' pad	Used both for basketball and road hockey. Facility is older and in poor condition. Usage varies year by year based on the current seasonal camper population.

	Small court is more suitable for kids.
Disc golf - course located in day use area across from workshop	Outdated course, minimal use, not a very big space/area. Posts only as targets, no modern baskets/chain.
Mini-golf	Course removed due to flooding in late 2014. A portable 9-hole course was constructed in 2017, however, it has not been a popular activity as the portable course has poor playability.
Overnight Camping (18 campsites) - Overnight campsites have gravel parking with a picnic table and firepit 40’ x 50’ site size.	Well used, during the summer and weekends throughout the season Sites are all side by side along a single road. All sites have water and 30-amp hydro connection. No sewers. Campers have access to dump station at no additional charge. Camping season runs from May 1st to the Sunday following Thanksgiving.
Group Camping (16 service connections) Sites A, B and C	Group areas A and B have 30-amp hydro and water connections for individual trailers. Group C has 30-amp hydro connections for individual trailers. Camping season runs from May 1st to the Sunday following Thanksgiving. Produce less revenue than other transient campsites per connection.
Seasonal Camping (112 sites)	All campsites have 30-amp hydro and water connections. Sites vary in size from 35’ x 50’ to 52’ x 105’. Most sites have mature trees and are heavily shaded. Seasonal campers organize events throughout the camping season on a volunteer basis. Camping season runs from May 1st to the Sunday following Thanksgiving. It is a very popular form of camping and the SCRCA often has a waitlist of interested campers.

Table 9 Description of Recreational Infrastructure

Dam and Reservoir

The 18-acre reservoir located on the property is a popular feature providing recreational opportunities to campers and visitors through canoe and kayak rentals, wildlife

observation, and fishing opportunities. Swimming was a popular activity at the time of construction until the 1990's when high bacteria levels found in the water made it unsafe for swimming. Cautionary signage has since been posted to warn visitors. Access to the reservoir is from the day use area where a removable dock is installed next to the canoe and kayak rental stand. A trail system exists along the perimeter of the lake, providing viewing opportunities and access to unofficial fishing locations.

The reservoir is fed by three intermittent watercourses (dry for part of the year) that drain upstream agricultural land. The reservoir is controlled by a bottom draw valved and outlets into Morrough Creek downstream. Online ponds have the potential to have negative impacts on the water quality of a system by disrupting the natural flow, increasing nutrient and sediment retention, increasing water temperatures, and hindering the movement of fishes and other aquatic organisms.

The shoreline of the reservoir is also contributing to some of the sedimentation due to the erosion and slumping of the banks that has occurred over time. This has led to shallower depths along the edges of the lake making some areas less functional for recreation.

Due to the increase in nutrients and bacteria in the water algal blooms have been observed in the reservoir annually and in one instance toxic blue-green algae was documented. It is unclear whether it is point source or non-point source factors contributing to the high nutrient levels in the reservoir.

Educational Opportunities

As previously discussed, prior to construction of the education building at L.C. Henderson Conservation Area in the mid 1990's the A.W Campbell Conservation Area was the primary outdoor education center for the SCRCA. At that time all the programming was moved to the new location. The education department continues to run the maple syrup program for one week of the year at A.W. Campbell.

The maple syrup program provides a history and demonstration of maple syrup production in Canada.

Through discussions with the education department there is no immediate need or active requests for additional programming at the A.W Campbell Conservation Area.

Sweet Maple Syrup (Grade FDK – 3)

Available MARCH 2025

How was Maple Syrup discovered? How has it been produced over the years? Are Maples the only trees that make syrup? Why is Maple Syrup an important part of Canadian and French Canadian culture? Find out the answers to these questions and more by visiting A.W. Campbell Conservation Area for a FIELD TRIP! This program offers a fun and interactive mix of learning – activities, games, and songs in the Sugar Bush!

Site Concepts for Camping

Alternative development proposals have been formulated and evaluated during the preparation of this plan. Using the background information and understanding the current use and demand for the existing conservation area the SCRCA proposes four camping concepts for consideration.

Concept 1

This development concept looks at transitioning the campground to exclusively seasonal camping. To do this the SCRCA would look at converting all overnight camping sites to seasonal sites along with breaking up Group campsites A and B and creating three or four seasonal sites. This will remove Group Camp C from the west side of the property. Recommendations include:

- Transition site 110-128 to seasonal
- Transition Group A and B to 4 seasonal sites
- Abandon Group C campsites
- Switch to a less expensive software system to manage seasonal reservations

Financial Analysis

Recommendation	One time cost	Annual Revenue
Convert 18 transient sites to seasonal	10000	
Convert Group A/B to four seasonal sites	5000	-8000 revenue
Reduced software expense		+3000 savings
Abandon Group C camping		-6000 revenue
Total	$15,000	-$11,000 annually

Overall, this concept will have a small revenue reduction from our current program but will streamline operations with some cost savings. By converting Group Camp areas A and B into seasonal sites, additional hydro will be available to power a future visitor's centre or Electric Vehicle charging station. Focusing solely on seasonal camping will allow for easier adoption of an automated gate system, improving security at the conservation area. An automated gate would also increase the day-use revenue collected. Expansion to the west side of the property would not be feasible in this concept as it would require construction of a sewer system and a new septic tank and weeping bed. This would not be cost effective for the creation of approximately 14 campsites.

Pros	Cons
Streamlined operations, reduced maintenance and software expenses	Reduced opportunity for the public to enjoy transient camping
Further meets current demand for seasonal camping	Loss in revenue from transitioned campsites
Reduced maintenance of transient campsites	Authority would not have any group camping areas
Easier to install and manage automated gate (no integration with transient camping software)	Current overnight sites are smaller than current seasonal, would require some alterations
Reduces conflict between seasonal/transient campers	Risk that if seasonal demand drops, some sites may become vacant
	Loss of exposure to transient campers. Transient campers often become seasonal campers.

Table 10 Scenario 1 Pros and Cons

Concept 2

Concept 2 is split into 2a and 2b. In both scenarios SCRCA would maintain a similar mix of seasonal and transient camping as the current camping program and add new transient campsites on the west side of the property. The difference between concepts will be the inclusion of roofed accommodations to some of the new campsites in option 2b. Figure 10 provides a potential location for the re-establishment of campsites on the west side of the property.

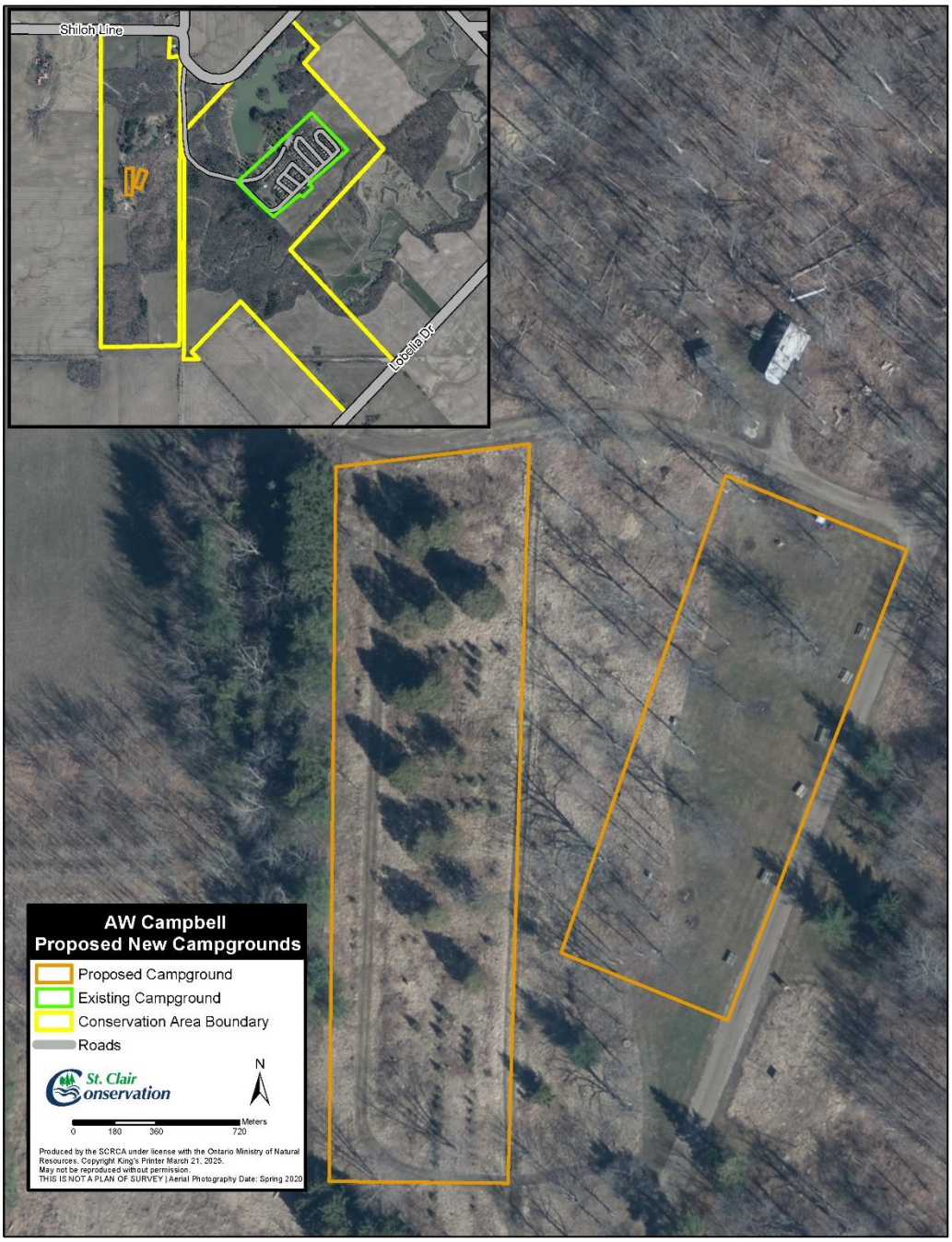


Figure 11 Proposed location of re-established campsites or camping facilities

Concept 2a

This concept aims to maintain both overnight and seasonal camping on the property while also re-introducing camping on the west side of the property along with other development/upgrades. Camping on the west side of the park could include an additional 14 transient campsites. Campsites would operate in a consistent manner with our current program. There is a limited amount of hydro available and the number of campsites created would not likely generate enough revenue to justify the construction

of a new washroom facility. Portable washrooms would be provided, and campers would have to travel to the main washroom facility for access to shower facilities.

Recommendations include:

- Add approx. 14 30-amp transient campsites with water supply, which would require re-establishment of a well, water treatment, hydro upgrades, road improvements, site creation, firepits, picnic tables, and portable washrooms
- Improve road on the west side of property
- To add 14 sites on the west side of the property, group c camping would need to be abandoned and the hydro re-directed to the new campsites.

Although group A and B camping areas are better utilized than group C, consideration should be given to converting these group camp areas into 4 or 5 transient or seasonal campsites. Currently group A and B have a combined 10 30-amp hydro connections. Reducing it to 4 or 5 would free up hydro for either a future new visitor center or for electric vehicle charging stations. This transition is anticipated to reduce revenue by $8000 annually. This could be done later, when ready for the installation of either a new visitors center or electric vehicle charging stations.

Financial Analysis

	One time cost	Annual
Add 14 transient sites on west side	145,000	+38,000 revenue
Abandon Group C camping		-6,000 revenue
Convert Group A/B to four seasonal or transient sites	5,000	-8,000 revenue
Total	150,000	+24,000

Pros	Cons
Maintain opportunities for transient campers	Capital cost to expand camping
Transient campers often transition to seasonal over time	New campsites will be further from shower facilities
Add additional revenue through expansion of camping opportunities	Will have to improve the hill to the west side of property to withstand more traffic
Potential to meet demand for additional seasonal sites	SCRCA would no longer have a group camping area if group sites A and B are converted
Operating both seasonal and transient sites provides flexibility to adapt to future market demand changes	

Table 11 Scenario 2 pros and cons

Concept 2b

Like Concept 2a, this concept will aim to maintain both overnight and seasonal camping opportunities while re-introducing camping to the west side of the property along with other development/upgrades. As with the previous option, camping on the west side of the park could include upwards of 14 campsites, 6 to 8 of which could be roofed accommodations (small cabins or yurts) and the remaining transient campsites. Roofed accommodations would require more staff resources for cleaning after visitors leave and before new visitors arrive but would otherwise operate in a consistent manner as the current camping program. There is a limited amount of hydro available and the number of campsites created would not likely create enough revenue to justify construction of a new washroom facility. Portable washrooms would be provided, and campers would have to travel to the main washroom facility for access to shower facilities.

The following recommendations would allow for expansion of camping to the west side of the property that includes roofed accommodations.

- Add 6-8 serviced campsites with small 1 room cabins or yurts
- Add 6-8 30-amp transient campsites
- Development of new campsites would require re-establishment of well, water treatment, hydro upgrades, road improvements, site creation, firepits, picnic tables, and portable washrooms
- Abandon group site C camping to supply hydro to new campsites

Financial Analysis

- Small cabin costs will vary depending on size and features of the cabins and are estimated to be between $35,000 and $65,000 each in addition to the $145,000 campsite development costs identified in option 2a
- Yurts will vary depending on size and features and are estimated between $25,000 and $50,000 each
- Yurts rent at a similar rate to cabins, they are less expensive to construct, but have a shorter lifespan

The demand for roofed accommodation is increasing and they are expected to generate between $7,500 and $11,000 annually per unit (before expenses)

- The initial investment for cabins/yurts is much higher and the estimated payback (8-10 years) will take longer, however this would fill a demand we currently do not accommodate

	One time cost	Annual
Develop 14 campsites	145,000	
Rent out 8 transient campsites		+24,000
Rent out 6 small cabins (least expensive cabins)	210,000	+45,000
Abandon Group C camping		-6,000
Total	355,000	+63,000

Pros	Cons
Provide roofed accommodations	Capital cost to build cabins
Maintain opportunities for transient campers	Capital cost to expand camping
Transient campers often transition to seasonal overtime	New campsites will be further from shower facilities
Add additional revenue through expansion of camping opportunities	Will have to improve the hill to the west side of property to withstand more traffic
Operating both seasonal and transient sites provides flexibility to adapt to future market demand changes	Increased staff time to clean cabins between visitors
Largest future revenue increase	Future maintenance costs to upkeep cabins (especially if wood siding used)
Could choose option 2a as a phase 1, add roofed accommodations at a future date as a phase 2	

Table 12 Scenario 3 pros and cons

Concept 3

The third concept is to maintain the existing camping program without expansion and only look to improve the existing infrastructure. Recommendations include:

- No concept specific recommendations
- See general recommendations

Financial Analysis

- There would be no significant capital investment required for the new infrastructure.
- The revenue would remain relatively the same with this concept as there are no major changes to the current operations of the property.

Pros	Cons
Requires no significant capital investment into new infrastructure	Stagnant revenue
Reduced risk if future camping demand is lower	
Focus on maintaining or improving existing facilities	

Table 13 Scenario 4 Pros and Cons

Concept Evaluation

Staff reviewed each concept against the following criteria and then rated it on a scale of 1 to 4, with 1 being the lowest and 4 being the highest score.

1. Future economic self-sufficiency of camping program.

2. Implementable within a practical time span (considers cost and other challenges to implementation).

3. Simplicity of operations for staff and low staffing cost

4. Flexibility/Adaptability to variations in future user demand.

5. Enhance the quality of visitor experience.

Evaluation

	Concept 1	Concept 2a	Concept 2b	Concept 3
Economic Self-sufficiency	2	2	3	2
Practical Timing	3	2	1	4
Operations	4	3	2	3
Adaptability to future user demand	1	3	3	2
Enhance visitor experience	1	3	3	2
Total	11	13	12	13

Table 14 Evaluation of concepts based on criteria

Preferred Concept (to be completed after Consultation Period)

- Identify preferred concept

General Management Recommendations

Final Management Recommendations are listed below. To achieve these goals, funding will be secured through conservation areas revenue, grants, and donations.

Action	Recommendation	Cost**
Signage	• Develop a new trail map and access point signage including accessibility information (x3 install locations)	$3,000-$4,000
	• Develop and install wayfinding signage	$800-$1,500
Trails	• Re-establish 4th trail loop (proposed white trail) on west side of property	$8,000-$10,000

	and re-route to avoid construction of large bridges and repair ATV damage*	
	• Close off access at dead end of Junction road	$5,000
	• Deter ATV use of trails (including signage, barricade and fencing)	$5,000-$7,000
	• Replace aging boardwalks where needed on Lake Trail	$5,000-$10,000
	• Better define the Yellow trail route along roadway by gatehouse (stone dust installation)	$2,000-$3,000
	• Install stone dust upgrades to portions of the trails not impacted by flooding	$5,000-$15,000
	• Improve surfacing on kid's bike trail	$3,500
	• Add obstacles/features to kid's bike trail	$1,500 - $2,500
Forest Management/Natural Areas	• Promote natural regeneration of Blue Ash through canopy opening and/or vegetation removal, (https://www.ontario.ca/page/recovery-strategy-blue-ash)	Staff Time
	• Investigate areas in plantations for infill planting	Unknown
	• Only native species or those acceptable to the area will be planted for forestry or wildlife habitat on the property	Unknown
	• Thin plantations where needed to improve health and growth of the plantation	Staff Time
	• Protect natural and sensitive features by controlling/restricting usage	Unknown
	• Removal of hazard trees as per the SCRCA Hazard Tree Policy	Unknown
	• Any trees cut, or debris falling naturally, will be removed from trails, parking lots, or other managed areas as necessary, with an appropriate amount of material left onsite to decompose naturally	Unknown

Access	• Investigate opportunities for secondary access during high water or emergency events*	Unknown
Recreation	• Investigate removal of pool and installation of splashpad or complete pool upgrades*	Splashpad $300,000+ Pool Upgrades $100,000-$150,000
	• Replace basketball court with a larger facility, install better quality hoops that extend further into court	$50,000-$80,000
	• Investigate the feasibility of pickle ball court	$50,000-$70,000
	• Consider a multi-sport facility (basketball & pickleball)*	$100,000-$200,000
	• Installation of permanent 9-hole mini-golf course with improved drainage if required (location to be determined)	$20,000 and up
	• Installation of shuffleboard	$20,000-$30,000
	• Install a disc golf course on the west side of the park, 6-9 hole course with modern baskets etc.	$15,000-$25,000
	• Remove the beach volleyball court	$2,500
	• Investigate feasibility of new recreational opportunities such as corn hole, holey board, etc.	Unknown
	• If playground replacement required, consider installation of a natural playground	$50,000 - $250,000
Washroom Facilities	• Upgrade septic system	Unknown
	• Replace and reconfigure water heaters in the main bathroom to allow maintenance access	$10,000 plus $15,000 new building
	• Investigate demand/feasibility of larger laundry building with second set of machines	$15,000 new building

	• Upgrade to exterior entry showers for both washrooms	Unknown
	• Ensure washroom facilities are accessible	Unknown
Camping	• See preferred concept selection on page 38 above	
	• Install an automated gate to improve security and collection of day-use fees*	$35,000-$40,000
Infrastructure	• Replace concrete in Group B pavilion (or remove pavilion if Group B camping is abandoned in the future)	$10,000-$12,000 for new concrete
	• Upgrades to Group C pavilion (replace wood posts and fascia)	$8,000-$12,000
	• Upgrades to existing visitor centre including new concrete (40'x18') porch and replace wood porch posts	$20,000
	• Upgrade aging hydro services	$25,000-$100,000
	• Investigate opportunities to set up annual inspections with the Electrical Safety Authority to ensure compliance with Electrical code in the park.	Unknown
	• Improve the road up the hill to the west side of the park to reduce and mitigate washouts	$5,000 - $10,000
	• Investigate feasibility of new visitor center for campground events, location to be determined	$55-$65 per sq ft
	• Wire the water treatment building for a generator	$2,500
	• Improve seal of building envelope in water treatment building	$2,500
	• Add second lane at sewage dump station to reduce congestion	Consider as part of larger septic project

	• Complete removal of Campbell House and commemorate appropriately	$20,000
	• Investigate need for electric charging stations*	$25,000-$30,000 for dual port *insufficient hydro available currently
	• Where hydro limitations exist, new facilities should be powered by solar power when appropriate	Unknown
	• If a new visitor centre is constructed, repurpose the old center as a Wifi café*	$10,000 for interior renovation
Invasive Species	• Locate areas of buckthorn and remove	Ongoing and grant dependent
	• Identify Phragmites patches and control using manual and chemical options	

Table 15 General Management Recommendations

** Budget costs are in 2025 dollars, projects and budgets to be reviewed annually.
*** Major capital items dependent on fundraising/grant.

*Additional Details for Select Recommendations**

Re-establish 4th Trail Loop (Proposed white loop – see figure 8)

The 4th trail loop on the west side of the property should be re-established to increase the length of nature trails. The previously established route was removed from the trail network due to ATV damage and the unsafe conditions of two old bridges. The previous bridge locations had steep ravines and hill slopes that require large span bridges (24-32') which are expensive to replace. The new trail route would seek a path that would utilize small boardwalks to cross drainage rather than large-span bridges. Damage caused by ATVs would require repair. Installation of signage, barricades, and gates should be explored to deter future ATV use of this area.

Access to Property

Currently the A.W Campbell Conservation Area has only one access to the property. This access is off Shiloh Line and provides access to both the west and east side of the property. The east side of the property is accessible by crossing twinned culverts over Morrogh Creek. In extreme rain events, the water in Morrogh Creek has overtopped this road and prevented those on the east side of the property from leaving. It is important that the campers, park staff and emergency services have access to both sides of the

park in all conditions. The SCRCA will investigate an emergency access route along the reservoir toward Shiloh Line.

Pool vs Splashpad

The pool at the A.W Campbell Conservation Area was installed in the early 2000's. The pool is a popular feature at the park. However, there have been issues in recent years due to a shortage of lifeguards. Additionally, the pool is aging and will soon require significant investment. Some of the issues with the pool include cracks/heaving in the cement deck which may lead to tripping hazards, repairs required to the plaster bottom, and the tile on the sides need replacement. Other upgrades that may be required include re-constructing the pump building and installing a safety cover for the off season. The cost to fully upgrade and restore the pool is estimated at $100,000 to $150,000.

Since before the Covid-19 pandemic SCRCA has encountered challenges with obtaining lifeguards. Since the pandemic, this has become a greater challenge. The pool is open for a short 10-week duration during the summer months and operates 8 hours each day. With difficulties in hiring and retaining lifeguards, we have experienced early pool closures or daily closures, shortened seasons and disappointed campers. The SCRCA budgets approximately $20,000 annually on lifeguard wages at A.W. Campbell.

It is recommended that an alternative feature like a splash pad be investigated to replace the pool. A splashpad provides the opportunity for a longer season (14 to 16 weeks, weather dependent), longer hours of operation, no requirement to have lifeguards on duty, and reduces risk and liability to the Authority, all while still providing a safe place for campers to cool down during hot and humid days. A 2023 cost estimate to remove the pool and install a splashpad was provided to the Authority at approximately $300,000.

New Recreation Area

The recreational facilities at the A.W Campbell CA are largely original to the park, and some features like the permanent mini golf course have been removed in recent years due to wet conditions in the location and aging infrastructure. Other features like the basketball court are undersized and in poor condition. To revitalize the recreational facilities at the park it is recommended that a new location be investigated to provide a central location for multiple recreational facilities to be located. The area across from the workshop in the day-use area may provide the necessary location for this development as it is relatively flat, close to the staff office/workshop for ease of dealing with any issues/concerns and centrally located for both campers and day-use visitors to the park. Figure 10 provides a proposed location for the new recreation area and visitor center.

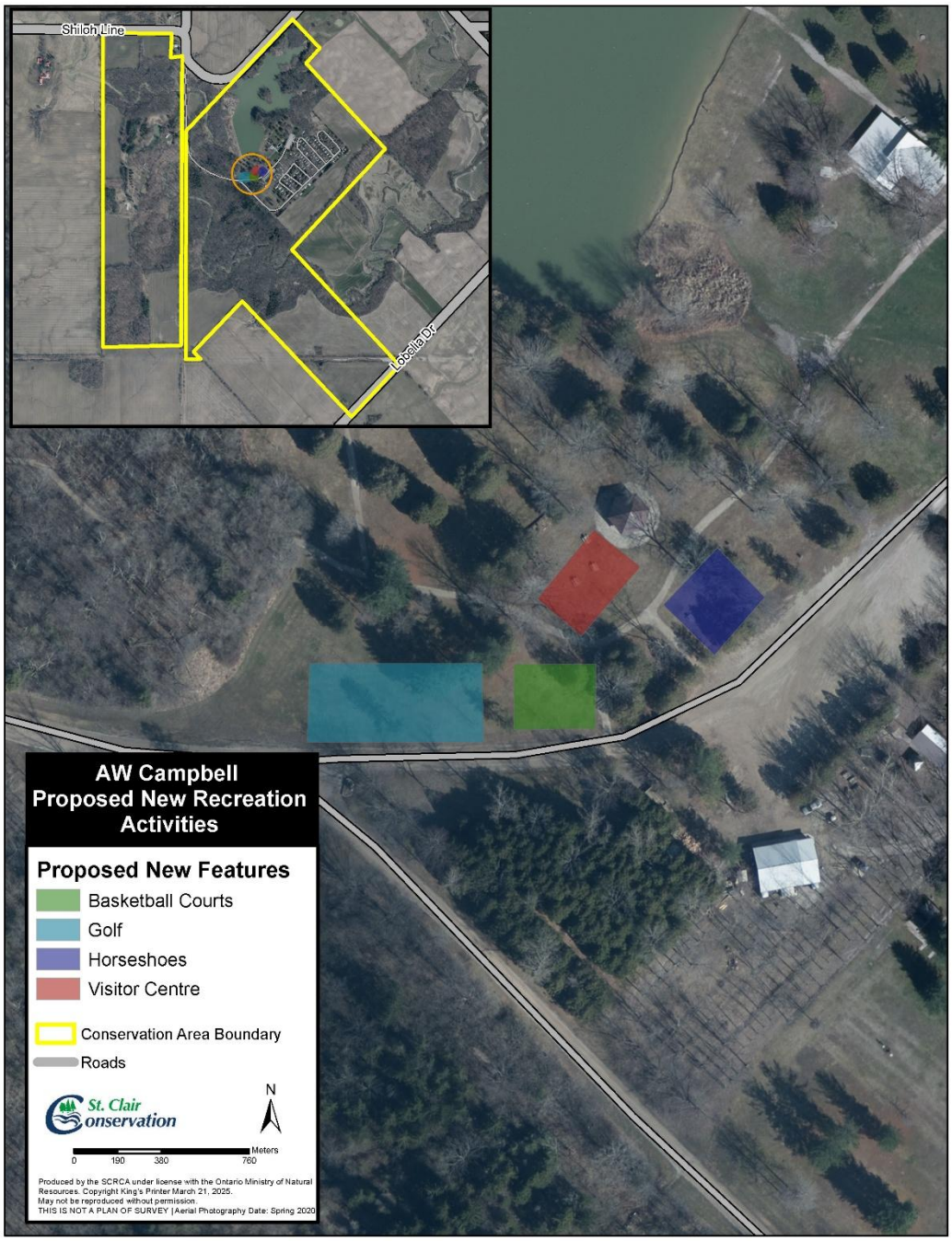


Figure 11 Proposed New recreation area and visitor center

Visitor Center and Wifi Cafe

The current visitor center is too small and undersized for larger camping events. The layout of the building does not provide adequate space for large groups and the step located in the center of the room impedes accessibility. It is recommended that a new larger facility be constructed to provide access for large camping events. This new visitor center could be constructed adjacent to the pavilion across from the workshop.

The pavilion will remain in place and provide additional covered seating for large events. This location would be ideal as it would overlook the reservoir. To power this facility, hydro would need to be re-directed from other park uses. The most feasible option would be to convert Group A and B camping to 4 or 5 individual campsites and repurpose the remaining hydro for the visitor's center. Alternatively, a solar power option could be explored.

The existing visitor center could be re-purposed as a Wi-Fi café and used for small gatherings or groups to play cards or act as a games room.

Electric Vehicle Charging Stations

In looking towards the future as Canada has set goals for 100% zero-emission vehicle sales by 2035, the campground may require future charging stations be installed on the property to accommodate this transition. The SCRCA should be prepared for grant opportunities that come available. Due to the limited amount of hydro available alternative power sources will be required to free up hydro for this service. Level 2 charging stations can require up to 100amps per charging port. Past grant funding opportunities required a minimum of 4 charging ports per site to be eligible for funding. A.W. Campbell Conservation Area does not have the available hydro to install 4 charging ports without closing a significant number of campsites. Staff will continue to investigate opportunities to add EV charging without significantly reducing revenue at the CA.

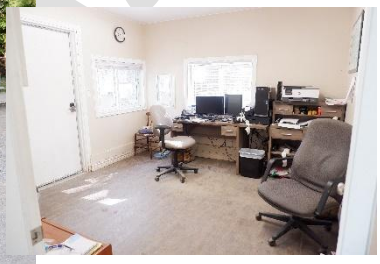
Automated Gate

The SCRCA should consider the installation of an automated gate at the A.W Campbell Conservation Area. An automated gate would provide improved security for the park, increase revenue from day-use visitors by taking away the current honor system for gate fees, and eliminate the need for staff in the gatehouse. The automated gate would be most feasible with the transition of the park to Concept 1 (all seasonal campsite) but could also be used with transient camping when the reservation software and gate software are integrated successfully. The integration of software is currently under investigation through the current reservation software system used by the SCRCA. The installation costs of the automated gates is estimated at $30,000 and revenue generated from the gate fee is estimated to be >$2,000 annually.

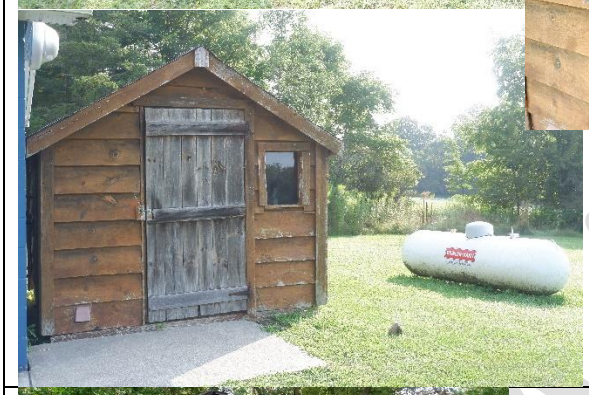
Appendices

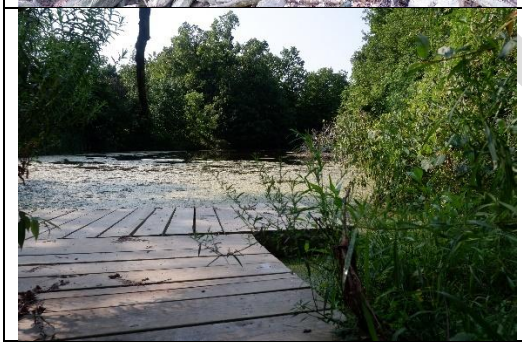
Appendix A: Photos of the Site

Buildings and Infrastructure

	Rectangular pavilion #1 in Group C Camping area with stone fire pit (inset) and chimney
	Gatehouse
 	2-bay workshop, includes office (inset), lunch room and storage area.
	Hexagonal pavillion #2 located across from Workshop in day-use area

	Hexagonal pavillion #3 behind Group B camping
  	Pool, washroom, and visitor center located in day use area

  	Main washroom building located south of seasonal camping, includes laundry facilities
  	Chlorinated water treatment system located in pumphouse

	Dumping station located along south side of property
	Campbell House
Roads and Trails	
	Smallest dam structure located along the abandoned trail
	Boardwalk/dock located on small reservoir adjacent to group C camping

	Parking Lot A in front of workshop
	Parking Lot B east of Pool
  	Reservoir and dam on Morrogh Creek, overflow structure (inset)
	Bike Trail located on west side of property

Recreation

	Playground designed for ages 18 months to 12 years, installed in 2010, located in day use area adjacent to pool.
	Little tikes Playground designed for ages 5-12 years old, installed in 2002, located along south of seasonal camping east of the washroom building.
	Canoe and Kayak storage (dock not pictured, prior to installation of new dock)

	The beach volleyball court located adjacent to group camp B and pavilion #3.
	Horshoe pits located along southern edge of campground between seasonal camping and the agricultural field.
	Basketball court located on southern edge of campground west of washroom building.
	Disc Golf course located in day use are across from Workshop and adjacent to pavilion #2

Camping at the A.W. Campbell Conservation Area

First photo depicts the Group B campsites with access to pavilion #3

Second photo decpits the Group A campsites

Third photo shows the overnight campsites located on the west side of the property, these sites currently act as overflow sites.

Fourth photo depicts Group C camping with access to pavilion #1

The final photo highlights a seasonal campsite on the property

Appendix B: A.W Campbell Conservation Area Forest Inventory 2006

A.W. Campbell Conservation Area

AW Campbell CA is a 125 ha (310 ac) property with 145 campsites on 5.0 ha. There is an additional 11.1 ha of mowed day use facilities. A total of 16.1 ha are mowed and used for recreation. There are 69.0 ha of other forested area on the property. Mature woodlands make up 35.3 ha. Second growth woodlands developed either through natural regeneration or plantations or a combination make up 33.7 ha.

Ash content varies from 10% to 35% and is a very common species in the campground and day use areas. It would be prudent to plant sugar maple or other trees through the memorial tree program in sections with significant ash numbers to avoid devastation at some time. DED killed most of the white and red elms and all the rock elm on this property between 1960 and 1972. It was quiet until 1989 when young elms got large enough to supply habitat for elm bark beetles to over-winter. They have been spreading the disease which is killing both red and white elm since that time. However, some of the originals are still alive and should not be cut down until they die. Purging buckthorn was observed in several locations. It should be searched out and destroyed in late October and early November. Norway maple is another exotic which should be removed before it spreads and eliminates other native species.

ATV's are using the area in the winter tearing up slopes, sod and running over small trees and shrubs. They are going in and out by lifting the loose cable at the entrance.

Deer are starting to produce a browse line in some areas and are definitely over browsing some species of trees and shrubs. Rabbit browsing is also a problem in some locations.

If it is desirable to cut firewood on site, there are clumps of trees scattered throughout the property which are too dense and could be marked for thinning. Firewood can currently be cut from hundreds of small dead elm in areas 1, 3 and 9. Hazard trees could also be cut for firewood. Those trees in areas difficult to access with equipment can simply be left on the ground for wildlife.

As white tailed deer numbers increase beyond the carrying capacity of the land one of the first signs of habitat destruction is the appearance of a browse line.

Total Forested Area: 84.5 ha (208.8 ac)

1) <u>Natural Reforestation around Morrough Lake</u>

Area: 11.1 ha (27.4 ac)

Species Composition: Hawthorn 40%, white and green ash 15%, white elm 10%, eastern cottonwood 10%, black walnut 5%, black cherry 5%, other species 15% (American crab apple, red oak, white spruce, white cedar, bitternut hickory, hard maple, Norway spruce, white pine, ironwood, bur oak, red elm, Carolina poplar and silver maple).

Regeneration: There is scattered regeneration of white ash and black walnut amongst the hawthorn.

Shrubs and Vines: Grey dogwood, wild plum, red-osier dogwood, European highbush cranberry, wild rose, honeysuckle, lilac, sandbar willow, autumn olive, feral apple, choke cherry, silky dogwood, purging buckthorn and grape.

Basal Area:

Basal area varied from 2 to 16 with an average of 7.4 m^2/ha.

BA Distribution

	Pole 10-24 cm		Small Sawlog 26-36 cm		Medium Sawlog 38-48 cm		Large Sawlog 50-60 cm		X Large Sawlog 62 cm +		Total	
	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS
B.A.	4.7	0	2.7	0	0	0	0	0	0	0	7.4	0
Total	4.7		2.7		0		0		0		7.4	

Diseases and Insects:

Spruce gall aphid
Nectria on black walnut
Dutch elm disease on white and red elm

Management and History: This area is old pasture land followed by a complete tree removal in the late 1960s. It was mowed with bush hogs until 1976. When the mowing ceased the hawthorns and other species sprang back. White pine spruce and cedar were hand planted among the hawthorn in the 1980s.

Observations:

- This area is mostly hawthorn with scattered white ash, black walnut and white elm.
- The hard maple and bitternut hickory are regeneration sized trees found on the hill area southeast of the creek out flow into the lake.
- This area is too thick with hawthorn to harvest any of the white and green ash and white elm when killed by EAB or DED.
- Numerous deer beds were noted on the southeast side of the lake.
- The white cedar are dying out from shading.
- There are ATV's using the trail around the perimeter of the lake.

Recommendations:

- The purging buckthorn should be located and destroyed and the populations of other invasive exotics such as autumn olive, European honeysuckle, lilac and cranberry should be reduced.
- Annual monitoring along the trails for hazard trees should be done and the trees identified and removed.

2) <u>Forested area along the southeast side west of property</u>

Area: 2.3 ha (5.6 ac)

Species Composition: White ash 30%, hard maple 20%, bur oak 20%, bitternut hickory 10%, white elm 10%, ironwood 5%, other species 5% (black cherry, basswood, shagbark hickory, blue-beech, hawthorn and blue ash).

Regeneration: Hard maple and sparse white ash.

Shrubs and Vines: Choke cherry, raspberry species, grape and poison ivy.

Basal Area:

Basal area readings varied from 16 to 30 with an average of 22.1 m^2/ha.

BA Distribution

	Pole 10-24 cm	Small Sawlog 26-36 cm	Medium Sawlog 38-48 cm	Large Sawlog 50-60 cm	X Large Sawlog 62 cm +	Total

	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS
B.A.	12.7	0.7	5.3	0	2	0	0.7	0	0.7	0	21.4	0.7
Total	13.4		5.3		2		0.7		0.7		22.1	

Diseases and Insects:

Black knot on choke cherry
Dutch elm disease on white elm

Management History: There is no record of any management done in this area since it was removed from cattle pasturing at the time of purchase, in 1965. At that time it was a lightly wooded pasture.

Observations:

- This area does not have enough merchantable timber for harvesting.
- There are no trails or evidence of people using this area.

Recommendations:

- An improvement thinning could be done in this area to reduce the amount of ash and give other species more room to grow.
- It can be done as a fuel wood cut.

3) <u>Day Use and Campground</u>

Area: 10.7 ha (26.4 ac)

Species Composition: Eastern cottonwood, white cedar, red cedar, white spruce, white pine, Norway spruce, northern catalpa, sycamore, red maple, white ash, black walnut, tulip tree, European mountain ash, bur oak, European willow and peach leaf willow.

Regeneration: There is no regeneration.

Shrubs and Vines: Red-osier dogwood and highbush cranberry.

Diseases and Insects: There were no diseases or insects recorded.

Management and History: This area is mowed on a regular basis. There are a few large stock trees planted annually throughout this area in conjunction with the memorial tree program.

Observations:

- This area has a mix of species.
- The newest campsites have been recently planted with 4 to 10 cm diameter ash trees. There are also a couple of areas with blocks of ash trees planted.

- The trees of concern for EAB are small and can easily be removed and replaced with other species if the EAB infests Campbell C.A.

Recommendations:

- Annual monitoring throughout this section for hazard trees should be continued and the trees identified and removed.
- If the emerald ash borer infests this area the ash trees will need to be replaced on the camp sites and in the day use area.

Trees provide important amenities to campgrounds and day use areas while providing habitat for several species of wildlife.

4) <u>New Forest</u>

Area: 9.9 ha (24.3 ac)

Species Composition: Black walnut 40%, white elm 20%, white ash 10%, bur oak 10%, eastern cottonwood 5%, Norway spruce 5%, red elm 5%, other species 5% (hawthorn, ironwood, red oak, black cherry, white cedar, bitternut hickory, hard maple, white pine, Carolina poplar, red pine, Manitoba maple and black ash).

Regeneration: There is advance regeneration of white ash and white elm.

Shrubs and vines: Highbush-cranberry, red-osier dogwood, American plum, grey dogwood, honeysuckle and grape.

Basal Area:

Basal area readings varied from 4 to 32 with an average of 17.2 m^2/ha.

BA Distribution

	Pole 10-24 cm		Small Sawlog 26-36 cm		Medium Sawlog 38-48 cm		Large Sawlog 50-60 cm		X Large Sawlog 62 cm +		Total	
	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS
B.A.	10	0	5.2	0	0.8	0	0	0	1.2	0	17.2	0
Total	10		5.2		0.8		0		1.2		17.2	

Diseases and Insects:

Dutch elm disease on white and red elm
Septoria canker on Carolina poplar
Nectria canker on black walnut and basswood

Management and History: There is a trail system throughout this area. Some of the trail has been abandoned and rerouted. Strips were cut through the hawthorn on 20 foot centres and planted with white pine, Norway spruce and black walnut in 1984. The project was successful.

Observations:

- This area consists of advanced regeneration, polewood and some small sawlog sized trees.
- There are also a few X large trees near the creek.
- There is a browse line developing because of the deer.
- Two dead medium size ash were noted along the trail beside the creek, one of the trees top has fallen onto the trail.

Recommendations:

- Annual monitoring along the trails for hazard trees should be continued and the trees identified and removed.
- Something needs to be done about the deer population before they not only eat all of their feed and starve but destroy other species habitat as well.

5) <u>Natural Reforestation Floodplain both sides of Morrough Creek</u>

Area: 7.8 ha (19.2 ac)

Species Composition: Hawthorn 90% and other species 10% (white ash, black walnut, white elm, soft maple and peach leaf willow).

Regeneration: here is sparse regeneration of black walnut and white ash.

Shrubs and Vines: Purging buckthorn

Diseases and Insects:

Dutch elm disease on white elm

Management and History: There are walking trails in this area. No other management has occurred since the Authority quit mowing this area in 1976.

Observation:

- This area is mainly hawthorn with approximately 1200 stems of hawthorn per hectare.

Recommendations:

- With the number of hawthorn present there is no room for planting other species unless the hawthorn is strip cut.
- The purging buckthorn should be located and destroyed.
- The trails need to be monitored annually for hazard trees.

6) <u>Second Growth Forest south of Morrough Creek</u>

Area: 10 ha (24.7 ac)

Species Composition: Black walnut 20%, white ash 20%, ironwood 20%, hawthorn 10%, shagbark hickory 5%, red elm 5%, red oak 5%, bur oak 5%, basswood 5%, other species 5% (white elm, white pine, red pine, white spruce, soft maple, American beech, trembling aspen, bitternut hickory and American crab apple).

Regeneration: Regeneration consists of white ash and hard maple.

Shrubs and Vines: Grey dogwood, choke cherry, prickly ash, highbush cranberry, European honeysuckle, wild plum and grape.

Basal Area:

Basal area varied from 10 to 22 with an average of 16.5 m^2/ha.

BA Distribution

	Pole 10-24 cm		Small Sawlog 26-36 cm		Medium Sawlog 38-48 cm		Large Sawlog 50-60 cm		X Large Sawlog 62 cm +		Total	
	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS

B.A.	10	0	4.5	0	0.5	0.5	0	1	0	0	15	1.5
Total	10		4.5		1		1		0		16.5	

Diseases and Insects:

Dutch elm disease on white elm

Management History: There are walking trails in this area. A few coniferous trees were planted during the 1970's to encourage reforestation. No other management has been done. There is an old flowing well with a casing in this section of the creek.

Observations:

- This area is a side hill and does not have enough merchantable timber for harvesting.
- This area does have a trail system.
- An X-large tree has fallen across Morrough Creek where the wooded area and the neighbour's field meet.

Recommendation:

- Annual monitoring along the trails for hazard trees should be done and the trees identified and removed.

7) <u>Mature Tolerant Hardwood</u>

Area: 6.6 ha (16.4 ac)

Species Composition: American beech 40%, hard maple 25%, shagbark hickory 10%, white and green ash 10%, bur oak 5%, ironwood 5%, other species 5% (bitternut hickory, red oak, basswood, soft maple, blue-beech, black walnut, white elm, eastern cottonwood and white pine).

Regeneration: Regeneration is mostly American beech, white ash and hard maple, with some shagbark and bitternut hickory.

Shrubs and Vines: Choke cherry, poison ivy and grape.

Basal Area:

Basal area varied from 12 to 20 with an average of 17.5 m^2/ha.

BA Distribution

	Pole 10-24 cm		Small Sawlog 26-36 cm		Medium Sawlog 38-48 cm		Large Sawlog 50-60 cm		X Large Sawlog 62 cm +		Total	
	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS
B.A.	4.5	2	5	0.5	3	1	0.5	0	0	1	13	4.5

Total	6.5	5.5	4	0.5	1	17.5

Diseases and Insects:

Nectria canker on basswood
Dutch elm disease on white elm

Management History: A timber mark and commercial harvest was conducted in 1984 and firewood was harvested from the area in 1995. There are also permanent sample plots established in area 7 but they were not located during the inventory.

Observations:

- A stick nest and deer paths were observed.
- There is a white pine plantation 0.4 acres in size on the east side of the area.
- There is an old concrete block shed located north of the white pine plantation.
- West of the shed, there is a small planting of black walnut.

Recommendations:

- There is ample regeneration and with the low basal area and lack of large and X-large trees there is no need for any type of cutting at this time.

8) <u>Well Drained Tolerant Hardwoods</u>

Area: 9.3 ha (22.9 ac)

Species Composition: White and green ash 35%, hard maple 30%, American beech 15%, ironwood 10%, bitternut hickory 5%, other species 5% (white elm, black walnut, red elm, basswood, red oak, white pine, blue-beech, shagbark hickory, black cherry, hawthorn and blue ash).

Regeneration: Hard maple is the main regeneration component in both early and advanced regeneration layers. White ash, bitternut hickory, basswood and American beech are also regenerating. There are pockets of blue ash regeneration.

Shrubs and Vines: Choke cherry and grape.

Basal Area:

Basal area varied from 20 to 32 with an average of 24.8 m^2/ha.

BA Distribution

	Pole 10-24 cm		Small Sawlog 26-36 cm		Medium Sawlog 38-48 cm		Large Sawlog 50-60 cm		X Large Sawlog 62 cm +		Total	
	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS

B.A.	9.2	0	6.8	0.4	4.8	0	2.8	0	0.8	0	24.4	0.4
Total	9.2		7.2		4.8		2.8		0.8		24.8	

Diseases and Insects:

Sooty mould on American beech
Nectria canker on basswood and black walnut
Eutypella canker on hard maple
Dutch elm disease on white elm
Ash heart rot

Management History: In 1985 Kevan Baker established five permanent plots in this area.

Observations:

- Several trees were marked for removal and are still standing.
- There are dead standing American beech, bitternut hickory and hard maple of the medium and large size class.

Recommendations:

- An improvement harvest could be done to reduce the amount of ash and some poor quality trees.
- The permanent plots should be sampled.

9) <u>Plantation</u>

Area: 1.3 ha (3.2 ac)

Species Composition: Black walnut 75%, Carolina poplar 10%, soft maple 5%, other species 10% (Kentucky coffee tree, white cedar and Norway spruce).

Regeneration: There was no regeneration recorded.

Shrubs and Vines: Honeysuckle and raspberry species.

Diseases and Insects: Septoria canker

Management History: This is a planted area; it was maintained for day use for several years.

Observations:

- There is one Kentucky coffee tree producing seed pods.
- The Carolina poplar is in fair condition.

Recommendations:

- The dead and dying Carolina poplar could be removed.

10) <u>Day Use / Plantations and Campground</u>

Area: 5.4 ha (13.3 ac)

Species Composition: White ash, soft maple, bur oak, bitternut hickory, hard maple, hawthorn, red elm, eastern cottonwood, white spruce, white cedar, white pine, red pine, Scots pine, Kentucky coffee tree, weeping willow, Carolina poplar, black cherry, sycamore, feral apple, honey locust, black walnut, tulip tree and Japanese heart nut.

Regeneration: No regeneration was noted.

Shrubs and Vines: Autumn olive, American plum, purging buckthorn, nannyberry, European highbush-cranberry, caragana and European honeysuckle.

Diseases and Insects:

Nectria on black walnut and Japanese heart nut
Butternut blight on Japanese heart nut

Management History: This area was planted from 1890 to 1993, with the majority between 1980 and 1993. There are a few campsites in this area. The area is mowed on a regular basis.

Observations:

- The newer campsites have medium to large trees around them - some of which are ash.
- Ash trees in this area make up about 30% of the stand. The majority are in the 4 to 10 cm diameter class.
- There are several dead pole size white elms as well as one white elm over a metre in diameter.

Recommendations:

- The purging buckthorn should be located and destroyed
- An improvement thinning in the pine plantation should be done within the next five years to release the white pine and promote other species.
- The European willow on the dam should be removed and the stump treated so its roots do not cause the dam to be breached.
- Annual monitoring in this area for hazard trees should be done and the trees identified and removed.

11) <u>Plantation/Old Nursery</u>

Area: 3.1 ha (7.7 ac)

Species Composition: White pine 35%, white and green ash 25%, black walnut 15%, white cedar 5%, other species 20% (Norway spruce, Carolina poplar, red oak, northern catalpa, European mountain ash and bitternut hickory).

Regeneration: Bitternut hickory and black walnut.

Shrubs and Vines: Raspberry species

Disease and Insects:

Septoria canker

Management History: This was a crop field with serious erosion problems planted to trees as a nursery. The open areas resulted from the trees being moved out to other locations. It is no longer used as a nursery.

Observations:

- There are approximately 300 stems of ash in the plantation near the workshop.
- The spacing is 1 meter between trees and 3 meters between rows.
- There is a trail system through one part of the area.

Recommendations:

- The open areas could be replanted to fill in the plantation.
- Annual monitoring in this area for hazard trees should be done and the trees identified and removed.

12) <u>Forest at Morrough Creek and West of Entrance Lane</u>

Area: 7 ha (17.3 ac)

Species Composition: Black walnut 30%, white elm 25%, white and green ash 15%, red elm 15%, hawthorn 10%, other species 5% (white pine, eastern cottonwood, peach leaf willow, black cherry, bur oak, hackberry, sycamore, blue-beech, ironwood, Carolina poplar, black ash and hard maple).

Regeneration: Black walnut, green ash and advanced white elm.

Shrubs and Vines: Choke cherry, European highbush-cranberry, American plum, European honeysuckle, raspberry species and purging buckthorn.

Basal Area:

Basal area varied from 10 to 20 with an average of 15.87 m^2/ha.

BA Distribution

	Pole 10-24 cm		Small Sawlog 26-36 cm		Medium Sawlog 38-48 cm		Large Sawlog 50-60 cm		X Large Sawlog 62 cm +		Total	
	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS	AGS	UGS
B.A.	7.3	1.3	4	0	1.3	0	1.3	0	0.67	0	14.57	1.3
Total	8.6		4		1.3		1.3		0.67		15.87	

Diseases and Insects:

Black knot on choke cherry
Dutch elm disease on white elm
Nectria canker on black walnut and red elm
Hickory bark beetle
Septoria canker on Carolina poplar

Management History: This area was previously used as pasture even after purchase by the Conservation Authority. Part of it was maintained with mowers until approximately 1980.

A variety of tree and shrub species were planted between 1970 and 1990, including black walnut, white & red pine, Carolina poplar and European cranberry.

Observations:

- There are a few open areas of herbaceous vegetation.
- Hawthorn is the most common species in the flood plain area.

Recommendations:

- The purging buckthorn should be located and destroyed.

Appendix C: Species List

Common Species Name	Scientific Species Name
(Rubus idaeus ssp. strigosus X Rubus occidentalis)	Rubus x neglectus
Agrimony	Agrimonia eupatoria
American Beech	Fagus grandifolia
american bullfrog	Lithobates catesbeianus
american crow	Corvus brachyrhynchos
American False Bindweed	Calystegia sepium ssp. americana
American Reed	Phragmites australis ssp. americanus
american robin	Turdus migratorius
american toad	Anaxyrus americanus
Autumn Olive	Elaeagnus umbellata
avens	Geum canadense
Baltimore Oriole	Icterus galbula
basswood	Tilia americana
Bitternut Hickory	Carya cordiformis
Black Cherry	Prunus serotina var. serotina
Black Maple	Acer nigrum
black snakeroot	Actaea racemosa
Black Walnut	Juglans nigra
bladder sedge	Carex intumescens
Bloodroot	Sanguinaria canadensis
Blue Ash	Fraxinus quadrangulata
blue jay	Cyanocitta cristata
Blue-beech	Carpinus caroliniana
bottlebrush grass	Elymus hystrix
Bristly Buttercup	Ranunculus hispidus
Brown-headed cowbird	Molothrus ater
Bur Oak	Quercus macrocarpa
Calico aster	Symphyotrichum lateriflorum var. lateriflorum
Canada Enchanter's Nightshade	Circaea canadensis ssp. canadensis
canada goose	Branta canadensis
canada wild-ginger	Asarum canadense
Chokecherry	Prunus virginiana var. virginiana
clearweed	Pilea pumila
Cleavers	Galium spurium
Clustered Sanicle	Sanicula odorata
Common Burdock	Arctium minus
Common Dandelion	Taraxacum officinale
Common Mouse-ear Chickweed	Cerastium fontanum ssp. vulgare
common white snakeroot	Ageratina altissima var. altissima

Common yellowthroat	Geothlypis trichas
Creeping Yellow Loosestrife	Lysimachia nummularia
Curled Dock	Rumex crispus
Cut-leaved Toothwort	Cardamine concatenata
dame's rocket	Hesperis matronalis
Downy Hawthorn	Crataegus mollis
Dwarf ginseng	Panax trifolius
early meadow-rue	Thalictrum dioicum
eastern chipmunk	Tamias striatus
Eastern Gray Squirrel	Sciurus carolinensis
Eastern Hop-hornbeam	Ostrya virginiana
Eastern Red Cedar	Juniperus virginiana
Eastern Towhee	Pipilo erythrophthalmus
Eastern White Pine	Pinus strobus
eastern wood-pewee	Contopus virens
enchanter's nightshade	Circaea canadensis
European Buckthorn	Rhamnus cathartica
European Honeysuckle	Lonicera periclymenum
European Red Currant	Ribes rubrum
European Starling	Sturnus vulgaris
false nettle	Boehmeria cylindrica
field sparrow	Spizella pusilla
Garlic Mustard	Alliaria petiolata
gray catbird	Dumetella carolinensis
great blue lobelia	Lobelia siphilitica
Great Crested Flycatcher	Myiarchus crinitus
Green dragon	Arisaema dracontium
Harbinger-of-spring	Erigenia bulbosa
heart-leaved aster	Symphyotrichum cordifolium
Hemp Dogbane	Apocynum cannabinum var. hypericifolium
Herb-Robert	Geranium robertianum
Hooked agrimony	Agrimonia gryposepala
Hooked Buttercup	Ranunculus recurvatus var. recurvatus
house wren	Troglodytes aedon
indigo bunting	Passerina cyanea
Jack-in-the-pulpit	Arisaema triphyllum
lance-leaved figwort	Scrophularia lanceolata
large-flowered bellwort	Uvularia grandiflora
Long-headed anemone	Anemone cylindrica
lopseed	Phryma leptostachya
mayapple	Papaipema rutila
May-apple	Podophyllum peltatum
midland painted turtle	Chrysemys picta marginata

moonseed	Menispermum canadense
mourning dove	Zenaida macroura
Narrow-leaved Cattail	Typha angustifolia
Northern Water-plantain	Alisma triviale
Ostrich Fern	Matteuccia struthiopteris
Pileated Woodpecker	Dryocopus pileatus
Poison Ivy	Toxicodendron radicans var. radicans
Prickly Gooseberry	Ribes cynosbati
Raccoon	Procyon lotor
red admiral	Vanessa atalanta
Red Ash	Fraxinus pennsylvanica
red-bellied woodpecker	Melanerpes carolinus
red-eyed vireo	Vireo olivaceus
Red-osier Dogwood	Cornus sericea
Red-winged blackbird	Agelaius phoeniceus
Riverbank Grape	Vitis riparia
rose-breasted grosbeak	Pheucticus ludovicianus
sedge	Carex lasiocarpa ssp. americana
Sensitive Fern	Onoclea sensibilis
Shagbark Hickory	Carya ovata
sharp-lobed hepatica	Hepatica acutiloba
Silver Maple	Acer saccharinum
small Duckweed	Lemna minor
small white aster	Symphyotrichum racemosum
snapping turtle	Chelydra serpentina
song sparrow	Melospiza melodia
Spinulose Wood Fern	Dryopteris carthusiana
Spotted Geranium	Geranium maculatum
spotted jewelweed	Impatiens capensis
Spring Avens	Geum vernum
Squirrel-corn	Dicentra canadensis
Sugar Maple	Acer saccharum
Sweet Crabapple	Malus coronaria
Three-flowered Bedstraw	Galium triflorum
Virginia Creeper	Parthenocissus quinquefolia
virginia smartweed	Persicaria virginiana
Virginia Waterleaf	Hydrophyllum virginianum var. virginianum
warbling vireo	Vireo gilvus
White Ash	Fraxinus americana
White Poplar	Populus alba
White Spruce	Picea glauca
White Trout-lily	Erythronium albidum
White Vervain	Verbena urticifolia

white-tailed deer	Odocoileus virginianus
wild leek	Allium tricoccum var. burdickii
Wild Strawberry	Fragaria virginiana ssp. glauca
wood frog	Lithobates sylvaticus
wood nettle	Laportea canadensis
wood thrush	Hylocichla mustelina
Woodland Agrimony	Agrimonia striata
wood-sorrel	Oxalis corniculata
Yellow Birch	Betula alleghaniensis
yellow pimpernel	Taenidia integerrima
yellow warbler	Setophaga petechia
Yellow-rumped warbler	Setophaga coronata

Appendix X: Community Consultation for the Vision of the _____ Conservation Area/property.

Community consultation for __ Conservation Area took place in the form of ___. The event was advertised by ___.

The following Stakeholders were contacted for feedback during the consultation process.

__ Number of community members participated.

< Poster/Handout highlighting the details of the Open House, this may also include an informational article if applicable >

Appendix X: Stakeholder Comments/Feedback

The following stakeholders were consulted during the process of updating the management plan and their concerns were noted and considered.

Appendix X: Public Comments/Feedback from Public Open House

“ ……..”

~~~

“……”

~~~

“……”