ST. WILLIAMS CONSERVATION RESERVE

10-YEAR OPERATIONS PLAN

2009-2018

Approval Statement

I am pleased to approve the 'St. Williams Conservation Reserve (SWCR) Operations Plan 2009-2018'.

SWCR was regulated in 2008 as a conservation reserve under the *Provincial Parks and Conservation Reserves Act* due to its ecological diversity and natural heritage features, which consist of numerous rare plant and animal species including many species at risk.

The guiding policy for SWCR is the 'St. Williams Conservation Reserve Management Plan' (2007). The Operations Plan provides operational detail for the implementation of policies stated in the Management Plan, which defines the area to which the plan applies; provides the purpose for which the conservation reserve has been proposed; and outlines the Ministry of Natural Resources' (MNR) management intent for the protected area.

The Operations Plan implements the Management Plan, based on the same five objectives: natural heritage protection, cultural heritage protection, recreational opportunities, educational awareness, and research opportunities. It has been created with input from program specialists within MNR's Aylmer District.

The Operations Plan will be implemented by the Aylmer/Long Point Area Team and will be reviewed and amended every 10 years.

M Wilson

Mitch Wilson
District Manager
October 15 2009

St. Williams Conservation Reserve – 10 Year Operations Plan 2009-2018

Table of Contents Page

1.0 Background

St. Williams Conservation Reserve (SWCR) is located in Norfolk County in the former geographic townships of South Walsingham and Charlotteville. It is comprised of 1033.95 hectares (ha) of Crown land in two geographically separate parts – Nursery Tract and Turkey Point Tract - that was formerly operated as part of the St. Williams Provincial Forest Station. The site was officially regulated as a conservation reserve on June 4, 2008 under Ontario Regulation 199/08 made under the *Provincial Parks and Conservation Reserves Act, 2006.* The conservation reserve is managed by the Ministry of Natural Resources (MNR) under provincial policy governing conservation reserves and the policy direction of the 'St. Williams Conservation Reserve Management Plan 2005-2055'[1] (SWCR MP), approved in January 2007.

The MNR has also established an external Community Council (SWCR CC) to provide community input and advice to the MNR SWCR District Technical Advisory Committee (DTAC) and to assume a key role in the implementation of the SWCR Operations Plan (SWCR OP).

The SWCR is one of the largest blocks of forest in the Carolinian Life Zone of extreme southern Ontario and is recognized regionally, provincially, and nationally for its exceptional biological diversity and natural heritage values. The combined diversity of oak savanna, Carolinian forests, and wetland habitats support one of the highest remaining concentrations of species at risk in Ontario and Canada. The SWCR is also internationally recognized as a natural heritage area within and adjacent to the Long Point World Biosphere Reserve, a United Nations Education, Scientific and Cultural Heritage Site.

Ontario's goal for SWCR was adopted from the Recommendations Report[2] of the St. Williams Crown Lands (SWCL, as the site was formerly known) Technical Advisory Group (TAG), formed in 2002. The goal for SWCR is that these tracts will be a flourishing example of extraordinary biological diversity representing their pre-European settlement natural legacy of ecological communities while protecting their unique cultural heritage and providing opportunities for compatible land uses.

The TAG Report's recommendation that SWCL be designated as a conservation reserve was the first step in SWCR management planning. In that designation process, the SWCR MP was created and implemented. The SWCR MP lists five key objectives for the management of the site toward that vision: Natural Heritage Protection and Restoration, Cultural Heritage Protection, Recreation, Educational Awareness, and Research. The SWCR OP is the next step in the management planning of SWCR.

---

[1] Ontario Ministry of Natural Resources, *St. Williams Conservation Reserve Management Plan* (Aylmer District, Ontario Ministry of Natural Resources, 2005).

[2] St. Williams Crown Lands Technical Advisory Group, *Recommendations for the Long-term Management of the St. Williams Crown Lands* (St. Williams Crown Lands Technical Advisory Group, 2003).

The SWCR OP identifies management activities to support the policies of the management plan over the 10-year period 2009-2018. Management priorities have been identified by the SWCR DTAC. Annual work plans will also be developed to outline specific projects and activities to be undertaken. The SWCR OP will be posted on the Environmental Registry for information purposes due to the interest in this property.

All management operations in the SWCR, including natural heritage protection and restoration activities, shall comply with the *Provincial Parks and Conservation Reserves Act* (PPCRA), *Endangered Species Act* (ESA), *Environmental Assessment Act* (EA), *Environmental Bill of Rights* (EBR), *Fish and Wildlife Conservation Act* (FWCA), and other pertinent legislation. Detailed information on SWCR objectives can be found in the SWCR MP.

2.0 Natural Heritage Protection and Restoration

The primary management objective, Natural Heritage Protection and Restoration, is to "maintain and restore the native ecological communities (including oak savanna, oak woodland, other tallgrass communities; and sand barrens, Carolinian forests, wetlands and streams) of SWCR, and their associated species and ecological processes."[3] These communities, specifically within the SWCR, are known to support a unique and nationally significant diversity of flora and fauna. These include a significant number of species at risk such as Bird's Foot Violet, Virginia Goat's-rue, Spotted Wintergreen, Fox Snake, Eastern Hog-nosed Snake, Hooded Warbler, and American Chestnut.

An overview of management approaches for each of these ecological community types is provided below. It is expected that habitat for species will be enhanced through protection and restoration of these various community types.

Where appropriate, MNR will take a landscape approach to SWCR natural heritage protection and restoration. When management objectives within SWCR are similar to those of neighbouring public lands (such as those owned by Norfolk County, Long Point Region Conservation Authority, etc.), operations may be combined to pursue a consistent protection and restoration effort and to maximize efficiencies. See the SWCR MP for a map of public lands near SWCR.

An adaptive management approach will be adopted for restoration and management operations. Inventory and monitoring are a critical component of the adaptive management principle. Inventory needs will be focused in high priority areas identified in Appendices B1a, B1b, B5a, and B5b.

[3] Ontario Ministry of Natural Resources, *St. Williams Conservation Reserve Management Plan* (Aylmer District, Ontario Ministry of Natural Resources, 2005).

2.1 Ecosystem Recovery

2.1.1 Oak Savanna and Tallgrass Communities

Oak savanna and related tallgrass ecotypes are among the rarest and most endangered vegetation communities in North America. The 'St. Williams Life Science Inventory'[4] conducted a detailed review of the distribution of conservative indicator species of oak savanna and tallgrass woodlands. This report indicates approximately two thirds of the land now within the SWCR supported oak savanna habitats during the time of early European settlement. The sandy, drought-prone soils that dominate most of the SWCR area favour the persistence, restoration and maintenance of oak savanna and tallgrass woodland environments.

Management operations will include a focus on restoring and maintaining oak savanna and tallgrass woodland remnants that occur in a degraded state within the SWCR. The scale of restoration and maintenance work will be directed using the oak savanna priority management areas as identified by the SWCR DTAC and by available funding and related operational capacity. Priority management area boundaries and rankings may be subject to change based on an adaptive management approach. Areas of savanna communities to be restored and maintained will be identified in annual work plans.

Oak savanna and tallgrass woodland communities are known to provide habitat for a substantial number of species at risk, thus the protection and restoration of these vegetation communities will provide effective management of related species. Oak savanna associates will generally be managed on a vegetation community basis, except where a species or sub-population approach is appropriate (e.g. for a species protected under the ESA (2007) where a threat occurs to part of a population at a specific location).

Oak Savanna Priority Restoration Areas:
Priority areas for the restoration and maintenance of oak savanna and related tallgrass communities were identified through a comprehensive site evaluation process by members of the SWCR DTAC. Information on remnant savanna indicator species and Ecological Land Classification (ELC) boundaries from the 2002 inventory[5] were evaluated to determine priority areas for restoration and maintenance of oak savanna communities. Restoration areas classified in High, Medium and Low priority categories were developed using the following criteria, ranked in order of significance:

1) *Presence of indicator species*

[4] William B. Draper, Mary E. Gartshore, and Jane M. Bowles, *St. Williams Crown Forest Life Science Inventory* (Ontario Parks, 2002).
[5] William B. Draper, Mary E. Gartshore, and Jane M. Bowles, *St. Williams Crown Forest Life Science Inventory* (Ontario Parks, 2002).

ELC polygons that contain plant species with a Coefficient of Conservatism rank of 8 to 10[6] were identified to represent historical savanna habitat areas. Vegetation areas with conservative savanna indicators suggest that SWCR has supported suitable habitat for these species for some time, even if they now occur in a degraded or ingrown state. Sites with a greater abundance and distribution of indicators were ranked as higher priority sites for restoration and/or maintenance. Polygons that support indicators that are protected under the ESA (2007) are also of particular significance, and often ranked as high priority.

2) *Site Condition*
The overall condition of vegetation polygons that support indicator species was evaluated through site visits. Sites that displayed generally good condition of openness and species representation were ranked as higher priorities, while more ingrown sites in poor condition that supported fewer representative species were ranked lower. This approach was applied to help ensure available resources are directed to areas where they will have the most immediate benefit.

3) *Logistical Suitability*
It is important that sites prescribed for management are accessible by equipment and related applications. Use of existing management access roads and trails will provide an important operational efficiency in savanna restoration and maintenance, so the proximity of these features was considered in the evaluation. Sites with suitable access and existing fire breaks were generally ranked higher than isolated sites where access roads or fire breaks would need to be created. In some cases, boundaries of savanna priority areas have been or will be adjusted slightly from original ELC delineations to better fit with existing roads and trails that provide a logistical advantage.

Other Factors
Field evaluations of remnant savanna polygons indicate that sites in reasonable condition tend to be smaller remnants. Since sites in better condition typically support a more significant number of savanna indicators and can be more quickly restored to functional savanna habitats, condition was a more influential criteria than site size for determining priority areas for restoration.

The proximity of the site to other savanna remnants within SWCR was also considered to be a benefit (based on patterns of savanna fauna known to use complexes of habitats) but was not specifically included as a separate criterion since comparison of site connectivity would not be as applicable to sites in Turkey Point Tract, where savanna remnants are widely scattered due to historical reforestation patterns and practices (such as furrow planting).

Based on results of field evaluations using the above criteria, priority areas for restoration and maintenance of oak savanna are shown in Appendix B1a – Nursery Tract and B1b – Turkey Point Tract. A summary of oak savanna community restoration and maintenance targets for the SWCR is provided in Table 1.

[6] Ontario Ministry of Natural Resources, *Natural Heritage Information Centre* ranking system.

Table 1. Oak savanna community restoration and maintenance targets.

Tract	*High*	*Medium*	*Low*	Total
Nursery	18.0 ha	30.6 ha	112.3 ha	160.9 ha
				(24.3% of NT)
Turkey Point	16.3 ha	13.6 ha	20.1 ha	50.0 ha
				(13.5% of TP)
Total:	**34.3 ha**	**44.2 ha**	**132.4 ha**	**210.9 ha**
				(20.4 % of SWCR)

A target of 210.9 hectares or 20.4% of the area of the SWCR has been identified for oak savanna restoration and maintenance. This represents approximately one third of the oak savanna habitats estimated to be present historically, and includes the remnant areas most suited to respond to management activities over the next ten years. Areas of High then Medium priority should receive operational treatments first, but Low priority areas (or parts thereof) may be included in initial management if logistical and cost efficiencies occur related to work on abutting High or Medium areas. Targets for specific restoration and maintenance treatments on specific priority areas will be developed by the SWCR DTAC through annual work plans.

Since an overall adaptive management approach will be applied to guide future operations of the SWCR, the locations and rankings of the priority oak savanna restoration sites may be subject to change. Monitoring of managed areas and evaluation of priorities will continue throughout the life of this and future operations plans. If opportunities to thin or clear plantation areas to promote regeneration of oak savanna species occur, these areas will be factored into the priority savanna restoration and maintenance model.

In addition to the oak savanna priority restoration areas, there may also be instances where it is appropriate to better link restored savanna areas to benefit movement of associate fauna species by creating or enhancing habitat corridors between them. In many cases this could be accomplished through habitat enhancement along existing access roads.

Management

Oak savanna and related tallgrass communities such as tallgrass woodland will be managed using a variety of techniques, such as prescribed burning, thinning, etc. Seed collection and planting of savanna species may be appropriate, as part of a community or species recovery effort, to speed up re-colonization of restored habitat areas. Seed collection will occur only from appropriate sources and may be subject to permitting under the ESA (2007).

Oak savanna and tallgrass restoration is still a relatively new science to conservation lands management. The use of new restoration and maintenance techniques developed by operations partners or other jurisdictions may be considered for implementation in the SWCR as deemed appropriate by the SWCR DTAC.

2.1.2 Sand Barren Communities

Sand barrens are a relatively small but ecologically significant component of the SWCR. Historical sand pits and clear cuts can successfully mimic sand barren systems found on disturbed, drought-prone dunes of the Norfolk Sand Plain before and during early European settlement. Recent disturbance from the use of motorized vehicles, horseback riding and even wildlife such as Wild Turkey in these areas have helped to keep them open and subject to natural wind effects. However disturbance from recreational users at some locations has been so excessive that suitability for some species has declined.

The sand openings of the SWCR have been documented to support a considerable number of species, some unique to dunes and barrens, including some species at risk. As such, all existing sand barrens will be retained. The maintenance and protection of these sand barrens is critical to the survival of species such as Small White Tiger Beetle, Antenna-waving Wasp and Eastern Hog-nosed Snake. The insect diversity and abundance found in these barrens also provides an important food source for a variety of breeding birds that nest on site, including rare migrants and game species such as Wild Turkey and Ruffed Grouse. Areas identified for management of sand barren communities are shown in Appendix B2a – Nursery Tract and B2b – Turkey Point Tract.

Due to the significant overlap between sand barren habitat functions and vegetation types with oak savanna communities found in the SWCR, some sand barren areas identified for management may also coincide with areas identified for oak savanna restoration and maintenance. This should not be considered to represent a management conflict, since in these overlapping areas it is possible and appropriate to manage for both community types and ecological functions.

Management

In order to provide optimal habitat conditions for flora and fauna species associated with sand barren communities, these areas must be actively managed using controlled disturbances that maintain barren openings but are not too frequent in nature to prevent use or colonization by related species. Periodic soil scarification or similar disturbances will be carried out as appropriate. This may involve the use of small-scale cultivation equipment, herbicide treatments and/or cutting to remove unwanted vegetation, fire management, or other site disturbance techniques as authorized by MNR. These operational techniques will be carried out at certain times of the year to prevent or minimize impacts to associated species. Other appropriate sites may become available for assessment during the course of this Operations Plan, especially following forest management activities.

2.1.3 Carolinian Forests

Carolinian forest areas will be identified for management on a priority basis. Forest management will be done in accordance with Section 6 – Silvicultural Guidelines by Forest Cover Types, of 'A Silvicultural Guide to Managing Southern Ontario Forests'[7]. Areas identified as Carolinian forests are based on ELC mapping and are shown in Appendix B3a – Nursery Tract and B3b – Turkey Point Tract.

2.1.4 Wetlands and Streams

Nursery Tract contains 32.5 ha of a Provincially Significant Wetland while Turkey Point Tract contains 0.4 ha of the Provincially Significant Evaluated Long Point Wetland Complex (LP1). Wetlands and streams are shown in Appendix B4a – Nursery Tract and B4b – Turkey Point Tract. Wetlands within SWCR may be evaluated in order to update the provincial evaluated wetlands boundary and scoring records.

The Nursery Tract water control structure is operated as a gang and sluice-way stop log facility, providing for an approximate one hectare impoundment along Dedrick Creek. The impoundment area - currently being used as a source of irrigation for the production of tree nursery stock - is inside the SWCR; however the water control structure is outside SWCR on the privately leased lands.

Annual operations of the facility include a late fall, stop log removal and draw down of the impoundment followed by the reinstatement of the stop logs in spring after the freshet. An inspection of the structure is completed every five to seven years undertaken by MNR Engineering Services Section. Aylmer District MNR is in the process of developing an 'Operations, Maintenance, Safety and Surveillance Manual' respecting the operation of this water control structure.

The Turkey Point Tract water control structure is located near the headwaters of Gibson Creek, which outlets into Turkey Point Marsh.

Since 2005, Normandale Fish Culture Station (FCS) has been the main MNR production facility involved in the production of Atlantic salmon for the Lake Ontario Atlantic Salmon Restoration Partnership Initiative, and will continue in this role for the foreseeable future.

Major capital funding for the reconstruction of the Normandale FCS sub-station as an advanced rearing and broodstock facility has been approved commencing in fiscal year 2009/10.

When the structure is operational, it holds water in the adjacent wooded ravine, creating a small valley impoundment up to 0.2 hectare in size. The source of water at this location is primarily spring seeps prevalent at the base of the valley, and surface water

[7] Ontario Ministry of Natural Resources, Forest Management Section, *A Silvicultural Guide to Managing Southern Ontario Forests* (Ontario Ministry of Natural Resources, 2000).

run-off to a lesser degree. Up to 1700 litres per minute of water is supplied to the fish tanks at Normandale FCS.

2.2 Forest Management

There has been no silvicultural management of the conifer plantations and Carolinian forests at SWCR for several years. The removal of some standing timber is required to meet the ecosystem recovery objectives and targets of this Operations Plan. Merchantable material resulting from ecological restoration activities may be salvaged. Silvicultural systems may need to be modified to ensure that forest management at SWCR complements the ecosystem recovery efforts and is compatible with other forest uses.

Mechanical thinning, brushing or girdling will be the key methods of forest management. These methods create or enlarge openings for increased sunlight penetration to promote vigour of savanna species and reduce competition with regenerating woody species. This may include selective fuel wood or other cutting in hardwood stands as directed by the SWCR DTAC, with a specific goal to reduce tree density and/or canopy cover in ingrown communities.

Table 2 provides a schedule for silvicultural management activities for the 10-year period 2009-2018. Forest management priority sites - areas targeted for oak savanna restoration or forest health improvement - are shown in Appendix B5a – Nursery Tract and B5b – Turkey Point Tract.

Table 2. Schedule for forest management 2009-2018.

Tract	Priority (ha)			**Total (ha)**
	High	*Medium*	*Low*	
Nursery	47.76	102.97	142.44	293.17
				(44.2% of NT)
Turkey Point	43.05	75.15	33.34	151.54
				(40.7% of TPT)
Total (ha)	90.81	178.12	175.78	444.71
				(43.0% of SWCR)

2.3 Fish and Wildlife

Wildlife is an important part of the SWCR ecosystem, thus all of SWCR has the potential to host habitat areas, including breeding grounds. Trails or sections of SWCR may be closed to accommodate sensitive areas and times for fish or wildlife. Trails will be signed accordingly.

Habitat management will be an integral part of SWCR operations. Forest management activities in SWCR will have regard for the enhancement of species diversity. Tree marking for forest management will be done in accordance with Section 4.4 - Conservation of Wildlife Habitat of ‘A Silvicultural Guide to Managing Southern Ontario

Forests'[8]. Fish and wildlife species and their habitat will be considered during management activities.

Any wildlife and fisheries management strategies will follow guidelines as set out by MNR for each species. Management strategies may need to be adapted to changes in habitat conditions or presence of new wildlife species.

2.4 Invasive Species

Populations of native insects and diseases affecting vegetation within the SWCR may be allowed to develop undisturbed, pending impacts and management objectives. However, a key part of the Natural Heritage Protection and Restoration objective in SWCR is the control of invasive species that have colonized native communities. Invasive exotic plants can quickly occupy a forest site, restricting or excluding native flora and suppressing small trees and shrubs. The impacts of invasive species on SWCR will be monitored and assessed on an ongoing basis.

Invasive plant species to be managed in SWCR include, but are not limited to:

- Garlic Mustard (*Alliaria petiolata)*
- Greater Celadine (*Chelidonium majus*)
- Spotted Knapweed (or Spotted Starthistle) (*Centaurea maculosa*)
- Purple Loosestrife (*Lythrum salicaria*)
- Autumn Olive (*Elaeagnus umbellate*)
- Common Reed (*Phragmites australis*)
- Dog Strangling Vine (*Vincetoxicum nigrum)*

Non-native insects often do more damage than native insects because they have no natural predators or diseases here to limit the expansion and subsequent naturalization of their populations. The Emerald Ash Borer (*Agrilus planipennis)* and Sirex Woodwasp (*Sirex noctilio*) are two non-native insects that have been found in southern Ontario in recent years and have the potential to threaten specific vegetation communities in SWCR.

Invasive species will be managed using an adaptive management model, with science provided by Best Management Practices (BMPs). Management operations in SWCR may include those to eliminate invasive species, such as herbicide or pesticide application, mechanical removal, etc.

2.5 Prescribed Burning

Remnant oak savanna and tallgrass communities exist within the SWCR. These native communities have been degraded due to the lack of fire disturbance and have become overgrown with successive shade tolerant and/or invasive species.

[8] Ontario Ministry of Natural Resources, Forest Management Section, *A Silvicultural Guide to Managing Southern Ontario Forests* (Ontario Ministry of Natural Resources, 2000).

Fire is a natural management tool for many ecosystems, necessary to maintain a diversity of flora and fauna. Prescribed burning in SWCR has been and will continue to be necessary to reclaim or maintain species habitat.

Any prescribed burns conducted in SWCR will be applied in predetermined areas, to accomplish well-defined management objectives. All burning will be subject to provincial fire regulations, MNR prescribed burn plans, BMPs, the 'SWCR Prescribed Burn Management Strategy'[9] and will have regard for individual species recovery strategies.

3.0 Cultural Heritage Protection and Educational Awareness

In 1908, the St. Williams Forest Station was established to provide nursery stock for distribution throughout Ontario, to demonstrate the feasibility of reclaiming lands by afforestation, and to experiment with various tree species in relation to this work. The present stands of red and white pine serve as an example to afforestation of the unstable and eroded soils in southern Ontario.

3.1 Cultural Significance and Educational Awareness

The St. Williams Interpretive Centre opened in 2005. It is privately owned by ForestCare Corp. for the enjoyment of SWCR visitors. Operated by the Port Rowan/South Walsingham Heritage Association, St. Williams Interpretive Centre - Canada's First Forestry Station - documents the history of the St. Williams Forest Station. Displays include pictures of early forest station workers, seeds from the trees in SWCR, forestry tools used on site throughout its lifetime, and more.

The Interpretive Centre is open between Victoria Day weekend and Labour Day weekend. It is located at 885 Highway 24, just west of Forestry Farm Road.

There is a wealth of interpretive material available at the Centre, including information on SWCR, brochures on trail use and the Forest Capital Trail, and informative postcards on the various species at risk on site.

Educational materials, based on Ministry of Education provincial curriculum guidelines, are available in the form of self-guided modules. These modules are currently available to educators of grades 2-3, 4-5, 8-9, and 10-11.

The development of additional educational and interpretive materials will be encouraged to provide a better understanding of the management and protection of the natural heritage values and will be fostered through the SWCR CC, local heritage programs, initiatives and partnerships.

[9] Karner Blue 32 Consulting and Eco-Ed Consulting, *St. Williams Conservation Reserve Prescribed Burn Management Strategy* (2008).

3.2 Representative Stands

SWCR is a living record of the practices of ecological restoration dating back to 1908. Conifers were planted at SWCR as a way to stabilize the sandy, windblown soil. Many of these conifer plantations still exist. Representative examples of these native conifer plantations will be protected to reflect the rich history of planting conifers at SWCR at various times since the origin of St. Williams Forest Station. These stands are outlined in Table 3 and shown in Appendix B6a – Nursery Tract and B6b – Turkey Point Tract.

Table 3. Plantation representative stands.

Map Reference	Tract	Stand ID	Area (ha)	Species	Year Planted
1	Nursery	508-4	2.8	White Pine	1910
2	Nursery	454-3	1.3	White Pine	1930
3	Turkey Point	822	3.0	Red Pine	1940
4	Turkey Point	894	1.2	White Pine	1946

4.0 Recreation

Recreational activities that do not adversely affect the natural heritage and cultural values of the SWCR, such as hiking, bird watching, motorized vehicle use on authorized trails, etc. are permitted. Visitors will be encouraged to refer to signboards located in Parking Areas identifying designated trails and permitted uses. Closed trails will be signed appropriately.

The Crown reserves the right to discontinue any and all trail use. Trail use that contravenes the regulations in this Operations Plan is likely to result in trail closure, restricted use, and/or personal penalties (i.e. fine and/or charges). Trail restrictions, up to and including loss of trail privileges, may be placed on specific trail user groups if they are found to be incompatible with the natural heritage and cultural values of SWCR. MNR may enter into agreements with specific trail user groups' provincial organizations to assist in the management and maintenance of the SWCR trail system.

The SWCR Management Plan outlines prohibited activities in SWCR. These include dumping, unauthorized collection of flora or fauna, and open fires. See Section 5.1.2 of the SWCR MP for a complete list of prohibited activities.

Several municipal roads provide access to SWCR. Management Access Roads within SWCR are not available for recreational purposes. No new road and trail development will take place in SWCR.

Visitors are required to enter SWCR via a municipal road and park only in authorized parking areas, identified in Appendix B7a – Nursery Tract and B7b – Turkey Point Tract.

SWCR users must be familiar with the boundaries of the privately leased Crown lands to the south of the Nursery Tract. A signed No Hunting buffer area surrounds the leased

lands and is signed appropriately. Access to SWCR is not permitted through these leased lands, except to access the Forest Capital Trail from the Interpretive Centre.

4.1 Recreational Trails

Recreational trails in SWCR are classified by permitted use. SWCR trails identified by permitted use are shown in Appendix B7a – Nursery Tract and B7b – Turkey Point Tract.. These maps will also be posted on signboards within SWCR. Where possible, recreational trails may be adapted to connect with existing adjacent public trails to better facilitate a trail network at the landscape level.

Trails shall be used only in accordance with the 'Code of Conduct for SWCR Users' (Appendix A), which outlines general rules of etiquette as well as specific rules for each type of SWCR user. There is potential for a mix of trail uses and visitors are asked to respect other trail users.

Trail users must be aware that hunting is a permitted use in SWCR, with the primary hunting periods being turkey and deer seasons. See provincial hunting regulations for specific open season dates. For safety, trail users are urged to wear noticeable clothing (such as hunter orange), especially during these seasons.

Motorized vehicles weighing under 300kg and bicycles are permitted ***only*** on multi-use trails. Horses are permitted on both horse trails and multi-use trails. Walkers and hikers are permitted on all trails. Prohibited trail uses will be identified at each trail access point.

From time to time, the MNR may place trail barriers accompanied by a sign to signify a trail's closure. Visitors are required to obey trail barriers, as it is likely that hazards to human or wildlife health exist on a closed trail.

- *Multi-Use Trails* – Multi-Use Trails are available for use by all SWCR user types and are the **only** trail type on which motorized vehicles and bicycles are permitted. Only motorized vehicles weighing under 300kg are permitted in SWCR. Because of the potential mix of trail users on Multi-Use Trails, there exists the highest potential for conflict.

- *Horse Trails* – Horse Trails are available for use both by horse riders and walkers/hikers. Motorized vehicles and bicycles are not permitted on horse trails

- *Forest Capital Trail* – The Forest Capital Trail is a legacy to Norfolk County's 2008 Forest Capital of Canada designation. Created by the SWCR CC, the Forest Capital Trail is available only for walkers/hikers.

4.2 Special Event Rides

Prior approval from MNR for Special Event Rides is required. These rides may be considered if ride routes include only Multi-Use trails, subject to seasonal or route limitations.

4.3 Hunting, Fishing, and Trapping

4.3.1 Hunting and Fishing

Hunting and fishing are permitted in SWCR, according to provincial and federal policy and legislation and the 'Code of Conduct for SWCR Users'. From time to time, areas of SWCR may be closed to hunting and/or fishing in response to safety, habitat, or species concerns. Visitors are required to obey posted signs.

4.3.2 Trapping

Trapping by individuals licensed by MNR is permitted in SWCR.

4.3.3 Leased Lands

Hunting, fishing, or trapping is not permitted on the privately leased Crown lands or in the signed No Hunting buffer area north of the leased Crown lands.

5.0 Research

The SWCR has been an area of scientific study since 1908, including growth and yield research plots, genetic (Picetum) and provenance trials on a variety of tree species, and current studies of carbon and water exchange in planted forests and of breeding birds and invasive species.

The first research priority of the SWCR will be to encourage and guide the maintenance and restoration of the site's biological diversity using the adaptive management paradigm. This will include monitoring the effectiveness of maintenance and restoration operations. Research will be compatible with the management guidelines as defined in the SWCR MP and will be subject to MNR approvals.

Historical research projects will be evaluated and continued or discontinued based on their relevance and compatibility. All new MNR projects in the conservation reserve, new approvals and permits issued and any relevant amendments must meet the legal requirements of the 'Class Environmental Assessment for Provincial Parks and Conservation Reserves'[10].

[10] Ontario Ministry of Natural Resources, Environmental Assessment Report Series, *A Class Environmental Assessment for Provincial Parks and Conservation Reserves* (Ontario Ministry of Natural Resources, 2005).

Research proposals will be reviewed annually and decisions to approve or disapprove made prior to the field season. New proposals will be presented to SWCR DTAC for approval using the form 'Procedural Guideline C – Research Activities in Conservation Reserves'[11] as part of the annual work plan. Copies of research findings, theses, and other scientific study will be required during (in the event of a multiyear undertaking) and/or following the conclusion of any research approved on the SWCR.

[11] Ontario Ministry of Natural Resources, Lands and Natural Heritage Branch, *Procedural Guideline C – Research Activities in Conservation Reserves (PL 3.03.05)*(Ontario Ministry of Natural Resources, 1997).

APPENDIX A
Code of Conduct for St. Williams Conservation Reserve Users

These guidelines have been adapted from the Ontario Trails Council's user guidelines for shared-use trails and various county and regional codes of conduct for forest users.

General Rules for all SWCR Users

- Expect and respect other trail users.
- Leave the wildlife for others to enjoy. Do not stress, harass or chase the wildlife.
- Stay on authorized trails; do not create new trails. Avoid any travel that will increase trail rutting or otherwise damage the land.
- Use trails only according to the permitted uses indicated in the Operations Plan. Some trails are user specific (i.e. hiking or horse only trails).
- Respect neighbouring landowners. Stay off private property and avoid excessive noise.
- Leave the Conservation Reserve as you found it; whatever you take in, take out.
- Some trails may close seasonally or during forestry operations. Obey trail closure signs.
- Hunting is a permitted use in SWCR. When entering SWCR during hunting seasons, wear clothing that stands out (i.e. hunter orange) for safety.
- Check the trail conditions, especially in the spring. If you are leaving tracks over 1cm deep don't use the trail.
- Keep to the right to allow other users to pass on your left. When stopping for a break, move to the side to allow others room to pass

Walkers & Hikers

- Remember that on shared use trails there are other users enjoying the trail with you. Be aware of any horses, dogs, bicycles or motorized vehicles.
- If approaching horses from the front, stop and let the horse and rider pass unless the rider indicates otherwise. When approaching from the rear, ask if it is OK to pass then proceed on the left.
- Keep control of your pets, particularly when sharing the trail with other trails users. Carry a leash for your dog and be prepared to use it. "Stoop & flick" when waste is on the trail path.

Equestrians

- Ride at a leisurely pace. Keep to a walk unless safety is certain and ground conditions rule out trail damage. Never gallop.
- When your vision of the trail ahead is restricted, slow down and control your horse. Always assume that there may be another trail user ahead.
- Ensure your horse is well mannered. Kicking, biting and excessive spooking are not safe on trails. Train your horse to accept various experiences and other users. Ride with an experienced horse if your horse is nervous.
- Keep to the right to allow other users to pass on your left. Help other users by telling them the safest and easiest way by.
- Pass other users on the left in single file, after receiving their permission. Allow them to get control of any pets, and be especially alert for children.
- Kindly remove manure from the trail.
- Never leave horses unattended.

- Some trails are for hikers only; respect those trails by only riding on trails designated for horses.

Cyclists

- Keep your pace leisurely and slow down to pass other trail users.
- Plan ahead: know your equipment, your ability, and the area in which you are riding. Prepare accordingly.
- Slow down if your vision of the trail ahead is restricted. Always assume there may be another trail user ahead, and be prepared to stop.
- Yield the trail to hikers and horseback riders. Use your bell or speak when you are about 30 feet away to alert them. Be careful when passing children or dogs, especially from behind. Allow the owner to control dog before passing.
- Stay on the designated trails. Off-trail riding can damage vulnerable plants and wildlife.
- Some trails are for hikers only; respect those trails by only riding on multi-use trails.

Snowmobile and Motorized Vehicle Operators

- All motorized vehicle operators must be fully licensed and insured.
- Obey all regulations and by-laws regulating the operation of your snowmobile or ATV.
- Be safety conscious. Be aware. Ride with care.
- Stay on authorized trails. Unauthorized trail riding can injure vulnerable plants and wildlife.
- Avoid sudden stops and starts and quick directional changes with acceleration.
- Slow down when your vision of the trail ahead is restricted, at night or over unfamiliar terrain.
- Always assume there could be other trail users ahead, and be prepared for a controlled stop.
- Slow down and be courteous when approaching or passing other trail users. Keep your speed and engine rpm low and steady when approaching and passing other trail users, homes, etc. Communicate with other trail users.
- Park and dismount from your machine and walk to sensitive, scenic, historic and cultural areas.
- Remove your helmet when talking to other trail users.
- When parking along a trail, park machines in single file over to the right as far as possible to avoid obstructing the trail. Ensure you are visible and turn off your machine.
- Some trails are for hikers only; respect those trails by only riding on multi-use trails.

Hunters and Anglers

- Always hunt safely, legally and ethically. Obey posted signs.
- Hunting and angling is subject to Provincial policies and regulations. All hunters and anglers must be properly licensed.
- Respect the rights of other Conservation Reserve users. Show consideration for non-hunters. Do not hunt in high traffic areas.
- Respect the environment, property owners' rights and other hunters and anglers.
- Support wildlife and habitat conservation.
- Pass on an ethical hunting tradition.

APPENDIX B
Mapping

B1a Oak savanna priority restoration areas – Nursery Tract
B1b Oak savanna priority restoration areas – Turkey Point Tract

B2a Sand barren management areas – Nursery Tract
B2b Sand barren management areas – Turkey Point Tract

B3a Carolinian forest sites – Nursery Tract
B3b Carolinian forest sites – Turkey Point Tract

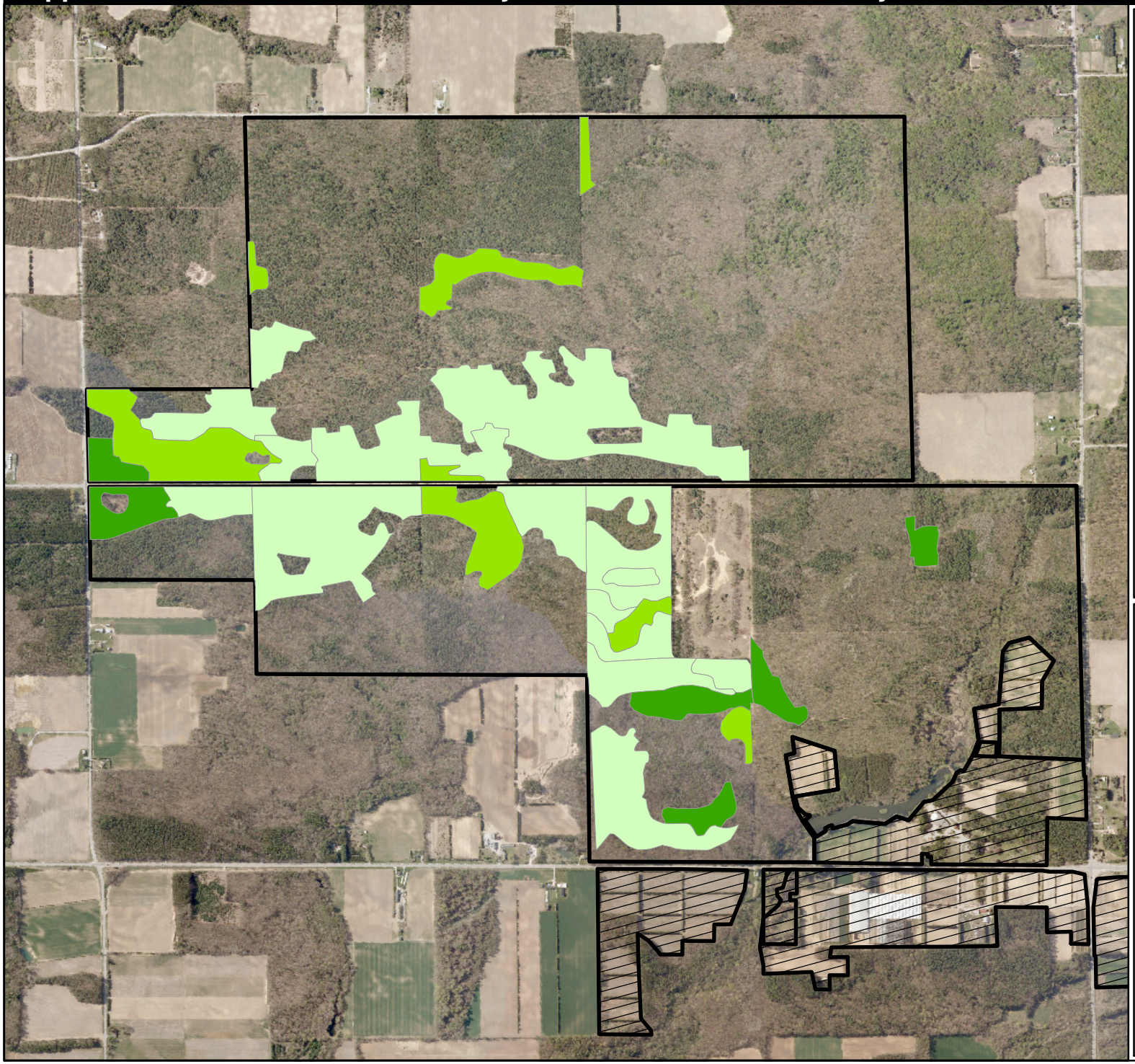
B4a Wetlands and streams - Nursery Tract
B4b Wetlands and streams - Turkey Point Tract

B5a Forest management priority sites – Nursery Tract
B5b Forest management priority sites – Turkey Point Tract

B6a Plantation representative stands - Nursery Tract
B6b Plantation representative stands - Turkey Point Tract

B7a Recreational trails and parking areas - Nursery Tract
B7b Recreational trails and parking areas - Turkey Point Tract

Appendix B1a - Oak Savanna Priority Restoration Areas - Nursery Tract



LEGEND

Ontario

- High Priority
- Medium Priority
- Low Priority
- SWCR Boundary
- Privately Leased Land

N

0 200 400 800

Metres

SCALE: 1:20,000

UTM NAD83 CNT Zone 17.

Base data derived from the Natural Resource Values Information System (NRVIS), Scale 1:10 000.

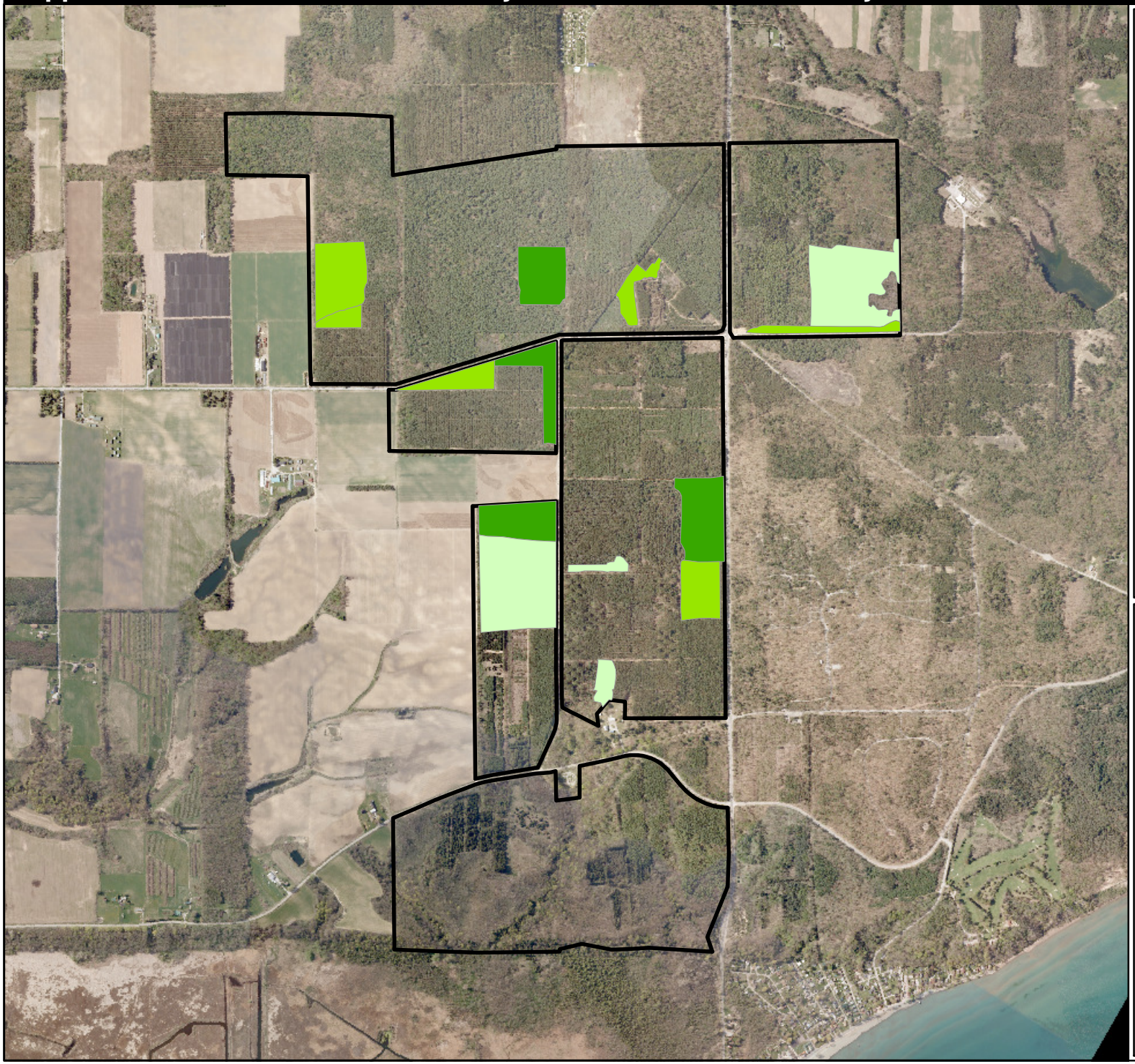
2006 Southwestern Ontario Orthophotography Project (SWOOP).

This map was produced by the Aylmer District Office GIS Unit, Ministry of Natural Resources.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources (OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

File Path:

Appendix B1b - Oak Savanna Priority Restoration Areas - Turkey Point Tract



LEGEND

Ontario

- High Priority
- Medium Priority
- Low Priority
- SWCR Boundary

0 200 400 800

Metres

SCALE: 1:20,000

UTM NAD83 CNT Zone 17.

Base data derived from the Natural Resource Values Information System (NRVIS), Scale 1:10 000.

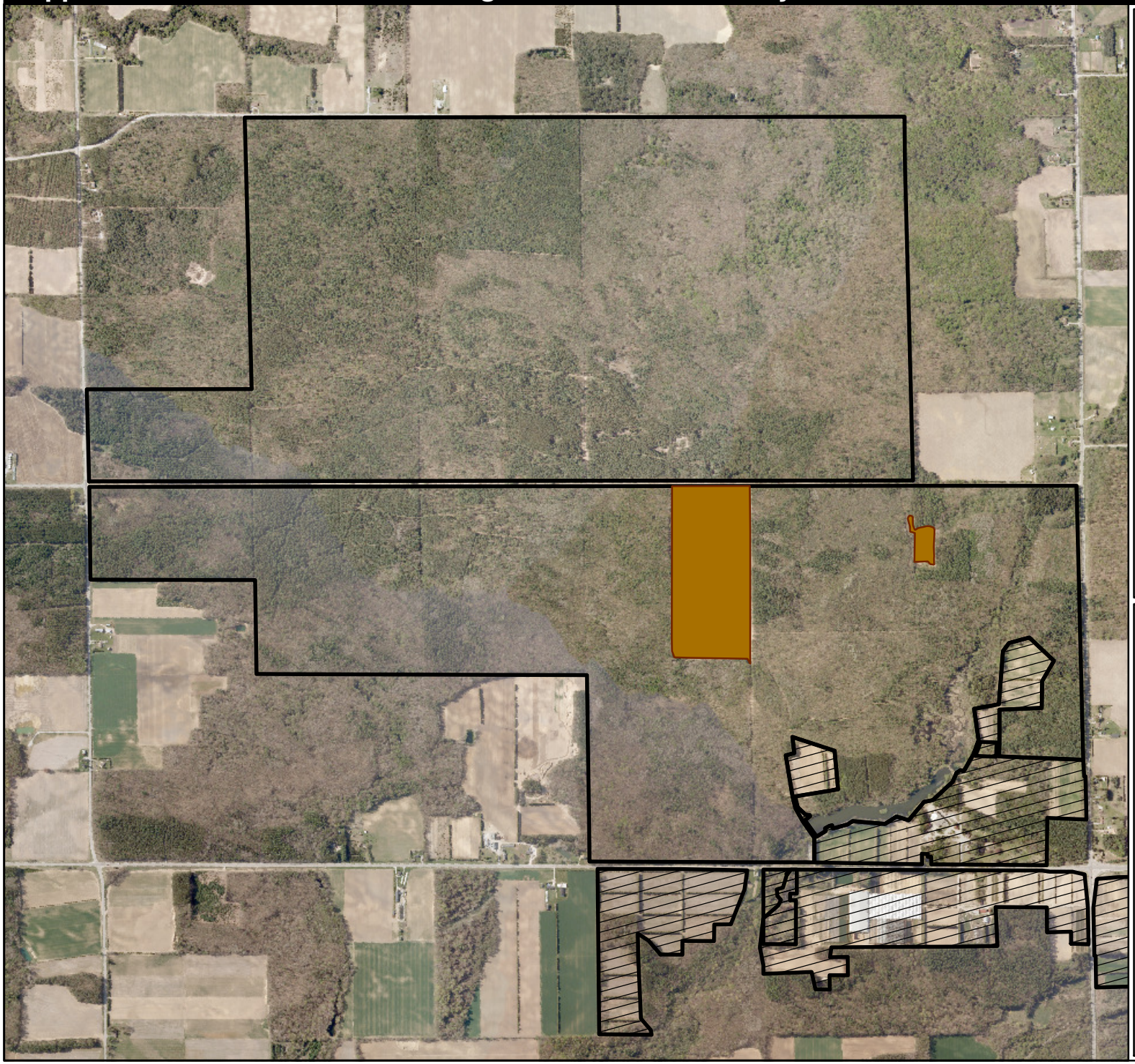
2006 Southwestern Ontario Orthophotography Project (SWOOP).

This map was produced by the Aylmer District Office GIS Unit, Ministry of Natural Resources.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources (OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

File Path:

Appendix B2a - Sand Barren Management Areas - Nursery Tract



LEGEND

Ontario

- Sand Barren
- SWCR Boundary
- Privately Leased Land

N

0 200 400 800

Metres

SCALE: 1:20,000

UTM NAD83 CNT Zone 17.

Base data derived from the Natural Resource Values Information System (NRVIS), Scale 1:10 000.

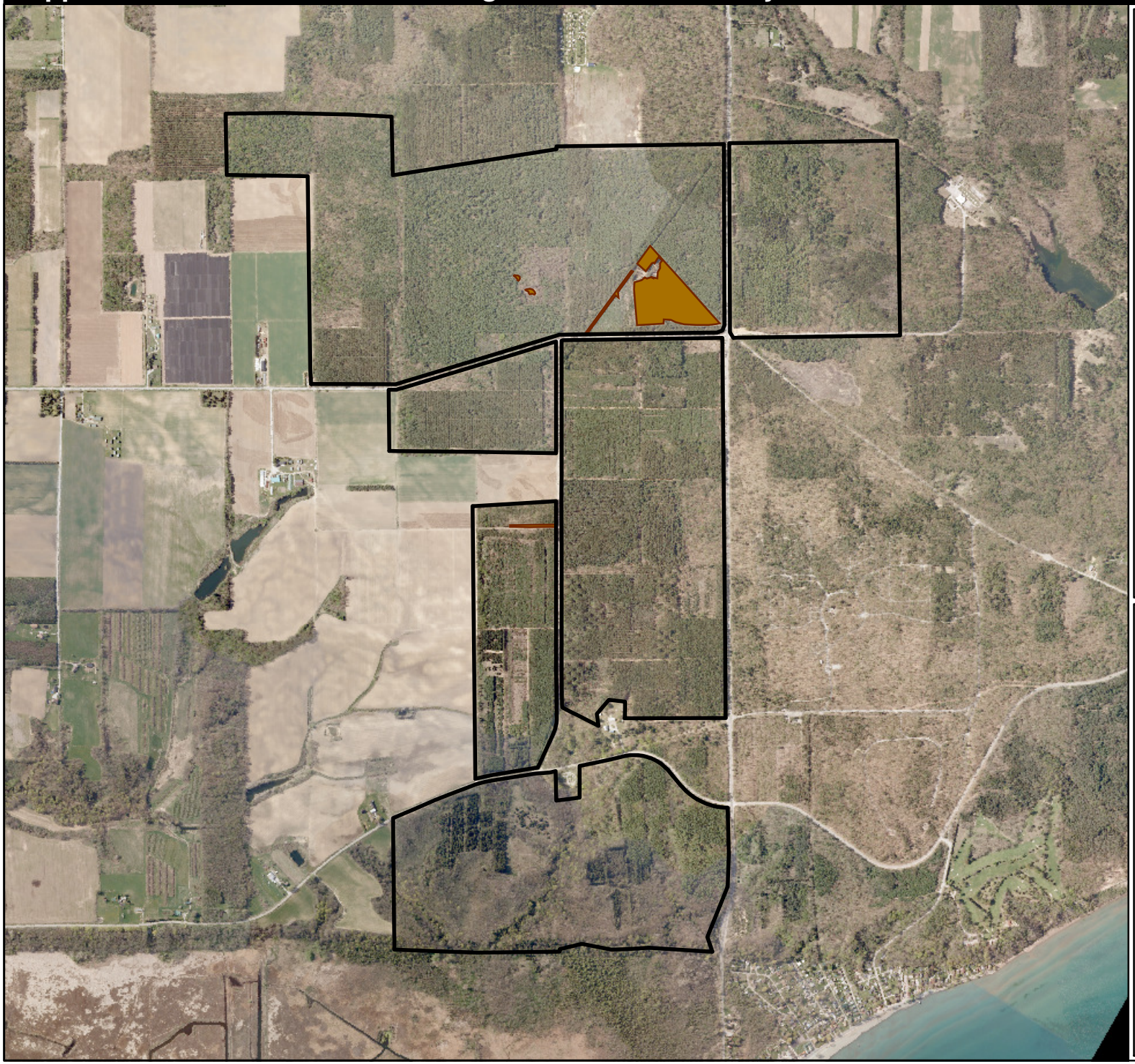
2006 Southwestern Ontario Orthophotography Project (SWOOP).

This map was produced by the Aylmer District Office GIS Unit, Ministry of Natural Resources.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources (OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

File Path:

Appendix B2b - Sand Barren Management Areas - Turkey Point Tract



LEGEND

Ontario

Sand Barren

SWCR Boundary

N

0 200 400 800

Metres

SCALE: 1:20,000

UTM NAD83 CNT Zone 17.

Base data derived from the Natural Resource Values Information System (NRVIS), Scale 1:10 000.

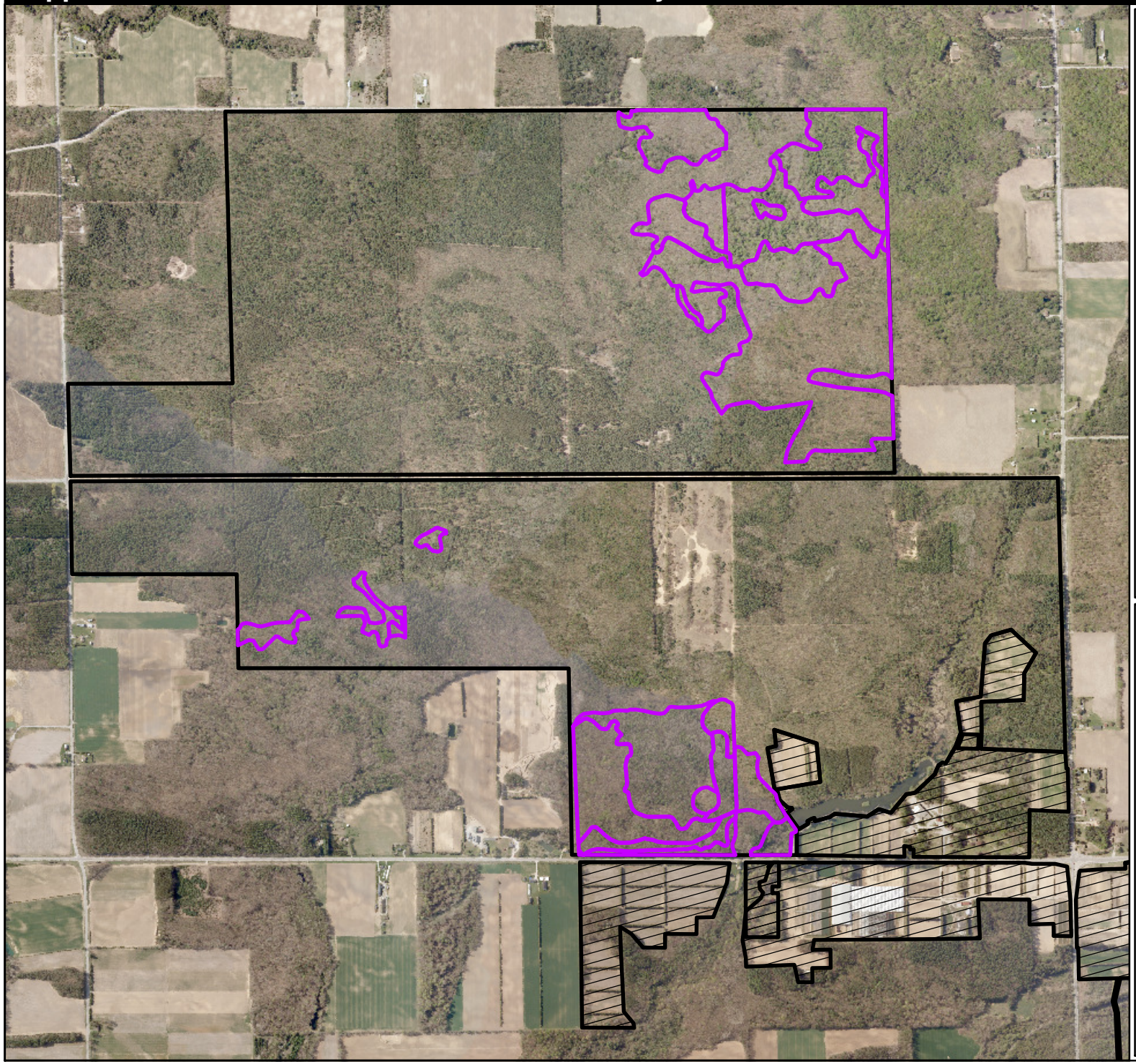
2006 Southwestern Ontario Orthophotography Project (SWOOP).

This map was produced by the Aylmer District Office GIS Unit, Ministry of Natural Resources.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources (OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

File Path:

Appendix B3a - Carolinian Forest Sites - Nursery Tract



LEGEND

Ontario

- Carolinian Forest
- SWCR Boundary
- Privately Leased Land

N

0 200 400 800

Metres

SCALE: 1:20,000

UTM NAD83 CNT Zone 17.

Base data derived from the Natural Resource Values Information System (NRVIS), Scale 1:10 000.

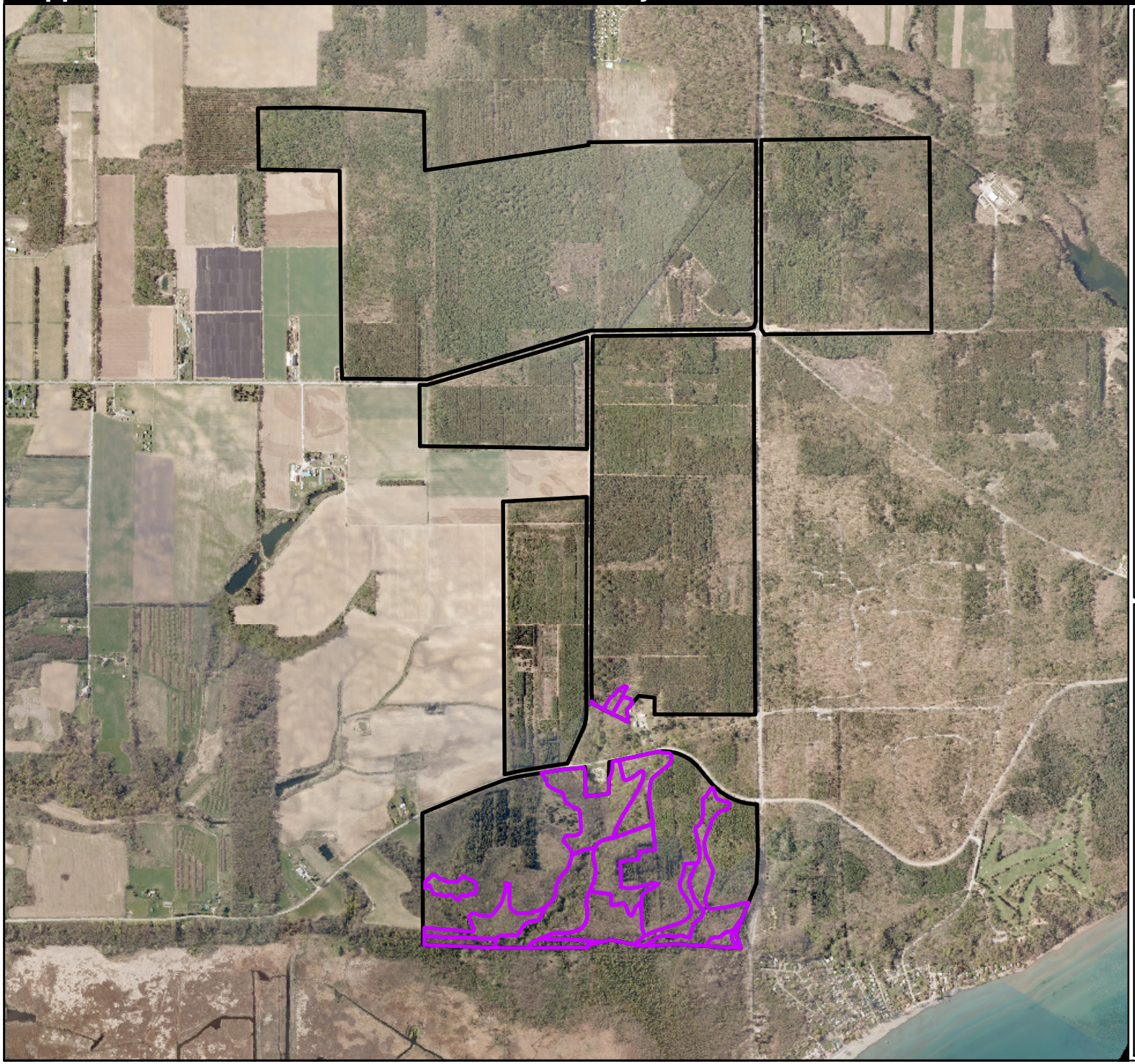
2006 Southwestern Ontario Orthophotography Project (SWOOP).

This map was produced by the Aylmer District Office GIS Unit, Ministry of Natural Resources.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources (OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

File Path:

Appendix B3b - Carolinian Forest Sites - Turkey Point Tract



LEGEND

Ontario

Carolinian Forest

SWCR Boundary

N

0 200 400 800

Metres

SCALE: 1:20,000

UTM NAD83 CNT Zone 17.

Base data derived from the Natural Resource Values Information System (NRVIS), Scale 1:10 000.

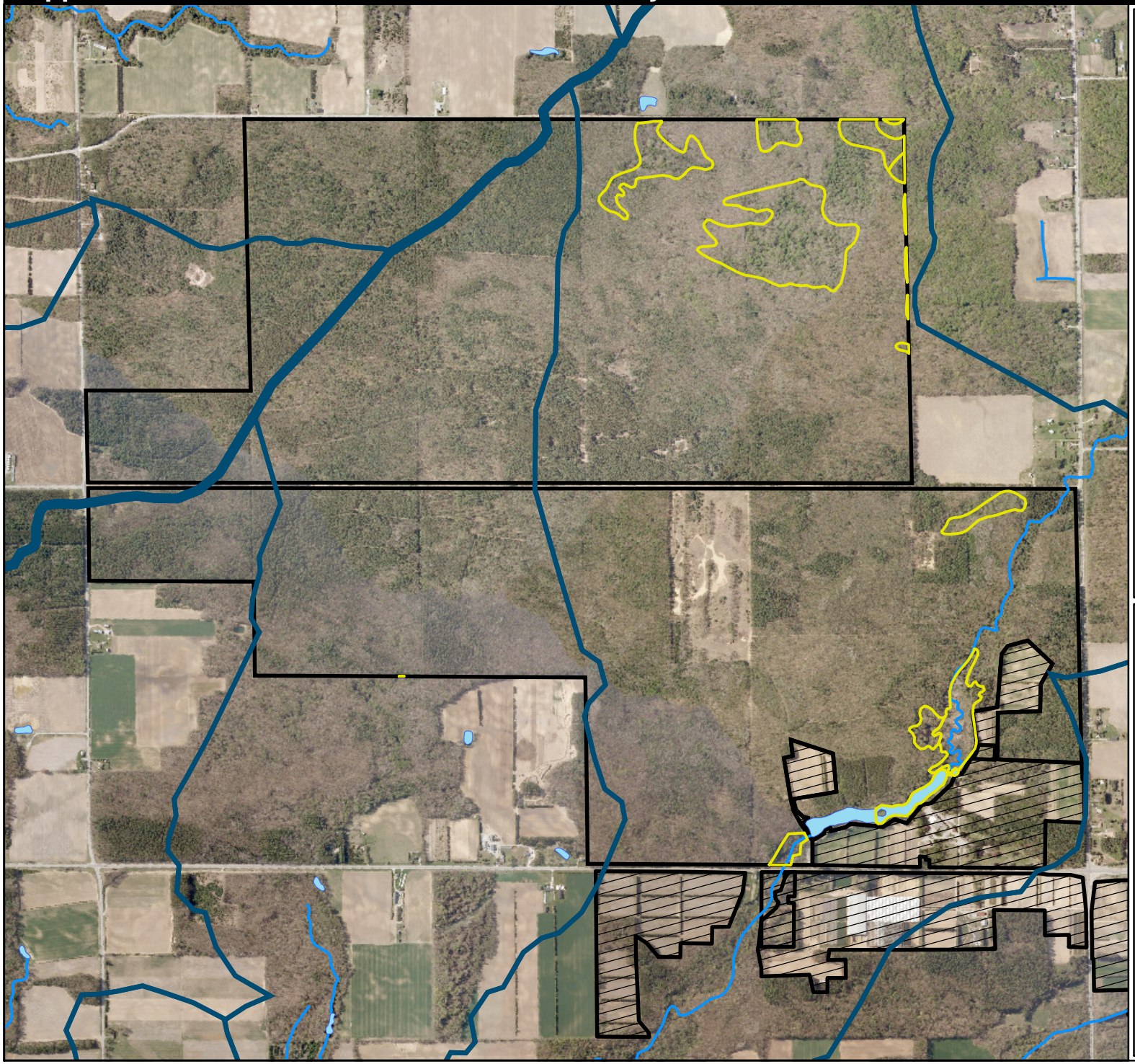
2006 Southwestern Ontario Orthophotography Project (SWOOP).

This map was produced by the Aylmer District Office GIS Unit, Ministry of Natural Resources.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources (OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

File Path:

Appendix B4a - Wetlands and Streams - Nursery Tract



LEGEND

Ontario

- Provincially Significant Wetland
- Watercourse
- Waterbody
- LPRCA Watershed
- LPRCA Subwatershed
- SWCR Boundary
- Privately Leased Land

N

0 200 400 800

Metres

SCALE: 1:20,000

UTM NAD83 CNT Zone 17.

Base data derived from the Natural Resource Values Information System (NRVIS), Scale 1:10 000.

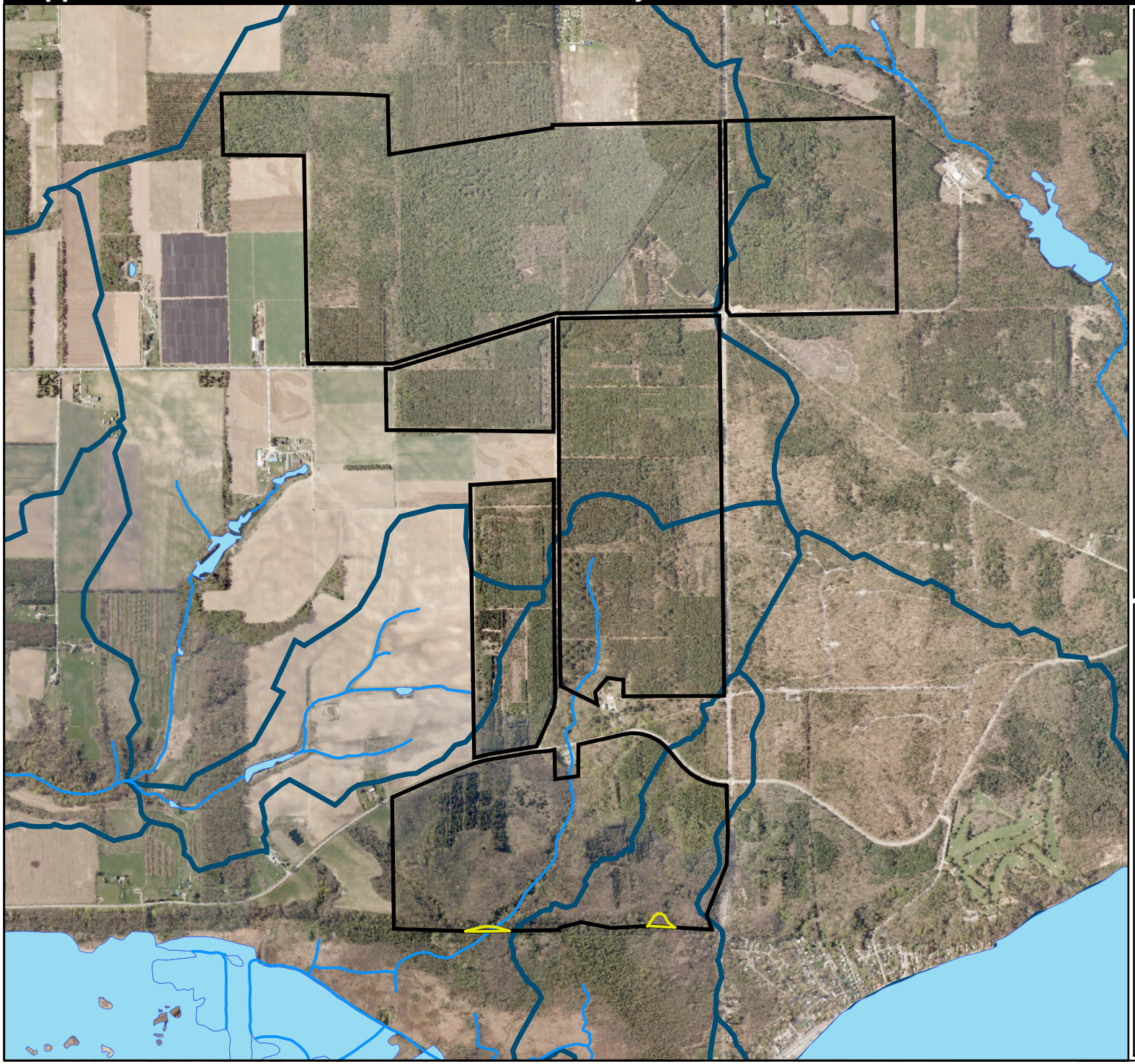
2006 Southwestern Ontario Orthophotography Project (SWOOP).

This map was produced by the Aylmer District Office GIS Unit, Ministry of Natural Resources.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources (OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

File Path:

Appendix B4b - Wetlands and Streams - Turkey Point Tract



LEGEND

Ontario

- Provincially Significant Wetland
- Watercourse
- Waterbody
- LPRCA Subwatershed
- SWCR Boundary

N

0 200 400 800

Metres

SCALE: 1:20,000

UTM NAD83 CNT Zone 17.

Base data derived from the Natural Resource Values Information System (NRVIS), Scale 1:10 000.

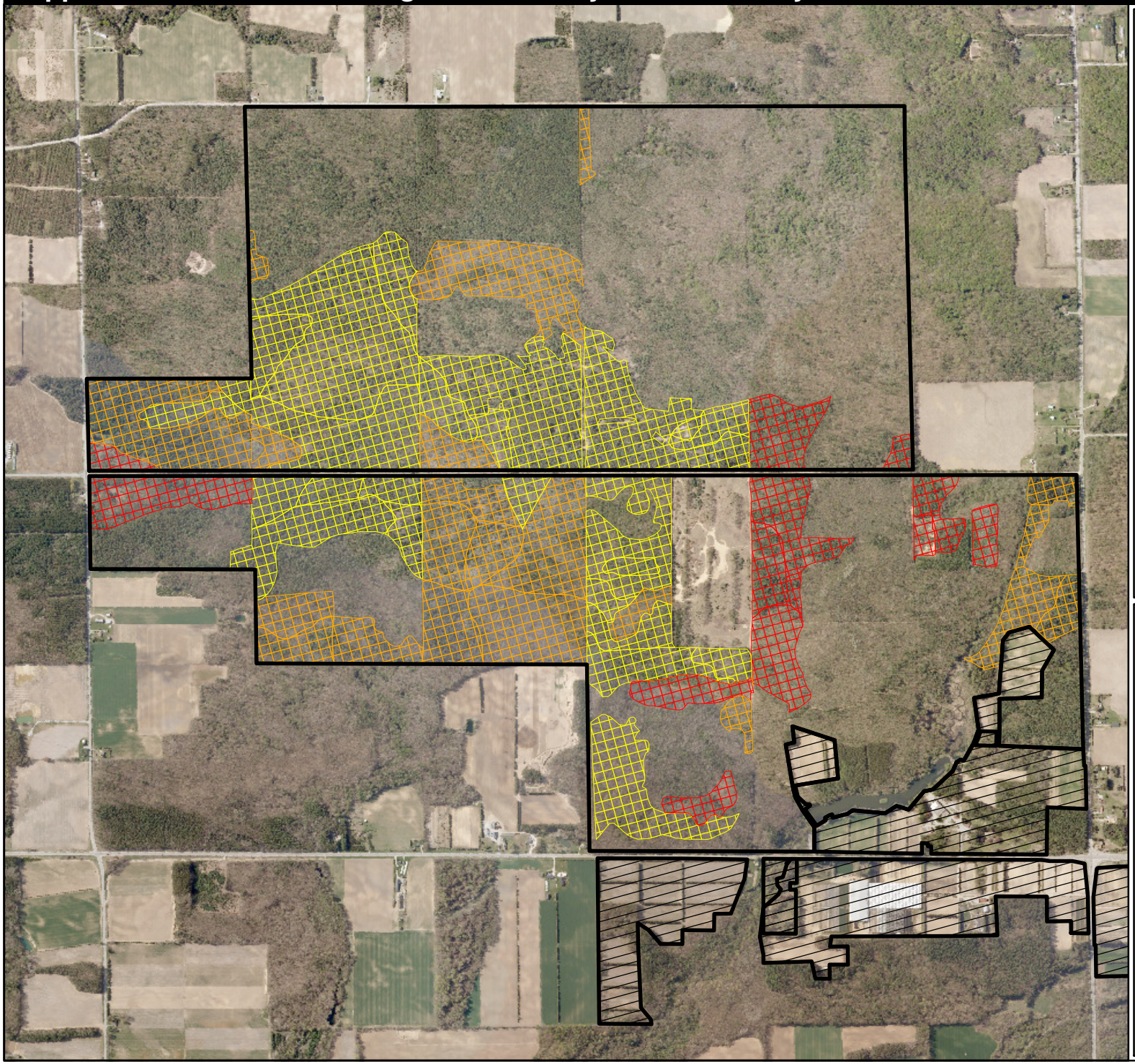
2006 Southwestern Ontario Orthophotography Project (SWOOP).

This map was produced by the Aylmer District Office GIS Unit, Ministry of Natural Resources.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources (OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

File Path:

Appendix B5a - Forest Management Priority Sites - Nursery Tract



LEGEND

Ontario

- High Priority
- Medium Priority
- Low Priority
- SWCR Boundary
- Privately Leased Land

N

0 200 400 800

Metres

SCALE: 1:20,000

UTM NAD83 CNT Zone 17.

Base data derived from the Natural Resource Values Information System (NRVIS), Scale 1:10 000.

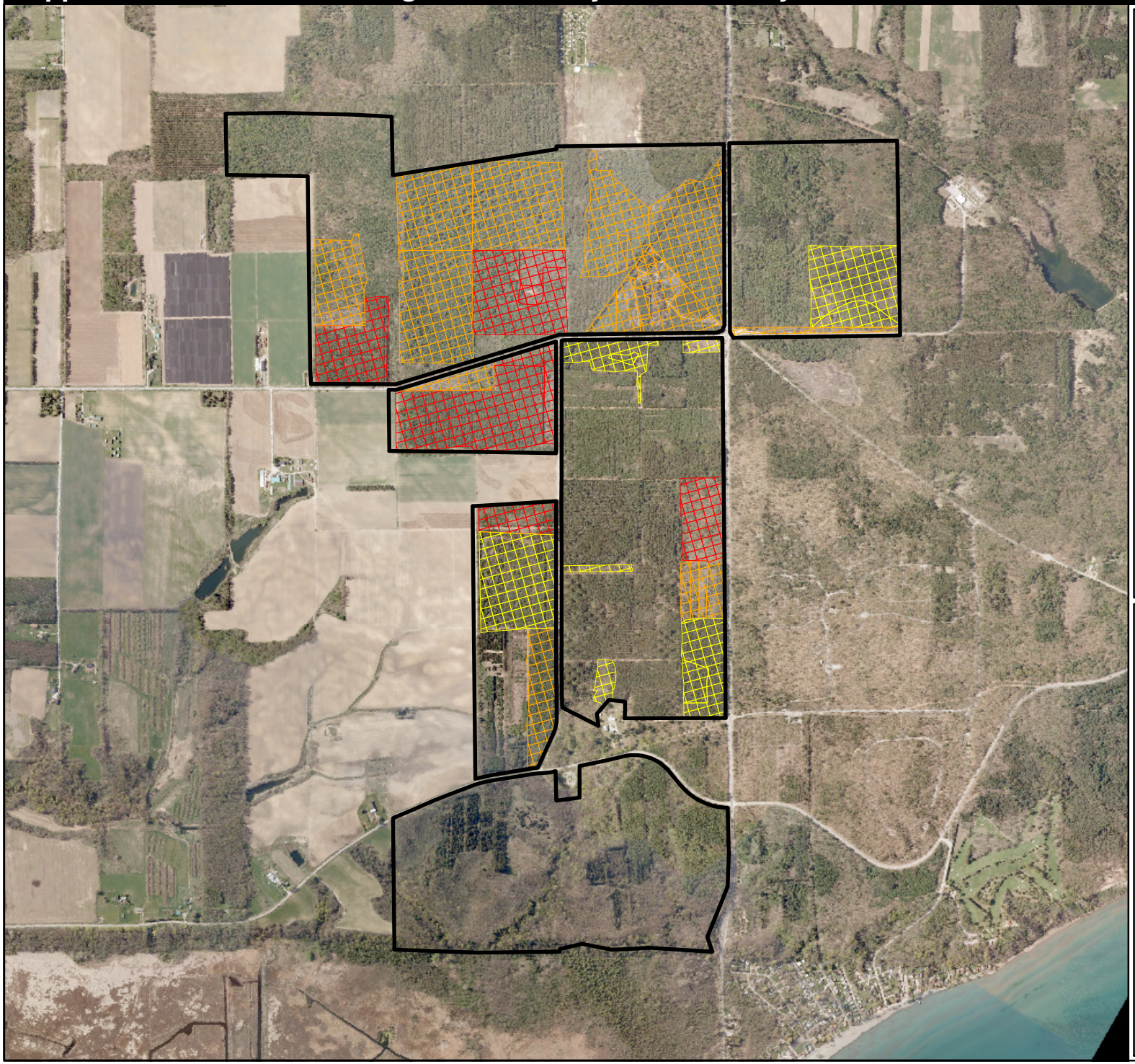
2006 Southwestern Ontario Orthophotography Project (SWOOP).

This map was produced by the Aylmer District Office GIS Unit, Ministry of Natural Resources.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources (OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

File Path:

Appendix B5b - Forest Management Priority Sites - Turkey Point Tract



LEGEND

Ontario

- High Priority
- Medium Priority
- Low Priority
- SWCR Boundary

N

0 200 400 800

Metres

SCALE: 1:20,000

UTM NAD83 CNT Zone 17.

Base data derived from the Natural Resource Values Information System (NRVIS), Scale 1:10 000.

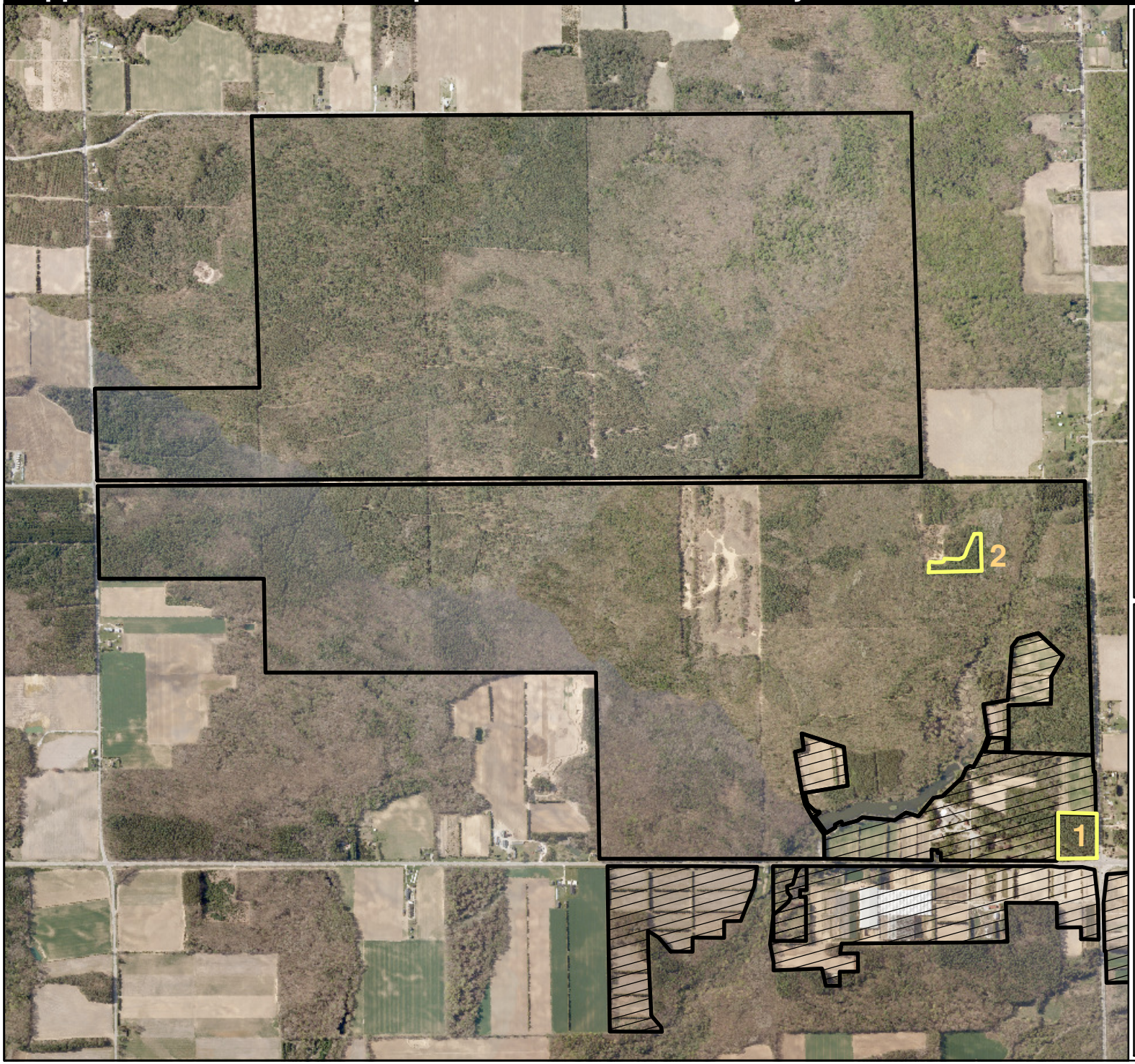
2006 Southwestern Ontario Orthophotography Project (SWOOP).

This map was produced by the Aylmer District Office GIS Unit, Ministry of Natural Resources.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources (OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

File Path:

Appendix B6a - Plantation Representative Stands - Nursery Tract



LEGEND

Ontario

- Representative Stand
- SWCR Boundary
- Privately Leased Land

N

0 200 400 800

Metres

SCALE: 1:20,000

UTM NAD83 CNT Zone 17.

Base data derived from the Natural Resource Values Information System (NRVIS), Scale 1:10 000.

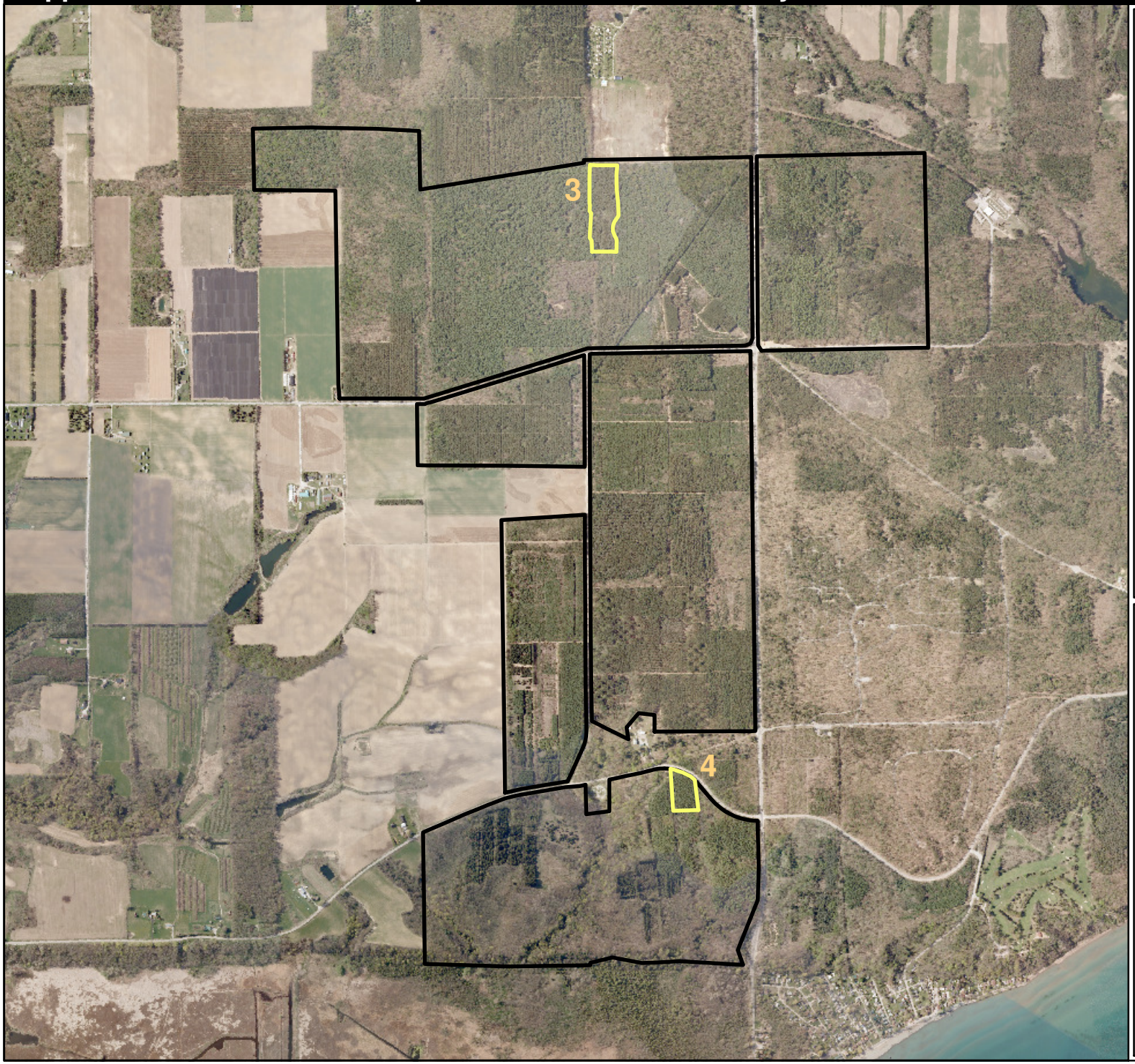
2006 Southwestern Ontario Orthophotography Project (SWOOP).

This map was produced by the Aylmer District Office GIS Unit, Ministry of Natural Resources.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources (OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

C:\AAA TB\SWCR\Draft Operations Plan\Template.mxt

Appendix B6b - Plantation Representative Stands - Turkey Point Tract



LEGEND

Ontario

Representative Stand

SWCR Boundary

0 200 400 800

Metres

SCALE: 1:20,000

UTM NAD83 CNT Zone 17.

Base data derived from the Natural Resource Values Information System (NRVIS), Scale 1:10 000.

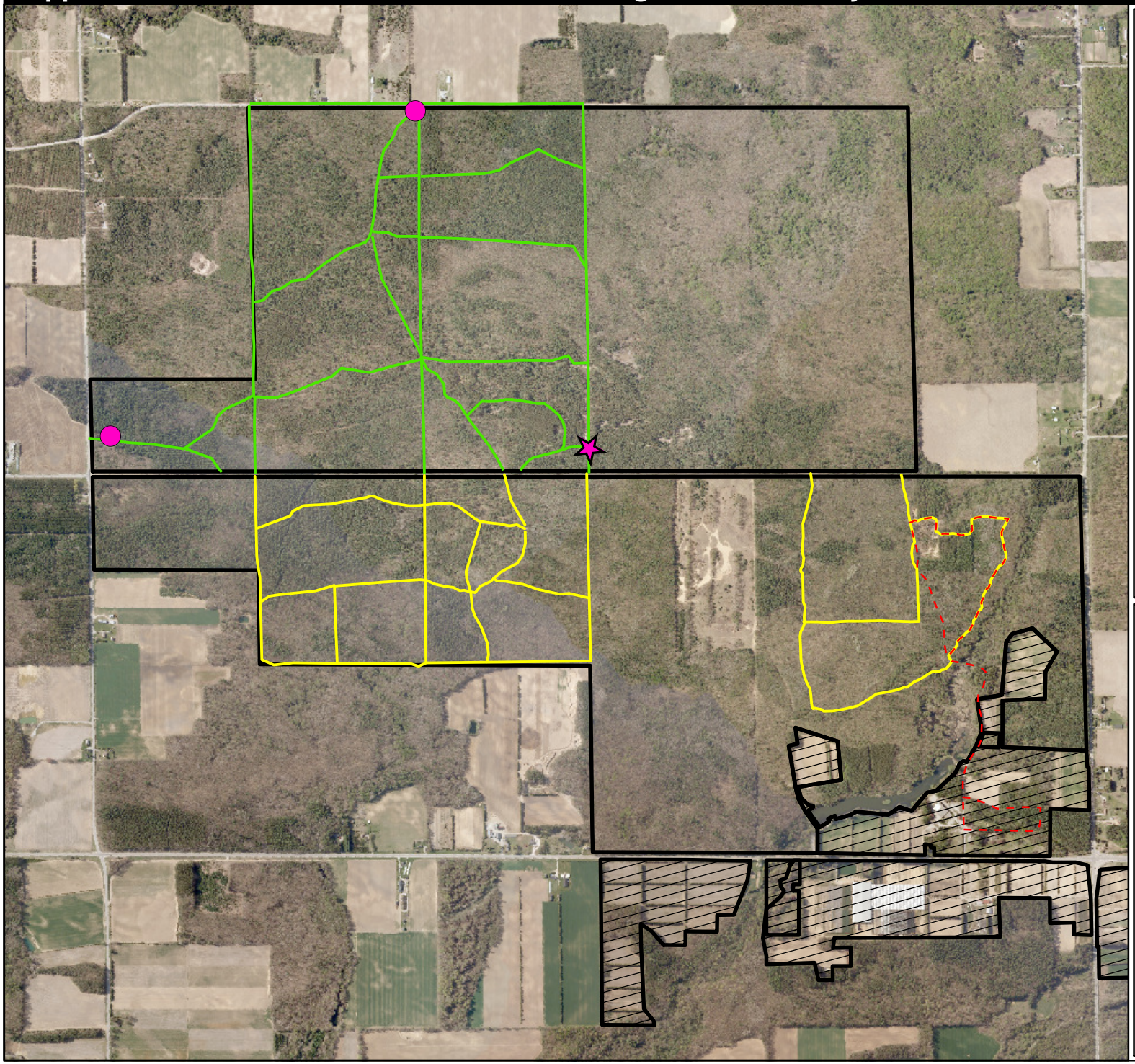
2006 Southwestern Ontario Orthophotography Project (SWOOP).

This map was produced by the Aylmer District Office GIS Unit, Ministry of Natural Resources.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources (OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

C:\AAA TB\SWCR\Draft Operations Plan\Template.mxt

Appendix B7a - Recreational Trails and Parking Areas - Nursery Tract



LEGEND

Ontario

- Multi-Use Trail
- Horse Trail
- Forest Capital Trail
- Existing Parking Area
- Proposed Parking Area
- SWCR Boundary
- Privately Leased Land

N

0 200 400 800

Metres

SCALE: 1:20,000

UTM NAD83 CNT Zone 17.

Base data derived from the Natural Resource Values Information System (NRVIS), Scale 1:10 000.

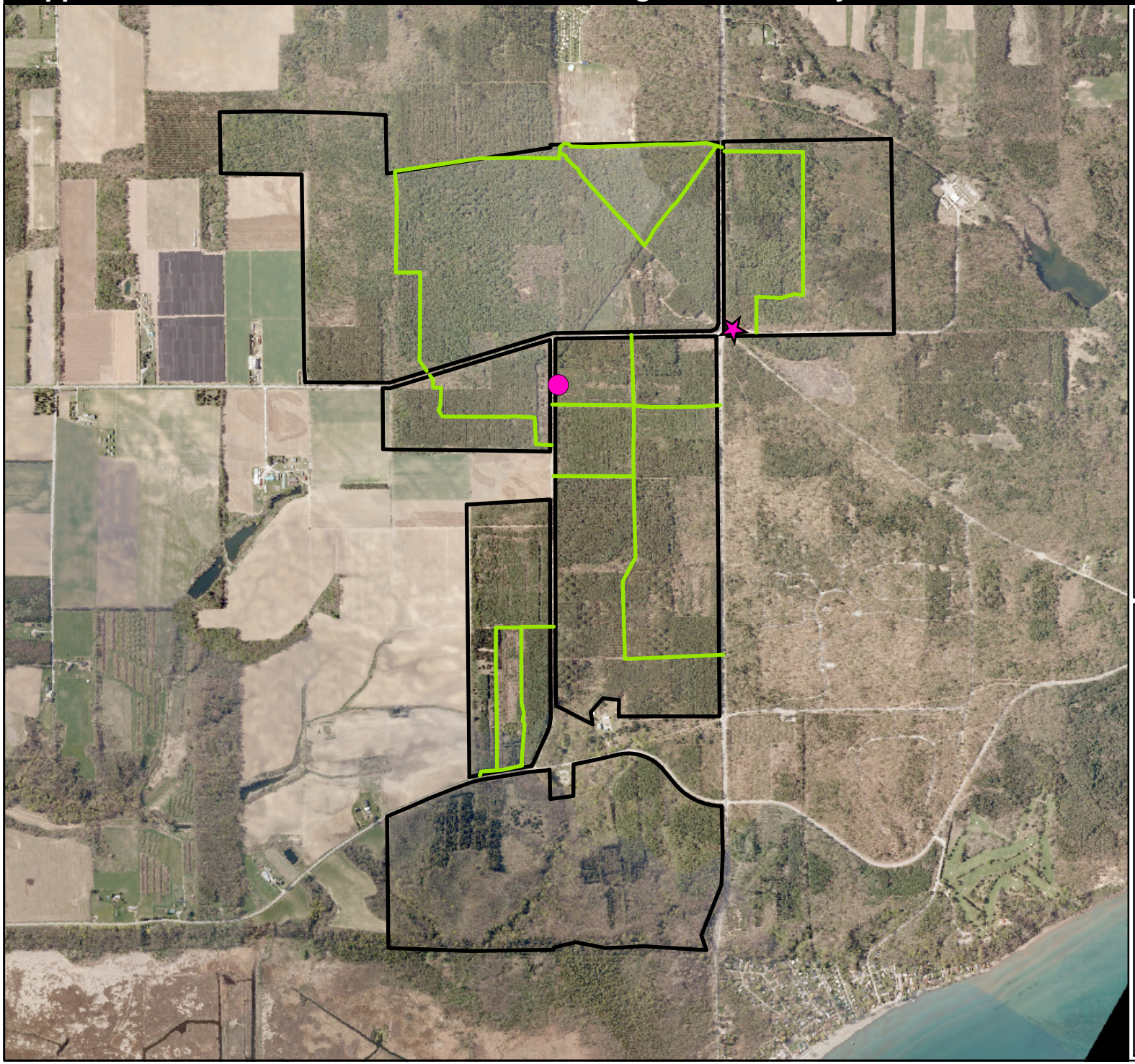
2006 Southwestern Ontario Orthophotography Project (SWOOP).

This map was produced by the Aylmer District Office GIS Unit, Ministry of Natural Resources.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources (OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

File Path:

Appendix B7b - Recreational Trails and Parking Areas - Turkey Point Tract



LEGEND

Ontario

- Multi-Use Trail
- Existing Parking Area
- Proposed Parking Area
- SWCR Boundary

N

0 200 400 800

Metres

SCALE: 1:20,000

UTM NAD83 CNT Zone 17.

Base data derived from the Natural Resource Values Information System (NRVIS), Scale 1:10 000.

2006 Southwestern Ontario Orthophotography Project (SWOOP).

This map was produced by the Aylmer District Office GIS Unit, Ministry of Natural Resources.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources (OMNR) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

File Path: