

Adjusting to Policy and Fiscal Change:

The Case of Land Use Planning in London, Ontario

by

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Summary

The research assessed the performance and process of land use planning in the City of London for the period 1978-1998. Changes in provincial policies and funding, and how the City of London and 2 referral agencies – the Ontario Ministry of Natural Resources and the Upper Thames River Conservation Authority – adapted to these changes are described and assessed. Data sources included planning and development files, interviews with relevant agency officials, and aerial photography from 1978 and 1998. The results indicate that the City of London has responded well to the evolution of wetland policy in both process and outcome. While there is a perception that OMNR and UTRCA roles may be overlapping and somewhat redundant, analysis suggests that there are clear and distinct responsibilities. Indeed, the public and the insurance industry could be well served by having some modest degree of overlap among public agencies to ensure that issues are properly considered in the land use planning process.

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Introduction

The implementation of resource policies remains an understudied area of research. The goal of this research was to assess the implementation of land use planning policies in the City of London, Ontario in order to determine its effectiveness. Of particular interest is how the City and two of its major referral agencies – the Ontario Ministry of Natural Resources (OMNR) and the Upper Thames River Conservation Authority (UTRCA) – adjusted to changing policy and funding conditions between 1978 and 1998. The research focused particular attention to the management of lands adjacent to wetland areas. Although Canada still contains about 25% of the world's wetlands, it has lost an estimated 20,000,000 hectares (14%) of its total wetland base over the past 200 years (Rubec, 1997). Approximately 80%-99% of these losses are within or adjacent to urban centers (Environment Canada, 1991). Prior to European settlement, Ontario was estimated to have had 50,000,000 hectares of wetlands, over 2,000,000 of which were located in southwestern and eastern Ontario. Only 13%-22% of those in southern Ontario remain, most of which are on private lands (Pope and Foster, 1981; Powell and Prout, 1981; Snell, 1987).

The loss of wetlands is significant for both governments and the insurance industry. Higher levels of urbanization detract from water quality and increase peak flows. The latter can cause increased flood levels and increase flood damages which, in extreme circumstances, can result in disaster relief payments. If increased runoff causes sewers to back-up, private residential insurance policies may cover damages. In instances where increased flows detract from downstream uses of waterways, such as golf courses, legal damages have and may be awarded. Ecological functions of a wetland can also be affected by urban development. Thus, wetland and stormwater management play an important role in supporting effective water resource management.

Early wetland conversion stemmed from a lack of knowledge and appreciation of their functions and values. They were traditionally regarded as obstacles to development and production; their perceived value was dependent on their potential for conversion to more "productive" uses (Lynch-Stewart, 1992). However, in their natural state wetlands have significant values that can be measured in economic terms (Young, 1994). Environment Canada (1991) estimated that Canada's wetlands provide \$1,000,000 from

direct production (*e.g.* peat, fishing, tourism and recreation) as well as from their natural functions of flood control and water purification.

A problem arises because the onus to protect privately owned wetlands rests with individual landowners while the benefits accrue to the general public. Finding a balance between who pays and who benefits is a challenge. Regulation is one form of government intervention. In Ontario, wetlands are regulated through a policy statement issued under Section 3 of the *Planning Act*. The goal of the paper is to assess the implementation of the Wetlands Policy Statement in London, Ontario. Focus will be paid not only to the outcomes of performance but the evolving roles of government agencies as well. A perception exists that suggests that there is too much duplication and overlap among public resource management agencies. This paper sheds light on how roles and responsibilities evolve in response to policy and fiscal changes.

Background

The *Planning Act* was established in 1947 to provide procedures and authority for making decisions about land use change on private and municipal lands. It established the authority for municipalities or joint municipal planning areas to control the use of land through a number of tools including official plans, zoning by-laws and subdivision control (Penfold, 1998). Attack (1981) and Bardecki (1984) noted that a municipality's power to influence wetland protection came from the *Planning Act* because it gave municipalities the ability to control land use planning by designating land uses in the official plan and by implementing these designations through zoning by-laws. The *Act* also gave municipalities the opportunity to review and approve developments that might affect wetlands (Attack, 1981).

Prior to the 1980s, the municipal political climate emphasized growth (Bardecki, 1984), and the use of environmental planning tools was not prevalent. This changed in the 1980s. Amendments to the *Planning Act* in 1982 provided for increased responsibility for environmental matters and increased levels of responsibility by municipalities (Hagan, 1994).

In 1984, a Wetland Evaluation System (WES) was established to provide a method of identifying and classifying wetlands according to a standardized methodology

(OMNR, 1984). Its ultimate aim was to provide a ranking system for wetlands with respect of their relative importance so that planning authorities could make decisions accordingly. Wetlands were ranked, based on their hydrological, biological, social and special features from Class 1 to Class 7, with Classes 1 and 2 termed "provincially significant" (and therefore most important) and the others as "locally significant". The *Guidelines* applied only to those wetlands ranked as provincially significant.

In 1992, the province released the Wetlands Policy Statement (WPS) under Section 3 of the *Planning Act*. Its goals were: (1) to ensure that wetlands were identified and adequately protected through the land use planning process; and (2) to achieve no loss of provincially significant wetlands. Class 3 wetlands were now considered provincially significant.

During the late 1980s and early 1990s, the development industry pressed the provincial government for a more timely process and with clearer rules. At the same time, environmental interest groups desired improvements in environmental protection in the land use planning process. This prompted the formation of the Sewell Commission that laid the foundation for Bill 163 – *The Planning and Municipal Statute Law Amendment Act, 1994*. It established a comprehensive set of policies, and with respect to environmental protection supported the following:

- The protection of significant natural features through revised provincial policies;
- The assessment of environmental impacts of options by municipalities when preparing land use plans; and
- The mapping or description of environmental features, the monitoring of environmental indicators and planning on a watershed basis (Garrod *et al.*, 1993).

A new provincial policy regime was supported in 1995 with the passage of a *Comprehensive Set of Policy Statements*. Despite these reforms, criticisms of delay and insufficient municipal control of the planning process remained (Wood, 1999).

With the election of a new government in 1995, further changes under Bill 20 were made to reduce the time for planning decisions in order that "developers would not have to sit on valuable land, paying high carrying costs while waiting years for a decision" (MMAH, 1996, Appendix 1). However, the time line allowed insufficient time to properly study and comment on wetland-related applications. The time limits to appeal to the Ontario Municipal Board were also reduced, restricting the ability of the public or reviewing agency to organize an effective appeal (Gonzalez, 1996).

Policy was not the only changes occurring during the 1990s. The passage of Bill 20 in 1996 restricted the ability of provincial ministries (such as OMNR) to appeal municipal planning decisions to the Ontario Municipal Board (OMB). This was done as a result of complaints that there were too many provincial ministries involved in the process, with varying requirements and independent ability to stall or significantly affect the approvals process. The new one-window planning approach named the Ministry of Municipal Affairs and Housing (MMAH) as the single channel for input from relevant provincial agencies so that provincial agencies acted as a "single voice" to the OMB (Wood, 1999; Heidenreich, 2000). This is potentially problematic as the mandates of different agencies may be conflicting and they may not support each other in wetland matters. The role of OMNR as lead commenter on development proposals and as the leading advocate of provincial wetlands policy was removed and opportunities for individual and community input were reduced (Environment Canada et al., 1997). Conservation authorities were retained as the prescribed body for planning input and some have assumed responsibility for natural heritage policy matters through agreements with local municipalities.

It is within this changing policy context that this study examines the implementation of land use policy in Ontario. How has the land use planning adjusted to these changes and do they have an positive, negative or neutral impact on decision making?

Methods

The City of London is located in southwestern Ontario and has a population of 326,000 (1996). It is also located within the Thames River watershed which has over 100 significant wetlands, many of which are hydrologically important as the headwaters of the river system (UTRCA, 1998). London has 8 provincially significant wetlands and 5 locally significant wetlands. Planning files, interviews and air photo analysis provided the data sources. Each is discussed below.

Planning Files

A total of 41 planning files were used to document the integration of the Wetlands Policy Statement into the land use planning process. Twenty Official Plan Applications and Zoning Bylaw Amendments and 21 subdivision applications that pertained to evaluated (*i.e.* wetlands that are provincially or locally significant) and non-evaluated wetlands (*i.e.* acknowledged but not inventoried or evaluated under the Wetland Evaluation System) for the period 1978 to 1998 were used. This time frame was used to facilitate comparisons of the treatment prior to and throughout the development of the 1992 WPS and throughout the history of London's implementation of the adopted policy. It also coincides with the availability of air photographs for the City of London.

Relevant development files were initially identified using a map of past registered plans of subdivision and chosen on the basis of their proximity to known evaluated wetlands. In order to identify applications for plans of subdivision that were either not registered (*i.e.* withdrawn or refused), were received prior to 1984 (year of the Wetland Evaluation System implementation), or involved non-evaluated, non-significant wetlands, all available subdivision files received no earlier than 1978 and closed no later than 1998 were examined. Wetland-related files were chosen based on their location relative to evaluated wetlands or from terms such as "wet area", "low lying area", "swamp" or "marsh" that might appear in the file. The inclusion of non-evaluated wetland files will allow a comparison of wetlands of varying significance.

Planning file applications were inspected for the same 20-year period. The subset of files chosen for analysis included those affecting provincially and locally significant wetlands. In order to locate those involving evaluated wetlands, the assessment role numbers of properties abutting significant wetlands were cross-references with a list of amendment applications. Relevant files were chosen from this cross-references subset using the same wetland terms as the application for subdivision files.

The following data were accumulated from the selected files:

- The application form provided site location, area and description information, as well as the requested amendments and/or proposed development.
- The nature and timing of the correspondence among relevant external (*e.g.* ONMR, UTRCA) review agencies was documented, primarily through

Planning Subdivision Liaison Sheet responses. This correspondence served to define the environmental roles of each in the planning process, as well as to document requested and recommended mitigative measures. It also served to denote changes in the roles and responsibilities as the policy evolved and financial circumstances changed (*e.g.*. the 1995 provincial budget cuts).

- Planning Committee Meeting reports provided background information as well as an analysis of the planning process and decisions to date on each file.
- Details of the actual approved development (it often was modified over the application review period) as well as the conditions placed on development were obtained from the subdivision agreements and associated special provisions.
 - The resolutions of Municipal Council and the decisions of the Ontario Municipal Board, where relevant, were noted.

Interviews

Interviews were conducted with representatives from the City of London Planning Department, the UTRCA and the OMNR. Although the focus of the interviews was the implementation of the Wetlands Policy Statement, additional information on the land use planning process and the changing roles of the regulatory agencies was discussed. Questions were directed to acquire information to support or challenge the results of file analysis, as well as to provide insight into how those involved in wetland policy implementation in London view the process and the outcomes. A total of 5 interviews were completed.

Mapping

Mapping sources and application:

- *Official Plan Schedule 'B':* for location of evaluated wetlands and other environmental features (1996).
- City of London Bylaw Z-1 mapping: to determine the extent of future development pressure around sensitive wetland areas

- *Air Photos of London, 1978 and 1998:* to compare pre- and post-development features
- OMNR wetland evaluation mapping: to roughly delineate wetland boundaries
- OMNR Natural Resources Values Information System Map of evaluated wetlands in London: to display location of evaluated wetlands and location of pending developments in London.

Assessing Stated Performance

This section will assess effort by examining the integration of the listed goals, objectives and stated policies of the Wetland Policy Statement (WPS) and its *Implementation Guidelines* into the 1996 City of London Official Plan.

The goals of the WPS are:

- To ensure that wetlands are identified and adequately protected through the land use planning process; and
- To achieve no net loss of Provincially Significant Wetlands (PSW).

The City through its Natural Heritage System (NHS) policies and land use designations addressed the first goal. The subwatershed plans identified provincially significant wetlands (PSWs) and locally significant wetlands (LSWs) as essential components of the NHS. An objective of the NHS was to "identify, protect and rehabilitate significant heritage areas" (City of London, 1996, s.15.1). These support the wetland policy's goals.

Significant wetlands are delineated on Official Plan Schedule 'B'. Flood Plain and Environmental Features and are designated as Open Space or Environmental Review, which confer varying degrees of protection. Municipal Council may request that unevaluated wetlands be evaluated in accordance with the Wetland Evaluation System. Once a wetland has been identified as significant, the Official Plan requires an environmental impact study (EIS) before any amendment, subdivision application or site plan approval application may be approved. This must be completed for development proposed within 120m of provincially significant wetlands and 30m of locally significant wetland, with the purpose of "preventing negative impacts to the Natural Heritage System" (City of London, 1996, s15.5). The second goal of the WPS, to achieve no net loss of PSWs is not explicitly incorporated into the Official Plan's policies. However, reference is made to having regard to provincial policy statements. The Subwatershed Studies Implementation Guidelines categorize wetlands as "Category 1" lands, which stipulate "no development", but the categorization is not directly reflected in the Official Plan. While protection is a common theme, "no loss" is less clearly articulated.

The objectives of the WPS are:

To ensure no loss of wetland function or wetland area of PSW in the Great Lakes St. Lawrence (and Boreal) Region; and

• To encourage the conservation of other wetlands (classes 4 to 7) throughout Ontario. The first objective of the Wetland Policy Statement is not fully addressed. While management and rehabilitation priorities include protecting "the function of all existing wetlands" (City of London, 1996, s.15.3.7) and environmental impact statements **may** include conditions to ensure that development does not negatively impact features and functions of Natural Heritage Areas, this does not guarantee no loss. PSWs are designated as Open Space and are further protected by:

- The Official Plan states that "the City shall encourage innovative development patterns and techniques which support and strengthen the NHS" (s.2.9.3);
- S.15.2 explains that information from the Subwatershed Studies should be used to help in the "planning and design of development to protect ecological functions." These studies themselves recommend that the City deny approval of proposals that "contravene their intent or requirements";
- S.15.3.6 states that buffers and additional techniques may be used to "assist in minimizing the impacts of development"; and
- An EIS is required prior to development approval to prevent any negative impacts on the NHS (City of London, 1996).

The City has encouraged the conservation of LSWs in that they are included as components of the NHS and their protection is to be considered in planning decisions. Aside from the differences in the 120m and 30m adjacent land distances, there appears to be little distinction between provincially significant and locally significant wetlands in the Official Plan. This aspect will be explored further in the paper.

Adjacent Lands Policy

The treatment of lands adjacent to wetlands can influence the form and function of a wetland. The WPS states that:

On adjacent lands, development may be permitted only if it does not result in any of the following: (a) loss of wetland function; (b) subsequent demand for future development which will negatively impact on existing wetland functions; (c) conflict with existing site-specific wetland management practices; and (d) loss of contiguous wetland area. This shall be demonstrated by an EIS prepared in accordance with established procedures, and carried out by a proponent addressing (a) to (d) inclusive. On adjacent lands, established agricultural activities are permitted without an EIS (OMNR/OMMA, 1992).

Development is permitted on adjacent lands with the support of an environmental impact statement (EIS) that may recommend mitigative measures to avoid negative impacts to important features and functions (City of London, 19996, s.15.5.1). These adjacent lands are not included within the NHS itself but the Official Plan suggested that adjacent lands could become part of the required parkland dedication for proposed development. Apart from its use as parkland and its involvement in the EIS requirement determination process, there is no mention of concern for the effects that development on adjacent lands might have on items (a) to (d) noted by OMNR/OMMA (1992) above.

London has done an admirable job in incorporating general environmental policies and the specific goals, objectives and policies of the WPS into its Official Plan. What remains to be determined is how well the policy was implemented.

Assessing Actual Performance

A total of 41 files were identified based on their proximity of their activities to evaluated and unevaluated wetlands. Of these, 27 were applications that were close to or adjacent to significant wetlands. Twelve of the files were adjacent to provincially significant wetlands. It is these twelve files that support many of the findings in this report.

Selected measures of performance were: (a) the location of the proposed development relative to the 120m adjacent lands; (b) the nature of the references to the policy by the reviewing agencies; and (d) the amount of wetland loss and encroachment over the study period. In assessing the performance, remember that three different policy environments, each superceding the previous, guided London's efforts. These were the Wetlands Policy Statement released on June 27th 1992, the *Comprehensive Set of Policy Statements* issued on March 28th 1995, and the Provincial Policy Statement on May 22nd 1996.

The location of each application is relevant to evaluating performance because of the fine line (*i.e.* 120m from the wetland) between allowing an application to proceed with or without an environmental impact study. The developer, the City and the reviewing agencies can address the location of a proposal with respect to a wetland and its 120m adjacent lands. The developer may identify the location of a wetland on the application form itself, or on the location map included with it. There was little evidence of this in the files examined. Grawey (2001, pers. comm.) suggested that recently, through consultants and the preparation of subwatershed and community plans, developers have become more aware of significant features on their properties. The City is able to use their Official Plan environmental policies to identify wetlands in the vicinity of the subject site, but in the past has relied upon the reviewing agencies to comment more specifically on significant features. Ultimately, it is the City's responsibility to ensure that the wetland policy is "regarded".

The 120m adjacent lands policy was referred to in 77% of the files. It was determined during the application process that 3 of the sites were actually beyond the 120m and the policy did not apply. The adjacent lands policy was addressed in the remaining files, all of which were located within the 120m zone. Only one file involved an actual encroachment into the wetland itself, and in this case an interim-control by-law was issues prohibiting further activity. The fact that no other application within a PSW was made suggests that the WPS is a deterrent. Representatives from the major agencies agreed that there is no longer an expectation to develop on provincially significant wetlands.

The WPS was mentioned in 10 of the 12 files. The majority of references pertain to the 120m adjacent lands policy. Specific objectives of the policy were not mentioned.

Both the OMNR and UTRCA played key roles in introducing wetlands policy into the planning process. The ONMR addressed it most often, which is consistent with their role on upholding the provincial interest. They had the opportunity to raise the issue as a referral agency in the plan review process.

The main objectives of the 1992 WPS were to ensure no loss of wetland function or area of PSWs and to encourage the conservation of other wetlands. None of the City of London wetland files contained information stating that proposed development would result in loss of PSW area or function, nor did a comparison of aerial photographs between 1978 and 1998 suggest any obvious loss of area. However, there was a loss of unevaluated wetlands area in several files. The WPS does not apply to these areas. Loss if wetland functions would be best determined through site visits or a re-evaluation of a wetland.

In short, wetlands were better protected after the introduction of the WPS in 1992. There was an increases awareness of wetland issues with in the planning and development community. The referral process that allows agencies to comment was an important element of increasing awareness. The next section describes the major changes associated with that process since 1978.

The Review Process: The Evolving Roles of OMNR, UTRCA and City of London

In the early 1980s, the OMNR's goal was "to provide opportunities for resource development and outdoor recreation for the continuous economic and social benefit of the people of Ontario and to manage, protect and conserve public lands and waters" (OMNR, 1980, 3). It recognized the importance of wetlands in the environment and gave support to protecting them and ensuring their values were recognized in land use planning. They were involved throughout the development of the provincial policy. By the 1990s, the OMNR was considered to be the principle governmental unit dealing with wetlands, overseeing them for flood control, food production and wildlife management (Tomick and Hendler, 1991). The 1992 Wetland Policy Statement was jointly administered by the OMNR and the Ontario Ministry of Municipal Affairs (OMMA – now MMAH); their associated responsibilities included providing wetland evaluation information and contributing to the land use planning process.

During this same time, the UTRCA used its regulations under Section 28 of the *Conservation Authorities Act* (Fill, Construction and Alteration to Waterways) to protect

wetlands from undue drainage and filling. The UTRCA regularly commented on municipal planning and development applications, and developed the following guidelines for the treatment of wetlands in land use planning applications:

- No new buildings are to be built in, or fill placed in Provincially Significant Wetlands;
- Filling And development were to be restricted in Locally Significant Wetlands;
- No development would be endorsed within a significant wetland and development was to be prohibited in provincially significant ones;
- All PSWs were to be circumscribed by a fill line (UTRCA, 1993a); and
- Due to the relative scarcity of wetlands in the Upper Thames River watershed compared to the province, they would encourage municipalities to extent the protection afforded to PSWs to LSWs (UTRCA, 1993b).

A current responsibility of the OMNR is to articulate the provincial interest in the planning environment, through the identification of PSWs and the approval of wetland evaluations (Pol, 2001, pers. comm.) Through this one-window approach, they also provide input to the MMAH when there is a specific request for interpretation of wetland policies or PSW boundaries. The OMNR is mandated to be "custodian for standards" for the WES through the review of evaluations and periodic review and revision of the system itself (Schraeder, 2001, pers. comm.). This represents a focusing of duties, as OMNR used to be regularly involved in planning matters that were not exclusively of provincial interest (Grawey, 2001, pers. comm.). In London, prior to 1996, the local OMNR office regularly received and actively commented on planning applications (Colman, 2001, pers. comm.); currently the OMNR comments on about 10% of applications liaised by the City. They continue, however, to regularly provide comments to the City on applications involving PSWs (Grawey, 2001, pers. comm.).

Conservation authorities saw the removal of OMNR as a circulating agency and land use planning advisor as an opportunity to provide the needed expertise on wetlands and other natural heritage issues to municipalities in a "comprehensive, accountable and cost-efficient manner" (Brick, 1998a, 1). To define and expand their role as municipal advisors on heritage issues, local CAs may develop memoranda of understanding (MOUs) with the municipalities: "conservation authorities have also assumed OMNR plan review responsibilities for natural heritage policy areas, such as provincially significant wetlands, through local agreements" (Brick, 1998b, 1).

Although conservation authorities appear keen to undertake a leading role as an environmental planning review agency, Grawey (2001, pers. comm.), a planner with the City of London, noted that the UTRCA now seems much less involved in municipal planning issues (such as subdivision approval and natural area concerns) and has become more selectively involved in technical issues (floodplain and fill line regulation). This could be attributed to cuts in funding but may also be due to the presence of a planning ecologist internal to the city. This ecologist provides comments on land use planning issues and may reduce the need for the city to rely on comments from the UTRCA. Schraeder (2001, pers. comm.), a management biologist with the OMNR, suggested that even though conservation authorities are identified as the commenting agency, it would not be prudent for them to deem their role as an exclusive one, nor for a municipality to vest a review function exclusively on one agency. He noted that London still relies on both the OMNR and UTRCA for guidance in environmental and land use planning.

Schraeder's comments highlight ongoing differences of opinion regarding the clarity and exclusivity of the roles of these two agencies. Brick (2001, pers. comm.) believes the "overlap effectively ended then the province was cut out of the circulating loop...there was tremendous overlap but it has evolved, and now there is a very clear definition of who is doing what." He also recalled that the reforms to the *Planning Act* "resulted in bitterness between the conservation authorities and provincial ministries because the OMNR's active role in land use planning was being reduced to the potential benefit of conservation authorities." On the other hand, Schraeder (2001, pers. comm.) stated that when London seeks comments on a wetland, "they still rely on both of us. They go to the conservation authority because it is a service entitlement because of their levy. For us, it is because they respect that OMNR has the final say as to whether something is an evaluated wetland or not. We can also comment on impacts and appropriateness of use of adjacent lands." Schraeder believed that the division of roles and responsibilities could still be clearer.

The UTRCA seems certain about their new lead role in natural heritage issues and of OMNR's reduction of responsibility in everyday planning processes, but OMNR appears less likely to concede their advisory services fully to conservation authorities. Though both share the responsibility for managing the province's wetland resources, the OMNR and UTRCA still seem to be jockeying somewhat for position that may affect the successful implementation of wetland policy. The following sections will examine the roles of these agencies in creating inefficiencies in the planning process through analysis of their wetland-based recommendations on planning applications.

Indicators of Duplication

(a) Nature of Correspondence

Prior to the release of the 1992 WPS, the URCA had relatively more input into the application process than the OMNR (Table 1). Correspondence in the files suggests that the UTRCA was concerned primarily with stormwater management and land acquisition/dedication. The technical focus was consistent with the UTRCA's stated role in flood prevention. The attention to acquisition was likely because many of the development proposals were for lands designated as priority acquisition areas under the Westminster Ponds/Ponds Mills area project.

 Table 1:

 Wetland-related topics noted in agency correspondence¹

Time Frame	No. of	Dedication/Acquisition		Technical		Biological			
	Correspondences	# (%)		#(%)		#(%)		# (%)	
		OMNR	UTRCA	OMNR	UTRCA	OMNR	UTRCA		
Pre 1992	23	1 (4)	6 (26)	1 (4)	7 (30)	2 (9)	6 (26)		
Post 1992	50	0 (0)	4 (8)	6(12)	18 (36)	11 (22)	11 (22)		

Issues related to administration or procedures were not included in the analysis above.

After 1992, input from OMNR was more frequent, which is consistent with their lead agency for implementation of the wetland policy. Their concerns ranged from stormwater management (mostly through plan review) to biological concerns such as wetland boundary and buffers. The UTRCA continued to focus on stormwater

management. The UTRCA did not discuss buffers, but often discussed encroachment issues.

This information suggests minor duplication or overlap between these agencies. While both were involved with wetland conservation and species management aspects, the UTRCA's correspondence was more technical. However, both agencies discussed stormwater management issues, and in fact at the time, both agencies shared "a responsibility to manage water resources for multiple benefits" (Ward, 1993, 2).

(b) Nature of Specific Mitigative Measures

A review of the specific mitigative measures recommended by these two agencies also failed to show evidence of significant duplication (Table 2). Prior to 1992, there was no evidence of wetland-related mitigation measures recommended by OMNR. The UTRCA contributed several measures relating to adjustments to development design and stormwater management. After the release of the policy, both agencies addressed biological measures (*e.g.* habitat function, effects of development on vegetation) to a greater extent. The OMNR increased their involvement in technical issues, while the UTRCA remained consistent in their discussion of stormwater management, sediment and erosion control, and grading measures (Table 2).

Time Frame	No. of	Technical		Technical		Biological		Other	
	Measures	# (%)		#(%) #(%)		%)	#(%)		
		OMNR	UTRCA	OMNR	UTRCA	OMNR	UTRCA		
Pre-1992	7	0 (0)	3 (43)	0 (0)	0 (0)	0 (0)	4 (57)		
Post-1992	58	8 (14)	24 (41)	8 (14)	4 (7)	9 (16)	5 (9)		

Table 2:
Nature of wetland-related mitigative measures
recommended by reviewing agencies

The issues that were discussed by both agencies were not discussed to the same extent in the same file. This is consistent with Brick's (2001, pers. comm.) comments that there was a lack of communication between agencies in the 1990s that lead to similar, but not identical application comments. In contrast, there was evidence of

cooperation among reviewing agencies with respect to stormwater management in the 1980s and 1990s. In many instances, a condition of approval was acceptance of the stormwater management plan by the City, OMNR, OMOE, and UTRCA.

(c) Summary

The apparent division of biological and technical roles between OMNR and the UTRCA was deliberate. Schraeder (2001, pers. comm.) suggested that it was a matter of respect between the agencies to try and avoid the "presentation of over-management." He also confirmed the results of the above analysis, commenting that the UTRCA could be relied upon for more quantitative comments on flood control, whereas OMNR tended to provide more qualitative, ecologically-based input. Although Colman (2001, pers. comm.), a planner with OMNR, mentioned many of the OMNR comments in the past did deal with stormwater management, Schraeder viewed this and other examples of overlap or duplication as "emphasis", signaling to the City the importance of the issue. Duplication may also serve as a procedural safety net, to reduce the potential for errors or other oversights.

It is interesting to note that of the 11 files that involved non-significant wetlands, the UTRCA discussed wetland-related mitigative measures in 10 of them, while the OMNR contributed once. This is consistent with the viewpoint of the UTRCA that all wetlands deserve consideration, regardless of their evaluated significance, whereas OMNR's concerns lie primarily with PSWs. There was no evidence of OMNR input on any files post 1996, which is consistent with their removal from the referral process.

The examination of the files does not indicate any significant overlap between the roles of these agencies within the application process nor was there evidence of obvious disagreement between these agencies. Although post-1992 there were more wetland-related recommendations made by both agencies, this did not appear to increase duplication.

Conclusions

The objectives of the *Wetland Policy Statement* have been successfully implemented in London. Since the introduction of the WPS, the City has developed

environmental policies that regulate development around wetlands. Reviewing agencies have played an important role in promoting and guiding this policy development. Despite the history of overlapping and confused mandates, OMNR and UTRCA are on "the same page" in terms of wetland protection and frequently supported each other's recommendations. Their roles appear to be clearly defined and duplication occurs only on general issues. However, the reviewing agencies were limited by the amount of resources (*e.g.* time, financial, staff) that they were able to devote to the review of proposals and defense of recommendations. Over the study period, the City did not push environmental issues to the same extent that OMNR and UTRCA did. This is, in part, explained by the strong and exclusive mandates of OMNR and UTRCA to the environment, whereas the City must satisfy often-conflicting social, economic and environmental priorities. The relatively recent hiring of a Planning Ecologist at the City suggests a higher level of commitment in the future and an outcome from changes in the referral process which has meant that municipal governments must accept more of the costs and responsibilities for planning decisions.

While there have been changes to the roles and finances available to government agencies, they appear to have adapted reasonably well. More fundamental issues concern its exclusion of agricultural activities, the limited protection afforded locally significant wetlands and unevaluated wetlands, and the current lack of comprehensive wetland inventory. As Ontario reconsiders its water management strategies in the wake of the Walkerton Inquiry, it would be well advised to reassess its Provincial Policy Statement concerning wetlands. While there has been progress over the past 10 years, it is not the time to become complacent.

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