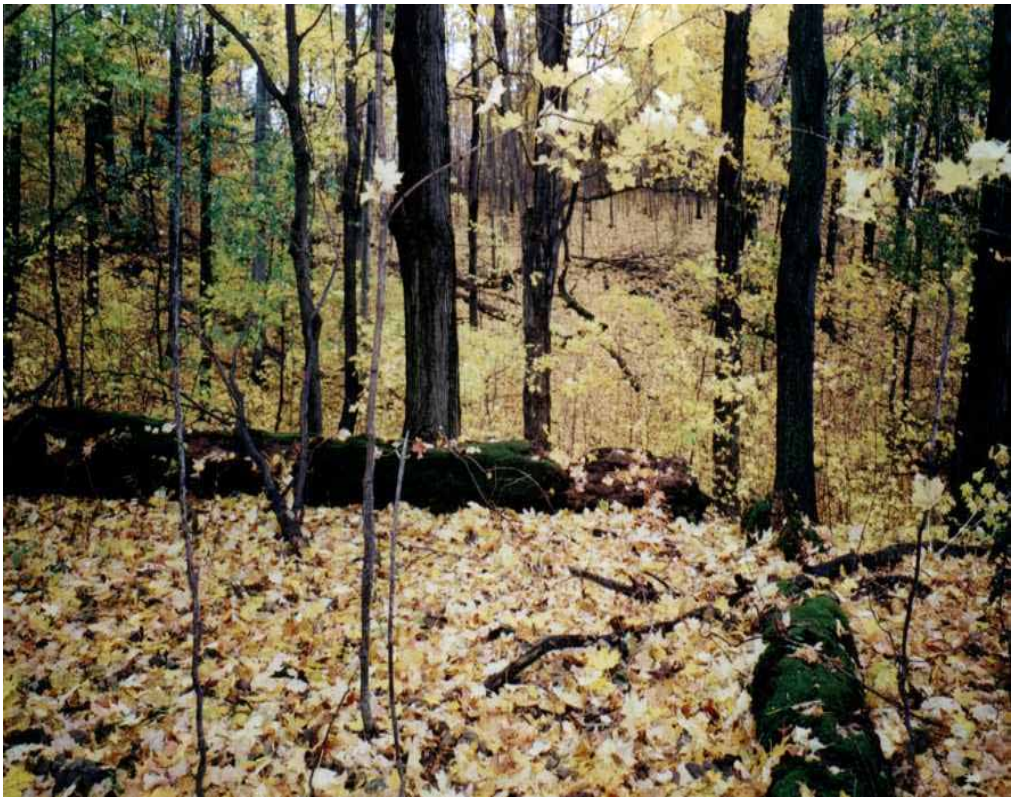
HALTON REGIONAL FOREST MANAGEMENT PLAN



ADDENDUM APRIL 2006

BRITTON, COX, CURRIE, MAHON, ROBERTSON, & TURNER TRACTS

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INTRODUCTION

This addendum to the Halton Regional Forest Management Plan (HRFMP) (February 2005) has been prepared in response to comments received from the Niagara Escarpment Commission (NEC) regarding special considerations for management within those forest tracts designated as the Halton Forest South Area of Natural and Scientific Interest in the Niagara Escarpment Plan (NEP) Area. A copy of the January 2006 correspondence from the NEC detailing these concerns is included at the end of this addendum. The revised tables, figures, and maps included in this addendum are intended to replace the corresponding tables, figures, and maps contained in the February 2005 management plan.

As stated in the Halton Regional Forest Management Plan, six tracts, i.e., Cox, Britton, Robertson, Turner, Mahon and Currie are located within the Niagara Escarpment Plan area. These tracts are located within the Hilton Falls Conservation Area, a park/open space recognized by the Niagara Escarpment Parks and Open Space System (NEPOSS) as a Natural Environment Park. The area recognized by the NEPOSS includes tracts owned by the Region of Halton and the Hilton Falls Conservation Area owned by Conservation Halton. The Niagara Escarpment Plan (Section 3.1.5) provides that Resource Management Zones will not be established in Provincial Parks or on Public Lands in NEPOSS identified as being in an Area of Natural and Scientific Interest (Life Science) with the following exceptions:

a) Where existing forestry agreements are in effect;

b) To facilitate uses permitted under existing approved Parks Master/Management plans;

c) To maintain or protect the unique features of an Area of Natural or Scientific Interest, where such features would otherwise disappear without active management;

d) For emergency access (e.g., fire protection); and

e) On public lands included in the Resource Management Area Class.

Five of these tracts (all except the Cox Tract) are located within the Provincially Significant Life Science Area of Natural and Scientific Interest (ANSI) known as Halton Forest South. All six tracts are also located within an area identified by Halton Region as the Hilton Falls Complex Environmentally Sensitive Area. Land use concerns within the Halton Forest South ANSI include damage that may occur from inappropriate logging or recreational use.

This addendum will provide specific policies with regard to forest management, recreational uses, and infrastructure development within the Britton, Currie, Mahon, Robertson, Turner and the Cox Tracts. This addendum will ensure that the HRFMP (with addendum) conforms to the NEP.

The Cox Tract, although not located within the ANSI, is within the same Natural Environment public land system. The Cox Tract has a stand that was identified to be older than 90 years of age. On page 13 of the HRFMP, one of the attributes proposed for identifying areas of High Conservation Value Forests where natural ecological functions should prevail, are “woodlands that are in the late seral stage of development, (i.e., ≥ 90 years of age)”. Therefore, this area should be identified as a Passive Area.

FOREST MANAGEMENT IN ANSI AREAS WITHIN THE NEP – Britton, Currie, Mahon, Robertson and Turner Tracts

The Halton Forest South ANSI includes the major portion of the largest continuous tract of forest and wetland along the Niagara Escarpment south of Grey County. It provides refuge for a high diversity of species requiring large tracts of forests and is unique within the regional and provincial landscape. It should be recognized as a High Conservation Value Forest (HCVF) where active management is limited to those activities that will protect or enhance the unique features of the forest. This does not preclude the identification of other HCVFs on other properties.

The majority of the forests in the ANSI are intermediate in age. Provincial direction is that the management of this ANSI should focus on enhancing the potentially mature and undisturbed character of this large and exceptional woodland. This includes allowing natural succession and progression to an old growth stage. Therefore, tree cutting in this area will generally be restricted to the reduction of hazard trees near areas of concentrated human use and to the management of the conifer plantations to promote natural regeneration and growth. It is possible that additional cutting may be necessary; for example, to implement a recovery program for a species at risk. In such cases, a detailed justification and prescription will be developed on an individual case basis, and input and concurrence will be sought from the Niagara Escarpment Commission and the Ministry of Natural Resources.

Conifer plantations are generally accepted as artificially regenerated areas where active management, usually quite limited in duration, will enhance the natural characteristics. Attributes to be improved include growth of naturally regenerating mid to late successional species and, in the case of white pine plantations, maintenance of an important native conifer.

Conifer plantation management is only recommended for those plantation areas which are outside the Restricted Management Area and accessible from existing forest access roads. If it is determined that additional tree cutting is necessary (e.g., to implement a recovery program for a species at risk), a detailed justification and prescription will be developed on an individual basis, and input and concurrence will be sought from the Niagara Escarpment Commission and the Ministry of Natural Resources.

The plantation areas proposed for forest management will be thinned based on the prescriptions developed for the objectives outlined in the HFMP. In recognition of seasonal sensitivities and the importance of this area as a breeding habitat for forest interior birds, appropriate logging operations should be conducted outside of the spring and early summer periods and only when the ground is frozen or dry enough to avoid site damage.

With regard to the Access Zone it shall be the aim in these areas to protect and maintain a closed canopy and to restrict the opening of this canopy. Since roads may create long canopy openings that attract cowbirds and predators, logging trails and access zones should be narrow enough not to break the forest canopy significantly. The areas proposed for cutting should be accessed by the most appropriate route possible and no new access routes should be created.

RECREATION USES IN ANSI AREAS WITHIN THE NEP - Britton, Currie, Mahon, Robertson and Turner Tracts

The primary reason for designating a large portion of the lands within these tracts as Passive rather than Restricted was to permit broader areas of lesser restriction that could be available for passive recreational activities on the existing access roads or trails or where trails are to be relocated to protect significant features. Table 3 of the HRFMP provides that permitted recreational activities in the Restricted Area should be confined to forest access roads and approved recreational trails included in the Access Management Area. Low-impact group activities (e.g., orienteering) may be permitted in the Passive Area depending on timing and provided the appropriate approvals have been obtained. Approvals should ensure that group activities do not disturb areas of sensitive and rare species by restricting their location and the times when approvals are issued. This would not include off-trail mountain biking.

The Niagara Escarpment Plan provides that only non-intensive recreation uses such as nature viewing and trail activities (except motorized vehicles) are permitted within these areas which are designated Escarpment Natural Areas in the NEP. This is consistent with the permitted uses identified in Table 3 which restricts the uses to those located on trails and low-impact activities where appropriate approvals have been obtained.

In addition to consulting with the user groups and the HRFAC, the Region of Halton will consult with the NEC and the MNR to review and approve the locations and permitted uses of recreational trails and to amend this plan to incorporate the approved trail system into the plan.

IMPLEMENTATION

This forest management plan contains specific recommendations on parking lot, gate and sign improvements. Regular maintenance of access roads, the replacement of culverts, the building of fences or gates, the erecting of signs and the resurfacing of parking lots do not require a development permit from the NEC. However, the expansion of parking lots and the widening of access roads will require a development permit from the NEC.

Approval will be required from the NEC where there are amendments made to this management plan that affect ANSI areas. This includes amendments regarding the designation of access roads and trails, the adoption of a new five year operating plan, the adoption of a Health and Safety Plan, etc.

Revised tables and figures appear on the following pages. Appendix C Revised contains revised maps of the management areas and tract specific management features for the Britton, Cox, Currie, Robertson, Mahon, and Turner Tracts. A revised five-year silvicultural schedule and revised forest stand maps for the same tracts are presented in Appendix D Revised.

Table 2 Revised. Management Areas, Criteria and Rationale

Management Area	Criteria	Rationale
Restricted *Highest Level of Protection*	• Significant portions of the habitat of Jefferson's Salamanders, including semi-permanent and ephemeral ponds defined as the pond plus adjacent forest within a 250 m radius.	• Protection of breeding ponds and summer through winter upland habitat to avoid changes in drainage patterns and compaction of soil.
	• Watercourses, ponds, submergent and emergent marsh.	• Protection of coldwater habitat for fisheries, and protection of features sensitive to contamination
	• Northern Goshawk, Red shouldered hawk, & Coopers hawk nests (follow Provincial guidelines MNR 2000b, 2002).	• Species that will re-occupy the same nest annually. Fledged young remain in the vicinity of the nest.
	• Habitat of rare plants. Plant or colony should be buffered by 1.5 times the height of the canopy. To be located at the time of prescription writing.	• Avoid changes in insulation, drainage patterns and compaction of soil.
Passive *High Level of Protection*	• Wetlands other than those identified above, plus a 30 m buffer from the wetland boundary defined by the occurrence 50% upland plants in the community.	• Protection of wetland attributes, but not as sensitive to contamination. Selective removals possible in winter for wildlife habitat management objectives.
	• A buffer of 30 m from the defined bank or wetted edge of watercourses, ponds, and marshes.	• Protection of wetland attributes and protection of features sensitive to contamination.
	• Significant portions of the habitat of Acadian Flycatcher, i.e. an open understory with 70+% canopy cover created by large, tall trees (Friesen et al. 1999) and Cerulean Warbler (supercanopy trees), and other designated species that may occur in the future.	• Endangered, Threatened or Vulnerable Species as identified by COSEWIC, but may benefit from managed forest prescriptions.
	• Areas within the Halton Region Forest South Life Science ANSI not identified as "Restricted" or plantation areas.	• Compatible with the Niagara Escarpment Plan
	• Woodlands in the late seral stage of development (i.e. 90+ years of age)	• To conserve areas of late seral forest.

Table 2 Revised. Management Areas, Criteria and Rationale

Management Area	Criteria	Rationale
Modified *Moderate Level of Protection*	• Forested habitat that includes some area-sensitive species, and those with specialized habitat requirements. • Conifer plantations including those within the Halton Region Forest South Life Science ANSI where access can be achieved without detriment to the surrounding forest. • Areas proposed for forest management will be thinned based on prescriptions developed for the objectives outlined in this management plan. In recognition of seasonal sensitivities and the importance of the Halton Regional Forest as a breeding habitat for forest interior birds, appropriate harvesting operations should be conducted outside the spring and early summer periods and only when the ground is frozen or dry enough to avoid site damage.	• Protects habitat for area sensitive species and rare species, as well as disturbance tolerant species. • Potential for enhancement of natural features and species diversity. • The Profile of the Halton Forests, other information on species at risk, and the tract summaries (Table 3) should be consulted to ensure that forest management can be accomplished while protecting the unique features of the forest stands and the surrounding forests. • Thorough site assessments should be made when developing silvicultural prescriptions for any stand being considered for management.
Access Zone	• Existing forest access roads, parking lots, and approved recreational trails except where noted in Tables for Tract Specific Management Features below. Recreational trails and permitted uses to be reviewed in consultation with forest users and the HRFAC. The location and uses of recreational trails within the Halton Region Forest South Life Science ANSI should also be reviewed with the MNR and NEC. • Access Zone is based on existing access width of 3.5metres.	• These management areas provide access for silviculture and other management activities, recreation, and public safety. • Further openings of the canopy along access routes should be avoided and full canopy closure should be the goal.

Table 3 Revised. Management Area Guidelines for the Halton Regional Forest

Management Area	Silviculture	Recreation	Education / Research	Amenities and Infrastructure
Restricted	• Special circumstances only[1]. • No machines.	• Permitted recreational activities should be confined to forest access roads and approved recreational trails included in the Access Management Zone. • Recreational activities that could extend beyond the Access Management Zone and into the Restricted Area should be prohibited.	• No education activities. • Limited research activities.	<u>Access roads and Recreational Trails</u> • Existing Forest Access Roads within all management areas should be maintained. • Recreational trails within all management areas will be reviewed in consultation with forest users and the HRFAC. • No new recreational trails permitted unless to re-locate existing trails to avoid sensitive sites. • Boardwalks may be required over some areas to protect sensitive sites <u>Signage, Fencing, and Property Boundary Markers</u> • Signage to be located at tract entrances and trail heads • Property boundaries to be marked where required. • Fencing to be erected only where required and in consultation with adjoining property owners.
Passive	• Special circumstances only[1]. • No new forest access roads or landings.	• Permitted recreational activities should be confined to forest access roads and approved recreational trails included in the Forest Access Management Zone. • Low-impact group activities, (e.g. orienteering) may be permitted depending on timing and provided appropriate approvals have been obtained. Approvals should ensure that group activities do not disturb areas of sensitive and rare species by restricting their location and the times when approved activities are permitted.	• Education and research. permitted.	
Modified	• Silvicultural prescriptions are modified to account for special features present by stand. • Machines permitted. • No new access roads. • Silvicultural management	• Permitted recreational activities should be confined to forest access roads and approved recreational trails included in the Forest Access Management Zone. • Low impact group activities, (e.g. orienteering) may be permitted depending on timing and provided appropriate approvals have been obtained. Approvals should ensure that group activities do not disturb areas of sensitive and rare species by restricting their location and the times when approved activities are permitted.	• Education and research permitted	

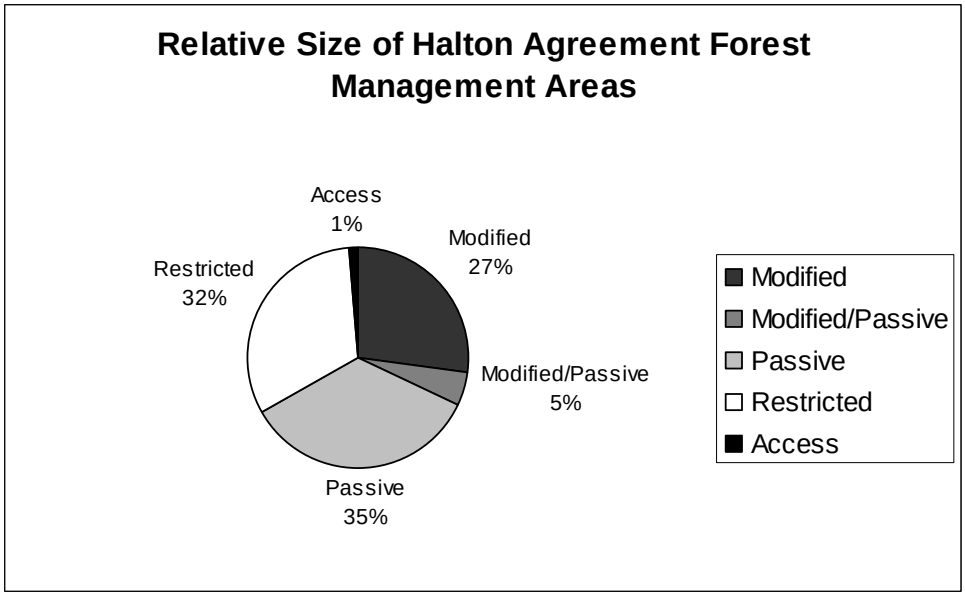
[1] If it is determined that tree cutting is necessary (e.g. to implement recovery program for a species at risk), a detailed justification and prescription will be developed on an individual basis, in consultation with the Ministry of Natural Resources and NEC.

Table 3 Revised. Management Area Guidelines for the Halton Regional Forest				
Access	• Fell hazard trees within one tree length of access roads and recreational trails.	• Permitted recreational activities can take place within the Access Zone.	• Education and research permitted	Parking lots. Maintain current parking lots. Some parking lots require surface grading and gravel. Culverts. Maintain and repair where necessary to avoid flooding. Access control • Reduce width of trails through restricted areas to 3.5m wide where feasible • Maintain gates and access control structures at tract entrances to restrict access by motorized vehicles including snowmobiles, ATV's, 4WD vehicles, and motorcycles (except where required for public safety and management). • Discourage unauthorized entry to adjacent private property and Hilton Falls Conservation Area through signage, appropriate access control structures, and enforcement where necessary. • Further openings of the canopy along access routes should be avoided and full canopy closure should be the goal. Recreational Trails: • Map all recreational trails using GPS technology. • Review location and uses of recreational trails with forest users and the HRFAC. The location and uses of recreational trails within the Halton Region Forest South Life Science ANSI should also be reviewed with the MNR and NEC. • Amend this plan to include approved recreational trails in the Access Management Zone. • Abandon recreational trails that are not approved and restore native flora where feasible.

Table 4 Revised. Summary of Management Area by Tract

Tract	Management Area					Grand Total (ha)
	Modified (ha)	*Modified / Passive (ha)*	*Passive (ha)*	*Restricted (ha)*	*Access (ha)*[2]	
Acton	7.61	3.40	10.80	0.04	0.19	**22.03**
Britton	6.90	0.00	70.97	86.62	1.62	**166.11**
Conley	8.24	5.03	7.62	0.00	0.83	**21.72**
Coulson	32.66	0.00	1.06	2.08	0.12	**35.92**
Cox	34.56	0.00	4.25	0.75	1.29	**40.85**
Currie	2.20	0.00	17.13	19.34	0.52	**39.19**
Elliott	10.50	7.09	12.64	0.04	0.45	**30.72**
Finney	18.23	0.37	0.36	0.00	0.71	**19.67**
Frank	8.93	4.53	23.27	4.84	0.21	**41.77**
Laking	3.43	1.83	6.31	1.18	0.10	**12.84**
Mahon	0.00	0.00	7.15	41.35	0.57	**49.07**
Robertson	5.70	4.00	41.97	34.56	1.13	**87.36**
Snyder	36.88	2.60	3.41	13.61	1.28	**57.77**
Turner	4.48	3.40	25.42	6.92	0.40	**40.62**
Grand Total	**180.30**	**32.24**	**232.35**	**211.32**	**9.42**	**665.63**

Figure 2 Revised. Relative Size of Halton Forest Management Areas



2. Number of hectares occupied by forest access roads is based on an average access road width of 3.5m.

Table 11 Revised. Management Areas by Age Class and Forest Type[3] with Average Stocking

	Age Class	Sugar Maple	Conifer Plantation	Mixed	Red/Silver/ Maple	Mixed Plantation	Oak	Cedar	Poplar-Birch	Deciduous Plantation	Total
Modified Management Areas	1-10										
	11-20					1.61					1.61
	21-30		16.73	1.08							17.81
	31-40		33.89	1.08		6.36	8.45	1.00	0.36		51.14
	41-50		28.65	4.67		2.81					36.13
	51-60		8.64	33.10	2.33			0.26		0.68	45.01
	61-70	1.07		14.50	1.54			1.13	3.87		22.11
	71-80										
	81-90										
	91+										
	Total	**1.07**	**87.90**	**54.43**	**3.87**	**10.78**	**8.45**	**2.39**	**4.23**	**0.68**	**173.81**
	Average Stocking[4]	1.10 Tol. Hwd SC1	0.90 Red Pine managed	1.10 Tol. Hwd SC1	1.10 Tol. Hwd SC1	1.0 White Pine SC2	1.1 Tol. Hwd SC3	0.91 Black Spruce Sc1	0.71 Aspen SC3	1.0 Tol. Hwd SC1	
Passive-Modified Management Areas	1-10										
	11-20										
	21-30		2.22	1.62							3.84
	31-40		10.66	1.08		0.77		0.09			12.60
	41-50		3.96	3.43		0.14					7.53
	51-60			1.12	1.21			0.7			3.03
	61-70	2.12			0.34			0.84	1.65		4.95
	71-80										
	81-90										
	91+										
	Total	**2.12**	**16.84**	**7.25**	**1.55**	**0.91**	**0.00**	**1.63**	**1.65**	**0.00**	**31.95**

[3] Restricted and Passive Management Areas are not subject to management. Area represents forested areas only.

[4] Average stocking = Average basal area at age 60/ Normal basal area at age 60 from Plonski's Yield Tables.

Table 13 Revised. Halton Regional Forest Maximum Sustainable Area Harvested by Planning Period for All Forest Types

Period	Total Area (ha)	Estimated Volume (m^3)
2006-2015	73.11	3783
2016-2025	84.09	4201
2026-2035	90.06	5069
2036-2045	96.87	7687
2046-2055	94.93	6919
2056-2065	83.18	7506
2066-2075	70.71	5329
2076-2085	62.43	2489
2086-2095	71.79	3164
2096-2105	82.56	3651

Table 15 Revised. Summary of Scheduled Thinning Treatments by Forest Type for the 5-year Operating Period of 2005-2009

Forest Type	Total Area (Ha)
Red pine plantation	23.05
White pine plantation	10.35
Spruce-Larch plantation	2.64
Total Hectares	36.04

January 2006 Correspondence from Niagara Escarpment Commission