Canadian Environmental Law Association
L'Association canadienne du droit de l'environnement

517 College Street, Suite 401, Toronto, Ontario M6G 4A2
Telephone (416) 960-2284
Fax (416) 960-9392

SUBMISSION TO THE

ENVIRONMENTAL ASSESSMENT ADVISORY COMMITTEE

REGARDING THE EAGLE CREEK GOLF COURSE AND SUBDIVISION

AND THE CLASS I CONSTANCE CREEK WETLAND

Publication #179
ISBN# 978-1-77189-550-7

March 19, 1990

Richard D. Lindgren
Counsel

TABLE OF CONTENTS

		Page
1.	EXECUTIVE SUMMARY	1
2.	INTRODUCTION	2
3.	BACKGROUND	3
	A) Constance Creek Wetland	3
	B) Chronology of Development	4
4.	SIGNIFICANCE OF THE CONSTANCE CREEK WETLAND	9
5.	IMPACTS UPON THE CONSTANCE CREEK WETLAND	12
	A) Physical Destruction of the Wetland	12
	B) Pesticide Use on the Golf Course	14
	C) Fertilizer Use on the Golf Course	16
6.	DISCUSSION	18
	Issue #1 - Designation	18
	Issue #2 - Legislation	24
	Issue #3 - Planning Process	28
7.	CONCLUSIONS	34
8.	APPENDICES	35

I. EXECUTIVE SUMMARY

The Constance Creek Wetland is an essentially undisturbed riverine wetland that has been mapped and evaluated by the Ministry of Natural Resources as a Class I (provincially significant) wetland. Accordingly, the wetland contains important ecological, hydrological and socio-economic values that must be protected against the adverse impacts of development.

The Eagle Creek development includes a golf course which has been partially built within the Class I wetland. This portion of the wetland has been cleared, dredged, filled and graded before any planning approvals have been obtained by the developer. A number of signficant environmental effects have already resulted from this development, and many others are likely to be caused by the operation and maintenance of the golf course. These immediate and cumulative environmental impacts have not been fully identified, analyzed or mitigated by the developer or the local planning authorities. Accordingly, the development must be designated under the Environmental Assessment Act, and the developer must be required to prepare and submit an environmental assessment to the Minister of the Environment.

While there appear to be other means available to protect significant natural areas such as wetlands, most existing options are either ineffective or inapplicable in the instant case. Thus, the province must immediately enact comprehensive wetlands protection legislation, and must develop effective regulatory and non-regulatory programs that secure the protection and preservation of significant wetlands.

As demonstrated in the instant case, the existing land use planning and approvals process is inadequate to identify, evaluate and protect wetlands and other environmentally significant areas. Therefore, the province must substantially revise the current planning process to ensure that environmental concerns, including those involving cumulative effects, are thoroughly identified and addressed within the planning process.

2. INTRODUCTION

In the instant case, Canadian Environmental Law Association ("CELA") has been retained by the Wetlands Preservation Group ("WPG") of West Carleton. The WPG is a citizens' group that advocates sound environmental decision-making for wetlands within the Township of West Carleton and across the province as a whole. The WPG has three main objectives:

i) to protect the quality and ecological integrity of wetlands;

ii) to promote the wise use and effective long-term management of wetlands; and

iii) to educate the public on the need to protect wetland values.

While the WPG is a party in the zoning appeals presently being heard by the Ontario Municipal Board in this matter, it should be noted that the WPG does not object to the construction of the subdivision and the golf course on the upland area of the subject property. However, the WPG is strongly opposed to the construction of the golf course within the lowland area evaluated and mapped as a Class I wetland by the Ministry of Natural Resources. In addition, the WPG wants to ensure that the operation and maintenance of the golf course on the upland area does not result in adverse environmental effects within the Constance Creek Wetland.

This submission by CELA on behalf of the WPG to the Environmental Assessment Advisory Committee (the "Committee") will provide an overview of the facts, and will focus on the legal and policy issues arising from the facts. A submission by the WPG will be filed separately with the Committee, and will contain more site-specific information and submissions concerning this development.

The WPG submits that the issues raised by this matter pertain not only to the Eagle Creek development *per se*, but to all wetlands and other natural areas threatened by urban development within Ontario. Therefore, the Committee must review this matter both on its facts and more generally as an example of the generic problem of protecting and preserving wetlands at risk from development. Accordingly, this submission will address the following three inter-related issues:

1. Should the Eagle Creek development be designated under the *Environmental Assessment Act*, having regard to the ecological, hydrological and socio-economic values of the Constance Creek Wetland

and the significant environmental impacts associated with the development?

2. What are the other means of protecting and preserving significant wetlands such as the Constance Creek Wetland, and are these means effective in achieving this objective?

3. Is the existing land use planning and approvals process adequate to protect and preserve significant wetlands such as the Constance Creek Wetland; if not, what changes are necessary?

3. BACKGROUND

A) THE CONSTANCE CREEK WETLAND

The Constance Creek Wetland stretches for 9 kilometres from Constance Lake in the City of Kanata to Constance Bay in the Township of West Carleton, where the wetland empties into the Ottawa River. The wetland complex is approximately 626 hectares in size, and largely consists of riverine wetland with some lacustrine (exposed to lake) and palustrine (intermittent stream inflow and intermittent or permanent stream outflow) wetlands. Aside from some minor road crossings, the Constance Creek Wetland is essentially undisturbed and undeveloped along its length. Over 80% of the wetland is privately owned. The surrounding countryside is mainly forested with some agricultural land use.

Approximately 76% of the wetland is hardwood forest "swamp", which is defined by the Ministry of Natural Resources (MNR) as "wooded wetlands where standing to gently flowing waters occur seasonally or persist for long periods on the surface." Red maple, silver maple and black ash are the predominant hardwood species along the length of the wetland.

The remainder of the wetland is classified as "marsh", which is defined by the MNR as "wet areas periodically inundated with standing or slowly moving water, and/or permanently inundated areas characterized by robust emergents, and to a lesser extent, anchored floating plants and submergents." A number of diverse vegetative communities have been identified, and the wetland contains numerous plant species that are considered to be regionally rare, uncommon and sparse.

In addition to animal species commonly found in the area, a number of provincially significant species have been recorded within the Constance Creek Wetland: river otter, marsh wren, pied-billed grebe, red-shouldered hawk, blue-spotted salamander, marsh hawk, black tern, and least bittern. Several regionally significant species have also been recorded within the wetland: blanding's turtle, eastern milk snake, mink frog, map turtle, green heron, loggerhead shrike, Virginia rail, and green winged teal.

The Constance Creek Wetland has been identified as a regionally significant waterfowl staging area, and as an active feeding area for

colonial water birds such as great blue herons. In addition, the wetland provides good winter cover for ruffed grouse and a number of furbearers. The wetland also contains fish spawning and rearing habitat for game species such as northern pike, muskellunge, and smallmouth and largemouth bass.

The Constance Creek Wetland contains a number of natural resources that may be harvested by man: timber, wild rice, bait fish, bull frogs, snapping turtles, and various furbearers. Recreational activities, such as hunting, fishing, canoeing and nature appreciation or study, occur within the wetland. Scientific research on aquatic plants has been conducted within the wetland, and several reports on the wetland's natural resources have been published. The wetland is close to several urban areas within the Regional Municipality of Ottawa-Carleton ("the Region"), and is easily accessible to many persons within the Region.

Organic soils occupy 50% or more of the wetland, and trees and shrubs occupy the shoreland and floodplain. Accordingly, the wetland serves as a nutrient trap and assists in erosion control. The wetland's catchment basin is 157 square kilometres, and approximately 9 square kilometres of lakes, reservoirs and wetlands drain into the Constance Creek Wetland.

B) CHRONOLOGY OF THE DEVELOPMENT

i) Location and Biophysical Setting

The subject lands are located on part of Lots 7 and 8, Concessions IV and V, Torbolton Ward, in the Township of West Carleton. The development measures approximately 123 hectares, of which 23 hectares have been evaluated and mapped by MNR as part of the Class I Constance Creek Wetland, as will be described in Part 4 of this submission. A small unclassified wetland existed on the upland portion of the site prior to preliminary construction of the golf course in 1989.

As result of clearing and grading of the golf course by the developer, the property now drains westward from Greenland Road to Constance Creek. The upland area previously drained into the upper wetland instead of Constance Creek. Approximately 250 metres west of Greenland Road, the land drops sharply at a gradient of up to 25%, then resumes its incline towards Constance Creek. The upland area consists of interbedded shale, dolomite and sandstone, and is underlain by grey limestone. The overburden largely consists of medium-grained sand; in the upland area, this sand deposit varies in depth from 3 metres adjacent to Greenland Road to zero at the escarpment edge. Below the escarpment, the sand deposit ranges from 3 - 10 metres in depth, and is underlain by fluvial clay with interbedded sand.

Over 350 plant species have been identified on the subject lands. The upland area contained approximately 3 hectares of white spruce and 22 hectares of red pine, which were planted in 1976 and 1979

as a result of a Woodlot Improvement Act agreement with the previous landowner. Other upland tree species, such as white pine, sugar maple and basswood, were also present.

The land below the escarpment consisted of diverse stands of upland (poplar, white birch and balsam fir) and lowland (black ash, red maple, silver maple, Eastern white cedar, and white elm) tree species. Numerous species of shrubs, wildflowers, ferns, sedges, grasses, and aquatic plants, including many considered to be regionally rare, uncommon and sparse, were present on the subject land.

ii) The Proposed Development

The proposed development consists of a 17.4 hectare 39-lot residential subdivision and a 106 hectare 18-hole golf course; however, there have been indications that a 36-hole golf course is being contemplated. The proposed subdivision is to be located on the upland area immediately adjacent to Greenland Road. The lots will be approximately 0.4 hectares in size, and will be privately serviced by drilled wells and septic tile fields.

The golf course is situate on land above and below the ridge, and will consist of tees, greens, fairways, cart paths, maintenance yard, practice range, and clubhouse facilities. Artificial drainage ditches and two on-site detention ponds totalling 9.3 hectares in size have been constructed for irrigation and stormwater management purposes. Artificial drainage will direct surface water flow towards Constance Creek.

The lower detention pond, as well as several greens, tees and fairways, have been constructed within 23 hectares of the Class I Constance Creek Wetland owned by the developer. Overflow discharges to Constance Creek will occur through the lower pond. Artificial drainage ditches on the property deposit directly into the creek, and thus surface water flow can circumvent the detention ponds.

A variety of chemicals have been proposed for use during the operation and maintenance of the golf course. Phosphorus and nitrogen have been proposed as fertilizers, while a variety of fungicides, insecticides and herbicides (such as daconil, 2,4-D, glyphosate, carbaryl and diazinon) have been identified as potential pesticides for the course.

It is noteworthy that the developer owns other property in the immediate area, and also holds options to purchase adjoining property on the condition that the Region either grants consent to the severance or agrees to include the land as part of the plan of subdivision for the Eagle Creek development. In light of this fact and the growing pressure to intensify land use in this area west of Ottawa, there is considerable concern that the Eagle Creek development will serve as a precedent for other development in the area.

iii) Official Plan Designations and Zoning By-laws

The subject lands have received only limited protection through official plan designation and local zoning by-laws. For example, the 1976 Regional Official Plan designated the property as Marginal Resource Area and Environmental Constraints Area. In November, 1979, the Regional Council adopted Amendment No.12, which would have placed much of the subject land into the more restrictive Natural Environment Area designation. This is a land use designation under which various natural areas and features, including wetlands, were to be preserved. In order to identify such areas, the Region commissioned two reports entitled An Ecological Study of Conservation - Recreation Areas in the Regional - Municipality of Ottawa-Carleton (University of Ottawa, 1975-76), which identified the Constance Creek Wetland as an area that warranted protection and preservation.

Amendment No. 12 was referred to the Ontario Municipal Board at the instance of several interested parties, including the Township of West Carleton, and the Board ultimately required substantial modifications of the amendment. The net result was that various types of development on the subject lands were permissible under the 1976 Official Plan, subject to the policies of the Marginal Resource and Environmental Constraints designations. The Township of West Carleton has taken the position that the proposed golf course is permitted under these 1976 designations. The Township has also taken the position that a golf course could be permitted, under certain conditions, on land designated as Natural Environment Area.

In 1980, the Official Plan of the Township of West Carleton was approved with various modifications, referrals and deferrals; final approval was obtained in 1984. The subdivision lands are designated as Marginal Resource, while the proposed golf course is designated as Marginal Resource and Hazard Lands. It is noteworthy that the more restrictive designation of Natural Environment Area is available under the Township's Official Plan, but has not been used to designate the Class I Constance Creek Wetland or any part thereof. In June 1989, the Township adopted Amendment No.43 to the Official Plan, which established new Hazard Land policies. The Township has taken the position that the proposed golf course is a permitted use under the local Official Plan, as amended by Amendment No. 43.

In September 1989, the Region's new Official Plan was approved with modifications, referrals and deferrals. Under the new Regional Official Plan, the subject land is designated as General Rural Area with an underlying designation of Environmental Constraints - Organic Soils for most of the wetland area. Again, the more restrictive designation of Natural Environment Area has not been used, and the Township has taken the position that the proposed golf course is a permitted use under the new designation under the Regional Official Plan. If the Natural Environment Area designation had been placed on the wetland, acquisition of the property would have been required of the Region pursuant to the policies of section 5.3 of the new Official Plan.

The Township's comprehensive Zoning By-law 266/81 zones the subject lands as Rural (RU) and Special Hazard Land (HL-1). As described below, this zoning was changed by the Township in 1989 by By-laws 36-89 and 73-89, which purport to rezone the subject lands to Residential Country Lot (RCL-23) and Open Space (OS-6). These two By-laws have been appealed to the Ontario Municipal Board.

iv) Development of the Site

The developer, R.J. Nicol Construction (1975) Ltd., purchased the upland portion of the subject property in 1987. Shortly thereafter, the developer's consultants made inquiries of various regulatory agencies and planning authorities regarding the proposed development. On several occasions, the MNR advised the consultants that it was concerned about the proposal and that no development of the Class I wetland should occur.

In October 1987, the Township's Planning Department recommended that council grant approval in principle to the development. At the time, the municipality was in receipt of MNR correspondence concerning the location of wetlands that had been evaluated and mapped by the MNR within the municipality. This information package had been sent by the MNR to the Township in the spring of 1986, and included, inter alia, a map and other information concerning the Class I Constance Creek Wetland. This information was updated by the MNR in early 1988, and was again provided to the Township in April 1988. In May 1988, the developer purchased the wetland portion of the subject property.

In May 1988, the MNR advised the Region of its concerns about the golf course and requested that the developer be required to submit additional information, including an environmental impact study on the effects of the development on the wetland and wildlife. In March 1989, the Region gave draft approval to the plan of subdivision, subject to certain conditions, including the following:

> 14. That no dredging, infilling or any other alterations occur within the boundary of the Class I Constance Creek Wetland as established by the Ministry of Natural Resources. This shall be to the satisfaction of the MNR.
>
> 15. That the final grading of any golf course development shall direct surface water drainage away from Constance Creek and the Class I wetland area as defined by the MNR. This shall be to the satisfaction of the MNR.

On or about the time that draft plan approval was given by the Region, the developer commenced construction of the proposed development. In particular, tree removal and grading for the greens and fairways occurred throughout the spring of 1989. Within the Class I wetland,

dredging, draining and filling occurred as the developer constructed several tees, greens and fairways within the wetland despite Condition 14 of the draft plan approval. A 3.6 hectare detention pond was also excavated within the wetland, which quickly filled with water. Significantly, this construction activity was undertaken before the municipality passed any by-laws implementing the draft plan approval and authorizing the development.

Moreover, this construction was undertaken without the consent of the MNR. As a result of concerns about environmental harm caused by the construction, the MNR investigated this physical alteration of the wetland as well as the associated problems of erosion and sedimentation. The MNR subsequently charged the developer with charges under the federal Fisheries Act for adversely affecting fish habitat, and under the provincial Public Lands Act for illegally placing fill on the bed of Constance Creek. These charges are presently before the Ontario Provincial Court.

After the construction work had been commenced by the developer, the Township prepared and circulated By-law 36-89, which was revised to exclude the wetland and rezoned the upland area to RCL-23 and OS-6. The MNR advised that it had no objections to this by-law, but that it would object to any rezoning of the Class I wetland. During the public meeting on By-law 36-89, the developer's solicitor advised that an 18-hole golf course could be built entirely on the non-wetland portion of the subject lands. Nevertheless, the developer's consultant indicated that a second application would be made to rezone the remaining wetland, thereby dividing the golf course development into two phases. Members of the WPG in attendance at this meeting expressed serious concerns about this two-staged development.

In May 1989, the Township council adopted By-law 36-89, which would rezone all of the subject land except the wetland portion. Subsequently, in September 1989, the wetland portion was rezoned pursuant to By-law 73-89. Shortly thereafter, the Region revised its conditions for final approval of the plan of subdivision. In particular, the Region added the following conditions:

> 28. That the owner agrees, by way of the subdivision agreement, to implement the recommendations contained in the Environmental Appraisal report prepared by P.D. Niblett & Assoc., dated July 1989.
>
> 29. That the Study referred to in Recommendation No. 3 of said Environmental Appraisal report be completed and submitted to the Township of West Carleton for approval prior to the implementation and final approval of the subdivision.

These conditions were added at the request of the Township,

although there is concern that the municipality lacks the expertise and resources to determine if these reports adequately identify and mitigate the environmental impacts of the development. As described below, these reports have been completed and circulated among the parties to the Ontario Municipal Board hearing of the appeals against By-laws 36-89 and 73-89. It is noteworthy that Conditions 14 and 15 of the draft plan approval have been referred to the OMB at the instance of the developer. It is expected that the developer will request the OMB to delete or modify these two conditions since the activities prohibited by the conditions have, in fact, already been carried out by the developer. Accordingly, the developer cannot comply with these two conditions in their present form.

4. SIGNIFICANCE OF THE CONSTANCE CREEK WETLAND

i) General

Wetlands have traditionally been viewed as wastelands possessing little or no value until they have been drained, dredged, filled and converted to agricultural or urban uses. Accordingly, over 80% of southern Ontario's original wetlands have been permanently lost as a result of wetland drainage and development. It has been suggested that further loss is continuing to occur at a rate of 1-2% per year.

More recently, there has been a growing recognition that wetlands are extremely important natural resources possessing a wide range of ecological, hydrological and socio-economic values. These values include the following:

A) Ecological Values

- photosynthetic production of biomass energy;
- provision of biological and landscape diversity;
- habitat for fish, waterfowl, furbearers, herpetiles invertebrates, non-game species, and rare, threatened and endangered species;

B) Hydrological Values

- water storage and flow stabilization;
- groundwater recharge and discharge;
- nutrient retention and recycling;
- erosion control and sediment removal;

C) Socio-Economic Values

- production of commercial natural resources;
- provision of recreational opportunities;
- provision of scientific and educational opportunities;

The recognition of these values has, in turn, resulted in the development of various governmental and non-governmental initiatives designed to protect and preserve wetlands. It is beyond the scope of this submission to identify and analyze the various initiatives that have evolved at the national and international level. Instead, Part 6 of this submission will briefly examine the initiatives that have been developed in Ontario, and will comment on the efficacy of such initiatives in protecting the Constance Creek Wetland. The adequacy of the existing land use planning process to protect wetlands will also be examined.

ii) The Value of the Constance Creek Wetland

In 1984, the MNR evaluated the Constance Creek Wetland under its Wetland Evaluation System (2nd edition, 1984). It should be noted that such an evaluation is not intended to be a complete inventory of all values within a wetland; instead, the evaluation is designed to measure certain key wetland values in order to identify the most valuable wetlands (see Appendix I). As the Wetland Evaluation System states:

> The ultimate aim is to be able to rate wetlands with regard to their relative value so that people who make decisions about land use will have a means through which to ascertain which wetlands are the more valuable.

The Constance Creek Wetland evaluation consists of two documents: the wetland data record, which identifies certain wetland values; and the wetland evaluation, which assigns a numerical score to the wetland values. The various values of the Constance Creek Wetland received the following scores from the MNR evaluators:

Biological Component	200
Social Component	159
Hydrological Component	115
Special Features Component	250
Total	724

It should be pointed out that under the Wetland Evaluation System, the highest score possible under each component is 250 points. Because the Constance Creek Wetland received a score of 724 points, it has been classified as Class I (provincially significant) wetland. Class I wetlands are defined by the MNR as wetlands that score 700 or more

total point, or have three out of four components that score more than 200 points each.

In January, 1990, Atkinson & Huizer Biosurveys conducted a re-evaluation of the Constance Creek Wetland for the WPG. Because of updated information under the Biological and Social Components, the wetland was scored in the following manner.

Biological Component	202
Social Component	199
Hydrological Component	115
Special Features Component	250
Total	766

This re-evaluation was based on the wetland values that existed prior to the destruction of the developer's portion of the Constance Creek Wetland. It is noteworthy that the developer's consultant has attempted to re-evaluate the wetland after the destruction has occurred, and has concluded that only five points relating to visual aesthetics have been temporarily lost as a result of the development. The WPG submits that this is an improper and specious reevaluation since the Wetland Evaluation System is designed to measure a wetland's positive values; thus, it is a misuse of the system to assess the negative impacts that a particular development would have on wetland values or scores.

As a Class I wetland, the Constance Creek Wetland has local, regional and provincial significance. At the local level, it must be noted that the Township of West Carleton contains only three other Class I wetlands -- the Carp Ridge Wetland Complex, the Huntley Complex, and the Manion Corners Long Swamp -- all of which are also experiencing considerable development pressures. In the WPG's view, all Class I wetlands must be protected and preserved, and this is particularly true of the unique and important values of the Constance Creek Wetland.

At the regional level, it has been estimated that approximately 60 - 80% of the original wetlands within the Region have already been lost to agricultural and urban development. While several other Class I wetlands have been identified within the Region, none appear to contain the essentially undisturbed riverine wetland found within the Constance Creek Wetland. Of the 295 wetlands evaluated in the MNR's Eastern Region (which includes Carleton Place, Cornwall, Brockville, Napanee and Tweed Districts), approximately 7% were classified as Class I wetlands (MNR, 1987 Interim Report: Provincially and Regionally Significant Wetlands in Southern Ontario). Interestingly, the regional municipality's response to the MNR's 1989 draft policy statement includes a summary description of the Constance Creek Wetland which includes an annotation that the wetland "needs review for protection."

At the provincial level, many of the prime southern Ontario wetlands have been identified and evaluated by the MNR. According to the 1987 Interim Report, of the approximately 700 wetlands that have been evaluated, less than 8% have been classified as Class I wetlands (MNR, 1987). Clearly, Class I wetlands are the rarest and most valuable wetlands in Ontario, and any loss of a Class I wetland, in whole or in part, is highly significant and must be avoided. This is particularly true of the Class I Constance Creek Wetland, which remains essentially undisturbed and undeveloped despite its proximity to several urban centres within the Region.

5. IMPACTS UPON THE CONSTANCE CREEK WETLAND

In order to determine whether the values and functions of the Constance Creek Wetland require protection, it is necessary to briefly examine the environmental concerns about the proposed development. Accordingly, this Part will describe some of the adverse environmental effects that have been caused or are likely to be caused by this development. Part 6 will then analyze the adequacy of various legal and policy means by which the wetland can be protected against such risks.

Adverse Environmental Effects of the Development

The WPG has retained a number of wetland and wildlife experts who have determined that the proposed development will adversely affect the ecological, hydrological and socio-economic values of the Constance Creek Wetland. In fact, since much of the wetland portion of the golf course has already been destroyed, several adverse environmental effects have occurred and are likely to continue.

The actual and potential environmental effects may be briefly summarized as follows:

A) Physical Destruction of the Wetland

The clearing of the trees within the wetlands, and the subsequent dredging, filling and excavating activities, have substantially altered the natural topography and vegetative cover that existed within the wetland. The location and nature of the shoreline of Constance Creek has also been altered immediately adjacent to the development. As noted above, this construction activity has caused erosion and sedimentation problems, and has prompted the MNR to lay charges under the Fisheries Act and Public Lands Act.

There is serious concern that many of the regionally rare, uncommon or sparse plants found within the wetland have either been destroyed or their habitat has been substantially degraded, thereby jeopardizing their continued survival in the area. In a report prepared for the OMB hearing, the developer's consultant has conceded that it is possible that there was a loss of some of these regionally significant plants as a result of construction activity (PDNA, 1990, p.10). Since the destruction has already occurred within the wetland, it is impossible

to precisely determine the magnitude and extent of this loss of significant botanical species.

The physical destruction of the wetland has also given rise to considerable concern over the loss of wildlife habitat. As noted earlier in this submission, the wetland contained fish habitat used by game species for spawning and rearing purposes; indeed, MNR witnesses have indicated that the portion of the creek bordered by the development was important northern pike spawning habitat prior to its destruction in 1989.

Bird and animal species will also be adversely affected by this loss of habitat. Again, the developer's consultant has conceded this point:

> The major impact on the wildlife from the construction of the golf course will be a loss of wildlife habitat. The removal of both lowland and upland forest has decreased the amount of cover available for all wildlife that utilized the property. Nesting and feeding activity for a variety of woodland passerines will be reduced as well as food and cover for white-tailed deer (PDNA, 1990, p.10).

The removal of cover in the wetlands will also significantly impair the ability of many animal species to utilize and travel the creek and the surrounding habitat. The WPG has retained an expert in wildlife biology and landscape ecology who has determined that the development has "broken" the diverse and undisturbed bands of wildlife habitat that parallel Constance Creek. Accordingly, the golf course, with its removal of cover, open spaces, ditches, ponds, roads and level of human activity, will act as a "barrier" to species using the Constance Creek Wetland as a movement corridor and as breeding habitat. This removal of previously undisturbed cover will also affect area sensitive species, such as the red-shouldered hawk and river otter, which require large areas of undisturbed habitat for their life cycle needs. This expert has concluded that this ecological fragmentation of the Constance Creek must be avoided, and it is his opinion that it would be possible to recreate the habitat bands destroyed by the development to date.

The developer's consultant has argued despite the above-noted impacts on wildlife, the construction of the golf course may attract bird species (such as Canada geese and other waterfowl) that did not previously utilize the lowland/upland forests and Class I wetland. Firstly, it should be noted that Canada geese and waterfowl have already been observed using the Class I wetland. Secondly, the WPG has retained an expert in the effects of pesticides on wildlife who has concluded that bird species attracted to the golf course may be at risk due to their likely exposure to pesticides used on the golf course. The hazards to wildlife posed by chemical use on the golf course is addressed below in more detail.

In addition to impacts on wildlife and habitat, there is concern that the construction of the golf course has adversely affected the hydrological functions of the wetland. The MNR has determined that of the 23 hectares of wetland owned by the developer, less than 10% has been left undisturbed. The remainder of the wetland has been cleared of trees and most of the original ground vegetation, and much of the area has been dredged, filled or modified with drainage ditches and cart paths.

The removal of shoreline and floodplain vegetation, the alteration of the terrain, and the modification of natural drainage patterns have undoubtedly affected the wetland's important hydrological functions such as water retention, nutrient capture and so on. In fact, it is clear that the developer has removed the critical portion of the wetland that would have served as a buffer against the effects of surface and subsurface runoff from the golf course.

While the lower detention pond is intended to collect any contaminated runoff, there is concern that it will not provide adequate protection since a sluice gate will allow pond overflow to discharge directly into Constance Creek. Moreover, the bottom of the pond is not lined with an impervious material, and the pond is separated from the creek by only a short distance and a small berm constructed largely of sand, a relatively porous medium. Thus, it is likely that there will be a subsurface exchange of water between the detention pond and Constance Creek. In fact, the developer's consultant has concluded that "the majority of the water flowing through the ponds will enter Constance Creek by means of the groundwater" (PDNA, 1990, p.14).

Finally, there has been evidence at the Ontario Municipal Board hearing that some of the socio-economic values of the wetland have been adversely affected by construction of the golf course. In particular, a member of the public who operates a canoe outfitting business has testified that in his opinion, the recreational and aesthetic value of the wetland has been diminished by construction of the golf course to the water's edge.

B) Pesticide Use on the Golf Course

Because turf is a pesticide-intensive crop, golf courses generally apply considerable quantities of herbicides, fungicides and insecticides to keep the tees, greens and fairways actively growing and pest-free. These products are usually applied on the golf course on a prophylactic basis throughout the year, although insecticides are more often applied on a remedial basis once a pest infestation has been detected.

A total of 82 active ingredients are registered for turf use in Canada. However, the developer's consultant has advised that the following products are being considered for use of the Eagle Creek Golf Course:

HERBICIDES

- Roundup (glyphosate)
- Mecoprop
- Killex (mecoprop, 2,4-D, dicamba)

FUNGICIDES

- Rovral Green (iprodione)
- Daconil 2787 (chlorothalonil)

INSECTICIDES

- Sevin (carbaryl)
- Diazinon

Several of these products (i.e. diazinon, glyphosate, carbaryl, mecoprop, 2,4-D, dicamba) are quite water-soluble and/or have a high propensity to leach into the soil. This is particularly true where the soil is sandy, as is the case at the Eagle Creek Golf Course. Moreover, all of these products can be used anywhere upon the golf course, including the tees, greens and fairways constructed within the Constance Creek Wetland.

Accordingly, there is considerable concern that these pesticides are likely to be carried away from the site of application towards Constance Creek via surface, sub-surface and groundwater flow, especially since extensive irrigation of the course will take place. This off-site migration will put aquatic life in Constance Creek at risk since a number of these products, (i.e. diazinon, carbaryl, chlorothalonil, 2,4-D) are known to be toxic to aquatic plants, invertebrates and/or fish. For other products (i.e. iprodione, mecoprop, carbaryl, dicamba), data on aquatic effects is either incomplete or non-existent.

In addition to the issue of off-site migration of these substances, there is concern that terrestrial wildlife will be at risk from pesticide use at the Eagle Creek Golf Course. In particular, pesticide residues on the course may cause lethal and sub-lethal effects upon birds and some small mammal species. For example, carbaryl has been shown to cause reproductive toxicity in some mammal species ingesting carbaryl residues. Similarly, residues of diazinon on golf courses have caused mortality of large number of grazing birds (i.e. geese, gulls and dabbling ducks such as mallard and widgeon) within Ontario and the United States. Accordingly, the U.S. Environmental Protection Agency has banned diazinon from golf courses, but the product remains available for use in Canada despite concerns by Environment Canada about its toxicity to birds.

As noted earlier, a number of grass-grazing waterfowl species are attracted to well-maintained, well-fertilized turf. Frequently, these species become a nuisance to golf course operators. These species are also attracted to golf course because they offer open areas for

flocking and safety from predators. However, grazing species generally must eat and digest large amounts of green vegetation, which is relatively inefficient food source. Thus, these species are more at risk from pesticide residues on the grass than other wildlife species.

Smaller bird species (i.e songbirds) also tend to be more susceptible to pesticide poisoning because they must consume more food per unit weight, and because they have larger surface areas per unit weight than larger birds. Three exposure routes of concern have been identified for small birds: ingestion of contaminated invertebrates such as earthworms; formation of contaminated puddles in which birds bathe and drink; and direct ingestion of pesticides or fertilizers applied in granule form. For certain compounds, it has been documented that younger birds are more vulnerable than older individuals of the same species.

In general, insecticides tend to be more acutely toxic to birds and mammals than other pesticides. However, pesticides pose a hazard not only through acute toxicity, but through removal or contamination of critical food or habitat resources. For example, at various times of their life cycles, all species of waterfowl have critical nutritional requirements for invertebrates that may be removed or reduced by pesticides. Similarly, pesticides may remove or reduce aquatic plants that are necessary as food or habitat for waterfowl.

The WPG's consultants have concluded that the application of pesticides near or within a Class I wetland will pose a hazard to plant, animal and bird species in the area. Not surprisingly, the developer's consultant has predicted that these chemicals will produce no adverse environmental impacts; at the same time, however, the consultant has proposed that an Integrated Pest Management (IPM) approach, relying primarily on natural or biological pest controls, be used in order to reduce the need for chemicals. It is noteworthy the developer has not committed itself to the IPM proposal, and in any event, IPM does not rule out the use of chemicals anywhere on the golf course. Hence the WPG's concerns about the effects of golf course pesticides on wildlife in the Constance Creek Wetland remain unanswered.

C) Fertilizer Use on the Golf Course

Chemical fertilizers such as nitrogen and phosphorus are routinely applied to golf courses to ensure lush grass growth on tees, greens, fairways, and roughs. Total annual fertilizer loadings vary but are typically high for golf courses, and generally range from 21 to 40 tons per year for an 18 hole golf course. Both nitrogen and phosphorus have been proposed for use on the Eagle Creek Golf Course.

The WPG has retained an expert in the effects of fertilizers on aquatic plants who has concluded while some phosphorus will be retained by the soil, phosphorus loading at Constance Creek will occur as a result of surface, subsurface and groundwater flow from the Eagle Creek Golf Course. This loading will add to the phosphorus levels already present in the creek from other sources in the area. This has been confirmed by

the developer's consultant; however, the consultant has suggested that the contribution of the golf course will have a negligible effect overall since phosphorus will only be used in the roughs after it has been applied to the golf course to facilitate initial growth of newly seeded areas. Significantly, the consultant apparently did not take any water samples from Constance Creek to support his conclusions, and it is again noteworthy that nothing prevents the developer from using phosphorus on a regular basis for all areas of the golf course.

Nitrogen is proposed as the main nutrient to be used at the Eagle Creek Golf Course. It is to be applied several times during the spring, summer and fall on the greens, tees and fairways, including those within the Constance Creek Wetland. The developer's consultant predicts a maximum concentration of 12.4 ug/L of nitrogen in discharge waters, although he indicates that nitrogen is technically more difficult to remove from wastewater or surface runoff.

The effects of increased nutrient loadings on water quality and wetland habitat have been well-documented. Increases in phosphorus and nitrogen result in increased plant biomass (i.e. algae growth), which, in turn, causes water quality problems such as green scum, fish kills, and taste and odour problems. The cause of these and other problems is that one group of algae -- the blue-green algae -- dominate in enriched aquatic systems. Since this algae is not consumed by natural herbivores, it accumulates to unacceptably high levels and results in eutrophication of the aquatic system.

In addition to increasing the amount of plant biomass, loading of phosphorus and nitrogen into wetlands can also significantly alter the existing vegetative community. In particular, increased nutrient loading can change diverse plant communities, which support a variety of wildlife species, to a much simplified plant community, such as cattails, which support fewer wildlife species. This transformation has an obvious and deleterious effect on the wetland's biological diversity, and this effect has been documented within Ontario and the United States.

The above-noted effects of nutrients are cumulative over time, and the WPG remains concerned that the increased nutrient loadings from the Eagle Creek Golf Course will contribute to the eutrophication and degradation of the Constance Creek Wetland.

This description of some of the adverse environmental impacts of the development is only a partial summary of the WPG's concerns about this proposal. Additional information on these environmental effects may be found in the consultants' reports appended to the WPG submission, which has been filed separately with the Committee. In our view, these environmental effects have not been fully identified and analyzed by the developer's consultants, nor have their effects been properly mitigated or prevented. As noted in Part 6 of this submission, the WPG submits that this makes an environmental assessment of this development both desirable and necessary, particularly since the existing land use

planning and approvals process is not adequate to protect and preserve significant wetlands such as the Constance Creek Wetland.

6. DISCUSSION

ISSUE #1: Should the Eagle Creek Golf Course and Subdivision be designated under the Environmental Assessment Act, having regard to the ecological, hydrological and socio-economic value of the Constance Creek Wetland and the significant environmental impacts associated with the development?

While private developments such as the Eagle Creek proposal are not automatically subject to the Environmental Assessment Act (EAA), it is clear that such developments may be designated as undertakings to which the Act applies, pursuant to s.40(d) and (e). With respect to the s.1(1)(o) definition of "undertaking", it is submitted that the Eagle Creek development is both a "major commercial or business enterprise or activity", and a "proposal, plan or program in respect of a major commercial or business enterprise or activity" (emphasis added). Clearly, there can be no doubt that this development is a "major" commercial enterprise, having regard to the size and nature of the development, as well as the significant environmental impacts that have occurred or are anticipated. Accordingly, it is open to the Minister of the Environment and the Cabinet to designate the development under the Act.

Having determined that this jurisdiction exists, it is then necessary to determine whether the jurisdiction should be exercised in this case. To answer this question, it is instructive to first review the project screening criteria promulgated by the Environmental Assessment Branch in Project Screening and Application for Exemption Orders under Section 29 of the Environmental Assessment Act (MOE, 1983). These criteria are intended to assist proponents in assessing whether a project is environmentally significant, and in our submission, the following criteria are applicable and can be answered in the affirmative:

Might the proposed undertaking:

- conflict with the environmental goals, objectives, plans, standards, criteria or guidelines adopted by the province or the community where the project is to be located?
- have an effect on any unique, rare or endangered species, habitat or physical feature of the environment?
- have effects on an area of ten acres (or equivalent hectares) or greater?
- have effects on adjacent persons or property or persons or property not associated with the undertaking?

- necessitate the the irreversible commitment of any significant amount of non-renewable resources?

- pre-empt the use, or potential use, of a significant natural resource for any other purpose?

- result in a substantial detrimental effect on air or water quality, or on ambient noise levels for adjoining areas?

- cause substantial interference with the movement of any resident or migratory fish or wildlife species?

- establish a precedent... which is likely to have significant environmental effects now or in the future?

- be a pre-condition to the implementation to another undertaking?

- generate secondary effects (e.g. land development, population growth) likely to significantly affect the environment?

- block views or adversely affect the aesthetic image of the surrounding area?

- substantially change the social structure or demographic characteristics of the surrounding neighbourhood or community?

- be highly controversial?

As the Environment Assessment Branch indicates in the above-noted document, "to the extent that any of the questions must be answered with 'yes' or 'maybe', the balance could be tipped in favour of the conclusion that the undertaking may have environmentally significant effects of sufficient significance to require an environmental assessment to be prepared" (p.3). The WPG submits that the evidence clearly establishes that the Eagle Creek development will cause significant environmental effects which fulfill the screening criteria listed above. The WPG would also refer the Committee to Report No. 37 on the Creditview Wetland, where the Committee stated:

> Another option is to apply the EAA to urban development undertakings that involve loss of wetlands and other environmentally significant areas. Requiring environmental assessments for such undertakings is consistent with the purpose of the Act. It is the Committee's opinion that the environmental impact of the loss of wetlands is often more significant than the impact of most municipal road, sewer and water projects which already fall under the Act (p.9

The WPG adopts these statements and urges the Committee to find that this project must be designated under the EAA, and that an environmental assessment of this project must be prepared by the proponent and reviewed by the government and the public.

Having regard for the legal effect of designation, the WPG submits that the Eagle Creek proposal should be designated under the Act for the following reasons:

i) Pursuant to s.5(3)(b) of the Act, designation would require the developer to, inter alia, identify all reasonable methods of carrying out the undertaking. The "do nothing" or null alternative would also have to be described. None of the reports prepared by the developer to date have properly analyzed the full range of alternatives, such as the option of not building within the Class I wetland. Sound environmental decision-making is premised on the rational and rigorous analysis of alternatives, and unless such a comprehensive analysis is required of the developer, the WPG and the community at large cannot be assured that an acceptable or optimal alternative has been selected. No other legislation, including the Planning Act, requires the analysis of alternatives, and thus the developer has not identified or assessed any alternatives in a comprehensive manner.

The WPG recognizes that the private proponent in the instant case is in business to earn profit on investment, and that it does not possess expropriation powers. This may affect the developer's ability to analyze "alternatives to" the development. Nonetheless, it is submitted that the developer should be required to fully consider the alternatives, as this may identify innovative approaches to constructing and operating the golf course in an environmentally sound manner. The consideration of alternatives will also assist in determining whether this development is in the public interest as defined in s.2 of the EAA.

ii) Pursuant to s.5(c)(i) of the Act, designation would require the developer to describe the environment that will be affected or that might reasonably be affected, directly or indirectly, by the undertaking and its alternatives. "Environment" is broadly defined in s.1(l)(c) as, inter alia, the natural environment, the man-made environment, the socio-economic and cultural environment, and any combination thereof. It has been suggested that the developer's reports constitute a full environmental assessment or impact analysis; however, a perusal of these reports reveals that they clearly do not satisfy the requirements of s.5(3) of the EAA. Incredibly, one report, entitled "Hydrogeology & Terrain Analysis Report - Eagle Creek Developments" (OMMA, 1989) does not even mention the presence of the Class I Constance Creek Wetland on the property. In addition, none of the reports describe the socio-economic environment likely to be affected by the golf course, although as noted above, there is evidence that the development has adversely affected recreational and aesthetic values within the wetland. Similarly, no cost-benefit analyses of the development (and alternatives, such as not building within the wetland) have been prepared, although the development has been touted as being economically advantageous for the area. This

omission is particularly significant since a wetlands expert retained by WPG has determined that leaving the Constance Creek Wetland intact will provide important economic and societal benefits.

Even the developer's reports that address the natural environment are deficient and lack important baseline data on a variety of important matters. For example, the report entitled "Eagle Creek Golf Course - Environmental Appraisal" (PDNA, 1989) was researched and written after the "tree removal and the majority of the grading for the fairways and greens had been completed, as well as the excavations for the large on-site ponds" (p.2). Accordingly, the report's authors did not identify and assess all of the pre-existing values within the wetland prior to construction. As a result, WPG and its consultants strongly dispute the report's conclusions that the development has had little effect on the wetland, and that no remedial action is necessary to protect wetland values. Given the substantial data gaps that exist in this and other reports, such conclusions are, at best, highly questionable if not improbable.

It is beyond the scope of this submission to identify all of the factual, technical and analytical deficiencies in the developer's reports. Instead, the WPG would simply submit that these reports do not contain adequate descriptions of the environment, as defined by the EAA, that has been or will be affected by the development. Designation is necessary to rectify this significant deficiency, and will likely result in further information about the remaining values and functions of the Constance Creek Wetland.

iii) Pursuant to s.5(3)(c)(ii) of the Act, designation would require the developer to describe the effects caused by the development and its alternatives. As noted above, the developer's reports do not address important environmental effects of the development and its alternatives, including:

- socio-economic impacts;
- effects of habitat fragmentation;
- effects on biological diversity;
- hydrological impacts;
- hydrogeological impacts;

Without this critical information on environmental impacts, it is unlikely that a decision-maker can reach a sound and informed decision on the merits of this undertaking. The importance of satisfactory data collection has been recently recognized by the Committee in Report No.38 on the Ganaraska Watershed:

> In the Committee's view, a prerequisite for development of sound land use planning, particularly in an area identified as environmentally important and historically vulnerable to degradation, is a full understanding of the resources and environmental features of the area to be protected, and the

potential impacts of future activities on those resources and features (p.22).

iv) Pursuant to s.5(3)(c)(iii) of the EAA, designation would require the developer to investigate preventative, mitigative or remedial measures to address the environmental effects of the development and its alternatives. While some of the developer's reports mention preventative or mitigative measures, there is no accompanying analysis to determine whether the suggested measures are the most appropriate or effective, or whether alternative measures may be more effective. Moreover, some measures are merely recommendations that the developer is not obliged to accept or implement. In any event, the WPG contends that notwithstanding the consultant's recommendations, there are a number of outstanding environmental impacts, as noted above, that have not been or will not be adequately prevented or mitigated if the development continues in its present form. In addition, the WPG is concerned that none of the reports suggest any remedial measures to rectify the environmental harm that has already occurred within the wetland. Designation would ensure that the issues of prevention, mitigation, and remediation are properly addressed by the developer.

v) Pursuant to s.5(3)(d) of the EAA, designation would require the developer to evaluate the advantages and disadvantages to the environment of the undertaking and its alternatives. There is considerable concern that the development's immediate economic advantages are substantially outweighed by the short-term and long-term disadvantages to the ecological, hydrological and socio-economic values of the Constance Creek Wetland. As noted above, an economic and environmental cost-benefit analysis has not been prepared by the developer to justify the development, nor has a social impact assessment been undertaken.

vi) If designated, the developer's environmental assessment must include a statement of the purpose and rationale of the development pursuant to s.5(3)(a) and (b). While the purpose and rationale for the Eagle Creek is self-evident (i.e. to generate a profit for the developer), this discussion must also necessarily focus on the "need" for the development (i.e. is there a "need" to build a golf course within a provincially significant wetland?). Again, this analysis would be required by designation, and would assist in evaluating the proposal from the public interest perspective.

vii) The designation of this development, and the submission of an environmental assessment by the proponent, will empower the Minister of the Environment to take various steps to ensure that no adverse environmental impacts result from this development. For example, where the environmental assessment is unsatisfactory, the Minister may, pursuant to s.11, order the proponent to carry out further research, investigations, studies and monitoring programs.

Similarly, where the Minister accepts, or amends and accepts, the environmental assessment, he is empowered under s.14(b)(iv) of the EAA to give approval to proceed and to require such changes in the

undertaking as he considers necessary. It is noteworthy that s.14 goes on to list other terms and conditions that the Minister may impose upon an undertaking in order to carry out the purpose of the Act. Accordingly, designation will enable the Minister to exercise powers to protect the environment that otherwise would be inapplicable in the instant case.

If this development were to be designated under the EAA, then the public, the proponent and interested government agencies would be involved in identifying and evaluating the various options, including the option of protecting and preserving the wetland. It is not unreasonable to expect that the environmental assessment would be referred by the Minister to the Environmental Assessment Board for a public hearing. This process may delay the completion of the Eagle Creek development. Nevertheless, the WPG adopts the views of the Committee in Report No.37 on the Creditview Wetland:

> At the end of such a process, there would not necessarily be a solution acceptable to all parties. Environmental assessment would cause further delays in the development of these lands, adding to the costs of development. <u>However, in the absence of a more direct and efficient approach, environmental assessment is a legitimate, if clumsy and slow, option</u> (p.11, emphasis added).

Designation of the Eagle Creek golf course and subdivision may also ensure that no further development or use of the subject lands would occur until the environmental assessment is accepted and approval to proceed is given. This is the result of s.6 of the EAA, which provides that licences, permits, approvals, or consents required for the undertaking under any statute, regulation, by-law, or other requirements of the province, a municipality or a regulatory authority, shall not be issued or granted until the environmental assessment is accepted and approval to proceed is given. Thus, for example, the Region could not give final approval to the plan of subdivision until the requirements of s.6(c) and (d) are satisfied.

As noted above, designation of this development could result in a hearing before the Environmental Assessment Board in addition to the present hearing before the Ontario Municipal Board. However, to avoid the uneccessary duplication and expense associated with two separate hearings, parties in the present proceedings may apply to the Ontario Municipal Board for an order under s.24(2) of the <u>Consolidated Hearings Act</u> that the proponent give notice to the Hearings Registrar under the Act. Thus, a Joint Board could be convened to determine matters under the EAA and the <u>Planning Act</u>. Therefore, the WPG submits there are no significant procedural impediments to the designation of this development under the EAA.

In Report No. 37, the Committee raised the possibility that

a class environmental assessment could be developed under the EAA for private and public sector undertakings that may threaten wetlands in urban areas. While this suggestion appears attractive, the WPG would respectfully point out that there is considerable concern about the legality of class environmental assessments under the present EAA. In addition, it is submitted that the class environmental assessment approach could not be justified because wetlands development cannot be said to be small-scale activities with minor or negligible environmental impacts. Moreover, a wetlands class environmental assessment would not be site-specific enough to provide adequate protection to wetlands values and functions. This is particularly true when one considers the unique and diverse nature of wetlands across the province, and the variety of environmental impacts that development may cause in different wetlands. Finally, the WPG notes that a class environmental assessment could not be developed quickly enough to be of assistance in the instant case. **The WPG therefore submits that the Eagle Creek development must be designated under the EAA, and an individual environmental assessment must be prepared and submitted to the Minister of the Environment.**

ISSUE #2: What are the other means to protect and preserve significant wetlands such as the Constance Creek Wetland, and are they effective in achieving this objective?

The fact that the Constance Creek Wetland has been classified under the MNR Wetlands Evaluation System as a Class I wetland does not, of itself, confer any substantive protection upon the area. This problem is recognized by the Evaluation System:

> It is not the role of this evaluation to make suggestions on potential uses of wetlands. In many cases, however, the potential uses are <u>clearly implied</u> by the evaluation for each component obtained through the application of the system (p.3, original emphasis).

Therefore, although the Evaluation System is intended for use by municipalities, conservation authorities and provincial agencies, the resulting classification does not guarantee the protection or preservation of even provincially significant wetlands. This has been made abundantly clear in the instant case and in many others where development pressures are threatening or have destroyed valuable wetlands throughout Ontario. As a result, the MNR has developed certain policies and programs, such as tax rebates under the Conservation Land Tax Reduction Program, that are intended to protect and preserve wetlands. However, these policies and programs have met only with a very limited degree of success in achieving wetlands conservation.

In 1984, for example, the MNR issued its "Guidelines for Wetlands Management in Ontario". While the Guidelines identified the importance of wetlands and stated the province's concern for wetlands,

the document was criticized by public interest groups as being vague and ineffective. Much of the criticism centred on the fact that the Guidelines spoke ambiguously of permitting "compatible" uses within wetlands. Moreover, the Guidelines did not mandate any changes in the way in which wetlands were to be considered by municipalities enacting official plans or zoning by-laws.

The MNR and Ministry of Municipal Affairs subsequently developed and circulated the 1989 Draft Policy Statement on Wetlands, which was issued pursuant to s.3 of the Planning Act and is intended to repeal the 1984 Guidelines. Again, the draft policy statement identified the importance of wetlands and committed the province to their protection; however, the policy statement made no mandatory changes in the local land use planning process, thereby leaving the provincial issue of wetlands preservation largely to the discretion of individual municipalities. Accordingly, there is considerable concern that municipalities will authorize wetlands development in order to provide short-term economic opportunities, enlarge tax bases, and satisfy local development pressures. In the WPG's view, then, municipalities cannot be relied upon as the front line in the battle to protect and preserve the remaining wetlands.

The policy statement has also been criticized by public interest groups for contemplating that "compatible" development can "safely occur" within Class I and II wetlands. The four-part compatibility test is set out in s.4.2 of the policy statement, and it is elaborated upon in the accompanying Implementation Guidelines. The concern is that these criteria leave municipalities with considerable latitude to allow many types of development in or near a provincially significant wetland under the guise of "compatibility". We note that in the instant case, the municipality and the developer have claimed that the Eagle Creek development is compatible with the Constance Creek Wetland.

By expressly stating that development may occur within Class I and II wetlands, the policy statement and guidelines effectively undermine the protection that should be accorded to provincially significant wetlands. Moreover, by providing an ambiguous test for compatibility, the policy statement and guidelines ensure that developers, municipalities, provincial agencies and the public will become embroiled in endless debate over what is or is not compatible. Thus, the WPG agrees with the Committee's finding in Report No. 37 that "the proposed Wetland Policy will not sufficiently protect threatened wetlands in southern Ontario in the long-term" (p.9).

In our view, if significant wetlands are to receive the degree of protection they clearly warrant, then the province must demonstrate its professed commitment to wetlands by moving beyond the issuance of mere guidelines or policy statements under the Planning Act. This is particularly true in light of the serious deficiencies in the existing land use planning and approvals process, as will be described below.

One option for the preservation of significant wetlands involves negotiations held between all interested parties and facilitated by a provincially appointed mediator. This was, in fact, the recommendation of the Committee in Report No. 37 as a means to resolve the dispute over development of the Creditview Wetland. While that recommendation may have been appropriate on the facts of the Creditview case, it is submitted that negotiation is not a realistic or practical solution in the instant case.

For example, it is the WPG's understanding that private negotiations between the developer and the MNR have already occurred, and that these negotiations were unsuccessful in resolving the dispute over the Constance Creek Wetland. It should also be pointed out that the WPG has explored the possibility of alternative dispute resolution (ADR) in this case; in fact, the WPG had engaged a consulting firm specializing in ADR to initiate this process by contacting the other parties. However, the firm reported that no other parties were willing to participate in the process.

On a more general level, the WPG is unable to support the concept of negotiation as a province-wide solution to the pressing problem of wetlands preservation. While a consensual settlement of wetland disputes is undoubtedly desirable, the WPG is concerned that such an approach sends a clear signal to municipalities and developers that protection of even provincially significant wetlands is negotiable. In the WPG's view, this is <u>not</u> a negotiable matter, and the WPG submits that the province must take a strong leadership role in ensuring the protection and preservation of Ontario's remaining wetlands. Therefore, while there may be situations where negotiation is appropriate, the province must develop and implement a broader and more coordinated approach to wetlands conservation.

Provincial acquisition of significant wetlands is often discussed as another option to protect and preserve wetlands. In this case, however, an MNR witness has indicated that the Ministry presently has no intention of purchasing the Constance Creek Wetland, and that from a cost-benefit perspective, it would be preferable if wetlands were held under private stewardship. This is particularly true since it would be difficult and costly to acquire and manage all wetlands as Crown land.

The Committee has previously noted in Report No.37 that the annual MNR acquisition budget is insufficient to purchase wetlands or other natural areas threatened by development. While there may be advantages associated with public ownership of particularly valuable wetlands, in general public acquisition is not a panacea to current wetlands problems. The WPG therefore concurs with the views of the Committee in Report No. 37:

> [the] public sector acquisition program... appears to be inadequate to meet the present challenge of wetland preservation. To meet the provincial objective of wetland

presevation, the Committee is of the view that other approaches should also be considered (pp.8 - 9).

In the WPG's submission, the optimal approach is to develop and enact forthwith comprehensive wetlands protection legislation. The Federation of Ontario Naturalists, the Ontario Federation of Anglers and Hunters, and other public interest groups have consistently called for wetlands protection legislation, and it is noteworthy that other jurisdictions, such as Georgia and Michigan, have implemented such legislation.
The WPG submits that it is time for the province to move from wetlands "management" to true wetlands protection, and the WPG believes that this can only be achieved through the express statutory protection of wetlands. Such legislation should eliminate the difficulty of implementing guidelines and policy statements through the official plans and zoning by-laws of municipalities that may be adverse in interest to the province.

The WPG suggests that this legislation should be developed jointly by the Ministries of Natural Resources, Environment, Agriculture and Municipal Affairs with input from citizens, public interest groups, and other interested parties, including federal agencies. The legislation must apply to all wetlands across the province, and it must prohibit the alteration, degradation or destruction of significant wetlands or any part thereof. Where wetlands have been unlawfully altered, destroyed or degraded, the legislation must expressly provide for the restoration and rehabilitation of the wetlands at the expense of the responsible party. In addition, the legislation must cover all forms of wetland development, including agricultural drainage activities, which are currently not caught by the draft policy statement.

To be fully effective, the legislation must be supplemented by a coordinated wetlands protection program which includes the following minimum requirements:

- removal of incentives or subsidies to drain wetlands (i.e. the Drainage Act);
- expansion of the Conservation Land Tax Reduction Program to all classes of wetlands;
- expansion of the public acquisition budget for the purchase of particularly valuable wetlands;
- establishment of extensive public education programs on wetlands values and stewardship;
- revision and updating of the Wetland Evaluation System;
- inventory and evaluation of all significant wetlands, including those in northern Ontario;

- restoration and rehabilitation of significant wetlands that have been altered, degraded or destroyed;

Because of the length of time involved in implementing the recommendations listed above, it is clear that a wetlands statute would not provide an expeditious means to protect the Constance Creek Wetlands in the instant case. For this and other reasons, the WPG submits that designation of the Eagle Creek development under the EAA is necessary and desirable. In the WPG's view, designation may serve as an interim or stop gap measure to protect this provincially significant wetland by requiring a full assessment of the adverse environmental effects, and by empowering the Minister and/or the Environmental Assessment Board to require effective mitigative and remedial measures.

At the same time, however, the WPG believes that wetlands in general are better protected through a comprehensive statute rather than ad hoc designations under the EAA. **Thus, the WPG submits that the province must immediately enact wetlands protection legislation, and must develop regulatory and non-regulatory programs that secure the protection and preservation of Ontario's remaining wetlands.**

ISSUE #3: Is the existing land use and approvals process adequate to protect wetlands; if not, what changes are necessary to achieve this objective?

As noted above, the Eagle Creek development is subject to planning requirements that have been established under the Planning Act. Accordingly, the development must occur in a manner that conforms to the planning policies contained within the Regional and local official plans; otherwise, amendments to these official plans are required. Conformity with the official plans has become an issue in dispute at the Ontario Municipal Board hearing in this matter.

The new Regional Official Plan designates the subject property as General Rural Area and Environmental Constraints - Organic Soils. Section 4.2.3 of the plan states that General Rural Areas "are characterized by less significant natural resource potential than lands designated Agricultural Resource, Mineral Resource, Natural Environment or Marginal Resource (Restricted)... [but] they may contain significant wetlands or wildlife habitats". The plan goes on to indicate that the Region's "prime concerns in these areas are the following: first, the rural character must be maintained; second, development only locate on sites which can support private individual services; and third, country lot development occur in accordance with specific policies". These policies apply to both the upland and wetland portions of the subject property.

The wetland portion of the subject property has also been

designated as Environmental Constraints - Organic Soils. Section 7.2.2 of the pfficial plan indicates that the Region's primary concern is that poorly drained organic soils or unstable slopes do not provide a stable base for building foundations. Thus, the official plan states that plans of subdivision may be approved only if, inter alia, engineering information indicates that the site is or can be made suitable for development, and that alterations to the site will not cause adverse environmental effects. In determining whether these two criteria can be met, council is directed to seek the advice of the MNR, the relevant conservation authority, and the Ministry of the Environment. In this case, the MNR has steadfastly refused to approve the development within the Class I wetland, but its advice has apparently been considered and disregarded by the planning authorities.

It is noteworthy that the municipality has also taken the position that the policies of the Environmental Constraints - Organic Soils designation are not applicable to the type of development (i.e. a golf course) proposed for the lands so designated. Assuming that this is correct, then the only protection that this Class I wetland receives under the Regional official plan is through the General Rural Area policies. But as noted above, the rural policies are largely intended to protect only the rural characteristics of the designated area rather than the ecological, hydrological or socio-economic values of natural features within rural areas. Natural areas receive some degree of protection from the policies contained within the Natural Environment designation, but the Constance Creek has not been so designated.

The local official plan designates the proposed golf course as Marginal Resource and Hazard Lands; the boundary of the Hazard Land designation corresponds with the Region's Environmental Constraints - Organic Soils designation. Section 6(2) of the plan provides that the Marginal Resource designation covers areas with poor agricultural potential, and that permitted uses include agriculture, forestry, recreational and preservation uses, small-scale commercial and quasi-industrial uses serving or related to the rural economy, tourist commercial uses, accessory residential uses, and non-farm residential development. As amended by Amendment 43, Section 6(6) states that the Hazard Land designation identifies lands having physical conditions that limit its development potential, such as poor drainage, organic soils, flood susceptibility, and so on. The official plan formerly provided that Hazard Lands "are intended primarily for the preservation and conservation of the natural land and environment"; however, this phrase was deleted by Amendment 43.

Permitted uses of Hazard Land include agriculture, outdoor recreation, nursery gardening, forestry, conservation, and public or private parks. The term "outdoor recreation" has not been defined, but the municipality has taken the position that the proposed golf course falls within the term despite the need for extensive terrain modification and intensive chemical and physical management of golf courses.

Significantly, s.6(6)(c) formerly provided that Hazard Lands

"are to be managed in such a fashion as to complement adjacent land uses and protect them from any physical hazards or their effects". Again, this phrase was deleted by Amendment 43. In addition, s.6(6), as amended by Amendment 43, provides that "although it is a general policy to discourage new construction on Hazard Land, there are many situations where development is appropriate under the proper circumstances". The amendment goes on to provide that in considering an application to develop Hazard Lands, the municipality may seek advice from, inter alia, the MNR. In this case, the MNR advice about the Class I wetland has been consistently disregarded by the municipality, which has passed zoning by-laws authorizing the development. No official plan amendments have been sought or obtained, as the municipality has taken the position that the development is consistent with the planning policies of the Regional and local official plans.

In the WPG's view, the fact that this provincially significant wetland is inadquately protected under the Regional and local official plans raises serious concerns about the ability of the municipal planning process to ensure the proper identification, evaluation and protection of significant natural areas. This is particularly true in light of Amendment 43, which has attempted to whittle down what little protection existed in the Hazard Land policies of the local official plan. The dynamics of local land use planning also causes considerable concern about the wisdom of using Planning Act policy statements to suggest official plan or zoning changes to protect wetlands. As noted earlier, many municipalities appear unable or unwilling to incorporate substantive wetlands protection into official plans and zoning by-laws.

Even if sufficient protection were to be built into official plans and zoning by-laws, it is likely to be eroded by official plan amendments and rezoning applications. This problem has been recognized by the Committee in Report No.38 on the Ganaraska Watershed:

> Procedures for amending official plans and approving individual projects do not ensure effective recognition of environmental protection needs, especially where cumulative effects may be involved. On the contrary, the current process is structurally inclined to favour incremental elimination of land use restrictions. The current process expects and permits amendments and approvals, which are almost invariably for more intensive land uses, and the proposals are evaluated and granted on a case-by-case basis (p.36).

The utility of Planning Act policy statements has also been questioned in the wetlands context for other reasons. Firstly, the draft wetlands policy statement is not intended to prevail over other Cabinet policies or policy statements, such as those relating to aggregates or housing, which may come into conflict with the provincial interest expressed in the wetlands policy statement. Secondly, s.3(5) of the Planning Act provides that municipal councils, government agencies and administrative bodies "shall have regard to to policy statements issued under subsection (1)" (emphasis added). This provision does not require

mandatory adherence with the policy statement and planning authorities are therefore free to contravene the principles of the policy statement, provided that it has at least been considered.

Accordingly, even if a policy statement contained strong wetlands protection provisions, the failure to mandate adherence to these provisions means that wetlands protection is not assured. Thus, planning authorities could continue to authorize development that is contrary to the principles expressed in the policy statement. Similar concerns arise with respect to the efficacy of discretionary guidelines such as the 1984 MNR Guidelines on Wetlands Management. Guidelines and policy statements may heighten wetlands awareness, but they are not an adequate substitute for the degree of protection that would be conferred by a wetlands protection statute.

The province is also empowered under s.17(19) of the Planning Act to declare by notice to the Ontario Municipal Board that an official plan or any part thereof affects a matter of provincial interest. Where the Board has received such notice, Cabinet has the authority to make the final decision in the matter. While this power could be generally used in the context of wetlands protection, the Ontario Municipal Board in the instant case is not seized of any official plan referrals. Moreover, a declaration of provincial interest is unlikely to occur in every case involving a wetland, and such a declaration does not necessarily guarantee that wetlands will receive an adequate level of protection. It should also be noted the province may make a similar declaration of provincial interest in relation to zoning by-laws pursuant to s.34(28) of the Planning Act. Such a declaration would empower Cabinet to confirm, vary or rescind the Board decision, or to repeal the by-law in whole or in part. This procedure is not available in the instant case since the required notice was not filed thirty days before the commencement of the Ontario Municipal Board hearing.

In addition to authorizing the province to issue policy statements and declarations of provincial interest, the Planning Act also empowers provincial agencies to appeal municipal land use planning decisions to the Ontario Municipal Board. This power has occasionally been used by agencies or ministries that have reviewed or commented on official plans or zoning by-laws, and have found inconsistency or conflict with provincial policies, guidelines or standards. Thus, it has been suggested that this process provides the MNR and other ministries with an opportunity to protect provincial interests by reviewing proposed developments, by requesting changes in the proposal, and by appealing to the Ontario Municipal Board if necessary.

In the WPG's view, however, the existing land use planning and approvals process is not adequate to properly evaluate the environmental significance of proposed developments, particularly those proposed for wetlands and other important natural areas. For example, the WPG is concerned that local offices of commenting agencies are understaffed and underfunded, and therefore cannot review development proposals in a

considered or meaningful manner. Similarly, there is concern that commenting agencies are too often constrained by their specific mandates, and they tend to examine only narrow aspects of individual developments on a case-by-case basis without considering the overall impacts of potential future development. No agency appears to be taking a comprehensive look at the long-term, synergistic or cumulative impacts of development within environmentally significant natural areas. In particular, no agency appears to be determining whether a development or certain forms of development are consistent with the long-term sustainability of the natural environment.

A number of other significant problems exist in the present land use planning process where environmentally significant natural areas are at risk from development. The more serious problems may be summarized as follows:

- coordinated ecosystem planning has not been integrated into the local, regional and provincial planning processes;

- clearly articulated environmental protection objectives and requirements are generally absent from land use policies and plans;

- municipalities generally lack the expertise or information to adequately assess the environmental significance of natural areas, or to evaluate the direct and cumulative impacts of development on such areas;

- local ratepayers and public interest groups generally lack the time, expertise or resources to participate in the planning process on an equal footing with developers and municipalities;

- natural areas can be cleared, graded, altered and destroyed well before planning approval is sought or obtained by developers;

- provincial agencies and planning authorities generally do not conduct sufficient post-approval monitoring to ensure that their concerns have been adequately addressed.

For these and other reasons, the WPG concurs with the Committee's finding in Report No.37 that the current municipal planning process is inadequate to meet the challenge of wetlands preservation (pp.8 - 9). The WPG also agrees with the Committee that "planning at both the municipal and provincial level should require an adequate land inventory, an identification of natural areas, and a comparison of natural areas both in the region and in southern Ontario" (p.8). However, it is submitted that a substantive revision of the land use

planning and approvals process is also necessary to ensure that wetlands and other significant natural areas are adequately protected from immediate and cumulative degradation.

In Report No. 33 on the Etobicoke Redevelopment, the Committee recommended that:

> The Ministry of Municipal Affairs should review the planning process under the Planning Act to ensure that environmental concerns, including cumulative effects, are addressed comprehensively as part of that process, and the Ministry of the Environment should clarify when the Environmental Assessment Act should apply to official plans, official plan amendments, individual development projects and sets of related development.

A similar recommendation may be found in the recent Interim Report of the Royal Commission on the Future of the Toronto Waterfront:

> The Commission recommends that the Ministry of Municipal Affairs amend the Planning Act to ensure that environmental concerns are more thoroughly identified and assessed as part of the planning process. The Commission is of the opinion that, by giving greater weight to environmental matters in developing official plans and related amendments, as well as in considering development applications, provincial, regional and municipal governments will have the opportunity to integrate the concept of sustainable development into the planning process (p.185).

It is the WPG's understanding, however, that the provincial government has not yet undertaken any steps to implement these recommendations. In light of the urgency of the issue of wetlands preservation, the WPG submits that this legislative inertia is unacceptable and must be ended forthwith. While it is beyond the scope of this submission to identify the specific statutory reforms that are necessary, the WPG firmly believes that revision of the existing planning process must address the above-noted concerns, and must commence immediately through an open and consultative process. On this issue, the WPG endorses and strongly supports Recommendations 10 - 14 made by the Committee in Report No.38, and the WPG urges the Minister of the Environment to undertake the actions therein contained (see Appendix II).

As the Committee concluded in Report No.38, "the existing land use planning and approvals process in Ontario is inadequate to the task of maintaining social and ecological quality in the face of 'development' pressures" (p.37). **The WPG therefore submits that the province must revise the land use planning and approvals process to ensure that wetlands and other significant natural areas are properly identified, evaluated, and protected against the immediate and cumulative impacts of development.**

7. CONCLUSIONS

The Class I Constance Creek Wetland contains considerable ecological, hydrological and socio-economic values that are at risk from the Eagle Creek Golf Course and Subdivision. This development has already resulted in significant environmental impacts; future impacts are also anticipated. This precedential development will also intensify the pressure to develop these wetlands. Accordingly, the WPG submits that this development should be designated under the EAA, and that an individual environmental assessment should be prepared and submitted to the Minister of the Environment.

Other means to protect and preserve significant wetlands -- such as the 1989 draft wetlands policy statement, multi-party negotiations, and public acquisition -- are either ineffective or have limited applicability. The WPG therefore submits that the province must enact comprehensive wetlands legislation and develop programs designed to achieve wetlands protection and preservation.

While the Eagle Creek development is subject to Planning Act requirements, the existing land use planning and approvals process is inadequate to ensure the long-term protection of wetlands and other environmentally significant areas. In the WPG's view, the province must immediately undertake a substantative revision of the planning process to ensure that environmental concerns, including those involving cumulative effects, are addressed in an effective and comprehensive manner.

Finally, the WPG notes that in Report No.37, the Committee indicated its concern over the irreversible loss of natural areas such as wetlands, and stated that "recreational areas such as sports fields are not considered substitutes" (p.14). It should be added that a golf course should similarly not be considered as an adequate substitute for a provincially significant wetland.

APPENDIX I

The Wetland Evaluation System

(From MNR Implementation Guidelines - 1989)

General Characteristics:

The wetland evaluation system is described in detail in the manual entitled, "An evaluation System for Wetlands of Ontario South of the Precambrian Shield".

This system was developed specifically for measuring wetland values. Within the system, these values are grouped under four separate components: the Biological, Social, and Special Features Components, each of which are evaluated individually. The values are measured in such a way that they may be quantified. The resulting scores may be used to compare one wetland to another in order to assess relative value.

The evaluation system was designed to identify and measure the most important wetland values in an unbiased manner. It does not, by itself, suggest potential uses of wetlands but, by identifying values, it does provide a framework through which proposed uses may be examined.

Both the science of determining the functions of wetlands and society's concepts of what is "of value" are changing. The evaluation system will have to be reviewed from time to time to reflect those changes. Revised editions of the Evaluation Manual will be approved by the Deputy ministers of the implementing ministries.

Who Evaluates?

The evaluation system is managed by the Ministry of Natural Resources (MNR) and resulting data is maintained at district offices of that Ministry. Evaluations are performed by field crews qualified by MNR, usually after specific training.

Use of Evaluation Data:

Evaluation results may be used as follows:

(a) by a municipality, regional government or county as part of the municipal planning process, where there is a need for objective information on value of a particular wetland in relation to other nearby wetlands, other resources, or land uses;

(b) by conservation authorities as part of watershed management plans;

(c) by MNR districts in relation to the development of resource management objectives, or as reference material for professional advice about wetlands during the development of Municipal Plans and review of drainage proposals;

(d) by the Province as an aid to broad provincial, national, and international planning.

The Evaluation Scoring System:

Wetlands are ranked into 7 classes based on their point scores as follows:

Class 1 - 700 or more total points or 3 out of 4 components which score higher than 200 points each;

Class 2 - 650 or more total points or 2 out of 4 components which score higher than 200 points each;

Class 3 - 600 or more total points or 1 out of 4 components which score higher than 200 points;

Class 4 - 550 or more total points or all 4 components score above 100 points each;

Class 5 - 500 or more total points or 3 out of 4 components which score more than 100 points each;

Class 6 - 450 or more total points or 2 out of 4 components which score more than 100 points each;

Class 7 - all other evaluated wetlands.

APPENDIX II

Excerpt from Report No. 38 on the Ganaraska Watershed

RECOMMENDATION 10: The Province should recognize that the existing land-use planning and approvals process does not provide satisfactory means of protecting the environment, especially from the negative cumulative effects of intensifying land use, and should begin immediately to prepare a package of reforms to incorporate effective commitment to environmental stewardship in land-use planning in Ontario.

To accomplish this, the Minister of the Environment and the Minister of Municipal Affairs, in consultation with other interests including regional and municipal authorities, should cooperate in determining whether the basic requirements for an environmentally enlightened land-use planning process should be met through revision of the Planning Act, application of the Environmental Assessment Act, or introduction of new legislation incorporating assessment and stewardship into planning requirements.

In particular, the ministers should act to ensure that the efforts of the Ministry of the Environment's Environmental Assessment Program Improvement Project and the Ministry of Municipal Affairs' current review of the planning process are directed and coordinated to address this issue.

RECOMMENDATION 11: The Minister of the Environment should direct the Environmental Assessment Program Improvement Project to initiate an immediate review of options under the Environmental Assessment Act for ensuring effective attention to environmental concerns in land-use planning decisions.

RECOMMENDATION 12: The Minister of the Environment should urge the Minister of Municipal Affairs to introduce an immediate amendment to the Planning Act to establish clearly that consideration of overall environmental quality issues and cumulative environmental effects as legitimate and necessary components of deliberations by municipal authorities, the Ministry of Municipal Affairs, the Ontario Municipal Board and the Cabinet on official plans, official plan amendments and related approvals.

RECOMMENDATION 13: The Minister of the Environment should direct Ministry representatives involved in reviewing proposed official plans, plan amendments and site-specific proposals, to comment on the nature and significance of any cumulative environmental effects likely to result from an approval. In support of this initiative, the Minister should ensure that Ministry reviewers develop a clear and uniform understanding of issues pertaining to cumulative effects and appropriate comments to make when these issues arise. The Minister should also direct the reviewers to monitor responses in cases where significant concerns about potential cumulative effects are raised.

RECOMMENDATION 14: The Minister of the Environment should announce the government's intention to designate under the Environmental Assessment Act any planning proposal that raises significant, unattended concerns about cumulative environmental effects.