

**MUNICIPAL LAND-USE PLANNING &  
ENVIRONMENTAL ASSESSMENT:  
AN INQUIRY INTO THE NATURE OF AND POTENTIAL FOR  
MUNICIPAL ENVIRONMENTAL ASSESSMENT  
IN ONTARIO**

**Theresa Diesch**

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**ABSTRACT**

There has been an increased interest in municipal environmental planning and decision-making, particularly municipal environmental assessment (MEA). This report examines the use of environmental assessment (EA) in the municipal land-use and development planning. The report's findings are primarily based on a review of recent studies on MEA and personal interviews with municipal officials from nine (3 regional, 4 area, and 2 single-tiered) municipalities in Ontario.

The report is divided into two parts. Part I of the report provides a background for the generation of general frameworks for and detailed components of MEA presented in Part II. It comprises of a review of recent studies of MEA in Canada, a review of how municipal governments are structured and function in Ontario, and the current land-use planning processes in Ontario. It also offers overview of MEA in practice in Canada.

Based on the review of MEA in Part I, three general types of MEA processes are presented in Part II. They are: site EA, plan EA, and area-wide EA. Each of these types of MEA processes have advantages as well as limitations. After a consideration of ideal EA and planning models, five general levels of integration between EA and planning processes are presented. They are: no EA, only an EA requirement, partial integration of EA and planning processes, full integration of EA and planning processes, and only an EA process. The 'no EA' and 'only an EA process' levels do actually represent EA-Planning integration. The three general levels of EA-Planning integration are then combined with the three general types of MEA processes to produce nine general frameworks for incorporating EA at the municipal level.

The information collected during personal interviews with municipal officials from nine Ontario municipalities are also discussed in Part II under the two broad components (type of EA and level of EA-Planning integration) as well as a number of more detailed components. Taken together, these provide an array of scenarios that MEA can assume.

The report also discusses some of the obstacles identified during the interviews that municipalities may face when adopting and/or implementing them. The obstacles discussed suggest that adoption of MEA may be more likely to occur in wealthier municipalities. The report concludes that future adoption of MEA could exacerbate inequities among municipalities.

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**TABLE CONTENTS**

ABSTRACT . . . . . i

ABSTRACTIN FRENCH . . . . . i

ACKNOWLEDGEMENTS . . . . . ii

TABLECONTENTS.. . . . . iii

LIST OF TABLES AND FIGURES . . . . . iv

ACRONYMS AND ABBREVIATIONS . . . . . iv

**1. INTRODUCTION . . . . . 1**

**PART I: . . . . . 3**

2. RECENT STUDIES OF MUNICIPAL ENVIRONMENTAL ASSESSMENT PROCESSES . . . . . 3

3. AN OVERVIEW OF ONTARIO’S CURRENT LAND-USE PLANNING SYSTEM . . . . . 7

4. AN OVERVIEW OF MUNICIPAL ENVIRONMENTAL ASSESSMENT IN PRACTICE . . . . . 12

**P A R T I I . . . . . 28**

5. GENERAL FRAMEWORKS FOR MUNICIPAL LAND-USE PLANNING AND ENVIRONMENTAL ASSESSMENT . . . . . 28

6. METHODOLOGY . . . . . 37

7. RESULTS FROM THE INTERVIEWS WITH MUNICIPAL OFFICIALS . . . . . 40

8. CONCLUDING REMARKS AND RECOMMENDATIONS FOR FUTURE RESEARCH . . . . . 50

REFERENCES . . . . . 52

APPENDIX A: ADDITIONAL INFORMATION ON THE REGION OF WATERLOO’S EIS PROCESS . . . . . 57

APPENDIX B: ORIGINAL CANDIDATE MUNICIPALITIES . . . . . 59

APPENDIX C: LIST OF BASE INTERVIEW QUESTIONS . . . . . 60

LIST OF TABLES AND FIGURES

- Table 1: Summary of Municipalities Identified in Recent Studies as Employing MEA  
Table 2: Summary of the MEAs in Nine Surveyed Municipalities in Ontario  
Table 3: General Frameworks for Municipal Land-Use Planning and MEA  
Table 4: The Surveyed Municipalities Categorized by the General Frameworks  
Table 5: Selected Characteristics of Municipalities Selected for the Personal Interviews  
Table 6: Summary of Alternative Options of the MEA Components

- Figure 1: Integrated Watershed and Municipal Planning  
Figure 2: Decision-Making Process for a Wetlands Policy Statement EIS  
Figure 3: The Region of Waterloo's Decision Procedures for ESPA Development  
Figure 4: The City of Ottawa's MEEP  
Figure 5: The City of Ottawa's MEEP Review Procedures for Development  
Figure 6: Diagram of the Decision Stages of an Ideal Fully Integrated EA and Planning Processes  
Figure 7: Comparison between the Municipal Plan-Making Process and the Ideal Planning Process

ACRONYMS AND ABBREVIATIONS

- CA: Conservation Authority  
CAO: Chief Administrative Officer  
CIA: Cumulative Impact Assessment  
EA: Environmental Assessment (in Kitchener, Environmental Analysis)  
*EAA: Environmental Assessment Act*  
EAR: Environmental Analysis Report  
EARP: Environmental Assessment Review Process  
EEAC: Ecological and Environmental Advisory Committee  
ECA: Environmental Constraint Area  
EIA: Environmental Impact Assessment  
EIS: Environmental Impact Statement  
ER: Environmental Review  
ES: Environmental Study  
ESA: Environmental Significant or Sensitive Area  
ESPA: Environmentally Sensitive Policy Area  
FEARO: Federal Environmental Assessment Review Office  
IA: Impact Assessment  
MEA: Municipal Environmental Assessment  
MEEP: Municipal Environmental Evaluation Process  
MEER: Municipal Environmental Evaluation Report  
MMA: Ministry of Municipal Affairs  
MNR: Ministry of Natural Resources  
OMB: Ontario Municipal Board  
OP: Official Plan  
*PA: Planning Act*

## 1. INTRODUCTION

There are many different definitions of environmental assessment (EA). In this report, an EA refers to a formal evaluation of the environmental health of a site or specific geographic area. The evaluation also includes an examination of potential environmental consequences of proposed or possible initiatives or activities within the area in order to minimize significant adverse environmental consequences during and after their implementation. A municipal environmental assessment (MEA) refers to an EA requirement or process where a municipality requires the EA and is the primary reviewer. A senior level of government can mandate that a municipality require MEA or a municipality can adopt MEA on its own initiative. The environment can be narrowly construed to refer to the biophysical or non-human ecological environment. It can also be broadly interpreted to include the economic and social milieu. The types of initiatives or activities subject to MEA may include developments, budgets, policies, programmes, projects, management activities, or plans. In cases where significant adverse environmental consequences are identified or anticipated, mitigative strategies to ameliorate or performance standards to limit the adverse impacts, or prohibiting the initiatives or activities entirely are considered. MEA can be used or required by governments as a traceable (and preferably reproducible) evaluation process. It can ensure that the environmental consequences of development are considered while allowing the public to hold decision-makers accountable.

EA was first legally required in 1970 by the U.S. *National Environmental Protection Act*. Unlike its American counterpart, the first formal EA procedure in Canada was established by a municipality--the City of Winnipeg--in 1972.<sup>1</sup> Despite Winnipeg's early leadership in adopting MEA in Canada, there are only a handful of municipalities that have some sort of formal MEA currently in operation (Davies 1991; Maclaren 1992; Novakowski 1993). A number of the municipalities that have adopted MEA such as the Regions of Waterloo (1975) and Halton (1977) did so shortly after Winnipeg. Between the late 1970s and late 1980s, there was little in the way of municipal or provincial activity relating to the area of MEA. During this period, there was also a lack of academic research on the subject.<sup>2</sup>

Recently, however, municipal, academic, provincial, and federal interest in MEA has re-emerged. In Ontario, the Cities of Guelph (1988) and Ottawa (1991) have adopted MEA. The Region of Halton is considering expanding its existing process which currently only requires an assessment for development affecting environmentally sensitive areas. A number of reports have recently been released (Davies 1991; Maclaren 1992; Leach 1993; Novakowski 1993) on this subject. In its 1992 *Draft Report*, the Provincial Commission on Planning and Development Reform in Ontario (the Sewell Commission) advocates the preparation of environmental impact statements for local development applications. In 1992, the Ontario Government released the Wetlands Policy Statement. The Policy Statement mandates municipalities to require development proposals which affect provincially significant

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<sup>1</sup>Between 1974 and 1977, the City of Winnipeg's MEA underwent a number of legal challenges (Armour and Walker 1977: 29-30). With changes to the City of Winnipeg Act in 1977 which made the review optional rather than mandatory, the MEA was discontinued by 1978 (Maclaren 1992: 3: 109). There have been a number of reasons cited for its demise including that the public consultation process was too unwieldy (Davies 1991) and that the process threatened departmental authority (Kaufman 198 1 in Novakowski 1993).

<sup>2</sup>Except for recent studies, the only academic inquiry into MEA known to this author appeared in the 1977 special issue of *Plan Canada*, comprising eight articles which examined early experiences with MEA as well as the potential application of MEA.

wetlands to undergo a MEA. These occurrences mark a potentially significant trend, and are in part bolstered by the recent interest in sustainable urban development.

The purpose of this report is to explore the potential for and nature of municipal employment of EA in land-use planning by developing models for MEA. It also discusses some of the challenges and barriers to their adoption and implementation. This is done through a literature review and personal interviews with officials from nine municipalities in Ontario.

The second chapter of the report is a review of recent studies on MEA. The third chapter presents an overview of the structure and function of municipal government in Ontario in order to establish an understanding of how a MEA can be used by Ontario municipalities. It also provides an overview of some of the problems with the current bifurcated EA and land-use planning system in Ontario. The fourth chapter provides an overview of the experience of municipalities with MEA in Canada. In chapter five, 15 general frameworks for incorporating MEA into the municipal land-use planning process are developed. The sixth chapter presents the methodology employed to design and conduct the personal interviews with officials in nine Ontario municipalities. The seventh chapter discusses the findings from the interviews organized under different components of environmental processes. The final chapter presents some concluding remarks about MEA and offers some recommendations for future research.

Before commencing such a lengthy investigation, it is important to consider its value. There is an emerging consensus that the current planning and EA system in Ontario is not adequate. One of the main criticisms of EA is its limited scope of application due to its separation from the traditional land-use planning process. EA is generally restricted to medium-to-large scale public sector or public sector funded private development initiatives. Since most development is small-scale and conducted by the private sector, it does not require a formal EA. The impacts of small-scale development are consequently not evaluated either individually or cumulatively. With recent initiatives such as the Provincial Commission on Planning and Development Reform in Ontario and municipal interest in implementing the goal of sustainable (urban) development, the adoption of MEA may increase in the near future. Since there is no consensus on how municipalities can incorporate MEA into their traditional planning processes, research such as the present study can serve to stimulate discussion and to outline some of the key issues that should be addressed before adoption and implementation of MEA.

PART I:

**2. RECENT STUDIES OF MUNICIPAL ENVIRONMENTAL ASSESSMENT PROCESSES**

Since the 1987 release of the World Commission on the Environment and Economy's seminal report *Our Common Future*, there has been an increased academic and professional interest in municipal environmental planning and decision-making, particularly in MEA. In a recent special issue of *Plan Canada*, two articles appeared which presented a cursory review of different types of local environmental initiatives including MEA (Rees et al/1991; Hendler et al/1991). A number of more detailed reports have recently been released (Davies 1991; Maclaren 1992; Leach 1993; Novakowski 1993). These reports are briefly described in the following chapter. The municipalities found to have a MEA in these studies are listed in Table 1. This chapter concludes by comparing the objects of the present study to each of these studies.

The 1991 report *The Role of Environmental Considerations in Municipal Decision-Making in Canada and Some Preliminary Comments on Municipalities and the Proposed Canadian Environmental Assessment Act* by Katherine Davies was the first study to analyze environmental decision making at the local level. Her study looked at 32 Canadian municipalities. With the exception of Victoria Capital Regional District, regional municipalities were excluded from her study. Her study's primary focus was on municipal procedures and processes for environmental considerations such as MEA. Environmental committees and environmental staff positions were also mentioned but other initiatives such as programmes and specific policies were excluded from her survey. Eight municipalities, none of which were towns or rural municipalities, were found to have a MEA. Although she found that there was a general correlation between the extent of environmental problems within the municipality and the sophistication of its environmental mechanisms, there were a number of exceptions particularly in Ontario. She identified the main barriers to municipal involvement in reviewing EAs, either jointly with federal or provincial governments or on their own, as lack of resources, the fragmentation of municipal structure and function, lack of provincial legislation, and prevailing attitudes and values.

Virginia Maclaren's three volume report *Sustainable Urban Development In Canada; From Concept to Practice* (1992) covers some of the same issues as Davies' report. The objective of Maclaren's study was to provide a general review of environmental initiatives, including MEAs, currently in existence in Canadian municipalities. The information for the study was collected through personal and telephone interviews with municipal officials from such departments as public works, planning, and parks and recreation in 23 local municipalities across Canada. Municipal officials from eight municipalities identified a MEA as an initiative existing in their municipalities. Maclaren provides brief descriptions of the eight existing MEAs and identifies some of the problems and successes that have been encountered during their implementation. She also identifies MEAs as an initiative that many municipalities are developing in response to increased political pressure.

Kimberly Leach's 1992 study *Municipal Environmental Assessment: Implications for Sustainable Urban Development* relies primarily on the information from the Davies and Maclaren's studies. She supplements this information with a review of California and New York's mandatory MEAs as well as a more in depth case study of the City of Ottawa's Municipal Environmental Evaluation Process. The primary objective of her study is to provide a general framework for MEA. She also presents a number of structural and functional barriers to implementation of MEA. Despite these barriers, she concludes that MEA is "an efficient and effective means to work towards sustainable urban development" (Leach 1992: i).



<b>Table 1: Summary of Municipalities Identified in Recent Studies as Employing MEA</b>		
<b>Municipality</b>	<b>Enabling Power(s)</b>	<b>Applicability of MEA</b>
○ Edmonton	Municipal Plan, 1980	developments in suburban growth areas, impacting on environmentally sensitive areas, and involving river valleys and ravines
○ Winnipeg	City of Winnipeg Act, 1972 *	city projects
○ Kitchener	Official Plan, 1979 *	developments impacting on environmentally sensitive areas
○ Guelph	Official Plan, 1988 *	developments impacting on environmentally sensitive or constraint areas
○ Fredericton	Official Plan, 1991 Draft	developments involving river valleys and residential developments
○ St. John's	Official Plan, 1990	all developments
○ Halifax	Official Plan, 1984	
⊕ ○ Ottawa	Official Plan, 1991 *	all development and public non-development activities
+ Hamilton-Wentworth	Official Plan	all development impacting on environmentally significant areas or their equivalents
Haldimond + Norfolk	Official Plan	
+ Halton	Official Plan	
+ Waterloo	Official Plan	
+ Metro Toronto	Official Plan	
+ Oakville	Official Plan	
+ Oshawa	Official Plan	
+ St. Catherines	Official Plan	
+ Markham	Official Plan	
+ Vaughn	Official Plan	official plan and zoning by-law amendments
+ London	Official Plan	

Sources: (○ Davies 1991 and Maclaren 1992); (+ Novakowski [no dates supplied] 1993).

\*: these dates differ from those found in Maclaren and Davies reports. The dates stated in the chart are the dates that the official plan (or act in Winnipeg's case) was adopted by the municipality (or province) rather than the dates that the official plans were approved by the province or the dates that the implementing guidelines were approved.

**Municipality** : these municipalities are also examined in this study.

The most recent study is by Erin Novakowski entitled *Impact Assessment and Urban Planning: An Investigation of Their Integration in the Larger Municipalities of Ontario*. The study included a general mail survey of 33 (11 regional and 22 area) municipalities in Ontario with populations exceeding 100,000. His mail survey included 10 questions on the following issues:

- the degree to which the impact assessment (IA) is integrated into the planning process;
- the legislative framework which entrenches the IA;
- the types of IA and their triggering mechanisms;
- how IA enhances the planning process;
- the planners' desire to see IA expanded;
- how integration could be enhanced;
- whether IAs are conducted by the department or consultants;
- the extent of public involvement;
- the use of Geographic Information Systems; and
- the planners' awareness of other municipalities use IAs.

Of the 33 municipalities surveyed, 15 municipalities were identified as having, at least in principle, IA. Novakowski supplements this broad survey with two case studies of the Cities of Oakville and Ottawa. The report also includes a review of the theory and practice of environmental IA (EIA) and urban planning, different types of IA (i.e., social IA, health, IA, technology assessment, risk assessment, cumulative IA, and urban IA), and the potential for integration of IA and urban planning. Novakowski found IA to be a viable means of enhancing urban planning in the larger municipalities of Ontario. He also found that most municipal EIAs were not integrated with the traditional land-use planning process and were only applied to protect special environmental significant areas. He identified this and the absence of municipal EIA as a lost opportunity of many planning departments.

The present report relies on information from a review of EA and planning literature (including but not limited to the above described reports), municipal documentation, and personal interviews with officials from nine municipalities in Ontario. The main objective of the personal interviews was not to collect information on the processes themselves but to gain insight into how MEAs function via the experience and/or personal opinions of municipal officials.

This report is similar to Leach's in its aim to develop frameworks for different scenarios of MEAs. However, it differs from Leach's report in that she presents one general framework whereas this report presents a variety of frameworks. It also differs from the literature review and case study approach taken by Leach in its use of a survey of nine Ontario municipalities. The study goes beyond Maclaren's and Davies' general surveys of some MEAs in practice to explore in considerably more detail how MEAs could operate.

The study also differs from these previous studies in that it is restricted to municipalities within the province of Ontario and includes regional and single-tiered municipalities. It complements Novakowski's study of Ontario municipalities in a number of ways. First, 4 of the 9 municipalities included in this study are the same as Novakowski's. However, this study investigates different sizes (see Table 5) and types of municipalities (3 single-tiered, 4 area, and 2 regional). Novakowski did not survey any single-tiered municipalities because of his selection criterion (all municipalities over 100,000). The criteria used in this study were specifically designed to ensure the selection of a mixture of municipality types active in environmental planning.

Second, this study, like Novakowski's levels of IA-planning integration, develops general frameworks for MEA by offering different levels of integration between planning and EA. The levels presented in this study resemble the levels presented in Novakowski's study. Novakowski's five levels are listed below in square brackets and italics after each of the five levels presented in this study:

- no EA requirement; *[no integration]*;
- only an EA requirement/no EA process; *[intersection of impact assessment with the urban planning process at a discrete point]*;
- partial integration between the processes *[partial integration]*;
- full integration between the processes *[total integration]*; and
- only EA process *[replacement of the planning process with impact assessment]*.

Unlike Novakowski's frameworks, the general MEA frameworks presented in this study are not only based on the levels of integration but the combination of two main components. The second component presented in this study is type of MEA. Like the other studies discussed in this section, Novakowski only focuses on various IA for development proposals on specific sites. This study discusses MEAs for land-use plans and large geographic areas as well. These types of MEAs can precede and consequently are independent of specific development proposals. This study's examination of the other types of MEAs may be related to another distinction between Novakowski's study and this study. Novakowski places more emphasis on the specific type of impacts assessed in the EA (e.g., urban, health, social IA, etc.) whereas this study did not. In addition to the two main components, this also study presents a number of other components that a municipality can tailor a MEA to suit its needs and resources.

### **3. AN OVERVIEW OF ONTARIO'S CURRENT LAND-USE PLANNING SYSTEM**

The first part of this chapter reviews the current municipal government structure and function in Ontario. A general understanding of the municipal structure and function will provide for a better understanding of the problems with the current land-use planning system as well as how MEAs could be incorporated into the current system. The second part of this chapter discusses the problems with the current EA and land-use planning system in Ontario.

#### **Municipal Government Structure and Function<sup>3</sup>**

Municipalities are not recognized in the Canadian constitution. They are corporations created by and subordinate to the provincial governments and are responsible to the inhabitants of the area within their boundaries. Ontario municipalities are generally organized into districts in the north and counties and regional governments in the south. Prior to the Second World War, local municipalities were either organized into districts which do not function as governing corporations and counties which are administratively weak. After the War, it became apparent that reform was required to address the geographic implications of municipal issues that extended beyond local boundaries. By 1953, the first regional government, Metropolitan Toronto, was established in Ontario. In 1968, the Ontario Government decided to establish two-tier regional governments throughout the urbanized areas of the province. By the mid-1970s, ten regional governments were established. Regional governments have more powers than counties and are usually responsible for regional-scale functions such as land-use planning, social services, waste disposal, major roads, and trunk sewer and water systems. Area councils are usually responsible for community services such as recreation, libraries, local roads, and garbage collection.

There are two general models of municipal structure in North America: the council-committee (CC) model and the council-chief administrative officer (CAO) model. The structure of most Ontario municipalities is based on the CC model (Canadian Urban Institute 1992: 107). In this model, members of council are elected by wards or at large, and are given both legislative and executive authority over municipal matters. There are no separate cabinet-like executive headed by a mayor or chair as in the United States.<sup>4</sup> Council meets on its own and in a variety of standing and special committees. The heads of departments report to one of the standing committees. One of the benefits of this model is the potential for frequent interaction between council members and top municipal officials. Its main disadvantage, however, is the fragmentation of activities among the departments and committees because coordination of them is generally limited to council members and heads of departments. Consequently, there is a tendency for decisions, particularly in the larger municipalities, to be made along departmental lines rather than collectively as a corporation.

The council-CAO is prevalent in the United States and is becoming fairly common in many regional and medium-to large-size local municipalities in Ontario (Canadian Urban Institute 1992: 107). In this model, the council assumes all policy functions and the administration of council staff while the CAO oversees the implementation of municipal programmes. In Ontario, the CAOs are not as powerful as their American counterparts. They

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<sup>3</sup>Most of the information used in this section is taken from the Canadian Urban Institute 1992 *Municipal Government in the Greater Toronto Area: Structure, Function, Issues, and Intergovernmental Relations*.

<sup>4</sup>In the past, most large cities used to operate with a board of control, meant to function as an executive committee of council, with members who were elected at large. However, these were replaced by executive or management committees of council that only have a limited leadership role in shaping the budget (Canadian Urban Institute 1992 : 108).

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are generally only as powerful as the heads of departments. Usually, they act as the chief support to the heads (chairs in regional municipalities or mayors in local municipalities) of council and are responsible for ensuring the coordination across municipal departments. Instead of adopting the CAO model, some municipalities use inter-departmental committees of department heads to coordinate department activities.

Municipalities, primarily the local municipalities, carry most of the responsibility of land-use planning. A council may only act in a legally significant way by enacting a by-law. A by-law is a subsidiary law or a law passed by a corporation of the Ontario government. An official plan is a specific by-law or a series of by-laws comprising a plan which set out general intentions regarding the future land-uses of the municipality. Zoning by-laws must conform to local official plans. Local official plans must conform to regional official plans. All official plans must conform to provincial policy statements. A local municipality can designate all or parts of its land as an area or areas of site plan control. Site plan control can be used to regulate more detailed planning issues such as landscaping, off-street parking, massing of buildings, and grading for the drainage of storm water. A development agreement is usually established to assure that the concerns of the municipality will be met by the developer.

A municipality's committee of adjustment<sup>5</sup> oversees minor variances to the zoning by-laws. Major amendments to official plans (more commonly known as secondary plans) or to zoning by-laws must be approved by the Ministry of Municipal Affairs (MMA), or where there is a regional municipality, by the regional council. For example, severance of land into two or three parcels of land for development are generally considered a minor variance? Severances exceeding three parcels of land are considered major amendments and must be approved by the MMA or the delegated regional council (Canadian Urban Institute 1992: 95).

Ministers or their delegates also have the power to approve certain municipal actions. Official plans, plan amendments, and plans of subdivision and condominiums are submitted to the MMA for review and approval. They are then circulated to other provincial ministries and agencies including the regional municipalities and conservation authorities (CAs) whose mandate may be affected. Site plans are only reviewed by the area municipality and CA. The MMA or other approving agencies may refer the municipal actions to the Ontario Municipal Board (OMB). A decision of a council (an official plan or zoning by-law) can also be appealed to the OMB, a quasi-judicial administrative review body by the public.

#### **Ontario's Environmental Assessment and Land-Use Planning System**

In practice, the land-use planning and EAs in Ontario are similar in many respects (Lawrence 1992: 22). First, they are both public interventions into the development process in an attempt to manage built environmental change. Second, while focusing on physical change, they have incorporated "a range of social, cultural and economic concerns" (Lawrence 1992: 22). Third, both processes are considered to be techno-political processes and incorporate public consultation. Fourth, they are traditionally premised on the rational decision-making model. Fifth, both processes involve the preparation and review of a planning document. Finally, they precede and have as their main goal the improvement of decision making.

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<sup>5</sup>Legislative or discretionary decisions cannot be delegated to committees of council or to other bodies except for minor variances which can be delegated to a committee of adjustment whose members are appointed by the council.

<sup>6</sup>This may not occur in every Ontario municipality because if the municipality does not formally delegate the approval of land severances into three or less parcels to the committee, a plan of subdivision and provincial approval is required for all severances.

Despite these similarities, land-use planning and EA have different regulatory frameworks in Ontario. The *Planning Act (PA)* and the *Environmental Assessment Act (EAA)* are the two primary statutes that regulate planning and development. The *PA* provides municipalities with a number of planning powers with respect to official plans, zoning by-laws, interim control by-laws, subdivision agreements, severance, and site plan control by-laws.

The primary method municipalities have to control development is the authority to adopt and revise official plans. The other planning instruments listed above must conform to the official plan. According to s. 1 (h) and s. 16 of the *PA*, an official plan is a:

document approved by the Minister of Municipal Affairs containing objectives and policies established primarily to provide guidance for the physical development of a municipality [as well as]...the measures and procedures proposed to attain the objectives.. .and for informing and securing the views of the public in respect of the proposed amendments to [the plan or by-laws].

Development proposals that do not conform to the requirements set out in the official plan must secure an official plan amendment in order to be approved. The amendment mechanism allows for flexibility in the use of official plans. Development proposals that deviate from the Plan, but are not inconsistent with the general intent of the plan, are not unnecessarily prohibited. However, there are problems with the use of official plan amendments. Because there are no restrictions placed on their use, municipalities can and often do ignore long term planning (a main objective of official plans) in favour of planning (or a lack thereof) through the use of successive amendments. Provincial requirements for final plan approval has encouraged municipalities to pursue this option. For example, the MMA often requires a municipality to prove that there is or will be adequate servicing capacity for all new development proposed in a new official plan (RCFTW 1992: 69). For the municipality, this can be difficult as sewer expansion is a lengthy process requiring provincial EA. It can also be unnecessary as it is unusual that all areas proposed in an official plan for new development would not be immediately pursued.

Although an official plan primarily focuses on physical land-use development of the municipality, s. 1 (h) also states that the plans are to have "regard to relevant social, economic and environmental matters."<sup>7</sup> This is the only section in the *PA* which directly requires municipalities to consider the environment in their planning. In practice, it has not secured substantial regard for environmental matters in municipal planning (Ontario 1989: 35; RCFTW, 1989: 18 I-I 82). The clause mandating a "regard to relevant... environmental matters" is not defined in the *PA* or its implementing regulations. As such, a superficial acknowledgement of environmental matters in an official plan has generally been sufficient to satisfy the statutory requirements. This vagueness, combined with the potential for misuse of the amendment process, has been criticised for undermining the effectiveness of municipal governments' capacity to address environmental matters (Ontario 1989; Doering *et al* 1991: 45). The result has been that environmental matters have been largely left to the discretion of the politicians and planners in each municipality. This has not only allowed for inconsistencies from one municipality to another, it also has allowed short-term "development-driven" planning to occur to the detriment of the environment.

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<sup>7</sup>The socio-economic matters of development are generally considered to be adequately addressed by the Ontario municipal planning process. The following is a list of the typical socio-economic components that municipal planners routinely investigate as part of the traditional land-use planning and development approvals process: employment/income, population/urbanization, recreation, business activity, transportation, housing, health/education/services, lifestyle, community, and heritage.

The Province can require municipalities to address environmental issues in a number of indirect ways. The PA requires that official plans and plan amendments be approved by the (MMA) or a delegated regional municipality. Provincial ministries that are concerned with environmental matters can voice their concerns when the official plans and plan amendments are circulated for review. However, because there has been so much time and money invested in a plan or an amendment prior to reaching this point in the approvals process, intervention has often proven to be politically difficult. Furthermore, without adequate environmental expertise within the MMA, environmental matters which affect another ministry's mandate may not be immediately identified and brought to the attention of the appropriate ministry.

The Province can intervene more directly in municipal environmental planning matters by declaring a "provincial interest" and/or issuing a policy statement. However, because these measures are viewed by municipalities as violations of municipal autonomy (and are generally met with opposition), and because it is difficult to reach agreement among provincial ministries concerning the appropriate action, the province rarely uses them. To date, the provincial government has completed the lengthy (more than the duration of one or two provincial terms in office) process of adopting a policy statement only four times (for flood plains, aggregate extraction, housing, and wetlands). Despite the time and expense of adopting a policy statement, statements only have the power to require that municipalities "have due regard" to their provisions.

Unlike the PA, the EAA outlines specific procedures for an EA and provides a statutory definition of the environment. Passed in 1975, the EAA has far-reaching implications for municipal environmental planning in theory. In practice, it has been interpreted rather narrowly. First, although the EAA broadly defines an "undertaking" to include all public and "major" private land-use undertakings in the province, its application has not generally been extended to private and small-scale public undertakings (Richardson 1989: 29). Second, although the EAA also defines "undertakings" to include plans and programmes pertaining to land use and development in addition to its traditional interpretation as development projects, in practice, the EAA has been applied only to medium-to-large-scale development projects (Richardson 1989: 29). The narrow application of the EAA in both of these respects has consequently substantially reduced the municipal obligation to assess the environmental implications in their planning. Not only are environmental impacts of most individual development activities not regulated, but more importantly, the cumulative environmental impacts are ignored by the current planning system. Cumulative impacts refer to the combined (additive or interactive) effects of the development activities within a given area and time period. The requirement that private development applications undergo an EA within Ontario and/or that municipalities assess the environmental implications of their official plans could have radically altered municipal environmental planning, and even advanced cumulative environmental impact assessment. Although the process required by the EAA is undoubtedly too comprehensive and prohibitively expensive for most private development proposals, a scaled-down version could be both feasible and effective in assessing the environmental impacts of private development (Brandao 1992).

The main principle that underlies both the PA and the EAA is the regulation of land-use planning and development procedures in order to ensure that development occurs in a rational and politically acceptable manner. Unlike the PA, the EAA requires a more comprehensive planning procedure. It includes an evaluation of a proposal's purpose and need, and alternatives to the proposal, as well as the evaluation of the impacts along with possible mitigative measures. But, because the Acts have not been implemented in a way which would maximize their reach, there is a division and consequent gap in the planning process. Private development is generally regulated by the PA and public development is generally regulated by the EAA. Thus, the statutes do not provide "an integrated, comprehensive

system for environmentally sound planning” (Doering *et al* 1991: 32). The planning system has not been effective in the evaluation of the cumulative environmental impacts of development let alone the individual impacts of each development activity. EAs firmly established within the municipal land-use planning process may help ameliorate this situation.



#### 4. AN OVERVIEW OF MUNICIPAL ENVIRONMENTAL ASSESSMENT IN PRACTICE

This chapter provides an overview of MEA in practice. The first part reviews the implications of the Federal Environmental Assessment and Review Process requirements on MEA. The second part reviews the current provincial requirements for EA and MEA in Ontario. The third part examines MEAs in the Ontario municipalities that were selected for personal interviews. A review of MEAs provides the background necessary to better understand the form MEA has taken and can take.

##### Federal EA Requirements and Implications on MEA in Ontario

◆ **Federal *Environmental Assessment Review Process (EARP)*:** EARP was adopted by Order-in-Council in 1973. In 1984, the *EARP Guidelines* Order-in-Council proclaimed under the *Government Organization Act* replaced the previous cabinet decisions. EARP has recently undergone a review, and the adoption of Bill C-13, the proposed Canadian Environmental Assessment Act, is pending approval. EARP applies to all federal proposals including proposals that have been funded by the federal government, use federal lands, or affect an area of federal responsibility. Under the proposed Act, the federal government could also require an assessment when a federal agency is required to issue a licence, permit or grant an approval for the project under other federal legislation.

In the past, municipalities have participated in EARP either as proponents of initiatives requiring a review or as commentators in a review. Although their involvement with EARP has not been as extensive as with the Ontario *Environmental Assessment Act*, under the proposed Act, with its broader trigger mechanism, their involvement would expand. For example, municipalities may be involved as proponents in class assessment projects (e.g., for road and sewer projects), or as proponents, commentators, or joint reviewers in large-scale development projects (Davies 1991: 28-30). With MEAs becoming more common, and with the scope of both MEA and the Federal EA processes broadening, the possibility of for the introduction of joint federal-municipal EAs exists.

##### Provincial EA and MEA requirements in Ontario

◆ **Ontario *Environmental Assessment Act (EAA)*:** The Ontario *EAA* was adopted in 1975. After its adoption, it was unclear how the *EAA* would affect municipalities (Earn 1977: 44). In 1980, municipalities were brought under the *EAA* by clarifying regulation. The application to municipalities has been interpreted narrowly to the exclusion of municipal plans and policy decisions and private development initiatives. Municipal development initiatives under \$3.5 million have also been exempted from its purview (Novakowski 1993). Sewer and water works projects, waste management projects, and transportation projects are the most common municipal initiatives that undergo provincial EAs. These tend to be initiated by the Engineering and Public Works Departments. Most provincial EAs of municipal initiatives are conducted as class EAs. Class EAs are “performed for certain types of projects which have common characteristics, are carried out in very similar circumstances, recur frequently and have a predictable range of effects” (Couch 1989: 35). Although there are no requirements under the *EAA* for municipalities to require MEAs, the possibility for joint provincial-municipal EAs exists.

◆ **Ontario Ministry of Natural Resources’ Watershed Planning:** For more than a decade, CAs have been engaged in the development of watershed plans. However, CAs have lacked the requisite authority to require that municipal official plans conform to their watershed plans. In conjunction with a few municipalities and their respective CAs, the Ministry of Natural Resources (MNR) is currently formalizing watershed and subwatershed planning procedures.

Although these plans still do not have legal force, municipalities can entrench their recommendations in such legal mechanisms as official and secondary plans, and development agreements.

A watershed is an area where the boundaries are set by runoff flowing to different rivers or basins. A subwatershed is a portion of a larger watershed encompassing an area drained by a tributary of the larger river system (Ontario 1992d: 5). For the purposes of a study area, the Ministry recommends that it also includes the area(s) of future development and extend far enough downstream to include significant water-related features, valley conditions and uses (Ontario 1992d: 5).

Figure 1 provides an illustration of how watershed and subwatershed plans would fit into the larger municipal planning process. The information in watershed plans is more general than in subwatershed plans. Prepared primarily by the CAs, watershed plans would provide the environmental and resource objectives and goals for regional and local official plans. Subwatershed plans would primarily be prepared by the property owners within the subwatershed. They would provide the information for planning areas within the municipality (e.g., OP amendments, secondary plans, plans of subdivision, etc.). Even though subwatershed plans are more specific than watershed plans, they would not set specific land uses. According to a recent report by the Ministry of Natural Resources, they would:

provide necessary and important information to the land-use decision-making process by establishing constraints, opportunities and approaches for the use and management of water and land that compatibly integrate natural systems with changing land use (Ontario 1992d: iv).

Watershed and subwatershed planning provide an opportunity to incorporate EA principles into land-use planning in a uniquely proactive manner (Ontario 1992b: 6). The information provided by the watershed and subwatershed plans can be used to guide future development to minimize environmental impacts. Even though the plans are drawn up prior to development proposals, because they set limits to anticipated adverse environmental impacts of future development within a large area, they are a type of *a priori* EA. Developers could incorporate the requirements of a municipality's or the province's EA processes in subwatershed plans. It is a significantly more proactive approach than traditional planning and EA approaches. For example, subwatershed plans recommend how water resources and related resource features can be "protected and enhanced to concede with changing land use" (Ontario 1992d: 8). Specifically, they:

- identify the location, areal extent, present status, significance and sensitivity of the existing natural environment within the subwatersheds;
- establish goals and objectives for management of subwatersheds;
- identify lands not suitable for development and recommend appropriate environmental management practices which will protect, conserve, rehabilitate and/or enhance natural features within the plan;
- provide directions for the screening and selection of, Best Management Practices for the subwatershed;
- establish an implementation strategy;
- provide requirements for monitoring programs and information updates, and
- set out direction policies and design criteria for secondary plans and subdivision design (Ontario 1992d: 8-9).

Subwatershed plans are a potentially significant way in which government entities can conduct EAs for future development in a holistic and rational manner. If a municipality embraces such an approach, it could be an effective type of MEA.

Figure 1: Integrated Watershed and Municipal Planning



Source: (Ontario 1992b: 3).

◆ **Ontario Wetlands Policy Statement Requirement for Municipal Environmental Impact Studies:** The Wetlands Policy was adopted by the Ontario Government in 1992 under s. 3 of the *Planning Act*. The Statement replaces the 1984 Ontario Ministry of Natural Resource “Guidelines for Wetland Management in Ontario.” The Policy Statement’s goals are:

- to ensure that *Wetlands* are identified and adequately protected through the land-use planning process, and
- to achieve no loss of *Provincially Significant Wetlands* (Ontario 1992e: 4).

The Policy Statement does not provide one set of criteria for the entire province. Rather it outlines different requirements for development proposals affecting provincially significant wetlands in the Great Lakes-St. Lawrence Region (southern Ontario) and the Boreal Region (northern Ontario). In the Great Lakes-St. Lawrence Region, development is not permitted within provincially significant wetlands’. Development within and adjacent (lands within 120 metres of an individual Wetland Area and all lands connecting individual Wetland Areas within a Wetland Complex) to provincially significant wetlands located in the Boreal Region and development adjacent to provincially significant wetlands located in the Great Lakes-St. Lawrence Region, is permitted only if it does not result in the following:

- loss of *Wetland Functions*;
- subsequent demand for future *Development* which will negatively impact on existing Wetland Functions;
- conflict with existing site-specific wetland management practices; and
- loss of contiguous *Wetland Area*.  
(Ontario 1992e: 11).

The preparation of an Environmental Impact Study (EIS) is required to demonstrate that the proposed development will not result in any of these impacts. Municipalities with provincially significant wetlands are required to adopt requirements for EIS in their official plan policies. The procedures outlined for an EIS under the *Wetlands Policy* are found in the *Manual of Implementation Guidelines for the Wetlands Policy Statement*. The requirements are modelled after the impact assessment processes used in the Regions of Waterloo and Halton (discussed below) (Ontario 1992c: 86). The *Guidelines* outline three general types of EIS: comprehensive EIS, scoped-site EIS, and full-site EIS.

- **Comprehensive EIS:** the proponent, municipality or an agency acting on behalf of the municipality may prepare an EIS for wetlands within all, or a portion, of the

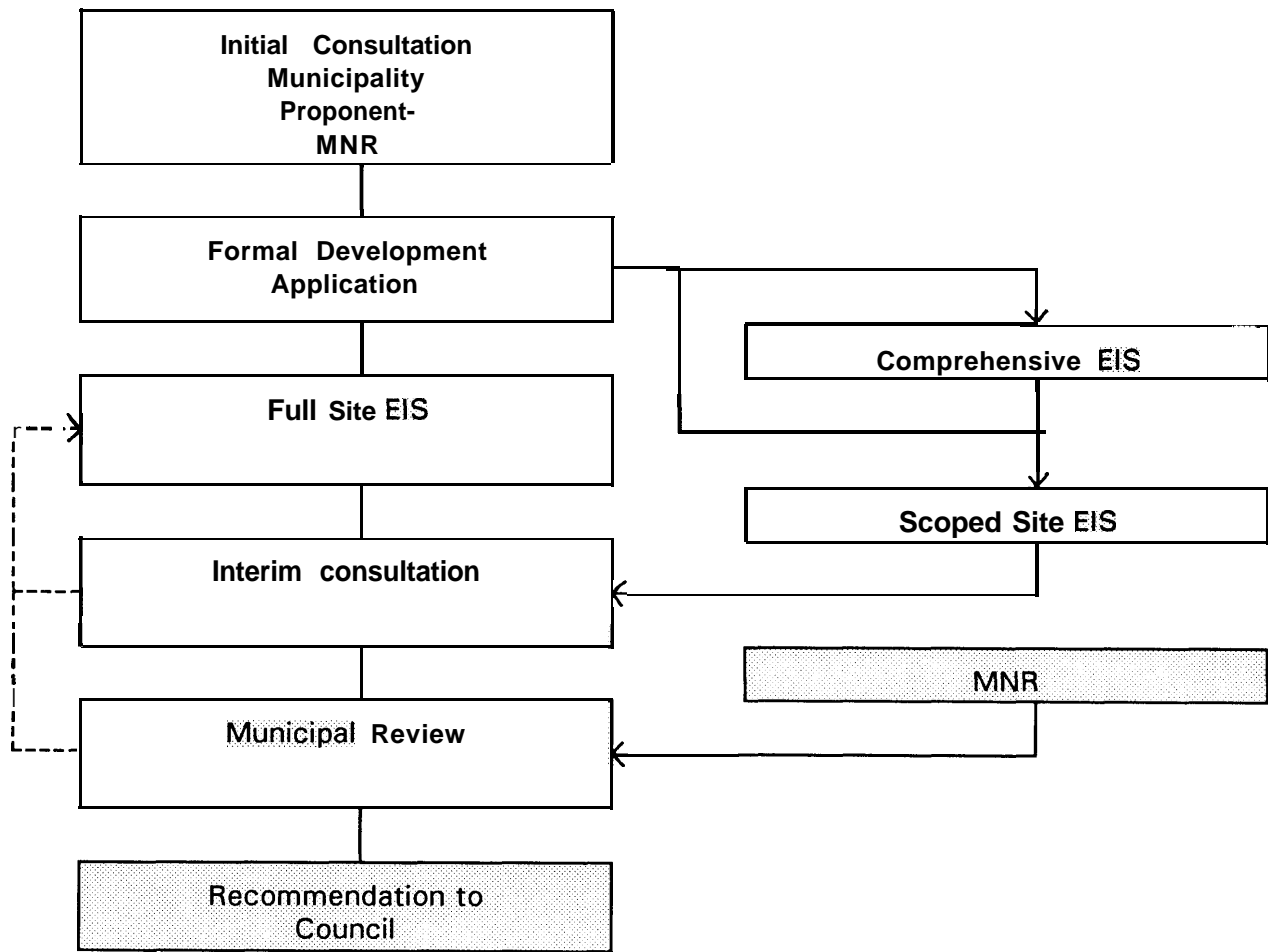
municipality in order to outline the necessary provisions for development in the Official Plan;

- *Full Site EIS*: the proponent would usually prepare a complete EIS of a development proposal for an area where a comprehensive EIS has not been completed. The EIS would identify the necessary requirements for the specific development proposal.
- *Scoped Site EIS*: the proponent would usually prepare a scoped site EIS of a development proposal for areas where a comprehensive EIS has been completed. The EIS would outline provisions for development in accordance with the Comprehensive EIS.

(Ontario 1992c: 17).

The comprehensive EIS approach is similar to the watershed planning approach being developed by the Ministry of Natural Resources (discussed above). A comprehensive EIS would establish constraints and performance standards that proposed development would be required to meet. Where comprehensive EIS is conducted, a site-specific EIS (usually only a scoped site EIS) would be necessary to show that the proposed development meets the standards or to justify the removal of the constraints. If a comprehensive EIS is not conducted and sufficient information did not exist from other studies, a full EIS would probably be required to assess the full range of impacts. Figure 2 provides an illustration of the general steps that would be taken in this planning process.

Figure 2: Decision-Making Process for a Wetlands Policy Statement EIS



Source: (Ontario 1992c: 91)

### **Municipal Requirements for Municipal Environmental Assessments in Ontario**

Although there are a number of municipalities that currently employ MEA in Ontario, this section only describes the approaches to MEA taken by five key municipalities: the Region of Waterloo, the City of Ottawa, the City of Guelph, the City of Waterloo, and the Region of Ottawa-Carleton. The other municipalities in the study, namely the Cities Kitchener and Oakville and the Region of Halton, are modelled on at least one of these key jurisdictions. Table 2 provides a summary of the use of MEA by the nine municipalities surveyed in this study.

#### **Region of Waterloo**

The first municipality in Ontario to adopt a MEA process was the Region of Waterloo which established an EA process in 1973. In its 1975 Official Plan, the Regional Municipality of Waterloo (pop. 277,284) adopted explicit mandatory policies to protect Environmentally Sensitive Policy Areas (ESPAs) and required EAs for changes in the legal land-use (i.e., as part of the approvals process for a land severance, plan of subdivision, rezoning, official plan amendment, etc.) on land within or “contiguous”<sup>\*</sup> to ESPAs. An ESPA “is an unusual ‘natural’ area that has been found to contain rare or significant environmental features which are of region-wide, provincial or national importance” (Region of Waterloo 1986: 1).

Section 7.1 1 of the Regional Official Plan outlines eight criteria that qualify an area for ESPA designation (see Appendix A). If an area meets any one of the eight criteria, it will be designated. Originally there were 69 areas formally recognized as ESPAs, most of which are privately owned. Ten areas were added to the list in 1991. Initially, the Plan categorized the environmentally sensitive areas into two classes: Policy Areas “A” (high significance) and Policy Areas “B” (lesser significance). This distinction was abandoned because it “represented a certain degree of pre-judgement” (Armour 1977: 34). The criteria used to distinguish the two were combined into one set which are used to determine the “degree of sensitivity” of a particular ESA during the preparation of the EIS (Armour 1977: 34).

The main objective of the policy “is to determine how proposed land uses requiring some form of municipal approval might affect the special features of an Environmentally Sensitive Policy Area and what actions, designs or revisions to the proposal might be effective to avoid major damage to such features” (Region of Waterloo 1986). If it is “not possible to reconcile the proposal to the maintenance of the important natural features” of an ESPA, the Council is required to give serious consideration to either:

- approve or refuse the proposed development;
- protect important natural features through public acquisition or private donation; or
- remove the ESPA designation (Region of Waterloo 1986: 2).

The Ecological and Environmental Advisory Committee (EEAC) was set up at the same time the Regional government was established in 1973. Among other duties, the EEAC is responsible for reviewing the EIS. It makes recommendations to the Regional Planning Staff and the Regional Committee of Planning and Development which in turn makes recommendations to the Regional Council.

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<sup>\*</sup>Greater discretion is allowed for development for proposals on areas contiguous but not within ESPAs. Because the impacts will vary depending on the nature of the relationship between the two areas (eg. proximity, upstream vs. downstream, etc.), each proposal for land contiguous to ESPAs is “evaluated on its own merits” (Region of Waterloo 1986).

Table 2: Summary of the use of M&As in the Nine Surveyed Municipalities in Ontario			
Municipality	Enabling Power(s)	Current MEA Status	Adm. /Rev. by: (Approved by:)
<b>Regional:</b>			
○ Waterloo	1976 OP 1986 Guidelines	EIS for 79 ESPAs	EEAC & Plg Dept (Council)
● Halton	1978 OP 1979 Guidelines	EIA for 37 ESAs (reconceptualizing)	EEAC & Plg Dept (Council)
<input type="checkbox"/> Ottawa-Carleton		Conducting an ER of OP (conceptualizing as implementing)	Planning Dept (Council)
<b>Area:</b>			
○ Waterloo		Conceptualizing watershed/subwatershed planning	Plg & Eng Dept (Council)
○ Kitchener	1979 OP	EA for 3 ESAs (not mandatory)	Plg Dept (Council)
		Experimenting with subwatershed planning	
● Oakville	1983 OP	EA for ESA 'A' and ESA 'B' (not mandatory)	Planning Dept (Council)
<input checked="" type="checkbox"/> Ottawa	1991 OP 1993 Guidelines	MEEP for entire municipality	Eng & other Depts (Council)
<b>Single:</b>			
Guelph	1988 OP	EAs for ECAs or ESAs	Planning Dept (Council)
Peterborough		Considering future MEA adoption	

OP: official plan

EA: environmental assessment (in Kitchener, environmental analysis)

EIA: environmental impact assessment

EIS: environmental impact statement

MEEP: municipal environmental evaluation process

ECA: environmental constraint area

ESA: environmentally sensitive area

ESPA: environmentally sensitive policy area

Rev: Review

Adm: Administration

Plg: Planning

Eng: Engineering

○ The Cities of Waterloo and Kitchener's regional government is the Region of Waterloo.

● The City of Oakville's regional government is the Region of Halton.

The City of Ottawa's regional government is the Region of Ottawa-Carleton.

Section 7.14 outlines the permitted land uses (such as farming operations, authorized management and harvest of timber, etc.) and Section 7.21 outlines prohibited land uses (such as a pit or quarry, a new Regional road, a new trunk sewer or new trunk watermain, a sanitary landfill site or groundwater taking project, etc.). All other land uses require some form of approval with regards to the ESPA EIS process as a pre-condition of consideration for land use change via the traditional planning approvals process. There are three general routes a development proposal can follow: full EIS, scoped EIS, or exemption. The general steps in the EIS procedure are outlined in Figure 3. For a detailed description of each step see Appendix A.

The full EIS requirements were modelled after the Ontario *Environmental Assessment Act*. Section 7.15 of the Regional Official Plan Policies outlines the requirements of a full EIS. They are as follows:

- a a description of the purpose of the undertaking;
- a description of and a statement of the rationale for:
  - the undertaking;
  - the alternative methods of carrying out the undertaking;
  - the alternatives to the undertaking;
- a description of:
  - the environment that will be affected or that might reasonably be expected to be affected, directly or indirectly;
  - the effects that will be caused or that might reasonably be expected to be caused to the environment;
  - the actions necessary or that may reasonably be expected to be necessary to prevent, change, mitigate or remedy the effects upon or the effects that might reasonably be expected upon the environment by the undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking; and
  - an evaluation of the advantages and disadvantages to the environment of the undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking (Region of Waterloo 1986: 1 I-I 3).

In practice, the requirements for alternatives to the undertaking are not rigorously applied, particularly to small-scale development proposals. Alternatives studied are usually in the form of alternative locations on the site, designs, and sizes of the project rather than alternative uses.

In situations where a full EIS may not be necessary (determined by the EEAC in consultation with the Environmental Manager), the applicant can work with the EEAC and Planning Staff to develop requirements for a reduced study requirement or a scoped EIS. Section 7.16 outlines the scoping requirements. If the scoping results in the elimination of any of the standard components outlined in section 7.15, formal support from EEAC and approval from Regional Council is required.

in cases where the development proposal is not likely to create any significant impacts, the applicant can apply for an exemption or “waiver” from the ESPA EIS process. A request for a waiver must be accompanied by an Environmental Analysis Report (EAR). The requirements of an EAR are outlined in section 7.17. They are:

- a description of land ownership, land use and municipal land use policies and controls applying to the property and adjacent lands;
- a location map and site plan showing the approximate location of the proposed development in relation to natural environmental features in the vicinity;
- identification of intrinsic limitations to development on the site; including flood or erosion susceptibility, slopes, high water table areas, wetlands, shallow soils and drainage courses from the site of the proposed development; and

- identification of the general location of the significant environmental features responsible for the ESPA designation in relation to the site of the proposed development and a description of the potential for the proposed development to impact such features (Region of Waterloo 1993).

The waiver request and the EAR are circulated to the EEAC for review and comment. After considering EEAC's recommendations and consulting with the area municipal council, the regional council decides on the waiver request. If the waiver is granted, the applicant can proceed with the development approvals process with no further regard to ESPA procedural requirements. If the waiver is not granted, the applicant will be subject to either a scoped or full EIS procedural requirements.

Figure 3: The Region of Waterloo's Decision Procedures for ESPA Development



The Cities of Kitchener and Oakville, and the Region of Halton,

Since 1975, a number of municipalities such as the Region of Halton in 1978, the City of Kitchener in 1979, and the City of Oakville in 1983 have implemented similar site MEAs for development proposals in or in areas adjacent to environmentally significant or sensitive areas. The Region of Halton's MEA process is almost identical to the Region of Waterloo's MEA process. The Cities of Kitchener and Oakville's MEAs are similar to those in the Regions of Waterloo and Halton but they have a number of important differences. They have discretionary rather than mandatory policies within their Official Plans, they do require the use of EEACs to review the EAs, and they do not have implementation guidelines. Most importantly, they are generally not used. As both of their regional counterparts, the Regions of Waterloo and Halton, have mandatory EA processes and EEACs, the employment of their policies may be somewhat redundant. Both the Regions of Waterloo and Halton have on average 1 to 5 (depending on the economy) full EAs annually.

The City of Guelph

The City of Guelph recently adopted a mandatory EA requirement for all development applications with the exception of consents or minor variances in Environmental Constraint Areas (ECAs). The policy requirement is outlined in section 3.3 of its 1988 Official Plan. Although the requirements outlined in section 3.3 of Guelph's Official Plan appear to be similar to the Region of Waterloo's EA process, they are significantly more simplified. In section 3.3.1, ECAs are defined as lands with inherent physical limitations to development (e.g., flood or erosion prone areas) and significant natural areas (e.g., environmentally sensitive areas or wetlands). According to section 3.3.3, the policy's main objective appears to be "to maximize the retention of significant Natural Areas" (Guelph 1988: 3-9). An EIS report is required to include:

- a description of, and statement of the rationale for the proposal and alternatives to the proposal;
- a description of adjacent land use and the existing regulations affecting the proposal and adjacent lands;
- a detailed description of the environment potentially affected, directly or indirectly, by the proposal on the environment;
- a description of the actions necessary to remedy or mitigate the effects on the environment created by the proposal and the alternative methods of protecting the functions and values of the area affected (City of Guelph, 1988).

Depending on the reason for the ECA designation (flood/erosion prone areas, woodlot, wetland, etc.), the policy also outlines specific requirements of the EIS. There is no allowance for site visits or consultation to determine whether a full or scoped EIS or exception is permitted. The EIS requirements are simply determined by the location of the development proposal within an ECA and the general reason for the ECA designation. The EIS is supposed to be submitted to the Planning Department prior to submission of the development application. The same planner that will coordinate the development proposal submission reviews and determines the acceptability of the report in consultation with the local CA and other municipal staff the planner deems necessary. The EIS is not circulated to all of the technical review agencies and departments that the proposal documentation is. This study is one of a number of studies that would be used by the planner to formulate the recommendations to the Committee and Council. It is not integral to or a parallel process to the planning process. Since its adoption in 1988, there have only been two or three EAs conducted.

### City of Ottawa

Recently, in its 1991 Official Plan, the City of Ottawa adopted an EA process called the Municipal Environmental Evaluation Process (MEEP). In 1993, they adopted *The City of Ottawa's Municipal Environmental Evaluation Process (MEEP) Guidelines for Application*. Since then, the City has prepared an information pamphlet on MEEP, a MEEP Environmental Screening Checklist Guide, and is conducting extensive training for staff in a number of departments affected by MEEP. MEEP applies to development proposals for the entire geographical area within Ottawa's boundaries while broadening the coverage of the EA process to include municipal non-development activities. It is scheduled to be officially implemented and applied to public initiatives as of May, 1993 and for private initiatives as of September, 1993. By evaluating the impacts of small-to-medium-scale development schemes, increasing public participation, and providing for better assessment of cumulative impacts, Ottawa is attempting in MEEP to address the gaps it considers to be in the Provincial and Federal EA processes. MEEP is a proponent driven self-assessment process. It applies to all applications for official plan amendments, zoning by-law amendments, subdivision approval (including removal of part-lot control) and site plan control approval as well as the municipality's non-development activities. Figures 4 and 5 provide an illustration of the process.

As outlined in the *Guidelines for Application*, MEEP is a two phase process. Phase one involves an initial evaluation of the application to determine whether it requires the preparation of Municipal Environmental Evaluation Report (MEER). Phase two involves the preparation of the MEER. In phase one, all applications for an official plan amendment, zoning by-law amendment, subdivision (including removal of part-lot control), or site plan control that is:

- related to a water management system or a snow disposal site;
- located within the Greenway;
- located on a contaminated site;
- located on an unstable slope;
- located on an existing pit or quarry; or
- located in an Area of Natural and Scientific Interest (Ottawa 1993c: 6).

automatically qualify for the MEER requirement. Certain non-development activities and planning applications are excluded from the evaluation because

- they are not expected to produce any adverse environmental impacts;
- they have been evaluated through another means; or
- they are governed by provincial or federal regulation, standard or guidelines (Ottawa 1993c: 8).

The exclusion list is divided into two sections. The first section is used by City project managers when considering whether municipal non-development activities require a MEER. Any non-development activities not appearing in the first section of the exclusion list (which will be routinely amended) require a MEER. The following is a list of the non-development activities that are excluded from a MEER:

- administrative and personnel services,
- purchases or procurement,
- purchased services,
- scientific studies, surveys,
- routine repair and maintenance,
- routine operations,
- any City of Ottawa undertaking subject to the Canadian Environmental Assessment Act or the Ontario Environmental Assessment Act,

**Figure 4: City of Ottawa's MEEP**

**Figure 5: City of Ottawa's MEEP Review Procedures for Development Proposals**

- an action that is part of a larger proposal,
- emergency operations, and
- “schedule A” proposals under class Environmental Assessment (Ottawa 1993c: appendix 4).

The second section of the exclusion list outlines the development applications that are excluded from a MEER requirement. The list is currently limited to development applications that are not subject to an official plan amendment, zoning by-law amendment, subdivision (including part-lot control), or site plan control. The following are examples of items that would be automatically excluded from a MEER:

- construction permits, including fire places, chimneys and pool enclosures,
- plumbing permits,
- occupancy permits,
- design committee approval,
- minor variances,
- heritage demolition,
- expand/change legal non-conforming uses,
- cash-in-lieu of parking,
- condominium conversion,
- rental housing protection,
- sign permit,
- demolition permits,
- demolition control applications, and
- land or street closing (Ottawa 1993c: appendix 4).

If the item is excluded from a MEER, the development submission to Council must state the basis for the exclusion.

For applications and non-development activities not identified on the inclusion or exclusion lists, the proponent must complete the Environmental Impact Screening Checklist to determine if a MEER is required. Because the vast majority of applications (for official plan amendment, zoning by-law amendment, subdivision approval, and site plan control) are not covered by the exclusion or inclusion lists, they will require the completion of the checklist. The checklist requires the assessment of potential impacts of the proposal on the following components of the environment:

- land, including the urban forest, soils, vegetation, wildlife, and others;
- air, including specific air characteristics, noise pollution, industrial emissions, and others;
- water, including stormwater, groundwater, wetlands, and others; and
- socio-economic concerns which are intricately linked to the well being of natural ecosystems and human health. These components should also be considered in conjunction with any evaluation of the natural environment. However, in accordance with the *Planning Act*, the City of Ottawa has existing procedures which study many of these components before project approval. MEEP will consolidate this information without duplicating existing procedures (Ottawa 1993c: 9).

If potential significant impacts are identified (by the proponent self-assessment or by the technical review of the checklist) or if the proposal is on the inclusion list, the proponent continues to Phase two.

Phase two concerns the formulation of a MEER which includes the following:

- a description of the proposed activity (includes construction, operation, and decommissioning),
- a rationale for the proposal,
- a description of the existing environment,

- a description of environmental impacts,
- a description of mitigative measures, and
- a monitoring plan (Ottawa 1993c: 12-1 3).

Once the MEER has been examined by the Environmental Management Branch in the Engineering Department to determine that the evaluation is complete and the procedures have been properly applied, substantive evaluations of the MEER begin. For development projects, the Department of Planning and Development provides the initial study review (Figure 5). The checklist and/or MEEP is also circulated to an additional 33 departments and agencies for technical review and comment along with the rest of the proposal documentation. The following agencies are included in the technical review circulation:

- Rideau Valley CA
- NCC Current Planning, Capital Management Branch
- RMCO, Environmental Services Dept.,
- Ministry of Environment,
- Ministry of Natural Resources,
- Environmental Advisory Committee, City of Ottawa
- Environmental Management Branch, Engineering and Works, City of Ottawa
- The affected Community Associated and any concerned citizens (Ottawa, 1993c: 16).

After any necessary additional technical circulations, the recommendations will be forwarded to Planning Committee and City Council which will either accept the mitigation measures/proposal modifications, accept the proposal as is, or shelve the proposal. As part of MEEP, all documents and reports submitted to Council must include an environmental impact section summarizing the environmental implications of any recommendations. For non-development activities, the responsible department head or the delegated official conducts the review.

#### City of Waterloo

As part of its Environment First Policy, the City of Waterloo is currently experimenting with watershed and subwatershed planning which incorporates EA considerations. As discussed earlier, watershed and subwatershed planning is an *a priori* EA where the assessment precedes and places constraints on development in order to ensure the environmental integrity of a watershed and subwatershed ecosystem. The City of Waterloo is one of the few municipalities that is working closely with the Ministry of Natural Resources and its CA to implement this innovative approach to land-use planning. If the municipality adopts this approach as a standard planning process, it will be a MEA process. Of the municipalities interviewed, the City of Kitchener is also experimenting, albeit to a lesser extent, with this approach.

The City of Waterloo's Laurel Creek Watershed Study is its pilot project for this approach. As part of the watershed study, the City created three land-use designations: constraint level 1, 2, and 3. The Constraint level 1 designation includes woodlots, wetlands, and stream corridors where no development is permitted. The Constraint level 2 designation includes lower quality woodlots and wetlands where some degree of development is permitted but the functions must be preserved. Constraint level 3 includes areas of lower environmental sensitivity where development may occur, providing that impacts on the environment will be minimized by meeting the Watershed Study recommendations. The City also has set a number of development control targets with respect to include:

- high flow,
- erosion control,
- low flow (infiltration),
- temperature (fishery protection),
- dissolved oxygen,

- phosphorus (water quality protection),
- sediment, and
- bacteria (City of Waterloo 1993).

The City of Waterloo plans to require property owners of land within a subwatershed to conduct their own subwatershed study prior to the preparation of secondary plans as a precondition of approval. The study would consider possible land-use changes that would not exceed the control targets developed in the watershed plan. It would be left to the riparian and adjoining property owners to finance and coordinate the study and development of the subwatershed plan. Such a plan could fulfil the Region of Waterloo's requirements for a site EIS. In certain cases where it is unclear if performance standards will be met by the proposal, a scoped site EIS may be required.

#### Region of Ottawa-Carleton

After the adoption of its 1989 Regional Official Plan, the Region of Ottawa-Carleton decided that an EA or an Environmental Review (ER) was to be prepared for the region. In 1991, the Regional Council authorized a three year project to evaluate the regional official plan from an ecosystem approach. The information from the review is to be used for the mandatory five year official plan review in 1994. The ER process is not mandatory nor is it firmly established in any legislation. There are no set guidelines for the project. The process is being developed with as it is implemented. The ER and the ER review are continuously receiving public input. There are a series of reports and newsletter which document the evolution of the process (Ottawa-Carleton, 1993a,1993b,1993c,1993d). Originally, the Planning Department was working independently on the routine Regional Development Strategy (a review of the growth strategy for the region) and the ER of the plan. However, it became clear that the two review processes "cannot be isolated" from each other (Ottawa-Carleton 1993c: 1). Consequently, the two processes have been combined into a more comprehensive ER.

The ER is being undertaken in three phases:

- development of a framework or a way of approaching the review;
- review of the plan and development/evaluation of options;
- formulation and recommendation of official plan policies and any related strategies (Ottawa-Carleton 1993c: 1).

The first phase, which is nearing completion, relied on extensive consultation with a wide range of individuals and groups. During the phase, it was decided that to integrate social, environmental, and economic matters without placing them in opposition with each other, ...[it was necessary] to develop a set of principles or set of goals that is common to all three matters" (Ottawa-Carleton 1993c: 3). At the time of this study, the guiding principles for the Official Plan Review which have been developed include:

- recognize that we are a part of, not apart from, life support systems in the environment and must learn to work within the ecological systems that we, and all other organisms, depend on;
- protect life-support systems by conserving diversity, respecting natural processes, and promoting sustainable use of renewable resources;
- recognize that Ottawa-Carleton exists as part of larger ecological, economic and social systems;
- anticipate opportunities and prevent problems in advance, rather than reacting once a problem or opportunity appears;
- adopt a long-range perspective which includes a commitment to ensuring that future generations can meet their needs;
- develop integrated decision-making processes that account for the complex inter-relationships between economic, social, and environmental factors;

- focus on the quality of change, rather than just the quantity of change;
- learn and work as communities to develop solutions and create change which reflects our place in the environment and our goals and aspirations;
- improve our self-reliance and self-sufficiency; and
- aim for an equitable distribution of benefits and costs (Ottawa-Carleton 1993c: 4).

Phase 2 is expected to be conducted between the spring and fall of 1994. It includes data collection and issue analysis, development of and evaluation of alternatives, and proposed directions and policies. Phase 3 is the review and adoption of proposed directions and policies and is expected to begin in the spring of 1995.

A plan EA such as the Region of Ottawa-Carleton's ER could evolve into a mandatory formal official plan review process, or at least result in EA policies in the next official plan that would outline procedures for official plan amendments and secondary plan EA processes.



PART II

**5. GENERAL FRAMEWORKS FOR MUNICIPAL LAND-USE PLANNING AND ENVIRONMENTAL ASSESSMENT**

The purpose of this chapter is to develop some general frameworks for municipal land use-planning and MEAs. The first part presents three general types of MEAs that can be used for land-use planning. The second part reviews ideal models for land-use planning and EA and considers their integration. This discussion provides the background for the development of five general categories or levels of integration between MEA and land-use planning presented in the third section. Since two of the levels are either planning only or MEA only, of the five levels of integration, only three represent actual EA-planning integration. The final section combines the three general types of MEA with the three actual levels of EA-planning integration that can exist in practice to produce nine general frameworks for adopting MEA.

**Different Types of Municipal Land-Use Planning Environmental Assessments**

Municipalities could adopt MEAs for any of a variety of initiatives such as budgets, policies, programmes, developments, projects, management activities, or plans. However, as previously mentioned, this study focuses on the MEAs that deal with land-use planning and development proposals. Adoption of EAs at the municipal level could improve the land-use planning and decision-making process in a number of ways. The following list provides a summary of some of the possible benefits municipalities could experience from MEAs:

- ensuring that a broad range of biological, physical, social, economic and community factors are considered;
- establishing a framework for making trade-offs among environmental, community, and economic goals;
- developing a clearly defined, legible process which can be responsive to public input and the need for public information programs;
- laying the groundwork for environmental data and evaluation systems;
- better integrating local municipal planning with provincial environmental policies and management programmes;
- analyzing widespread and secondary or indirect environmental effects;
- reducing the incompatibility of the land-use designation with the environmental characteristics of the site;
- examining the impacts and alternatives which could rarely have been predicted at the time the official plans were formulated;
- evaluating the effects of a project and establishing procedures for minimizing impacts; and
- improving future prediction of impacts (Earn 1977: 42-43).

The advantages that MEA offers municipalities stems from its emphasis on an explicit comprehensive evaluation of the environment, the alternative scenarios, and their potential impacts within the auspices of stakeholder and public consultation (Earn 1977: 43). This process is advocated not only for the environmental benefits it offers but also for the potential long term cost savings that it may afford by ensuring that the full costs of development are included in the consideration of the proposal.

The following are three general types of MEAs relating to land-use planning:

- EAs of land-use plans,
- site EAs, and
- area-wide EAs.

Each of these types of EAs can allow for the consideration of different environmental consequences at the various stages of the land-use planning and development system.

Because each of the different types of MEAs serves different purposes in reducing and mitigating adverse environmental impacts, the use of all the types for any given area is recommended. A variety of different types of MEAs would provide a more:

systematic approach which would achieve an increasing level of specificity in terms of environmental assessment both as the area under scrutiny decreases and as the proposal proceeds from plan to project (Burchell and Listokin 1977: 25).

If an EA is conducted for land-use plans and policies, then the site assessment is less likely to discover significant adverse impacts. Moreover, broader EAs as conducted in area-wide and plan EAs enable cumulative impact assessment of incremental development which is difficult if not impossible for site EA. Similarly, if an EA is only conducted on land-use plans and not on individual projects, many impacts that cannot be anticipated during the area-wide EA or general plan formulation will go unevaluated. If an area-wide EA has been completed, a scoped plan EA or a scoped site EA would more likely be sufficient for plan review or development proposal within the area.

◆ **Land-Use Plan EAs:** EAs of official plans and secondary plans could involve the evaluation of the environmental impacts of the proposed land-use designations, and plan policies and goals. At the official and secondary planning stage, the alternatives evaluated could include alternative land uses and land-use policies. An EA would preferably be conducted before final adoption of the plan. Alternatively, it can be conducted a number of years after adoption as part of the routine plan review process to decide on whether the official plan needs to be changed as in the case of the Region of Ottawa-Carleton's ER. It is important to assess the environmental impacts of an official plan's land-use designations to ensure that the designated land uses are not incompatible with the integrity of environmental health of the site and to the neighbouring area's environmental health and land-use designations. For example, it is not enough to designate a significant woodlot green space if it is not sufficiently large and the surrounding designations are incompatible with its preservation. It is also important to assess the environmental impacts of an plan's policies. It is not enough to merely evaluate, or include, environmental policies. It is also important to assess the impacts of other official plan policies. For example, transportation policies can have significant environmental impacts that directly affect automobile pollution and indirectly affect land values and density pressure.

◆ **Site EAs:** EAs of site-specific development proposals can identify impacts that cannot be assessed until a development proposal is sufficiently detailed. Alternatives can also be evaluated at this stage. However, instead of the evaluation of broad land-use alternatives as in the plan EA, alternatives relating to the project configuration can be evaluated such as density, built form, and location of the development on the site. Site EA can be applied to all types of development proposals and land classifications. Alternatively, it can be restricted to certain types of development proposals (e.g., by size and/or land use) and/or land classifications within the municipality. This type of MEA is most common. The Regions of Waterloo and Halton, and the Cities of Kitchener, Oakville, and Guelph, each have requirements for some form of a site EA. The Wetlands Policy Statement also requires municipal site EAs.

◆ **Area-Wide EAs:** Area-wide EAs refer to an EA of a geographic area and are generally independent of existing, or at least can be conducted prior to, a specific proposal for a development or a land-use plan. Area-wide assessments can be used for a variety of purposes. Prior to land-use plan and site proposals, area-wide assessments can be conducted to understand the nature of the ecosystem. The information can be used to identify sensitive areas, hazardous areas, and other areas with significant natural features as well as establish

development constraints and performance standards to ensure the integrity of the natural systems. This information can be used in preparation of an official or development proposal for a site or in the EA of them. They can also provide some of the baseline information which is needed to measure the potential impacts of land-use plans and/or development proposals. Post-implementation (of a land-use plan or project) area-wide EAs can also be conducted and generally serve two functions. They can identify the adverse impacts which require mitigative and/or compensatory actions. They can also determine the level of understanding of the cause-effect relationships of development to improve predictions, evaluations, and mitigative procedures in EAs of future proposals. A number of Ontario municipalities, such as the City of Waterloo, are currently working with their counterpart CAs and the MNR to develop a watershed/subwatershed area-wide EA approach to land-use planning. The Wetlands Policy Statement's Comprehensive EIS requirement also provides an example of a provincial requirement for municipal area-wide EAs.

#### **Current Land-Use Planning and Environmental Assessment Models**

Not only are there different types of MEA, but there are different manners in which each type of MEA can be combined with existing planning processes. Before they are presented, however, it is useful to review current land-use planning and environmental assessment models. Prior to the Second World War, traditional planning approaches tended to be "aesthetically, politically, or administratively arbitrary" (Hodge 1985: 171). In the early 1950s, American planners Meyerson and Banfield attempted to formulate a systematic community planning model. Their rational-comprehensive approach to planning has evolved and forms the basis of current planning. The steps can be summarized as follows:

- identify and assess the problem(s), needs, opportunities, and community goals;
- design the alternative courses of action to satisfy the first step;
- compare and evaluate the alternatives;
- select the preferable course of action;
- develop a plan of action to implement the preferred alternative;
- maintain the plan (Hodge 1985: 171-172).

When EA emerged as a formal process in the early 1970s, it was also based on the rational-comprehensive approach. The steps can be summarized as follows:

- identify and assess the problem(s), need(s), opportunity(ies), and goal(s), etc.;
- formulate alternative courses of action including the no action alternative;
- study the area which may be affected;
- identify the publicly and scientifically valued environmental components, spatial and temporal boundaries for impact study, and data needed to assess hypothesized impacts on the valued environmental components;
- predict effects and impacts of the alternative options;
- assess the significance of the possible impacts and compare/evaluate the impacts of the alternative options;
- select the preferred option and develop a mitigation and monitoring strategy;
- implement preferred alternative along with mitigation and monitoring strategies (Whitney and Maclaren 1985).

Although these EA steps appear to be almost identical to those followed in planning, there are subtle differences. Unlike the practice of planning, the *raison d'être* of EA is not the resolution of a set of problems or the realization of a set of goals via the implementation and maintenance of a plan or set of policies (Lawrence 1992: 23). Its emphasis is rather on the prevention of environmental degradation by selecting the least harmful alternative via an explicit, reproducible, and systematic evaluation and comparison of the consequences of a

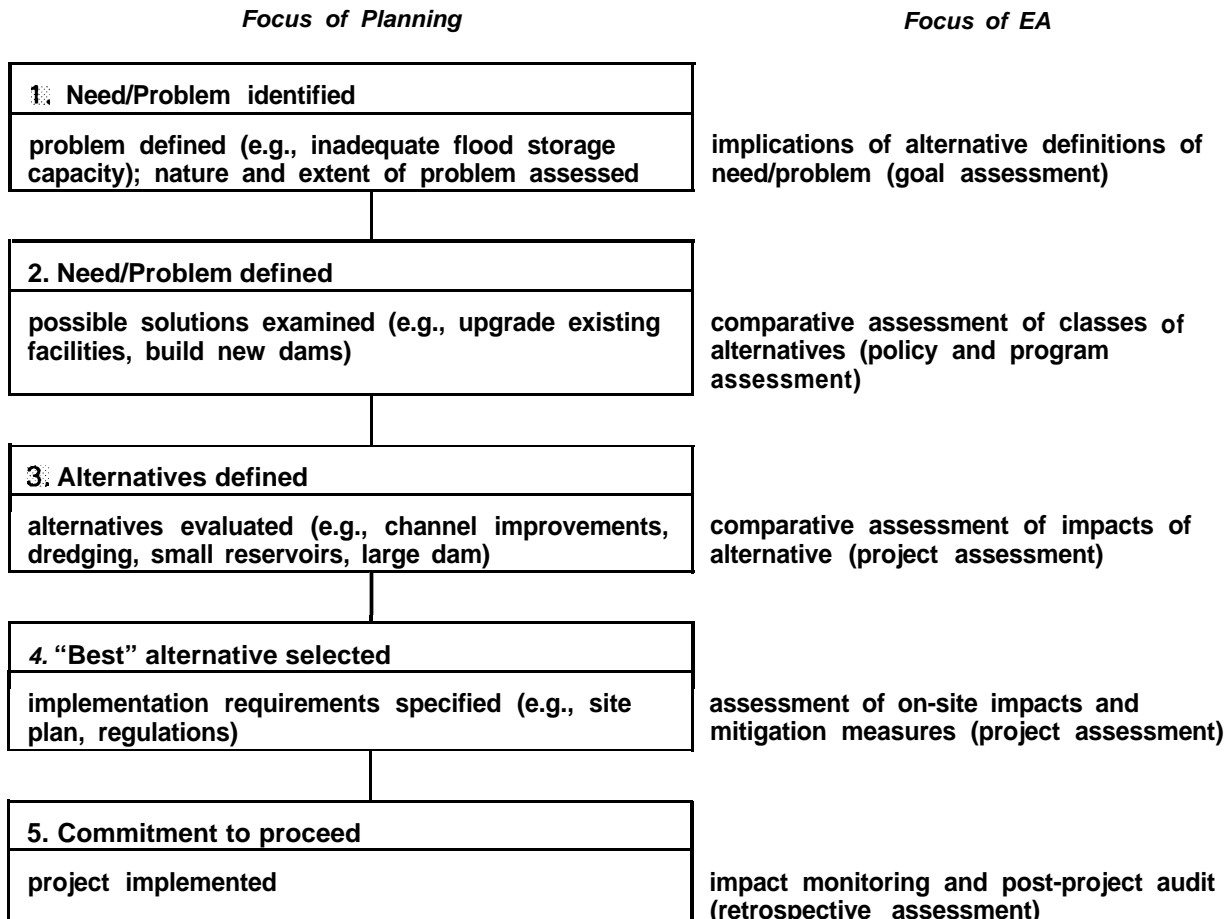
range of alternative options. Consequently, the positioning and substance of the steps are slightly different.

Although EA and planning are slightly different, the two may be highly complementary. If EA is introduced into the early stages of land-use planning, it is generally acknowledged that the decisions will be more environmentally sound (Armour 1990). However, EA often tends to be used to justify rather than to make decisions. According to Audrey Armour, the use of EA has unfortunately been during:

the project review stage of the planning process [ie, only one or two stages within the planning process], either when alternative solutions are be[ing (sic)] evaluated or when detailed implementation requirements are being drawn up (Armour 1990).

She contends that this approach should be reformulated such that EA considerations become “integral” to the planning process “from start to finish” (Armour 1990). Armour’s conception of a single integrated EA and land-use planning process is portrayed in Figure 6. The traditional *non-integrated* EA would have been limited to either or both of the planning stages represented in the 3rd and 4th boxes. The traditional approach therefore is *not an integration* of MEA and planning. Rather, it is an EA stage or requirement within a land-use planning process.

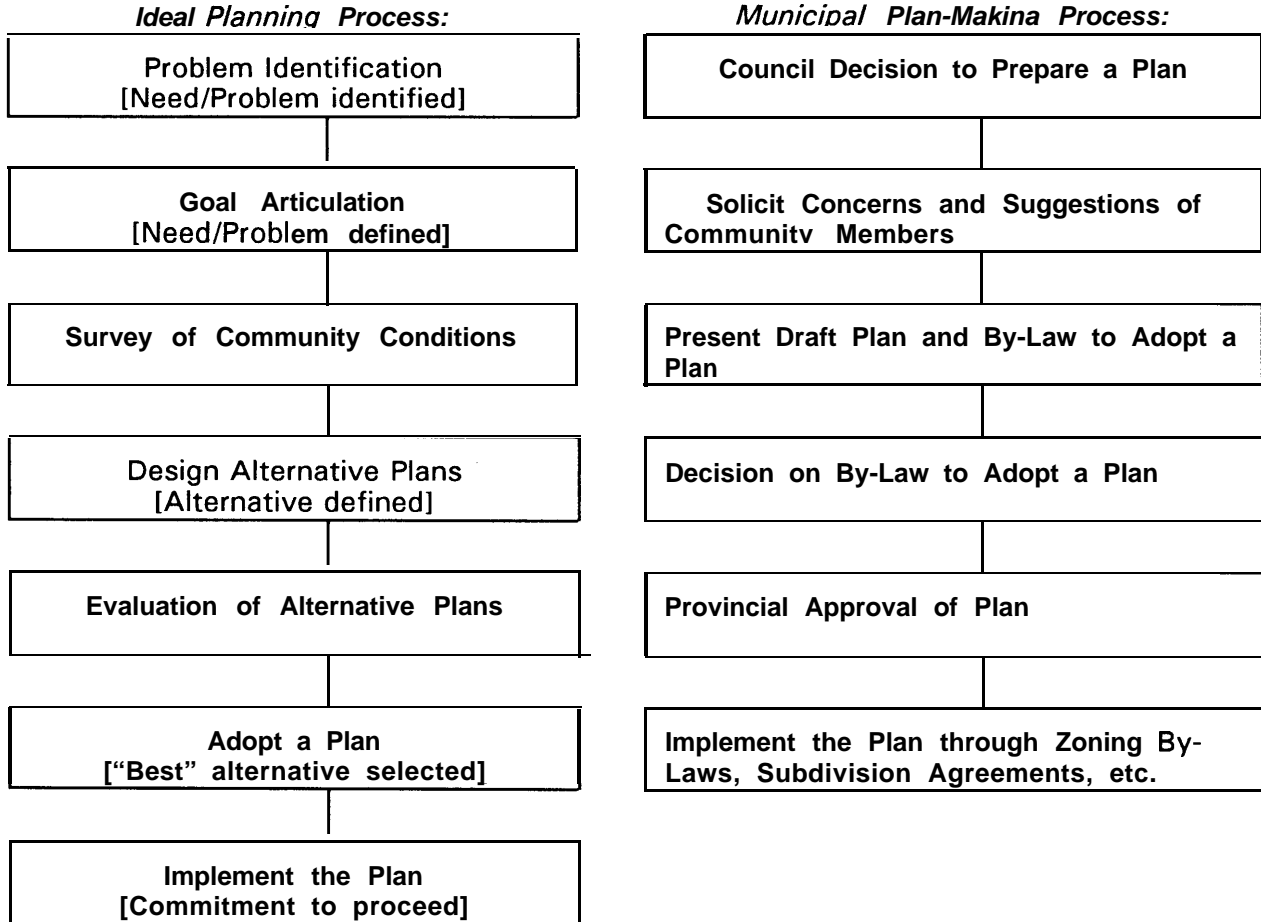
**Figure 6: Diagram of the Decision Stages of an Ideal Fully Integrated EA and Planning Processes**



Source: (Armour 1990: 8)

It is important to note that Figure 6 represents an ideal conceptualization of the integration of a planning process and an EA process. In practice, the stages of both planning and EA, whether integrated or not, are not as explicit or as self contained as the ideal diagram would imply. The idealized process is not easily translated into practice. This is made explicit in Figure 7, where Hodge compares the municipal plan-making process in practice to the ideal community planning process. One reason for this is that the actual process must explicitly take the roles of private and public interests and actors into account. These roles and interests are often incompatible with an idealized process or are irreconcilable. Another reason is that the actual process must address questions of timing and communication between the various actors which are more problematic than the ideal process implies. This appears to be equally applicable to Armour's ideal integrated process. In practice, a fully integrated planning and EA processes therefore would probably not appear as Armour's ideal representation.

Figure 7: Comparison between the Municipal Plan-Making Process and the Ideal Planning Process



(Hodge 1991: 426) [Armour's ideal planning stages1

Armour's discussion of a full integration of planning and EA processes suggests the formal integration or unification of the stages of the processes. According to Armour, the process of EA "...merges with the process of planning and they become one" (Armour 1990: 5-6). But, there is at least one other alternative to Armour's full integration of the processes that is not only feasible but in certain cases may be desirable. A complete EA process which parallels the land-use planning process (i.e., only formally integrated at some stages but informally integrated throughout both the processes) could address certain problems such as those associated with the narrowly defined and often conflicting mandates of the various actors in the processes. By "merging" the processes (and actors) into "one," subtle but significant differences in mandates may be submerged in the unification of the process. A distinct but informally or partially integrated EA process would allow separate actors along each of the stages to assess the proposed according to their specific environmental mandate.

A partially integrated EA process should not be confused with the traditional **non-integrated** EA requirement approach criticised by Armour. Unlike the traditional non-integrated EA, a partially integrated EA process is not merely a study conducted to satisfy the requirements of one part of the traditional land-use planning process. A partially integrated EA process is a fully developed parallel process that is both initiated and completed with the start and finish of the land-use planning process.

#### **Levels of Environmental Assessment and Planning Process Integration**

For the purposes of this study, five categories of EA-planning integration are presented. Since all municipalities have an already established planning process, they are **categorized** in terms of how the EA operates in relation to the traditional planning process. The five broad categories or levels are as follows:

- **No EA Requirement:** ad hoc EA only informally conducted during the planning process;
- **Only an EA Requirement/No EA Process.-** a formal requirement for an EA study as one separate step or stage of a series that comprise the planning process;
- **Partial Integration of the Processes.-** formal EA process only formally integrated at some stages but informally integrated throughout the planning process;
- **Full Integration of the Processes.-** formal EA process formally integrated at every stage of the planning process; and
- **Only an EA Process:** displacement of the planning process by an EA process (adapted from Armour 1990 and Novakowski 1993).

Only three of these categories, the second, third, and fourth, actually refer to EA-Planning integration. The first level refers to the current traditional planning process while the last refers to its wholesale replacement by an EA process. Each of these scenarios has different advantages and disadvantages. They are each discussed separately in detail below. Because the theoretical distinctions between these categories are not precise, they are best **conceptualized** in terms of a spectrum where the categories are viewed relative to one another.

Before discussing what these categories are, the distinction between a 'process' and a 'requirement' within an already existing process must be made explicit. Where a requirement can be defined as a singular action or set of actions, a process can be defined as a sequence of actions or sets of actions. In general, a process is more extensive, and obligates the actors to comply with a series of requirements over a particular time in a particular sequence. A typical process would generally stipulate more formal responsibilities to various actors, qualifications, options, and lines of interaction. Because **a process is** by its nature more complicated, whereas a site EA 'requirement' may be outlined **in an official plan**, a site EA 'process' would probably require additional guidelines. A site EA process would offer more procedures such as site-specific screening and scoping procedures. **In short, the**

distinction between a requirement and a process is a matter of extent, methodology, and elaboration of the obligations, procedures, options, and/or stages.

◆ **No EA requirement:** This approach refers to the absence of any formal MEA requirements. This is currently the most common approach municipalities adopt. It is usually adopted less by conscious choice than by default. The 'no EA requirement' approach has a number of limitations. First, decision makers cannot be held accountable for the consideration of environmental impacts. Second, the extent to which the environmental impacts are considered varies arbitrarily among analysts and decision-makers. Third, environmental considerations are too easily dismissed when faced with overwhelming social or economic pressures for approval. Of the municipalities surveyed, the City of Peterborough would currently fit in this category as it does not have any formal MEA requirements or processes.

◆ **Only an EA Requirement/No EA Process:** This approach to MEA refers to a formal EA requirement as only one of a series of requirements that together constitute the planning process rather than an EA requirement for each of the requirements. The requirement could be met in the early stages of the planning process or near the end whereas an EA process would be a series of parallel or integral steps throughout the planning process steps. Many municipalities that have EA requirements would probably fall under this category because formal EA processes would generally require a greater resource commitment than that associated with an EA requirement as part of the traditional planning process. While this approach is significantly better than the 'No EA Requirement,' there is a concern that the EA requirement would not be enough to ensure environmental integrity. There is a tendency for an EA requirement to be conducted as one of a number of studies to be considered only after much of the planning and decisions have been made. The EA's findings may be subsumed by the socio-economic concerns of other studies. An EA is often conducted with approval already in mind and is conducted to merely justify the proposal (Armour 1990). At best, it may result in some minor tinkering with the proposal. It does not usually result in the formulation and selection of the least harmful alternative or rejection of the proposal (Armour 1990). Of the municipalities surveyed, the City of Guelph has only an MEA requirement.

◆ **Partial Integration of EA-Planning Processes:** This approach refers to the adoption of a formal EA process that is generally independent of or operates parallel to the traditional planning process. A 'partial integration of the processes' implies that the EA process only formally intersects the traditional planning process at "discrete points." For example, the two processes may only intersect at their inception and completion. Although they formally operate independently, on-going informal interaction or communication between the practitioners of each process may occur. This approach is appealing because the less integration that occurs between the two processes, the less difficult or complicated the EA process is to adopt and coordinate. Two groups of practitioners can independently implement each of the processes, while simultaneously communicating and sharing information where they deem it useful or necessary. In practice, the absence of any communication would be impractical. First, the two decision-making processes could result in incompatible recommendations because the community goals, problems, and other information and decisions throughout the processes are not shared. This would either require one process to take precedence over the other, thereby nullifying one process's recommendations, or require an additional process to reconcile the differences. Both of these outcomes are undesirable. For this approach to be successful, it would be dependent upon the diplomacy between the EA and planning practitioners. A break-down in communication could undermine the success of the processes. Furthermore, since both of the processes share a number of common stages such as goals identification, consultation with the public, identification of the

alternatives etc., there may be unnecessary duplication in the process and in expenditure of limited resources. If the challenges of communication and duplication can be successfully dealt with, however, this process can offer decided advantages. For example, by having a formal EA process parallel to the planning process, if the processes have different goals, there is a reduced risk of goal subordination. Or at least, goal subordination would be more explicit. The Regions of Halton and Waterloo MEAs area examples of site EA processes that are only partially integrated into the land-use planning processes.

◆ **Full Integration of the Processes:** This approach refers to a amalgamation of a formal EA process with the traditional planning process. Generally at each stage of the planning process, there would be formal requirements and obligations for both the EA component and the traditional planning component. In this sense, both processes would be given equal priority. Like 'the partially integrated level,' the two processes would start and finish together. However, with full integration they would not be coordinated by separate practitioners. The two processes would function in a formally symbiotic but distinct manner, sharing information and undergoing analogous steps simultaneously throughout the entire decision-making process. In practice, the integration would be realized by the same practitioners being responsible for both the EA and the traditional land-use planning obligations and requirements simultaneously in each of the stages. Of the different approaches, this has been identified in the literature as the preferable approach (Armour 1990). It is, however, uncommon. There are a number of reasons for the paucity of fully integrated processes. "[B]udgetary constraints, ...disciplinary chauvinism, data incompatibility, and the lack of integrative evaluation methods" have been identified as significant impediments to such a process (Armour 1990: 7). For integration to occur, it must be integrated along technical or disciplinary, consultative, organizational, and procedural lines (Armour 1990: 7-1 0). Of the municipalities surveyed in this study, the City of Ottawa' MEEP would be the best example of a full integration of the EA-planning processes.

◆ **Only An EA Process:** The approach refers to the total replacement of the planning process with an EA process. It is not considered practical or desirable. As discussed above, despite the similarities between the two decision-making processes, they serve different but complementary purposes. Whereas traditional land-use planning seeks to reduce the problems associated with land-use conflicts and uncertainty of the future of development, EA seeks to reduce the adverse impacts of development by choosing the least harmful alternative or incorporating mitigative strategies. Since land-use planning processes are already firmly in place in Ontario, the adoption of such an approach is highly unlikely.

#### **General Frameworks for Municipal Land-Use Planning and Environmental Assessment Processes**

The three general types of MEA can be combined with the three general levels of EA integration to generate nine different general frameworks for MEA in land-use planning. Table 3 provides a summary of the nine possible combinations or general frameworks plus the traditional 'no EA requirement approach'. Table 4 presents where the municipalities studied in this report would fit in the general schema.



<b>Table 3: General Frameworks for Municipal Land-Use Planning and MEA</b>			
<b>Level of EA- Planning Integration</b>	<b>Types of MEA</b>		
	<b>Site EA</b>	<b>Plan EA</b>	<b>Area-wide EA</b>
<b>No EA Requirements</b>	<b>Traditional Site Planning</b>	<b>Traditional Plan Making</b>	<b>Traditional Area Planning</b>
<b>Only an EA Requirement/ No EA process</b>	<b>Traditional Site Planning with an EA study requirement</b>	<b>Traditional Plan Making with an EA study requirement</b>	<b>Traditional EA with an EA study requirement</b>
<b>Partial Integration</b>	<b>Site EA parallel to Land-use Planning</b>	<b>Plan EA parallel to Plan Making</b>	<b>Area-wide EA parallel to Area Planning</b>
<b>Full Integration</b>	<b>Site EA conducted with Site Planning</b>	<b>Plan EA conducted with Plan Making</b>	<b>Area-wide EA conducted with Area Planning</b>

<b>Table 4: The Surveyed Municipalities Categorized by the General Frameworks:</b>			
<b>Level of EA- Planning Integration</b>	<b>Types of MEA</b>		
	<b>Site EA</b>	<b>Plan EA</b>	<b>Area-wide EA</b>
<b>No EA Requirements</b>	<b>Most Municipalities Peterborough</b>	<b>Most Municipalities Peterborough</b>	<b>Most Municipalities Peterborough</b>
<b>Only an EA Requirement/ No EA Process</b>	<b>Guelph * Kitchener/Oakville</b>	<b>?</b>	<b>?</b>
<b>Partial Integration of Processes</b>	<b>Halton, Region of Waterloo * Kitchener/Oakville</b>	<b>Ottawa-Carleton (originally)</b>	<b>?</b>
<b>Full Integration of Processes</b>	<b>City of Ottawa</b>	<b>Ottawa-Carleton (currently)</b>	<b>City of Waterloo</b>

? : no examples available

\*: the Cities of Kitchener and Oakville may fit in either of these categories or perhaps somewhere in between. Because their MEAs are not mandatory and generally are not used it is difficult to determine their general framework. However, since they do not have EEACs, it is more likely that the MEAs would be more like the City of Guelph's.

## **6. METHODOLOGY**

For this study, information from previous studies and municipal documents on MEA practice was supplemented by personal interviews with at least one municipal official from each of nine municipalities in Ontario. Only those municipalities that had either developed or were in the process of developing environmental review procedures and/or other environmental committees/policies were included in the sample.

The selection of the candidate municipalities was a two-step process. First, a pool of 15 municipalities in Ontario was identified based on information about municipal programmes summarized in a variety of studies on Canadian municipalities (Davies 1991; Maclaren 1992; Environmental Economics International 1992; Tomalty 1992). The selection process was limited to city and regional governments. Smaller units of government (villages, townships, and towns) were excluded because of the limited use of EAs by these governments (Davies 1991).

Municipal officials in the Planning Departments of the 15 selected municipalities were contacted and information was requested about their municipality's employment of municipal EAs. The City of Ottawa was the exception. In the City of Ottawa, officials from both the Engineering and Planning Departments were contacted. The study was originally intended to survey municipal officials from other land-use planning/development departments such as Public Works and Engineering, and Parks and Recreation. However, initial contact with a number of municipalities suggested that to conduct interviews with officials from all three departments for each of the nine municipalities would not be possible due to time and resource constraints. Since most formal MEAs (not including those required by provincial or federal legislation) are overseen by, or at least directly involve, the planning departments for both private and public development proposals (Davies 1991; Maclaren 1992), this is not considered a significant limitation of the study. The list of 15 municipalities was then narrowed down to nine using the following criteria:

- whether the municipality is considering adopting or has adopted a MEA,
- whether the process was unique (in terms of comprehensiveness of process and definition of the environment),
- whether the municipality complemented the other candidate municipalities in terms of a mixture of local municipalities, their regional counterparts, and single-tier municipalities,<sup>9</sup>
- whether the municipal officials in the municipality showed an interest in participating in the study.

The nine municipalities did not have to meet all four criteria in order to make the final cut. For example, the City of Ottawa was primarily chosen for the uniqueness of its process. Hamilton-Wentworth was struck from the list because not one of the region's counterpart area municipalities were identified on the original list of 15 municipalities. The selection criteria used in this study provided for a wide range of municipalities in terms of type, size,

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<sup>9</sup>For the purposes of this study, "single-tiered" municipalities includes local municipalities within counties. In southern Ontario, all local municipalities, except a few cities and "separated towns" are within either counties or regional municipalities. Counties are similar to regional governments but currently do not possess the same degree of planning authority and development control. Most counties do not have official plans, and if they do, the plans tend to be more a summation of the local municipalities' and towns' official plans rather than a proactive plan initiated by the county council. Consequently, a MEA is unlikely to be initiated at the county level. Local municipalities with counties are in this regards can be considered single-tiered municipalities. Counties may be granted greater planning powers as a result of the Sewell Commission's recommendations.

percentage of land developed, and population (Table 5). Once the nine candidate municipalities were chosen, at least one official from each was contacted for a personal interview.

<b>Table 5: Selected Characteristics' of Municipalities 'Selected for the, Personal Interviews</b>			
<b>Municipality</b>	<b>Size (hectares)</b>	<b>Apptox. % Developed *</b>	<b>Poputation (1991)</b>
<b>Regional:</b>			
○ Waterloo	134,270	25-30	370,330
● Halton	98,305	25-30	<b>300,6 12</b>
□ Ottawa-Carleton	269,634	25-30	663,898
<b>Area:</b>			
○ Waterloo	6,605	60-65	72,062
○ Kitchener	13,350	60-65	163,923
● Oakville	<b>14,245</b>	<b>60-65</b>	109,718
□ Ottawa	<b>11,017</b>	<b>90-95</b>	<b>308,366</b>
<b>Single:</b>			
Guelph	6,875	65-70	85,625
Peterborough	5,378	65-70	67,823

○ The Cities of Waterloo and Kitchener's regional government is the Region of Waterloo.

● The City of Oakville's regional government is the Region of Halton.

□ The City of Ottawa's regional government is the Region of Ottawa-Carleton.

Sources: the figures for the approximate % developed (\*) are based on estimates obtained during the interviews with the municipal officials; and Ontario 1992a.

Prior to the interviews, each official was sent a copy of a list of questions similar to those to be discussed during the interview. The list of questions evolved from the survey questions used in Katherine Davies' study on *The Role of Environmental Consideration in Municipal Decision-making in Canada* (1991). Additional questions were developed to address some of the many issues that were identified during the review of the literature on EA. The general categories of questions asked during the interviews dealt with the following issues:

- a description of the MEA (including types, triggering mechanisms, how discretionary, frequency, delays, legislative framework, screening criteria, scoping, interaction with other procedures, interaction of actors, public involvement, problems, effectiveness, etc.);
- the resources used (i.e., staff, consultants, expertise, departments, financial commitment, etc.);
- whether the officials knew of other forms of formal municipal EAs employed by the municipality (i.e., non-development activities);
- obstacles and challenges to adoption and implementation of MEAs.

A more detailed list of questions similar to those asked in the interviews can be found in Appendix C. During the interviews, the question list was used more to stimulate discussion rather than as a rigid method to quantify or systematize the data as would be done in a structured survey questionnaire.

Originally, the survey was to encompass all types of MEAs (e.g., MEAs for budgets, plans, policies, developments, etc.). However, it became apparent in the development of the list of questions that it would not be possible to collect enough information to develop models for all of these different types of MEAs. Such a study would require interviews with a number of municipal officials from various departments and sections of each municipality. Since (as mentioned above) most formal MEAs are aimed at the assessment of development proposals or other land-use planning initiatives, the interviews focused on the use of MEA in land-use and development planning.

In order to allow for a free flow of information during the interviews, the municipal officials were assured that any of the information they provided which is not ordinarily accessible to the general public would remain confidential. Consequently, in the analysis of the information, individual officials and positions are not referenced and municipalities are only mentioned in the context of publicly accessible information. Municipal officials therefore, are referred to in the anonymous aggregate, eg. "one planner..." or "some of the planners...".

The interviews were conducted between March and May, 1993. Follow-up interviews were conducted by telephone as needed.

## **7. RESULTS FROM THE INTERVIEWS WITH MUNICIPAL OFFICIALS**

In the following chapter, the evaluation of the empirical and normative information will be structured around the general MEA framework components as well as a number of other EA components.” They are as follows:

- type of MEA
- integration of EA with traditional planning process
- role and function
- triggering mechanism
- scope of application
- definition of environment
- screening and scoping procedures
- preparation responsibility
- review responsibility
- decision responsibility
- level of government
- legal framework
- method of financing
- public participation
- time delays and restrictions
- potential effectiveness
- obstacles and challenges to adoption/implementation

Each of the above components are briefly described and the knowledge discerned from the interviews with the municipal officials is discussed. Most of the municipal officials interviewed have only had experience with site EAs. Since the Cities of Kitchener and Oakville have had little or no experience their site MEAs and since there is sufficient information about the municipalities with mandatory site MEAs, the particulars of the two cities’ MEAs are only occasionally discussed. However, the opinions of the municipal officials from these municipalities are included throughout. The discussion of the components for area-wide and plan EAs is limited by the fact that these EA types were only in the conceptual stages of two municipalities in the study.

◆ **Type of MEA:** As discussed in chapter 5, there are generally three types of EAs: Site EA, Area-wide EA, and Plan EA.

The most common type of MEA is the site EA approach. The Regions of Waterloo and Halton and the Municipalities of Oakville, Kitchener, Guelph, and Ottawa each have site MEAs. Most of the officials conceived of an MEA in terms of a form of site EA.

In some of the more rural area municipalities, area-wide EA approaches are being developed. The City of Waterloo (and to a much lesser extent the City of Kitchener), for example, are experimenting with watershed and subwatershed planning prior to the request for an official plan amendment.

Of the 9 municipalities studied, the Region of Ottawa-Carleton was the only municipality in the study that was conducting a Plan EA. This, however, is experimental and not a mandatory process. Most municipal officials interviewed had not considered the use of a formal MEA to evaluate official plans. One municipal official felt that land-use plans are too general to undergo an EA. The official suggested that environmental matters were sufficiently considered in an informal manner as part of the current official plan process.

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<sup>10</sup>Some of the components are taken from Graham Smith’s 1989 paper *Evaluating Canadian Impact Assessment Provisions*.

However, another suggested that a scoped official plan assessment procedure may be both desirable and feasible.

None of the municipalities surveyed in this study have as yet had to employ the Provincial Wetland Statements requirement for Comprehensive (area-wide EA) or Site EIS (site EA).

◆ **Integration of EA with the Traditional Planning Process:** Based on the discussion in the previous section, there are, for all practical purposes, only three levels of EA-Planning integration: only an EA requirement, partial integration of EA-planning processes, and full integration of EA-planning processes. In practice, these categories are not precise. There are no simple defining characteristics. Consequently, the municipalities included in this study are placed in the category which best approximates their level of integration.

The City of Guelph's site EA approach would best fit under the 'Only an EA requirement' level. The City of Guelph's EA requirement is merely for an EA study and is one of a number of requirements in the planning process for proposals affecting ECAs. There are no stages or process options open to the proponent's requirement for a MEA. The City does not have an EA process as found in the Regions of Waterloo and Halton, and the City of Ottawa. Unlike the City of Guelph, the Regions of Waterloo and Halton have established an Environmental Manager position on the planning staff and an EEAC to implement and review the MEA process. Most importantly, there are various stages and options open to the proponent. Similarly, the City of Ottawa has established an Environmental Management Branch to implement and monitor its EA process and the EA process has different stages (or phases) and options for most proponents of development within the entire municipality. Unlike the City of Guelph where a generic screening/scoping exists for ECA proposal EAs, the processes established in the Regions of Waterloo and Halton, and the City of Ottawa provide proponents with more site-specific screening and scoping procedures.

The Regions of Waterloo and Halton have processes which are formal but operate parallel to the traditional planning process. In both regions, the MEA processes are coordinated by EEACs and an environmental planner while other planners coordinate the traditional development approvals process. Although there is little formal interaction with the traditional planning process, the actors engage in on-going informal discussion and proposal coordination. Because there is little formal integration between the two processes, they would appear to fall under the 'partial integration' category.

The MEEP in the City of Ottawa is more fully integrated with the planning process. The MEEP requirements are conducted and reviewed at the same time and by the same people as the traditional planning review process requirements. In a sense, the City of Ottawa's EA process "piggybacks" on the traditional planning process. The final recommendations to the planning committee would be part of the final planning process recommendations but would be placed within a separate MEEP section.

Most of the officials interviewed in the study understood MEAs (particularly site EA) to be either 'only a requirement' or 'a partially integrated process' with the traditional planning process. One official felt that a parallel or partially integrated approach was more desirable to ensure that the municipality has its own environmental experts and establishes its own environmental mandates. Ordinarily, environmental concerns are addressed by provincial practitioners (usually in the CA) who may have narrow mandates that may not encompass all of the interests of the municipality. Because there are few municipal planners with environmental expertise, a more fully integrated process (with no additional environmental planners or EEACs added to the municipal reviewers) may fail in establishing the adequate municipal environmental review. Consequently, local environmental concerns may be overlooked by the provincial reviewers. To the extent that most of the officials had considered a more integrated approach, they felt that a parallel approach to MEA was more

practical and viewed the exception of the City of Ottawa approach with scepticism. However, although they were sceptical, they were intrigued with the innovation that the City of Ottawa is attempting.

The Region of Ottawa-Carleton's Plan EA was originally only partially integrated. However, shortly after its inception, the Region realized that the process would be more effective if it was more fully integrated with the planning review (Regional Development Strategy) that was being conducted. The two processes were then combined. The City of Waterloo's area-wide EA appears to be integrated with the traditional planning process. Since the municipal officials interviewed were generally not familiar with either plan EA or area-wide EA, their view that a partially integrated process may be more effective may not necessarily apply to either plan or area-wide EAs processes.

◆ **Role and Function:** Role and function refer to the policy objectives of the MEA and the general approach taken to achieve these objectives.

Most of the municipalities that currently have MEAs define their purpose rather narrowly. For example, in the Region of Waterloo, the purpose of the assessment process is narrowly understood to protect ESPAs. In light of the limited resources available to municipalities, most of the municipal officials thought it appropriate to limit the role of EAs. A broader use of the MEA can be found in the City of Ottawa. The objective is broadly understood to "provide for the consideration of the environment in local decision-making...[and to] provide for education and awareness" (Ottawa 1992). other municipalities.

◆ **Triggering Mechanism:** There are a variety of different mechanisms that municipalities can use to trigger a MEA. As part of the development review process, in the municipalities with site EA, an EA is usually triggered when a planning application requires an official plan amendment, zoning by-law amendment, and subdivision plan approval. In addition to these trigger mechanisms, in local municipalities, site plan control approval can be used.

In the City of Waterloo, the timing of watershed study or area-wide EA is related to development pressure. There is currently no formal triggering mechanism because the process is still being conceptualized. Community pressure for environmental planning is in a sense the informal trigger.

In the Region of Ottawa-Carleton, there is also no formal triggering method. Again, public pressure may have been the informal trigger to initiate the Region's plan EA.

◆ **Scope of Application:** Scope of application generally refers to the type of proponents (public, private, etc.) and the type of activities (developments, plans, etc.) that must comply with the requirements for an EA. All of the site MEAs are applicable to both private and public sector development initiatives and lands.

However, most of the site MEAs were restricted by a geographic area that was less than the total area of the municipality. For example, in the Region of Waterloo, the MEA process is applicable to both private and public development proponents of developments within or in areas contiguous to ESPAs. This is also true in the Region of Halton with its ESAs. The only exception to geographic exclusion of site MEAs is the City of Ottawa's MEEP, which is applicable to all development proposals regardless of where they are located within the municipal boundaries.

The City of Ottawa's MEEP also requires that public non-development activities undergo an environmental evaluation. This is the only municipality that requires formal EA of non-development activities.

Most of the municipal officials interviewed felt that a limited approach to EA was better. One reason suggested was that it represented the most effective use of limited resources. They suggested that it is better to review development in environmentally

sensitive areas more thoroughly than to review all development superficially. Nonetheless, when made aware of the City of Ottawa's MEEP, they exhibited interest in its potential.

Although the City of Waterloo's area-wide EA process is being developed for lands that are undeveloped, it could and might evolve into a process applicable to the entire municipality. The Region of Ottawa-Carleton's plan EA process is applicable to the entire municipality. A formal plan EA process may evolve out of the current voluntary process that may require plan EA for areas undergoing substantial redevelopment (e.g., secondary planning). As official and secondary plans are prepared by municipalities, plan MEA is limited to the public sector.

◆ **Definition of Environment:** Definition of environment refers to the scope of the definition of environment used in the assessment process. Generally, there is a tendency to either define the environment exclusively with reference to biophysical impacts or to define the environment more broadly to refer to the social, economic, and ecological impacts.

Most municipal officials felt that the environment should be restricted to the biophysical environment. They believed that by looking at a broader range of impacts, the biophysical impacts would be de-emphasized. In addition, they suggested that the traditional planning process already adequately provided for the evaluation of the socio-economic aspects of development. The officials that preferred the more comprehensive definition of the environment suggested that it is important to define the environment broadly in order to better examine the interaction amongst the socio-economic and ecological components.

In most of the municipalities with site MEA, the environment was narrowly defined. The City of Ottawa was the only exception. However, Ottawa's MEEP did not require social and economic studies above and beyond the requirements of the traditional planning process. It merely requires that a summary of any social and economic impact analysis conducted be included in the MEER to provide for a synthesized assessment. Whether the result will be a weakening of the bio-physical component as discussed by some municipal officials cannot be determined since MEEP has not been implemented yet.

The Region of Ottawa-Carleton defines the environment broadly to include the social and economic aspects in its plan EA. The City of Waterloo defines the environment narrowly in its area-wide EA.

◆ **Screening and Scoping Procedures:** Screening refers to the procedure whereby the need for a MEA is evaluated. Scoping refers to the procedure where the level of comprehensiveness adequate for the EA is determined. Self-screening and scoping is generally considered inappropriate. However, it is often chosen because it requires less resource commitment.

In the Region of Waterloo, although all development within or contiguous to ESPA, the Manager of Environmental Planning conducts the initial screening and scoping. Based on a site visit and consultation with the proponent, the Manager presents recommendations to the EEAC. If the proponent wants an EA exemption, an EAR must be submitted to the EEAC. The EEAC then makes the final decision as to whether the EIS is to be waived, scoped, or comprehensive. The Region of Halton has a similar approach.

In the City of Ottawa, for the vast majority of applications that are neither automatically excluded or included in the MEER requirement, the applicant must conduct an initial review by filling out an environmental impact screening checklist. If possible significant or unknown adverse environmental impacts are identified, the applicant must undergo a MEER. The checklist not only determines whether a MEER is necessary but it scopes the requirements for the MEER. Only those impacts that are considered significant must be further evaluated in the MEER.

The City of Guelph does not have site-specific screening or scoping procedures. The generic requirement for an EA is merely whether the proposal is within or adjacent to an ECA,



and the generic requirement for the scope of the EA is determined by the general reason for the ECA designation (e.g., wetland, flood prone area, etc.).

The City of Waterloo and the Region of Ottawa-Carleton have not established formal screening and scoping procedures for their respective area-wide and plan EA processes.

◆ **Preparation responsibility:** Preparation responsibility refers to the actors that are responsible for conducting the EA. Among the municipalities with site MEAs, there are similar requirements for the preparation of the MEA. For site MEAs, among the municipal officials interviewed most suggested that the MEA should be prepared by the applicant with input from the reviewing members. Although self-assessment is limited because of possible bias by the applicant toward a site's development, it is considered the only feasible approach because it would be too costly and time consuming for municipal planners or consultants hired by the municipality to conduct. There was variation in the degree to which the site MEA facilitated input from the reviewers. In general, the partial and fully EA-planning integrated processes (i.e., Regions of Waterloo and Halton, and the City of Ottawa) appear to facilitate more input from the reviews than the one step requirement in the City of Guelph.

In the City of Waterloo area-wide EA process, the responsibility for preparing the EA for a watershed is jointly shared by government (municipality and CAs) and the private sector (property owners and developers) whereas the responsibility for preparing the EA for a subwatershed would probably be shared by private sector property owners and developers.

The Region of Ottawa-Carleton's plan EA is being conducted entirely by the municipality.

Whether the preparation responsibility rests with the proponent, a municipality, or is jointly shared, consultants are often hired to assist in the EA preparation.

◆ **Review Responsibility:** Review responsibility refers to the actors responsible for reviewing and accepting the EA, and making recommendation to council.

There are a variety of approaches to review procedures. In the Regions of Waterloo and Halton, the EEAC and the environmental planner have the review responsibility. An EEAC offers a number of advantages such as inexpensive local technical expertise. In the City of Guelph, instead of an EEAC, the review responsibility rests with any of the senior planner reviewing the application, in consultation with other municipal planners and the CA. In the City of Ottawa, the Environmental Management Branch along with other departments and agencies participating in the technical review share the authority to determine the acceptability of the MEER. The municipal departments and provincial agencies that proposals are normally circulated to can comment on the proposal as part of traditional planning review process.

There was no general agreement among the municipal officials interviewed as to who specifically should coordinate and review a site EA, although most felt that, for private proposals at least, it should affiliated with the Planning Department. One municipal official suggested that the best place for those implementing a review of public activity would be in the Chief Administrative Office. By not assigning review authority to one department over others, it could help to avoid interdepartmental jealousies.

The City of Waterloo's area-wide EA process appear to be merged or fully integrated with the review responsibilities of the traditional planning process. Like the City of Waterloo, the Region of Ottawa-Carleton's plan EA process is merged with the review responsibilities of the traditional planning process. The Planning Department at the Region of Ottawa-Carleton was responsible for conducting the plan EA.

◆ **Decision Responsibility:** Decision responsibility refers to the actors that make the final decision as to whether the proposal is acceptable. It is standard practice that council makes

the final decision with the possibility of appeal to the OMB. Decisions are generally based on recommendations and options submitted by the reviewers.

◆ **Level of Government:** The level of government most appropriate for a MEA ultimately depends on the circumstances of the particular municipality.

Some of the officials suggested that a MEA would be more appropriate at the regional level of government as it is more likely to possess the required resources and expertise than smaller area municipalities. Furthermore, its authority to take on provincial development and planning approval powers places it in a good position to exercise this authority.

Other municipal officials suggested that it could function equally well at either level of municipal government. They suggested that it would depend on the municipalities. For example, where there are significant differences among the area municipalities in terms of resource base, need, and public demand, notwithstanding provincial intervention, MEA may be more appropriately initiated by the area municipality that has the capability, need, and demand to do so. The greater land-use control powers (e.g., site control) that local municipalities possess may provide them with a greater ability to control specific development impacts.

Although a number of two-tiered municipalities studied in this report had site EA policies at both levels of municipal government (e.g., Region of Waterloo its counterpart the City of Kitchener, and the Region of Halton and its counterpart the City of Oakville), in no case were both levels of government have mandatory site MEA. The Cities of Kitchener and Oakville's MEA are discretionary and are generally not implemented. Nevertheless, MEAs could probably function at both levels in a complementary manner. It might work better if different levels of municipal government adopted different types of MEA in order to avoid unnecessary duplication of effort. For example, the City of Waterloo's area-wide EA process appears to be compatible and even complementary to the Region of Waterloo's site EA process.

◆ **Legal Instruments:** Official plans, by-laws, guidelines, and legislation outline the requirements and procedures necessary to perform a MEA.

Official plans are the most common type of legal instruments used to require MEAs (Davies 199 1). All the municipalities with formal site MEAs in this study have their policies entrenched in the Official Plans (Table 2, Section 5).

In theory, the MEA could also be outlined by a non-official plan by-law. One municipal official suggested that entrenching the MEA in an Official Plan by-law is superior to a individual by-law. First, the whole purpose of the Official Plan is to outline the objectives of future development of the municipality as well as to outline the measures that will be used to achieve them. Second, official plan by-laws are more difficult to pass and change than non-official plan by-law.

Alternatively, the province could require the use of a formal MEA. This already occurs in the United States (Armour 1977). Currently, Ontario only requires this in the Wetlands Policy Statement. In cases where the municipality is required by an upper level of government to implement MEA, the specific procedures may still be outlined in the Official Plan. This currently happens with the Wetlands Policy Statement. It allows for each municipality to tailor the specific MEA policies to their planning processes. They are required to entrench them in their official plans.

Generally, the municipal officials interviewed did not wish the province to legislate in this area. However, at least one municipal official felt that a model process prepared by the province would be useful provided it allowed for sufficient local adaptation.

In municipalities where site MEA is mandatory (Regions of Waterloo, Halton and City of Ottawa), guidelines through which the policy are to be realized have been adopted to outline the specific procedural and substantive requirements of the MEA.

The City of Waterloo and the Regions of Ottawa-Carleton did not have their area-wide and plan EA entrenched by a legal instrument.

◆ **Financing:** All of the municipalities that currently have site EAs for private developments require that the applicants finance the EA. There was consensus among the municipal officials that the applicant should pay for the EA. The City of Waterloo area-wide EA approach has joint financing for the watershed study but private property and developer financing for the sub-watershed study. The Region of Ottawa-Carleton financed the Official Plan ER entirely.

◆ **Public Participation:** Public participation refers to the opportunities for public involvement at one or more stages of the process. Public participation may be either formal or informal and required or discretionary. Funding, hearings, open houses, meetings, notice, and sufficient time for review and comment are various components of public participation schemes. Of all of the municipalities with site MEAs, none required public involvement beyond what was already established as part of the traditional planning process. Where the site MEAs are only a requirement or fully integrated (Cities of Guelph and Ottawa), public participation will be directly or formally connected to the MEA. In the Regions of Halton and Waterloo, because the MEA processes are only partially integrated to the traditional planning process, there is no formal interaction with the traditional public participation process. The EEACs will, however, accept a presentation or submission from any individual or group during their regular meetings.

Most of the municipal officials interviewed suggested that notification or consultation specifically for the site MEA was not necessary. Although the most common reason cited was that there was enough consultation provided for in the traditional planning process, at least one municipal official suggested that because of the technical nature of EAs, public consultation for MEA was completely unnecessary.

Although not formally required, the City of Waterloo's area-wide EA process and the Region of Ottawa-Carleton's plan EA process have thus far included considerable public consultation.

◆ **Time Delays and Restrictions:** There was a consensus among the municipal officials that site MEAs need not lengthen the traditional planning process. Most of the officials with experience in implementing site MEAs suggested that there were few cases where the MEA actually extended the planning process. In these cases, it was usually because the developers did not cooperate with the municipal staff in conducting the review. The municipal officials agreed that an external time limit placed on the process would not be necessary or useful. In cases where wholly unsatisfactory proposals and EAs were submitted, a time limit could serve to undermine the effectiveness of the MEA.

The City of Waterloo's watershed-subwatershed planning approach (area-wide EA) will probably result in time delays because sub-watershed are to be conducted by all the property owners prior to secondary planning. If some of the property-owners do not want to develop their lands and if the property owners who do to develop are not willing to finance the study for the entire subwatershed themselves, then secondary planning will be delayed.

The Region of Ottawa-Carleton's ER (plan EA) most likely will not result in time delays as it has been merged with the traditional planning review process.

◆ **Potential Effectiveness:** The evaluation of whether the MEAs actually achieve their stated objectives is beyond the scope of this study. However, based on their policies and the discussions with the municipal officials, the geographically restricted site MEAs such as in the cases of the Regions of Waterloo and Halton appear to be generally satisfactory at requiring that the integrity of environmentally significant areas be protected from development. Both municipalities review on average 1 O-I 5 full EAs annually. Unfortunately, they cannot be compared to an alternative approach such as the City of Ottawa's MEEP which has yet to be implemented or the City of Waterloo's subwatershed planning process and the Region of Ottawa-Carleton's ER which are still in development.

In terms of the extent of and types of impacts assessed, both the geographically restricted and the unrestricted application of site MEAs are limited. Although site MEA, particularly if applied across the entire municipality, could lead to improved cumulative impact assessment (CIA) by at least ensuring the individual impacts are assessed, it does not formally ensure the collective synergistic evaluation of impacts across sites and time. Area-wide EA and/or plan EAs are more likely to be effective in the evaluation of cumulative impacts. By evaluating the environment of a larger area and anticipating develop across more than one site, both plan and area-wide EAs allow for spatial and temporal cumulative impacts to be assessed. But, such approaches may be weak in the evaluation of site-specific impacts. In general, constraint and performance standard planning (part of the area-wide EA process) can only be as effective as it is comprehensive. For example, if a performance standard for a potential impact is not established during the area-wide EA, without a site EA, a significant impact may go unregulated.

In general, the municipal officials interviewed recognized the limitations of site MEAs in tackling cumulative impacts and felt that area-wide EA and plan EA may be more effective for the purpose.

◆ **Obstacles and Challenges to Adoption and Implementation:** A number of obstacles and challenges to the adoption of implementation of MEAs were identified during the interviews. Limited resources of municipalities in terms of municipal staff and financial capability to hire consultants was generally identified by most of the officials as one of the most significant problems.

Another related problem was the lack of technical expertise in environmental matters on current planning staffs. This situation could be rectified with an infusion of resources from the province. Given the current financial problems of the provincial government, municipalities will no doubt need to look to local sources of funding and expertise. Thus, the matter devolves into one of political will. At least one official suggested that political will ultimately depends on socio-economic status of the municipality (which of course is important in increasing the total amount of funding). The case of Waterloo was offered as support for this contention. As a university town both the City and the Region of Waterloo have a higher average socio-economic status than other municipalities. The Region was the first to adopt a MEA process in Ontario and the City is currently at the forefront of the development of an area-wide EA process. In general, municipalities with lower socio-economic status may have lower demand because of a lower environmental awareness and encounter greater resistance because of a lower tax base. This has important implications for the effectiveness of a provincial requirement for mandatory MEA. If it is not considered to be useful by the local constituents, developers, planners and/or politicians within a municipality, the implementation of a mandatory MEA would more likely be theoretical than actual even if funding were provided. In places such as California where a senior level of government has been relatively successful at mandating MEA, the municipalities advocated the state initiative (Armour, 1977: 13).

Another obstacle is local attitudes towards property and development. One official **suggested** that the politicians' and developers' limited view of property ownership as the right to development was a major obstacle. In addition, the permeability of local government makes it relatively less difficult for the public and various interest groups to influence the decision-making process than at senior levels of government.

Another major problem is related to the limited understanding of the ecological systems, and the related uncertainty and risk in predicting development impacts. These uncertainties exacerbate the political and financial difficulties facing municipal officials as they must often choose between going ahead with a development which may increase their tax base and assuage development pressure with uncertain environmental consequences or discouraging the development in order to be sure the integrity of the environment is preserved.

Lack of provincial leadership in **MEAs** was also identified as a major obstacle. Model **MEAs** could be prepared for municipalities interested in adopting such processes. The Sewell Commission was identified as possibly rectifying the absence of provincial leadership.

Another problem is the lack of municipal authority to protect environmental features that have been identified by a MEA. Some officials specifically identified the current authority to preserve **woodlots** as inadequate and were not convinced that the proposed Trees Act would address this problem. The Trees Act is supposed to enable municipalities to pass and enforce by-laws restricting the destruction of trees on both private and public property. The recent Wetlands Policy Statement was identified as a major breakthrough for MEA.

None of the municipal officials mentioned the fragmented and hierarchical structure of the council-committee model as a problem. Contrary to what previous studies have suggested (Davies 1991), the municipal officials in municipalities that currently use **MEAs** agreed that communication among departments, committees, and council was not a problem for their employment.

**Summary Table of the MEA Components**

Based on the above findings from the interviews, Table 6 is a summary of possible MEA components and their alternative options. The first two components (the type of MEA and level of EA-planning integration) establish the nine general frameworks. The rest of the components describe other aspects on which each or some of the general MEA frameworks can vary. The components and options will not necessarily apply to all three EA types. For example, under the component scope of application, the last set of options (land-use designations/policies/both) applies to plan EA whereas the rest apply to site **EAs** and/or area-wide **EAs**.

Table 6: Summary of Alternative Options of the MEA Components	
Components:	Alternative Options:
Type of MEA:	<ul style="list-style-type: none"> <li>● site EA</li> <li>● plan EA</li> <li>● area-wide EA</li> </ul>
Level of EA-planning integration:	<ul style="list-style-type: none"> <li>● only an EA requirement</li> <li>● partial integration of the processes</li> <li>● full integration of the processes</li> </ul>
Role & function:	<ul style="list-style-type: none"> <li>● protect special areas</li> <li>● educate</li> <li>● reduce/mitigate adverse impacts</li> </ul>

**Municipal Planning & Environmental Assessment Processes in Ontario**

Table 6: Summary of Alternative Options of the MEA Components		
Triggering mechanism:	<ul style="list-style-type: none"> <li>development proposal (OP/by-law amendment, subdivision, etc.)</li> <li>official/secondary planning</li> <li>development pressure</li> <li>public demand</li> </ul>	
Scope of application:	<ul style="list-style-type: none"> <li>special areas in the municipality</li> <li>entire area of the municipality</li> </ul>	
	<ul style="list-style-type: none"> <li>public sector</li> <li>private sector</li> <li>both private &amp; public sector</li> </ul>	
	<ul style="list-style-type: none"> <li>land-use designations</li> <li>land-use policies</li> <li>both</li> </ul>	
Definition of environment:	<ul style="list-style-type: none"> <li>ecological only</li> <li>social, economic, &amp; ecological</li> </ul>	
Screening/scoping procedures:	<ul style="list-style-type: none"> <li>generic screening procedure</li> <li>site-specific screening procedures</li> </ul>	<ul style="list-style-type: none"> <li>generic scoping procedure</li> <li>site-specific scoping procedures</li> </ul>
	<ul style="list-style-type: none"> <li>private/public sector self application of procedures</li> <li>municipal application on private sector proposals</li> </ul>	
Preparation responsibility:	<ul style="list-style-type: none"> <li>private/public sector self assessment</li> <li>joint private and public assessment</li> </ul>	
Review responsibility:	<ul style="list-style-type: none"> <li>separate actors</li> <li>some actors same as under traditional process</li> <li>all actors same as traditional planners</li> </ul>	
Decision responsibility:	<ul style="list-style-type: none"> <li>council with appeal to OMB</li> </ul>	
Level of government:	<ul style="list-style-type: none"> <li>local</li> <li>regional</li> <li>both</li> </ul>	
Legal framework:	<ul style="list-style-type: none"> <li>municipal by-laws, officials plans, guidelines</li> <li>provincial statutes</li> </ul>	
	<ul style="list-style-type: none"> <li>discretionary</li> <li>mandatory</li> </ul>	
Method of financing:	<ul style="list-style-type: none"> <li>public</li> <li>private</li> <li>both</li> </ul>	
Public participation:	<ul style="list-style-type: none"> <li>no additional</li> <li>integrated with planning public participation</li> <li>additional</li> </ul>	
Time delays/restrictions:	<ul style="list-style-type: none"> <li>no delays</li> <li>occasional delays</li> <li>time delays</li> </ul>	<ul style="list-style-type: none"> <li>no restrictions</li> <li>restrictions</li> </ul>
Cumulative impact assessment (CIA):	<ul style="list-style-type: none"> <li>no evaluation of CIA</li> <li>may facilitate but not sufficient to ensure CIA</li> <li>conducts CIA</li> </ul>	

## **8. CONCLUDING REMARKS AND RECOMMENDATIONS FOR FUTURE RESEARCH**

There are at least three different types of MEAs and three different ways of incorporating them into the existing land-use planning process. Together these produce nine general MEA frameworks. There are also a number of other MEA components that a municipality can tailor a general MEA framework to suit its individual needs and resources.

Because each of the three different types of MEAs presented in this study serve different and complementary land-use planning functions, the use of all three types in a given area would be the most effective approach to promoting environmentally sound development. Depending on the type, needs, and resources of a municipality, one or a number of the MEAs types may be more suitable. Where there is more than one level of municipal planning authority, the use of the MEAs should be coordinated to increase optimal effectiveness while avoiding duplication of effort.

Although the three types of MEAs identified in this report offer potential environmental benefits, there is little practical experience of area-wide and plan MEAs. Since both area-wide MEA and plan MEA are uncommon but perhaps offer the most potential in terms of cumulative impact assessment, further development of these two types should be more rigorously pursued. However, this pursuit should be monitored carefully to ensure that they are effectively and efficiently implemented, and that on-going contributions to their development continues.

In terms of the levels of integration between the chosen type of EA and its counterpart traditional planning process, the three levels (only an EA requirement, partial EA-planning integration, and full EA-planning integration) each appear to be viable approaches, at least for the adoption of site MEA. Like the selection of MEA type, the selection of the ways to incorporate MEA into the existing land-use planning process would best be done to suit a municipality's individual needs and resources. In the case of area and plan MEA, full integration may be preferable to the other two, but at this point, due to a lack of practical experience and theoretical analysis, this conclusion cannot be made with confidence.

In light of the current economic situation, it appears that MEA requirements or processes will not become common practice unless the province offers assistance and/or expands its mandatory requirements. If provincial leadership in this area does not occur, MEAs may be adopted by only a few municipalities. It is likely that the municipalities adopting MEAs will possess more resources and have constituents with higher socio-economic status, than those that do not. This could in turn exacerbate the environmental and social inequities among municipalities. Conversely, if the province wishes to expand the mandatory requirements for MEA, it should proceed with caution. Since the degree to which a municipality effectively employs a MEA ultimately depends on the political support (which will vary across municipalities), a mandatory requirement or process may not result in any useful employment of the MEA. Even if funding for the process is provided for or subsidized by the province, general public and/or private opposition to a MEA may encourage its employment in name only.

The following is a list of recommendations for future research that would complement the above the findings.

- Research into whether an unrestricted application of MEA across the entire municipality (such as the City of Ottawa's MEEP) is a more or less effective and practical approach than the traditionally limited approach of MEA (such as the Regions of Halton and Waterloo).
- Research into whether area-wide MEA (such as the City of Waterloo watershed planning) offers an effective opportunity to incorporate MEA considerations into secondary and site planning.
- Research into whether and which types of MEA can be used to effectively evaluate cumulative environmental impacts.

- Research into whether the variable adoption of MEAs amongst municipalities in Ontario will lead to or exacerbate current inequities among municipalities.
- Research into how the provincial government could encourage equitable employment of MEAs.
- Research into MEA for non-development activities such as budgets, policies, and programmes.



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**APPENDIX A: ADDITIONAL INFORMATION ON THE REGION OF WATERLOO'S EIS PROCESS**

The eight criteria for designating ESPA are as follows:

- the occurrence of significant, rare or endangered indigenous species within the designated area;
- the identification of plant and/or animal associations; and/or landforms which are unusual or of high quality regionally, provincially or nationally;
- the classification of the area as one that is large and undisturbed thereby affording a habitat to species which are intolerant to human disturbance;
- the classification of the area as one which is unique with limited representation in the Region or a small remnant of once larger habitats which have virtually disappeared;
- the classification of the area as one containing an unusual diversity of plant and animal communities due to a variety of geomorphological features, soils, water and micro-climate effects;
- the identification of the area as one which provides a linking system of undisturbed forest or other natural refuge for the movement of wildlife over a considerable distance;
- the performance of the area in serving a vital ecological function such as maintaining the hydrological balance over a widespread area acting as a natural water storage or recharge area; or
- the recognition of the area as one demonstrating any one of the above qualities but suffering from a minor reduction of its uniqueness or rareness by intrusion of human activities.

A detailed description of the Process Steps are:

1. **Determining ESPA Policy Applicability:** as part of the “pre-circulation” of the proposal before reporting the submission to the area municipal council, the Regional Planning Department advises of the applicability of ESPA policies. If applicable, final Council decisions are held in abeyance.
2. **Initial Consultation and Direction:** at this stage consultation with regional planning staff and EEAC (or a subcommittee of the EEAC) are conducted to determine the key environmental factors of concern, how they might be expected to be impacted, and how the impacts might be minimized. After the initial consultation, the applicant decides whether to request a “waiver” or exemption from ESPA policy or whether to proceed with a scoped or full EIS.
3. **Waiver or Exemption:** if a proposal is thought to have insignificant impacts, an Environmental Analysis Report (7.17) is submitted along with a request for a waiver. After consultation with the area municipal council, regional council decides on the waiver request. Regional council can grant the request or require an EIS.
4. **Reduced Study Requirements:** comprehensive EIS are not always necessary. In such cases, a scoped EIS can be prepared. The applicant determines the scope through consultation with the EEAC. Approval from EEAC and Regional Council is required when standard components of EIS are deleted.
5. **Preparation of an Environmental Impact Statement:** An outline of the proposed study is submitted to EEAC for review and input. The applicant then proceeds with the analysis of environmental features and associated development impacts.
6. **Interim Consultation with EEAC:** Since EEAC reviews the EIS, EEAC is usually consulted through the study period.
7. **Completion of Environmental Impact Statement:** when the environmental studies are completed, an EIS document is prepared presenting the results of the analysis and is submitted to the Regional Planning staff.

8. **EEAC Review and Recommendation:** The EEAC reviews the completed EIS for its acceptability. If it is considered acceptable, the EAAC identifies the significance (minor or major) of any potential ESPA impacts. It will also recommend conditions or requirements that might be attached to approval of the proposal. Site visits supplement the review of the Environmental Impact Study.
9. **Regional Staff Review and Recommendation:** regional and area municipal planning staff review the completed EIS proposals and EEAC recommendations and integrate them with other planning related recommendations and conditions.
10. **Decision Procedures:** decisions procedures for proposals considered to have minor impacts differs for those considered to have major impacts. For those considered to have major impacts, regional council is to consider alternatives to the proposed development by taking one of the following actions within six months: acquisition of the land or significant portions thereof, persuade other agencies or NGOs to acquire the land or portions thereof, negotiate further changes or new conditions to the approval to the extent that the impacts would then be considered minor, remove the ESPA designation, or refuse the proposed development in its entirety. For minor impacts, EEAC proceeds to consider mitigation measures and other conditions recommended by the EIS. The Regional Planning Department consider the recommendations and include others required by regional planning policies. The recommendations of both groups are considered and ratified by Regional Council. (Region of Waterloo, 1983).

**APPENDIX B: ORIGINAL CANDIDATE MUNICIPALITIES**

◆ *Regional Municipalities:*

1. Waterloo
2. Halton
3. Ottawa-Carlton
4. ~~Metropolitan Toronto~~
5. ~~Hamilton Wentworth~~

◆ *Area Municipalities:*

6. Kitchener
7. Waterloo
8. Oakville
9. Ottawa
10. <sup>A</sup>~~Toronto~~
11. ~~Niagara Falls~~
12. ~~Burlington~~

◆ *Single Municipalities:*

13. Guelph
14. Peterborough
15. ~~London~~

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municipality: municipality not selected for personal interviews with municipal officials



## APPENDIX C: LIST OF BASE INTERVIEW QUESTIONS

### GENERAL BACKGROUND INFORMATION

- Municipality?
- Year of current Official Plan?
- Is the municipality currently reviewing its Official Plan?
- Population?
- Acreage? Percentage developed?
- How much of the municipality is considered “environmentally sensitive/significant” or under other protectionist designations?
- Is there an environmental planner/coordinator on staff?
- Is there an Environmental and Ecological Advisory Committee or an equivalent?

### QUESTIONS FOR THE INTERVIEW

1. Are the environmental consequences of proposals for land-use development, official/secondary plans, and plan amendments assessed as part of the decision-making process in your municipality?

No: For each of the types of proposals that an environmental review process is not established, I will ask how you envision the processes by answering the set of questions on page 4.

Yes: For each of the types of proposals that an environmental review process is established, I will ask the following set of questions.

#### FIRST SET OF QUESTIONS (i.e., if Yes to 1):

##### 1.1 What is the process?

- What types of proposals are assessed?
- How is the process triggered?
- Is the process discretionary or mandatory?
  - if discretionary, who/what decides what will undergo an assessment?
- Approximately how many assessments are reviewed on an annual basis?
- How much longer is the planning process with the addition of the assessment process?
- Are there time limits placed on the amount of time an environmental assessment process adds to the planning process?
  - If yes, how long?
  - If no, are time delays a (perceived) problem? If yes, do you think this would be an effective method to alleviate some of the concerns developers have about time delays?
- Is all of the land within the municipality subject to the same assessment process?
  - Are there areas exempted from the process? If yes, do you think that the exempted areas contribute to negative cumulative impacts?
- Are all types of development/land uses subject to the same assessment process?
  - Are there certain types of development/land uses exempted from the process? If so, do you think that it should be expanded to include more or all types of development?
  - Are screening criteria used to decide whether an assessment is needed or the extent of the assessment or is it determined with lists of specific types of development/land uses that undergo assessment or not?
- Is the process formal or informal?
  - If formal, could you provide a description of it? How might the process be improved?

- If formal, what type of legislation prescribes the process,--provincial (e.g., statute) or municipal (e.g., official plans, by-laws)?
- If informal, how does it usually function? Who decides if it will be done? Do you find it adequately addresses environmental concerns? If not, how might it be improved?
- How does the assessment process fit into the larger planning process?
  - Are there any problems with coordination of the processes?
- How does the assessment process complement other environmental planning procedures (e.g., environmental resource inventories, State of Environment Reports, etc.)?
  - Are municipal staff and/or consultants involved in its implementation, and how?
  - What are the areas of expertise of the staff and/or consultants involved in the process?
  - Are the staff in one organisational unit or decentralised?
  - Is more than one department involved and if so, how do they interact and communicate?
    - How could the interaction be improved upon?
  - Is there one department/agency whose primary concern is with environmental impacts of the proposals?
  - Who performs, directs, and reviews the assessment?
  - What happens if the development proposal is required to undergo an environmental assessment as required by the *Ontario Environmental Assessment Act*?
    - if the proposal is automatically exempt from your municipality's process, do you think that joint reviews would be i) better and ii) possible?
  - Are the assessments done with a standardized list of criteria for all proposals or are the assessment parameters developed on a site-specific basis?
  - Is there a scoping procedure conducted to identify the important potential environmental impacts?
    - Is there any public involvement, and if so, what form does public input, review, participation take (e.g., formal/informal meetings, hearings, written or oral submissions, etc)?
    - Do you find the public involvement adequate, and if not, what are its deficiencies and what type of involvement would be more appropriate?
    - What is the involvement of elected officials in the process (initiation, review, oversight, approval, etc)?
    - How do the administrative and political levels work together?
    - What is the resource commitment (\$ and person years)?
    - Is the process paid for by the proponent or by the municipality, or some other arrangement?
    - If your municipality has a counterpart municipality (local/regional), are there any problems with coordination or interference in the assessment from it? If yes, how could they be mitigated?
    - What actions could be taken by higher levels of government to improve or enhance the process?

**1.2 What Environmental consequences are required to be assessed?**

- Are effects on air quality, water quality, soil quality and/or noise required to be assessed?
- Are possible health effects on biota (including people) assessed?
- Is the environment broadly defined to include social, cultural, economic components or is it restricted to the natural environment?
- Do you specify how the effects are to be assessed (qualitatively, quantitatively, both, or either)?
- Would you characterize the assessments as more descriptive or more evaluative?
  - If only descriptive, is this a drawback to the effectiveness of the assessments, and if so how do you think this could be addressed?

- Is there a discrepancy between the consequences that are actually assessed and the consequences stipulated by the legislation?
- Are old assessments made available to those conducting new assessments? -If so, how (e.g., formal data bank, memory, etc.)?
- Who generates the information?/What sources are used?
- Is the information primary information or secondary information?
- Is the assessment based on technical information?
- How information from public input coordinated with technical information?
- Are the environmental consequences evaluated on a site specific or generic basis?
- How is uncertainty and risk associated with the prediction of environmental impacts addressed?
- Are alternatives evaluated in the assessment process (e.g., density, form, layout, land use, etc.)?
- Are cumulative environmental impacts assessment?

**1.3 Documentation and examples**

- Could you provide copies of any relevant documents and examples to illustrate your response to question 1.

**2. In assessing the environmental consequences of a proposal, are any follow-up activities conducted..**

- to validate predictions?
- to monitor changes in environmental quality?
- to mitigate any predicted environmental effects?
- to compensate those affected?

**3. While assessing the environmental consequences of proposals, what problems have been encountered (e.g., lack of provincial legislative framework for municipalities to do this, lack of resources, opposition from developers, politicians, others, etc.)?**

**4. In your opinion should the environmental consequences of proposals be explicitly included in municipal decision-making?**

- If not, why not?

**5. Are there other forms of environmental assessment/ evaluation processes (e.g., policies and plans [other than the O.P.], budgets, etc.)?**

- If so, please elaborate.

If you have already responded to questions 6 & 7 in the second set of questions, I will not ask the following two questions.

**6. Do you have any links with the federal or provincial environmental assessment processes?**

- If so, please elaborate.

**7. Are there any additional comments you would like to make about the municipal environmental assessment process?**

**SECOND SET OF QUESTIONS (i.e., if No to question #1 above):**

**2. In your opinion, should the environmental consequences of proposals of land use development, official/secondary plans, and plan amendments be explicitly included in municipal decision-making?**

- If not, why not, and then please skip to question 5.
- If so, why?

**2.1 How should the process be structured?**

- What types of proposals should be assessed?
- How should the process be triggered?
- Should the process be discretionary or mandatory?
- Should there be a limit on the amount of time the assessment process adds to the planning process? - If yes, approximately how long?
- Should all of the land within the municipality be subject to the same assessment process?
  - Should some areas be exempted from the process?
- Should all types of development/land uses be subject to the same assessment process?
  - Should some types of development/land uses be exempted from the process? If yes, could this contribute to negative cumulative impacts?
  - Should screening criteria be used to decide whether an assessment or the type (i.e., how comprehensive) of an assessment is to be required or should lists of specific types of development/land uses determine what type of an assessment should be required for a given proposal?
- Should the process be formal or informal?
  - If formal, could you provide a description of how it might be structured/function?
  - If formal, what type of legislation should prescribe the process,--provincial (statute) or municipal (e.g., official plans, by-laws)?
  - If informal, how might it usually function?
- How should the assessment process fit into the larger planning process?
- How should the assessment process complement other (could be hypothetical) environmental planning procedures (e.g., environmental resource inventories, State of Environment Reports, etc.)?
- Would staff and/or consultants perform the assessment?
- What areas of expertise do you feel the staff and/or consultants should have?
- Should more than one department be involved and how should they interact and communicate?
- Should there be one department/agency whose primary concern is with environmental impacts of planning proposals/ initiatives?
- Who should perform, direct, and review the assessment?
- If the development proposal is required to undergo an environmental assessment as required by the Ontario *Environmental Assessment Act*, should the proposal be automatically exempt from your municipality's assessment process or do you think that the municipality should enter into a joint review of the assessment?
- Should the assessments be done with a standardized list of criteria for all proposals or should the assessment parameters be developed on a site-specific basis?
- Should there be a scoping procedure conducted to identify the important potential environmental impacts?
- Should there be any public involvement, and if so, what form should the public input, review, and/or participation take (e.g., formal/informal meetings, hearings, written or oral submissions, etc)?
- How might elected officials be involved in the process (initiation, review, oversight, approval, etc)?
- How might the administrative and political levels work together?

- What should the resource commitment (\$ and person years) be?
- Should the process be paid for by the proponent or by the municipality, or some other arrangement?
- If your municipality has a counterpart municipality (local/regional), do you anticipate any problems with coordination or interference in the assessment process from it? How could these be avoided?
- What actions should be taken by higher levels of government to improve or enhance the process?

**2.2 What environmental consequences should be assessed?**

- Should the effects on air quality, water quality, soil quality and/or noise be assessed?
- Should the health effects on biota (including people) be assessed?
- Should the environment be broadly defined to include social, cultural, economic components or should it be restricted to the natural environment?
- How should these effects be assessed (qualitatively/ quantitatively)?
- Should the assessments be evaluative as opposed to descriptive, and why?
  - If so, what could be done to ensure that an evaluative assessment is done?
- Should a data base of all the assessments be made available to those conducting new assessments?
- Should the assessment be based on technical information?
- Who should generate the information/what sources would be used?
- Should the information be primarily primary or secondary information?
- How should public input be coordinated with technical information?
- Should the environmental consequences be evaluated exclusively on a site-specific basis or do you think an evaluation on a generic basis would be sufficient in many instances?
- How should the uncertainty and risk associated with the prediction of environmental impacts be addressed?
- Should alternatives (e.g., in density, form, layout, land use, etc.) be considered in the assessment?
- Would the process evaluate cumulative environmental impacts? If yes how?

**2.3 Documentation and examples**

- Please provide copies of any relevant documents and examples to illustrate your response to question 1.

**3. Should any follow-up activities be conducted after the implementation of the approved proposals.. .**

- to validate predictions?
- to monitor changes in environmental quality?
- to mitigate any predicted environmental effects?
- to compensate those affected?

**4. In assessing the environmental consequences of proposals, what problems would you anticipate (e.g., lack of provincial legislative framework for municipalities to do this, lack of resources, opposition from developers, politicians, others, etc.)?**

- Please elaborate.

**5. Should there be other forms of environmental assessment/ evaluation process (e.g., policies and plans [other than the O.P.], budgets, etc.)?**

- Please elaborate.

If you have not already responded to questions 6 and 7 in the first set of questions, I will ask the following two questions.

6. Do you have any links with the federal or provincial environmental assessment processes?

- If so, please elaborate.

7. Are there any additional comments you would like to make about the use of environmental assessments by municipalities?