

**ENVIRONMENTAL PLANNING POLICY MANUAL**  
**FOR THE**  
**UPPER THAMES RIVER CONSERVATION AUTHORITY**

**APPROVED BY BOARD OF DIRECTORS**

**JUNE 28, 2006**

**REVISED October 24, 2017**

## REVISIONS

Revision #	Date	Comments
0.0	June 28, 2006	Approved by Board of Directors
1.0	October 24, 2017	Approved by Board of Directors

# TABLE OF CONTENTS

HEADING	PAGE
1 INTRODUCTION .....	1-1
1.1 PURPOSE OF MANUAL .....	1-1
1.2 LAYOUT OF MANUAL .....	1-2
1.3 THE UPPER THAMES RIVER CONSERVATION AUTHORITY .....	1-3
1.3.1 <i>Environmental Commitment &amp; the Watershed Approach</i> .....	1-3
1.3.2 <i>Our Watershed</i> .....	1-3
1.3.3 <i>Our Planning Approach – The Watershed Model</i> .....	1-5
1.4 REGULATORY ACTIVITIES .....	1-7
1.4.1 <i>The Planning Act</i> .....	1-7
1.4.2 <i>The Conservation Authorities Act</i> .....	1-10
1.4.3 <i>Other Legislation</i> .....	1-10
1.4.4 <i>Inquiry Services</i> .....	1-11
1.4.5 <i>Integration &amp; Cumulative Effects</i> .....	1-11
1.4.6 <i>Fees</i> .....	1-12
2 ENVIRONMENTAL PLANNING AREAS OF INTEREST .....	2-1
2.1 OVERVIEW .....	2-1
2.2 NATURAL HAZARDS .....	2-1
2.2.1 <i>Natural Hazards Planning</i> .....	2-1
2.2.2 <i>Goals &amp; Objectives for Natural Hazards</i> .....	2-2
2.2.3 <i>Guiding Principles for Natural Hazards</i> .....	2-2
2.2.4 <i>Natural Hazard Features - Overview</i> .....	2-3
2.2.5 <i>Environmental Impact Study (EIS) for Natural Hazard Lands</i> .....	2-4
2.2.6 <i>Pre-consultation</i> .....	2-4
2.2.7 <i>Specific Natural Hazard Areas</i> .....	2-5
2.3 NATURAL HERITAGE .....	2-13
2.3.1 <i>Natural Heritage Planning</i> .....	2-13
2.3.2 <i>Goals &amp; Objectives</i> .....	2-13
2.3.3 <i>Guiding Principles</i> .....	2-14
2.3.4 <i>Natural Heritage Features Overview</i> .....	2-14
2.3.5 <i>Environmental Impact Study (EIS) for Natural Heritage</i> .....	2-14
2.3.6 <i>Pre-consultation</i> .....	2-15
2.3.7 <i>Natural Heritage Features</i> .....	2-15
2.4 NATURAL RESOURCES .....	2-21
2.4.1 <i>Natural Resource Planning</i> .....	2-21
2.4.2 <i>Goals &amp; Objectives</i> .....	2-21
2.4.3 <i>Guiding Principles</i> .....	2-22
2.4.4 <i>Natural Resources in the Watershed</i> .....	2-22
2.5 SERVICING & MITIGATION .....	2-23
2.5.1 <i>Planning for Services</i> .....	2-23
2.5.2 <i>Goals &amp; Objectives</i> .....	2-23
2.5.3 <i>Guiding Principles</i> .....	2-23
2.6 INTEGRATED RESOURCES & SYSTEMS PLANNING .....	2-24
2.6.1 <i>Goals &amp; Objectives</i> .....	2-24
2.6.2 <i>Guiding Principles</i> .....	2-24

3	MUNICIPAL PLAN REVIEW .....	3-1
3.1	OVERVIEW .....	3-1
3.2	NATURAL HAZARDS.....	3-1
3.2.1	<i>Overview</i> .....	3-1
3.2.2	<i>General Natural Hazard Policies</i> .....	3-1
3.2.3	<i>Riverine Flooding Hazard Policies</i> .....	3-2
3.2.4	<i>Riverine Erosion Hazard Policies</i> .....	3-5
3.2.5	<i>Watercourse Policies</i> .....	3-5
3.2.6	<i>Wetland Policies</i> .....	3-6
3.3	NATURAL HERITAGE FEATURES & AREAS.....	3-6
3.3.1	<i>Overview</i> .....	3-6
3.3.2	<i>Wetland Policies</i> .....	3-6
3.3.3	<i>Woodland Policies</i> .....	3-7
3.3.4	<i>Valleyland Policies</i> .....	3-7
3.3.5	<i>Policies for Wildlife Habitat</i> .....	3-8
3.3.6	<i>Policies for the Habitat of Endangered Species, Threatened Species, Species of Special Concern &amp; Locally Rare Species.</i> .....	3-8
3.3.7	<i>Policies for Aquatic Ecosystems &amp; Fish Habitat</i> .....	3-8
3.3.8	<i>Policies for Areas of Natural &amp; Scientific Interest (Life Science)</i> .....	3-9
3.4	NATURAL RESOURCES .....	3-9
3.4.1	<i>Overview</i> .....	3-9
3.4.2	<i>Groundwater Policies</i> .....	3-9
3.4.3	<i>Aggregate Resources Policies</i> .....	3-10
3.4.4	<i>Agricultural Lands Policies</i> .....	3-10
3.5	SERVICING & MITIGATION.....	3-10
3.5.1	<i>Overview</i> .....	3-10
3.5.2	<i>Policies for Stormwater Management and Erosion &amp; Sediment Control Measures</i> .....	3-10
3.5.3	<i>Policies for Servicing</i> .....	3-12
3.6	INTEGRATED RESOURCES & SYSTEMS PLANNING .....	3-12
3.6.1	<i>Policies for Integrated Resources &amp; Systems Planning</i> .....	3-12
4	SECTION 28 REVIEW & APPROVAL PROCESS.....	4-1
4.1	OVERVIEW.....	4-1
4.2	REGULATION LIMIT .....	4-1
4.2.1	<i>General Policies for Hazard Limit</i> .....	4-2
4.2.2	<i>Riverine Flooding Hazard Policies</i> .....	4-3
4.2.3	<i>Riverine Erosion Hazard Policies</i> .....	4-7
4.2.4	<i>Wetland Policies</i> .....	4-8
4.2.5	<i>Watercourse &amp; Flood Plain Alteration Policies</i> .....	4-11
5	INQUIRY SERVICES.....	5-1
5.1	PROPERTY CLEARANCE LETTERS .....	5-1
5.2	DATA REQUESTS .....	5-2
6	IMPLEMENTATION & INTERPRETATION .....	6-1
6.1	GENERAL .....	6-1
6.2	PROCESSING PLANNING ACT APPLICATIONS.....	6-2
6.2.1	<i>Notification</i> .....	6-2

6.2.2	<i>Review</i>	6-3
6.2.3	<i>Appeals</i>	6-3
6.2.4	<i>Approval</i>	6-4
6.2.5	<i>Technical Studies</i>	6-4
6.2.6	<i>Peer Review</i>	6-5
6.2.7	<i>Fees</i>	6-5
6.3	PROCESSING SECTION 28 PERMIT APPLICATIONS	6-6
6.3.1	<i>The Process</i>	6-6
6.3.2	<i>Building Code</i>	6-6
6.3.3	<i>Hearing</i>	6-6
6.3.4	<i>Approval Period</i>	6-7
6.3.5	<i>Enforcement</i>	6-7
6.3.6	<i>Technical Studies and Peer Review</i>	6-7
6.3.7	<i>Fees</i>	6-7
6.4	OTHER TECHNICAL REVIEW PROCESSES	6-7
6.4.1	<i>Environmental Assessment Act</i>	6-7
6.4.2	<i>Drainage Act</i>	6-8
6.4.3	<i>Aggregate Resources Act</i>	6-8
7	GLOSSARY & COMMON ABBREVIATIONS	7-1
7.1	GLOSSARY	7-1
7.2	COMMON ABBREVIATIONS	7-12
8	REFERENCES	8-1
9	APPENDICES	
9.1	APPENDICES ATTACHED	
9.2	LIST OF KEY REFERENCE DOCUMENTS/LINKS	

## FIGURES

Figure 1-1	1-4
Figure 1-2	1-5
Figure 2-1	2-6
Figure 2-2	2-7
Figure 2-3	2-10
Figure 2-4	2-11

# 1 INTRODUCTION

## 1.1 PURPOSE OF MANUAL

The need to prepare a comprehensive Environmental Planning Policy Manual for the Upper Thames River Conservation Authority (UTRCA) was driven by a number of factors including:

- The need to update the UTRCA'S outdated Municipal Plan Review Guidelines dated April 1993;
- In response to the implementation of a new Generic Regulation 157/06, there was a need to update the UTRCA's Policy and Procedural Manual dated March 1993; and
- The need to develop a Comprehensive Policy Manual that would facilitate the implementation of the Authority's integrated systems approach for *watershed* planning and which is consistent with the 2005 Provincial Policy Statement.

"Inspiring a Healthy Environment" is the vision which guides the programs of the UTRCA and the preparation of this policy manual. In keeping with this vision, the Authority has formulated a Mission Statement which is designed to achieve a healthy environment on behalf of its watershed municipalities and incorporates the following themes;

- To protect life and property from *flood* and *erosion*
- To ensure a sustainable water supply
- To protect and enhance water quality
- To preserve and manage natural areas
- To provide outdoor recreation opportunities.

The purpose of the Policy Manual, taking guidance from Provincial Policy, is to provide local Upper Thames *watershed* policies which will guide *development* and *site alteration* while protecting, preserving and enhancing the natural environment. The policies are based on the interrelationship between environmental, physical and social factors that impact land use planning and *development* in the *watershed*.

This manual will be implemented by UTRCA Staff through its Environmental Planning Services program and it is envisioned that this Policy Manual will be a valuable tool for the UTRCA Board of Directors and Staff as well as for our *watershed* municipalities, the land *development* industry and the public.

## 1.2 LAYOUT OF MANUAL

This policy manual is a living document which will continue to evolve. The policies and implementation requirements contained herein have been formulated using a variety of sources. These include:

- the UTRCA's Municipal Plan Review Guidelines (1993)
- the UTRCA's Policy and Procedure Manual for the Administration of the *Fill, Construction and Alteration to Waterways Regulation*
- the new Conservation Authorities Act, the enacting Regulation (the *Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation*) and supporting documents
- *Watershed*-based Fact Sheets
- UTRCA files from past *development* and case law
- The Provincial Policy Statement (PPS, 2005) and relevant provincial technical manuals and guidelines.

The layout of the document is structured to be very general at the beginning and then becomes more detailed. Section 1 Introduction provides the reader with a general overview of the Authority and its programs. It establishes the purpose of the manual and provides an overview of the watershed and the UTRCA's regulatory activities. Section 2 – Environmental Planning – Areas of Interest describes the principles, goals and objectives which guide the planning of *natural hazards*, natural heritage, natural resources and servicing and mitigation. It is anticipated that Sections 1 and 2 will be used by a broad audience including the general public, community organizations and professional staff.

The detailed, technical policies contained in Sections 3, 4 and 5 which pertain to the UTRCA's Municipal Plan Review Process, our Permit Process and our Inquiry Services, as well as the implementation thereof as set out in Section 6, are more complex in nature. It is anticipated that these latter sections will be used primarily by professional staff including land use planners, lawyers and engineers. For all users, the italicized terms in the manual are defined in the glossary. Further more detailed information is included in the Appendices to assist development professionals. It is anticipated that additional accepted methodologies, general terms of reference documents and other technical support information will be added to continue to update and improve the Manual. Users should periodically refer to the UTRCA website to check on the availability of updates and revisions.

The policies in this manual are intricately interwoven and inter-connected. They should always be read in their entirety. When Authority Staff review a *development* proposal or application and the potential impacts thereof on the watershed's *natural hazards*, natural heritage and natural resources, all of the policies will be reviewed and the appropriate ones will be applied. The Authority anticipates that the manual will be updated annually to incorporate changes in legislation and government policy as well as when the Authority's understanding of the Thames River *watershed* is expanded through the implementation of other UTRCA programs and services.

## 1.3 THE UPPER THAMES RIVER CONSERVATION AUTHORITY

### 1.3.1 Environmental Commitment & the Watershed Approach

The Upper Thames River Conservation Authority (UTRCA) was formed in 1947. Since then, the Authority's original water resources mandate and programs have evolved to respond to the issues of our *watershed* municipalities, science findings as well as Provincial Policy and Legislation. This includes developing a broad range of *watershed* management programs and services that engage the community in responding to *watershed* issues.

The Authority continues to strive towards implementing a *watershed* or *ecosystem approach* to planning. This approach is consistent with Section 2.2.1a) of the PPS, which encourages the use of the *watershed* "as the ecologically meaningful scale for planning" because it is considered to be the most effective and comprehensive systems-based approach for *ecosystem* planning. While this concept has only recently been incorporated into the PPS, the Authority has a long legacy of planning, implementing and monitoring using *watershed* and *subwatershed* management units. Through the application of this approach, the implications of local management actions and municipal decisions can be evaluated in a *watershed* context. The *watershed* approach addresses the fact that water does not respect political boundaries and the *riparian rights* of the downstream community are considered.

### 1.3.2 Our Watershed

The UTRCA has developed a program for the upper *watershed* of the Thames River. The Upper Thames *watershed* has an area of 3,482 square kilometers, a population of more than 470,000 residents and drains land in the Counties of Perth, Huron, Oxford and Middlesex, the City of London, the City of Stratford and the Separated Town of St. Marys. The predominant land use in the *watershed* is agriculture, covering approximately 73% of the land area. Urban land use covers approximately 15% of the *watershed* and *woodlands* and *wetlands* make up the remaining 12% of land area. The *watershed* is divided into 28 *subwatersheds* which are either major tributaries or sections of the main branches of the Thames. Each area is of a sufficient size for evaluating environmental information, monitoring environmental change and targeting rehabilitation work.



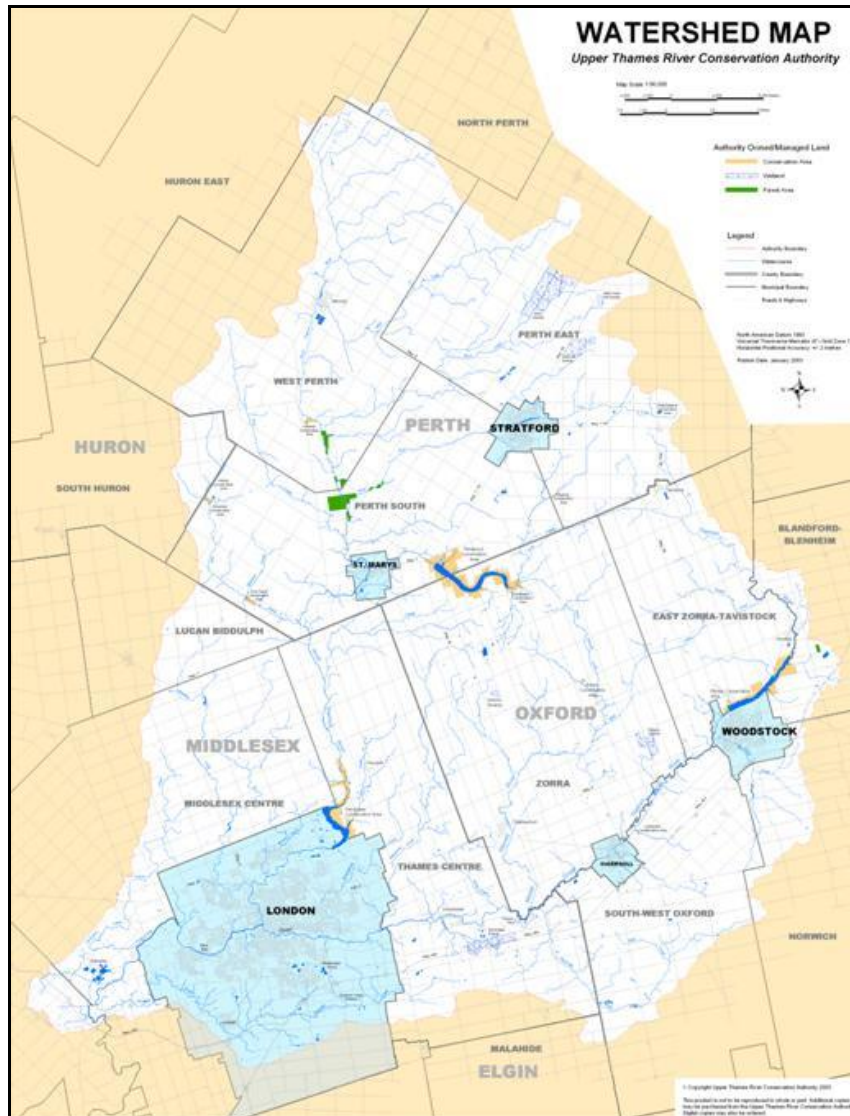


Figure 1-1

Because of its location in a highly developed part of southern Ontario, the *watershed* experiences pressures from both urban and rural land uses. The water quality and quantity in the Thames River and its tributaries is influenced by the relatively intense land uses and land management in the *watershed*. The Thames remains one of the most biologically diverse rivers in Canada. The river and its tributaries provide a *habitat* for more than 90 species of fish and many species-at-risk including the Spiny Softshell Turtle and the Queen Snake. The Thames River system has been designated a Canadian Heritage River based on its rich cultural heritage and diverse recreation opportunities.

### 1.3.3 Our Planning Approach – The Watershed Model

The broad plan for the Upper Thames *watershed* follows the watershed planning model approach. As illustrated in Figure 1, *watershed* planning is a continuous cycle of plan development, plan implementation, monitoring and research and reporting and evaluating. It is critical that the various components of the cycle are undertaken collaboratively with the community which includes municipalities, landowners, professionals, other government agencies and advocacy groups.

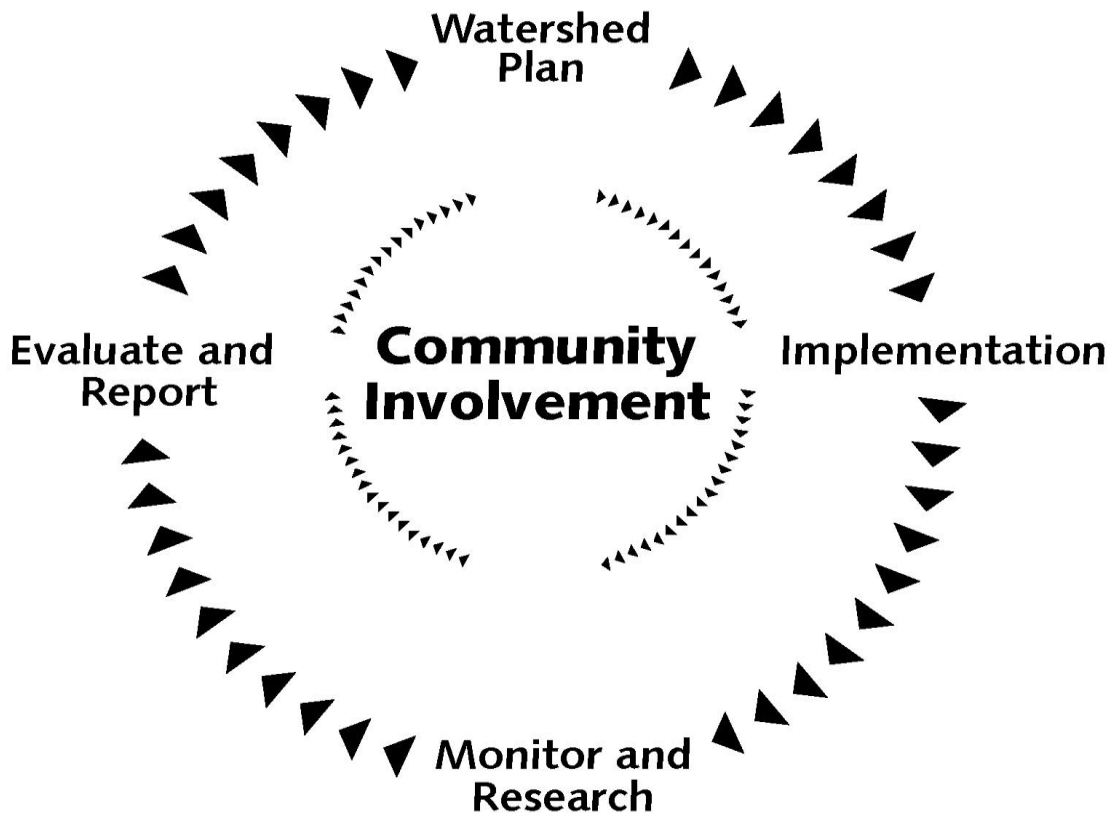


Figure 1-2

The continuous process involves the following components:

- **Plan Development:** a *watershed* plan is developed based on the information that is available about the *watershed* at the time. The plan is developed collaboratively with the community and includes the identification of implementation activities. It is recognized that the plan is based on available information and projections for implementation and the need for future adjustments or revisions depending on results is acknowledged.
- **Implementation:** a number of strategies are identified to implement the plan. These may include activities such as education, regulation of land acquisition.

- **Monitoring:** as the plan is implemented, monitoring needs to be undertaken to collect information to assist with assessing plan effectiveness and to expand the understanding of the management activities and *watershed* processes.
- **Evaluation & Reporting:** the continually evolving understanding of the *watershed* through monitoring and research is evaluated and reported. This information is used to make modifications to the plan and the cycle continues.

The five main implementation strategies include:

1. Acquisition - The purchase of land or easements as a means of obtaining management control. The Authority owns approximately 6500 ha. of land which is managed for various purposes including recreation, protection of *wetlands*, and protection of the public from *flooding* processes.
2. Stewardship - Providing the tools to landowners and the community to undertake measures which sustain and improve resources. *Stewardship* is often combined with incentive measures that reward good management practices. The incentive can be financial or simply recognition.
3. Education – Creating a broad awareness of the importance of *watershed* resources and actions that can be taken to maintain and restore these resources. Education and *stewardship* are closely linked.
4. Water Management – Conservation Authorities are uniquely positioned to develop and implement water management programs that include strategies such as *flood* control and low flow management using dams.
5. Regulatory Measures – Measures that control an individual's freedom to act for the benefit of the individual, the community or the broader public interest. The Authority may be involved as the direct implementer of legislation or as an advisor to other organizations that implement legislation.

This Environmental Planning Policy Manual focuses on the UTRCA's regulatory implementation activities.

## 1.4 REGULATORY ACTIVITIES

The UTRCA is involved with the implementation of several laws and regulations. This Policy Manual focuses on the following two main tools:

- The Planning Act – Largely through an advisory role, the Authority provides planning and technical advice to municipalities to assist them with fulfilling their responsibilities under the Planning Act.
- The Conservation Authorities Act – Under Section 28, the Authority regulates *development* and *site alteration* within the Regulation Limit.

The guidance provided in this manual for the implementation of the Planning Act and the Conservation Authorities Act is applicable to all other Acts and Regulations that the UTRCA may be asked to comment on.

### 1.4.1 The Planning Act

The Planning Act provides municipal governments, Conservation Authorities and other agencies with a broad, province-wide framework to promote the orderly *development* of land. It guides land use planning decisions in Ontario as well as local policy formulation that is consistent with provincial requirements. Section 3 of the Planning Act enables the Province to develop and implement detailed policies for those matters considered to be of provincial interest.

#### 1.4.1.1 The UTRCA's Role in Planning

Municipalities circulate Planning Act applications to the Upper Thames River Conservation Authority for review in accordance with circulation procedures established under the Planning Act. UTRCA comments consider the following factors:

1. **Delegated Responsibility** - The Minister of Natural Resources has delegated responsibility for reviewing and commenting on hazard planning issues to the Conservation Authorities in those areas where Conservation Authorities have been established. This delegation includes interpretation of hazard policies contained in the Provincial Policy Statement. The Minister's delegation letter to the UTRCA is dated April 19, 1995 (See Appendix 9.1.4).
2. **Watershed Agency** - The UTRCA provides comments to municipalities on the implications of *development* proposals from a *watershed* perspective. These comments pertain to natural hazard planning, natural heritage planning or *groundwater* and surface water management. In addition to reflecting the requirements of Provincial Policy, the Authority's comments reflect the Authority's goals and objectives for the management of the Upper Thames *watershed*. This manual consolidates the Authority's policies for commenting as a *watershed* based agency.

**3. Municipal Planning Advisory Service** - The UTRCA has an arrangement with its *watershed* municipalities to provide access to planning and technical expertise on a fee for service basis. The UTRCA provides expertise in the following areas:

- advisory services related to all natural hazard matters;
- advisory services related to the all natural heritage matters; and
- advisory services related to *groundwater* and surface water quantity and quality.

It is noted that while the UTRCA provides advice to municipalities on natural heritage, this advice is not provided on behalf of the Province and does not necessarily reflect the position of the Ministry of Natural Resources or the Ministry of Municipal Affairs and Housing.

**4. Regulatory Agency** - UTRCA comments identify the Authority's regulatory role and the potential need for permits.

**5. Landowner** – The Authority is occasionally involved in the review of a Planning Act application as a proponent or an adjacent landowner. In these rare cases, the Authority must ensure that the comments provided as a landowner are clearly identified and treated separately from our comments as a regulatory and technical agency provided under our other roles.

#### 1.4.1.2 Municipal Plan Review Process

With the exception of participation as a landowner, the various roles of the UTRCA with respect to the implementation of the Planning Act are undertaken through the Municipal Plan Review Process. The areas of interest for the Municipal Plan Review Process are presented in Section 2 of this Manual and the specific policies to guide the review of Planning Act applications are provided in Section 3.

Municipalities are empowered to make most decisions under the Planning Act. They need to satisfy themselves that the decisions that they are making are consistent with Provincial Policy (as outlined in the PPS). The main function of the UTRCA Plan Review Service is to provide planning advice and technical review services to assist municipalities with fulfilling their responsibilities under the Act when they are reviewing and commenting on *development* and *site alteration* proposals. In providing its comments on Planning Act applications, the Authority considers the requirements of the Planning Act, the PPS, the requirements of other legislation and the Upper Thames *watershed* specific policies.

The objectives of the UTRCA's municipal plan review process include:

1. To minimize the potential for loss of life, property damage and social disruption and to create a safer and healthier environment for everyone who lives in the Upper Thames River *Watershed*;
2. To reduce the need for public and private expenditures for emergency operations, evacuation, and restoration of properties which may be impacted by *flooding* and erosion;

3. To increase public awareness about the potential risks to *development* as a result of the physical conditions associated with hazardous areas;
4. To use an *ecosystem* planning approach for identifying the environmental implications of *development* applications in order to maintain, protect, preserve and enhance natural heritage resources and natural resources;
5. To screen *development* applications and proposals to identify where a Provincial or *watershed* interest may be impacted;
6. To specify conditions of approval which satisfy the afore noted objectives;
7. To serve as an information centre for inquiries from landowners, potential landowners, lawyers, municipalities, and community groups interested in environmental legislation, approvals and *stewardship*;
8. To advise and inform potential applicants (and/or their consultants) to consult with UTRCA Staff prior to submitting their *development* proposals in order to identify potential concerns that could result in delays to the planning process, as well as for the need to prepare and submit technical reports and supporting information required to undertake the review and approval of applications;
9. To provide responses to site specific inquiries in a timely manner through the continued expansion of data bases (e.g. natural heritage data bases and inventories) and other information management systems; and
10. To continue to liaise with other agencies, county and municipal governments and departments, consultants, developers and *watershed* residents to ensure continued co-operation in achieving effective management of our natural resources.

The Authority's Municipal Plan Review Process provides decision-makers, applicants and the public with important information regarding the potential impacts and opportunities for mitigation related to *development* and *site alteration*.

Through its Municipal Plan Review Process, the Authority provides comments on Planning Act Applications which address provincial interests as well as those of the Authority on natural hazard, natural heritage, natural resource and servicing related matters. The UTRCA's *Watershed* municipalities recognize the Authority's expertise in assisting them with fulfilling this role. Planning Act Applications include:

- Official Plans & Official Plan Amendments
- Zoning By-Laws & Zoning By-Law Amendments
- Minor Variances
- Consents (severances)
- Plans of Subdivision
- Plans of Condominium
- Site Plans

The specific policies which guide the Municipal Plan Review Process are provided in Section 3.

## 1.4.2 The Conservation Authorities Act

Section 28 of the Conservation Authorities Act empowers the UTRCA to prepare regulations and require permits within its area of jurisdiction regarding the following:

- a) restricting and regulating the use of water in or from rivers, streams inland lakes, ponds, *wetlands* and natural or artificially constructed depressions in rivers or streams;
- b) prohibiting, regulating or requiring the permission of the Authority for straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream or watercourse, or for changing or interfering in any way with a *wetland*;
- c) prohibiting, regulating, or requiring the permission of the authority for *development*, if, in the opinion of the Authority, the control of *flooding*, *erosion*, dynamic beaches or *pollution* or the *conservation of land* may be affected by the *development*.

The following objectives provide the basis for the decision making process for implementing the Authority's regulation and permit process:

- prevent loss of life;
- minimize property damage and social disruption;
- reduce public and private expenditure for emergency operation, evacuation and restoration;
- minimize the hazards and unnecessary *development* of riverine *flood plains* and *flood* and *erosion* susceptible shoreline areas which in future years may require expensive protection measures;
- regulate works and *development* which, singularly or collectively, may reduce riverine channel capacities to pass *flood* flows resulting in increased *flood* levels, and creating potential danger to upstream and downstream landowners;
- control *filling* and/or draining of natural storage areas such as wetlands;
- encourage the *conservation of land* through the control of construction and placement of *fill* on existing or potentially unstable valley slopes or shoreline bluffs,
- reduce soil erosion and sedimentation from *development* activity;
- control *pollution* or other degradation of existing and potential *groundwater* aquifer(s) and aquifer recharge areas, created by *fill* activities; and
- control water *pollution*, sedimentation, and potential nuisances due to floating objects and debris.

## 1.4.3 Other Legislation

The Appendices of the Manual presents other federal and provincial legislation that Authority Staff consider as part of its Permit, Municipal Plan Review and Other Technical Advisory processes. Authority Staff will endeavour to assist applicants in identifying the relevant policies that pertain to their submissions.

The federal legislation can be accessed at [laws.justice.gc.ca](http://laws.justice.gc.ca) while the provincial legislation can be accessed at [www.e-laws.gov.on.ca](http://www.e-laws.gov.on.ca).

#### 1.4.4 Inquiry Services

The UTRCA is routinely called upon to provide property information to landowners and other stakeholders. These range from informal telephone inquiries seeking general information about an individual's property to specific requests for information as part of the purchase or sale of property. This information sharing process contributes to the Authority's proactive approach to land use planning and resource management for the watershed. The UTRCA considers its inquiry service as an opportunity to provide valuable information and to educate stakeholders about the Natural Hazard and *Natural Heritage Features* on the subject property. It also provides an indication of the potential limitations on *development* to a landowner or prospective home-buyer.

#### 1.4.5 Integration & Cumulative Effects

The Authority fully supports and advocates an integrated *ecosystem or as defined in the PPS, a natural heritage system approach* to planning for the Upper Thames River watershed. This system includes *natural heritage features and areas* that are linked by natural corridors which are necessary to maintain biological and geological diversity, natural functions, viable populations of indigenous species and *ecosystemss*. These systems can include lands that have been restored and areas with the potential to be restored to a natural state.

As previously noted, the PPS recognizes the meaningfulness of planning on a *watershed* scale with respect to protecting long-term ecological functions, *bio-diversity* and the linkages between and among features, systems and areas. The *watershed* is an integrated system of human and natural resources that needs to be managed in a holistic and balanced way to achieve a healthy and sustainable environment.

The UTRCA encourages municipalities to take a lead role in preparing comprehensive studies on natural hazard, natural heritage and natural resource features and processes on appropriate management scales. While it is preferred that all land use planning decisions be guided by the findings of comprehensive studies, it is recognized that this is not economically feasible or even practical in many cases. The Authority recommends that comprehensive studies be required to support site specific decision making in those cases where *development* pressure can be anticipated for an area or in those cases where the resource is particularly significant or stressed.

The UTRCA's approach to long range planning gives careful consideration to the *cumulative effects* of human activities on the watershed's resources in order to ensure that they are used wisely and effectively, and are preserved for future generations. This approach balances a wide range of public and private interests that may extend beyond a single *development* site. A precautionary approach is taken in making decisions on *development* which may have a minimal impact on a case by case basis yet cumulatively and incrementally may have an adverse impact on the resources of the watershed.



## 1.4.6 Fees

The UTRCA charges fees for its Environmental Planning Services. The fees are established on a cost recovery basis, and the benefit received by the applicant from specific types of services. The ability to charge fees is set out in Section 21 (m.1) of the Conservation Authorities Act and the fees are administered in accordance with the MNR Policies and Procedures for the Charging of Conservation Authority Fees (MNR, June 1997).

Within the Environmental Planning Service Unit, the UTRCA charges fees for the following three areas of service:

1. Municipal Plan Review
2. Section 28 Review and Approval
3. Inquiries

### 1.4.6.1 Municipal Plan Review Fees

The Planning Act empowers local municipal governments to regulate *development*. As part of this regulatory process, municipalities often call on the technical expertise of conservation authorities. As previously noted, through its Municipal Plan Review Process, Authority Staff provide advice on natural hazard, natural heritage and water quality and quantity matters when commenting on Planning Act applications.

Municipal Plan Review Fees are charged to the *development* proponent. The Municipal Plan Review Fee Schedule is included in Appendix 9.1.1 of this manual. This fee schedule is reviewed on a regular basis to ensure that the revenue generated is comparable to the operating costs to provide the service.

The UTRCA will work with municipalities to:

- develop screening protocols to target applications that need to be forwarded to the Authority for review; and
- to coordinate the collection of fees.

#### **1.4.6.1.1 Application Review Fee Component**

The Application Review Fee component covers the following activities:

- Screening of Planning Act applications to determine if natural hazard, natural heritage, natural resources or servicing mitigation interests may be affected in accordance with the Provincial Policy Statement and the specific Municipal Plan Review policies of the UTRCA;
- Identifying the need for technical reports;
- Recommending conditions of approval and clearing or revising of those conditions; and
- Maintaining a record of the transaction.

### **1.4.6.1.2 Technical Review Fee Component (Peer Review)**

The Technical Review Fee covers the Authority's cost to undertake peer reviews of technical reports submitted by the proponent. Peer review is a process used for evaluating the work performed by other professionals in order to ensure that it meets established criteria. This review is an important aspect of Ontario's land use planning system wherein municipalities are empowered to make decisions on Planning Act applications.

Technical reports are prepared by qualified professionals and characterize existing conditions and/or predict the impacts of land use change. Peer review brings integrity to the planning process by allowing the work submitted by a *development* proponent to be reviewed by another qualified professional. Through this process:

- the applied methodologies and assumptions can be confirmed; and
- the peer reviewer may suggest options or modifications to the technical report. Any suggestion or modification must be considered as a viable option. If the option is to be incorporated into the report or *development*, it must be with the approval of the "design" consultant.

The UTRCA provides peer review services to its watershed municipalities to assist them with fulfilling their responsibilities under the Planning Act. With the broad range of technical expertise on staff, the UTRCA is able to provide peer review services for a number of types of technical reports. In addition to possessing the technical expertise, the UTRCA also has long term monitoring data which is a valuable resource for the peer review process.

When reviewing technical reports in support of land use planning and *development*, the UTRCA will assess the technical report for the following:

- Confirm that it has been prepared by a qualified professional;
- Ensure that accepted technical guidelines, standards, methodologies or procedures have been followed;
- Check that appropriate data was utilized or if other data could have been used and if the information was properly analyzed;
- Check that relevant existing comprehensive studies for the area have been utilized or cross referenced; and
- Determine if the technical conclusions are reasonable and if recommendations for future monitoring are included or are necessary.

### **1.4.6.1.3 Levy Services to Municipalities**

The UTRCA provides the following services to municipalities as a levy service (no application fee required):

1. Input on and review of comprehensive Official Plans and Zoning By-Laws;
2. Maintenance of mapping and data resources;
3. Expert witness support to municipalities for OMB Hearings or other proceedings;
4. Review of municipally sponsored applications such as policy and technical amendments;
5. General inquiries and technical support to municipalities;
6. Development and maintenance of services and technology;
7. Policy *development*;
8. Identify a need for;
  - Storm Water Management Facilities and Studies;
  - Subwatershed Studies;
  - Comprehensive Environmental Impact Studies related to natural heritage features;
  - Studies to assess mitigation measures for applications that may be impacted by flooding or erosion hazards: and
  - Assist in the preparation of the terms of reference for any studies identified above.

Participate in pre-consultation meetings for potential planning applications upon the request of the Municipality.

### **1.4.6.2 Section 28 Review & Approval Fees**

In accordance with the Conservation Authorities Act, the UTRCA regulates *development* within its Regulation Limit as defined in its *Development, Interference with Wetlands and Alteration to Shoreline Regulation*. In reviewing applications and issuing permits within the Regulation Limit, the Authority considers natural hazard, natural heritage and water quantity and quality concerns. The Section 28 Review and Approval Fee Schedule is provided in Appendix 9.1.1 of the manual. It is reviewed on a regular basis to ensure that the revenue generated is comparable to the operating costs to provide the service.

### **1.4.6.3 Inquiry Fees**

The UTRCA is routinely asked to provide property information to landowners and other stakeholders. Telephone requests for information are answered in a professional manner at no cost. Requests for written information require more effort, are more valuable to the recipient and therefore, require additional responsibility and care in preparation. As a result, fees are charged for written inquiries and data requests. The Inquiries Fee Schedule is included in Appendix 9.1.1 of this manual. The fee schedule is reviewed on a regular basis to ensure that the revenue generated is comparable to the operating costs to provide the service.

## 2 ENVIRONMENTAL PLANNING AREAS OF INTEREST

### 2.1 OVERVIEW

This section outlines the goals and objectives as well as the guiding principles for the UTRCA's area of planning interest which include:

- *Natural Hazards*
- Natural Heritage
- Natural Resources
- Servicing & Mitigation
- Integrated Resources & Systems Planning

This framework provides the context for the environmental planning policies which guide the UTRCA's Municipal Plan Review and Permit Processes that are presented in Sections 3 and 4 respectively.

### 2.2 NATURAL HAZARDS

#### 2.2.1 Natural Hazards Planning

Natural hazard planning involves planning for risks associated with naturally occurring processes. These risks include the potential for loss of life, property damage, social disruption as well as environmental impacts.

*Flood plains*, unstable slopes and *erosion* are examples of naturally occurring hazardous processes. Since it is not possible to completely eliminate the threat of *natural hazards*, natural hazard planning is based on a risk management approach. This approach recognizes that there is always a risk associated with natural hazard processes and establishes an appropriate level of risk for society to be exposed too. The minimum standards for acceptable levels of risk to the general public are set by the Province.

The Authority implements natural hazard planning through its Municipal Plan Review and Section 28 Permit processes. Both of these processes consider the following factors:

- The provision of safe or dry *access* for *development*;
- Appropriate *floodproofing* measures;
- The maintenance of channel capacity and channel conveyance functions;
- Changes in *flood* storage characteristics; and
- The potential impacts from *development* or *site alteration* in the immediate area and *cumulative effects* on the system.

Because *natural hazards* extend across wide geographic areas, they should not be addressed on a piecemeal basis. Rather, they need to be considered as contiguous units using a systems management approach.

## 2.2.2 Goals & Objectives for Natural Hazards

The following goals and objectives guide the Authority's decision making for *natural hazards*:

1. To protect life and property from the risks associated with natural hazard processes;
2. To ensure that no new hazards are created by *development* and *site alteration*; and
3. To ensure that no adverse environmental impacts will result from *development* or *site alteration* in natural hazard areas.

## 2.2.3 Guiding Principles for Natural Hazards

In making decisions regarding *natural hazards*, the Authority considers the following guiding principles:

- New *development* will locate and avoid *natural hazards*;
- Existing *development*, limited *infill development* and *re-development* will locate and characterize the *natural hazard(s)* and address it;
- *Development* and *site alteration* for passive public uses will be provided more flexibility because of the public good that may be achieved;
- Recognition that some types of *development* must locate in the *flood plain* (e.g. storm outlets, and bridges);
- *Fragmentation* of *hazard lands* will be avoided;
- In considering the *natural hazards* implications of *development* and *site alteration*, natural heritage and other natural resources implications will also be considered; and
- The potential for *cumulative effects* from individual *development* and *site alteration* projects must be anticipated and in this regard, a precautionary approach will be taken when reviewing proposals.

## 2.2.4 Natural Hazard Features - Overview

As indicated, *natural hazards* are caused by naturally occurring physical and ecological processes which continuously shape and reshape the landscape. These processes pose risks and problems to society when they are not fully understood or effectively dealt with as part of *development* activities. *Hazard lands* in the Upper Thames River *Watershed* include the following main components:

1. Riverine Flood Hazards - *flood plain*
2. Riverine Erosion Hazards – slopes and *meander belt*
3. Watercourses – streams, rivers, creeks, ditches and municipal drains
4. *Wetlands* – includes swamps, marshes, bogs, fens and may contain organic soils

The UTRCA has completed comprehensive mapping of natural *hazard lands* for the *watershed*. The Riverine Flood Hazards, Riverine Erosion Hazards and *Watercourses* make up the *Riverine Hazard Limit*. *Wetlands* are also included as *natural hazards* in recognition of the influence that they have on watershed hydrology and also because they may contain organic soils. The maximum extent of the Riverine Hazards plus the *Wetlands* is considered to be the *hazard lands*.

An allowance of 15 metres has been added to the *Riverine Hazard Limit* for the purpose of maintaining sufficient *access* for emergencies, maintenance, and construction activities. This allowance provides an extra factor of safety, providing protection against unforeseen conditions that may adversely affect the land located adjacent to a natural hazard area. An *Area of Interference* is added to *Wetlands* to recognize that *development* outside of the *wetland* boundary could have an impact on the *wetland* function.

The *Area of Interference* is 120 metres for all *Provincially Significant Wetlands* and *other wetlands* greater than 2 ha. The *Area of Interference* for *wetlands* that are less than 2 ha in size and not *Provincially Significant* is 30 metres.

The *Regulation Limit* is the maximum extent of the following areas:

- *Riverine Hazard Limit*, and
- The 15 metre Allowance, and
- The *Wetland Boundary*, and
- The *Area of Interference* (30 or 120 metres) adjacent to all *wetlands*.

It is recognized that due to the application of standard Allowances and *Areas of Interference*, the *Regulation Limit* includes lands that may not be natural hazards. It must also be recognized that due to the unpredictability of hazard processes and the variable scale of the information used to identify *hazard lands*, that it is possible that the hazard features extend beyond the Allowances and *Areas of Interference* mapped. Through the submission of more detailed information about the specific hazard feature and about the *development* proposal, it is anticipated that a more precise extent of the hazard limit will be determined. More detailed information on the hazard limits is found in Appendix 9.1.7, the UTRCA's Reference Manual – Determination of Regulation Limits, March 2006.

## 2.2.5 Environmental Impact Study (EIS) for Natural Hazard Lands

*Development* or *site alteration* proposed within a natural hazard feature or within the Allowance or *Area of Interference* may be required to be supported by an *Environmental Impact Study* (EIS). The *EIS* will need to:

- Confirm the extent of the natural hazard feature;
- Identify any potential impact of the *development* or *site alteration* on the hazard feature or hazard processes;
- Identify hazard avoidance or hazard mitigation strategies; and
- Integrate natural heritage, natural resource and/or servicing considerations.

The detailed requirements of an *EIS* will depend on the nature of the proposed *development* or *site alteration* or the specific characteristics of the natural hazard feature and the extent of encroachment on the hazard feature. Minor projects may only require a scoped *EIS*. The factors to be considered for a scoped *EIS* include the extent of the encroachment, the potential impact of the use and the sensitivity of the feature. Major projects involving more complex issues, will likely require a comprehensive *EIS*. The Authority strongly encourages pre-consultation on the requirements of the *EIS*.

## 2.2.6 Pre-consultation

Prior to submitting their *development* applications and proposals, applicants should meet with Authority Staff so that any issues and concerns can be identified early on in the planning process. At such time, Staff can advise applicants whether the Authority can support the proposed *development*. There may be site conditions and factors that simply will not allow any *development* to occur.

Through the pre-consultation process staff can also advise on:

- the need for technical studies and supporting information that may be required for the review process; and
- the requirement to obtain a permit under the UTRCA's *Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation*...

Development proponents are also encouraged to pre-consult with municipalities and other approval agencies and where applicable, the pre-consultation should occur as a joint meeting.

## 2.2.7 Specific Natural Hazard Areas

### 2.2.7.1 Riverine Flood Hazards

#### 2.2.7.1.1 *Description of Riverine Flood Hazards*

In the case of riverine flood hazards, the Province has established the minimum *Regulatory Flood* Standard to be the *1:100 Year Flood*. Although the 100 Year (1 % risk of occurrence in any given year) is established as the minimum, Conservation Authorities are encouraged to adopt a *Regulatory Flood* Standard for their area of jurisdiction which is in the 1:250 range (0.4 % risk of occurrence in any given year).

The *Regulatory Flood* Standard for the UTRCA is the 1937 *Observed Flood*. The UTRCA received approval from the Minister of Natural Resources to use this standard in an agreement dated 1989 (See Appendix 9.1.3). As previously indicated, the probability of occurrence of the *Regulatory Flood* is calculated to be approximately 1:250. The flood levels for the *Regulatory Flood* are calculated using mathematical models which consider historical stream flow, precipitation, climate, watershed conditions, *watercourse* and *flood plain* characteristics, and flood control systems across the watershed. These mathematical models include HEC II or HEC RAS Flood Plain Modeling.

The UTRCA considers the threshold for Provincial Interest *flooding* to be a 125 hectare *drainage area*. In this regard, the policies for Riverine Flood Hazards that are discussed in this manual are generally only applied to those cases where the *drainage area* of the *watershed* exceeds 125 hectares. *Flooding* from smaller *drainage areas* is generally considered to be local interest *flooding* and the management of these areas is left to the local municipalities. It should be noted that no minimum *drainage area* is applied to erosion hazards, *watercourse* hazards or *wetlands*.

The UTRCA provides technical assistance to municipalities in dealing with the management of local *flooding* issues. In those cases where the flood flows from a *drainage area* of less than 125 hectares are significant and affect multiple properties, the Authority, in cooperation with the municipality, may apply *flood plain* hazard approaches to those specific *drainage areas*.



### 2.2.7.1.2 Flood Hazard Management Approaches

The Authority implements various approaches for managing flood risk as follows:

1. **One Zone Policy Approach** whereby the *Regulatory Flood Plain* is considered to be one management unit - the *Floodway*. This approach is typically applied in rural areas and unserviced settlement areas. *Development* and *site alteration* in the *Floodway* is generally prohibited or restricted.

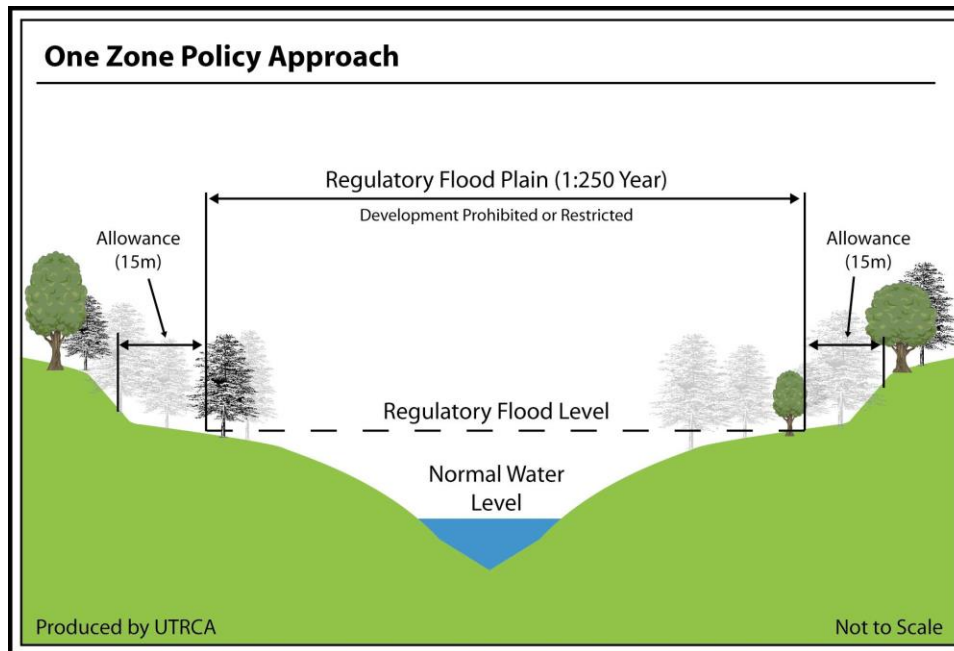


Figure 2-1

2. **Two Zone Policy Approach** is typically applied in serviced urban areas. It separates the *flood plain* into two main components:
  - a) The *Floodway*: The portion of the *flood plain* that is characterized by deeper, faster moving water in a flood event. The *floodway* is the more hazardous part of the *flood plain* and *development* and *site alteration* is generally not permitted.
  - b) The *Flood Fringe*: The portion of the *flood plain* that is characterized by shallower, slower moving water in a flood event. The *flood fringe* is a less hazardous part of the *flood plain* and *development* and *site alteration* may be permitted in this area subject to satisfying specific conditions.

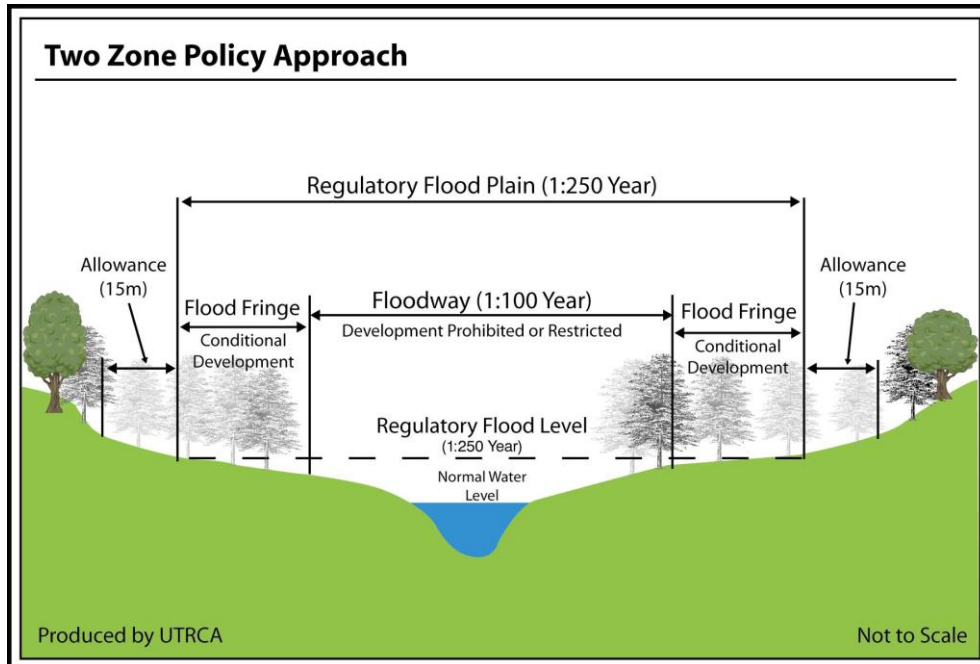


Figure 2-2

3. **Special Policy Areas** are specifically identified areas that are not protected to the minimum provincial standard. The area must be a viable community that feasibly cannot be protected from the risk of *flooding*. Through the implementation of a *Special Policy Area*, the Provincial government may permit certain activities that do not meet the minimum Provincial standards. Special Policy Areas must be supported by the Municipality and the Conservation Authority and must be approved by the Ministers of Natural Resources and Municipal Affairs and Housing. Specific policies and considerations that may be established for a *Special Policy Area* include:

- no basements, *floodproofing* to the maximum
- no new severances - no new lots
- no intensification of use
- preference for residential conversion to commercial type uses
- no day cares, hospitals, nursing homes etc.

### **2.2.7.1.3 Riverine Flood Hazards – Determination of Limits**

The following requirements are used to identify the limits of riverine flood hazard areas:

1. *Regulatory Flood Plain* – its limit must be delineated to the satisfaction of the UTRCA. The preferred method of delineation is based on detailed *flood plain* mapping calculations which incorporates site specific elevation data and catchment specific flow data and variables. In cases where detailed *flood plain* mapping is not available, the UTRCA reserves the right to require a proponent to determine the *flood plain* limits using a method that is acceptable to the UTRCA.

Detailed *flood plain* mapping has been completed for many areas of the Upper Thames River *watershed*. The mapping is generally available for urban areas, main branches of the watercourses and local areas where specific studies have been provided. For the remainder of the *watershed*, the UTRCA has prepared estimated flood lines in accordance with the methodologies documented in the *Determination of Regulation Limits*, UTRCA, March 2006 (Appendix 9.1.7). The estimated flood lines are to be used at a broad planning level and depending on the type of *development* or *site alteration* proposed, the Authority may require a detailed *flood plain* calculation to be undertaken.

2. The *Floodway* – In those limited cases where a *Two Zone Policy Approach* is applied, the extent of the *floodway* may be determined using one of the following methods:
  - a) The land below the 1:100 Year *Flood Plain* elevation
  - b) A detailed hydraulic *floodway* analysis for a logical reach of the subject watercourse
3. *Special Policy Areas* – In those limited cases where a *Special Policy Area* is applicable, the limits of the *Special Policy Area* and policies must be supported by the UTRCA and must be approved by the Municipality, the Ministry of Natural Resources and the Ministry of Municipal Affairs and Housing. In cooperation with the municipality, the UTRCA may identify potential *Special Policy Areas* and implement interim policy requirements for these areas while the formal *Special Policy Area* review and approval process is underway.

### **2.2.7.1.4 Riverine Flood Hazards – Allowance**

A 15 metre Allowance is applied to Riverine Flood Hazards.

## 2.2.7.2 Riverine Erosion Hazards

### 2.2.7.2.1 **Riverine Erosion Hazards - Description**

*Erosion* is a natural process which can pose a risk to life and property and cause social disruption. The natural movement of *watercourses* and valley slopes due to *erosion* can be aggravated by human activities and the impact of the activity can be transferred some distance from the impact site. The risk of *erosion* is managed by planning for the 100 year *erosion rate* (the average annual rate of recession extended over a one hundred year time span). The extent of the riverine erosion hazard limit depends on whether the *erosion* is occurring in an *Apparent System* (e.g. well defined valley system) or whether it is a *not apparent system* (e.g. relatively flat landscape that is not confined or bound by valley walls). In keeping with the hazard avoidance approach of the UTRCA, *development* and *site alteration* is generally not permitted in riverine erosion hazard areas.

### 2.2.7.2.2 **Riverine Erosion Hazards – Determination of Limits**

The UTRCA has prepared mapping which establishes the location of riverine erosion hazards at a planning area level of detail. The UTRCA mapping incorporates detailed *erosion* information for those areas where it is available along with general methodologies that are consistent with Provincial Technical guidelines. More specific information on the mapping of slopes is available in the Determination of *Regulation Limits*, UTRCA, March 2006 (Appendix 9.1.7). The UTRCA reserves the right to require a detailed assessment of riverine erosion hazards as a prerequisite for reviewing any *development* or *site alteration* proposal and any such assessment must be undertaken with regard for Provincial Technical guidelines and follow accepted engineering practices to the satisfaction of the UTRCA.

1. The Riverine Erosion Hazard Limit for *Apparent Systems* is comprised of the combined effect of the following:
  - a) *Valley Top of Slope* – In cases where valley slopes are found to be at a stable angle, and not subject to the potential influence of toe erosion, the *Valley Top of Slope* is the riverine erosion hazard limit. The *Valley Top of Slope* is located at the break in slope point between the valley side slope and the tableland.
  - b) *Toe Erosion Allowance* – In cases where there is a potential for erosion at the toe of the slope from natural processes, the riverine erosion hazard limit needs to be shifted to account for the influence of toe erosion.
  - c) *Stable Slope Allowance* – In cases where a slope is steeper than its determined stable angle of repose, the riverine erosion hazard limit needs to be shifted to account for slope movement over time. In the absence of detailed geotechnical information about the slope, the *stable slope* allowance is based on an assumed *stable slope* gradient of 3 horizontal units to 1 vertical unit (3:1). For slopes having a steeper gradient, the allowance is equal to the distance between the

actual *valley top of slope* and the point at which a slope at a 3:1 gradient, rising from the same toe position, would intersect the ground surface.

- d) *Erosion Access Allowance* – a six metre allowance added to the *Valley Top of Slope* or the combined *Toe Erosion and Stable Slope Allowances*. The *erosion access allowance* is required for the purpose of maintaining sufficient access for emergencies, maintenance, and construction activities.

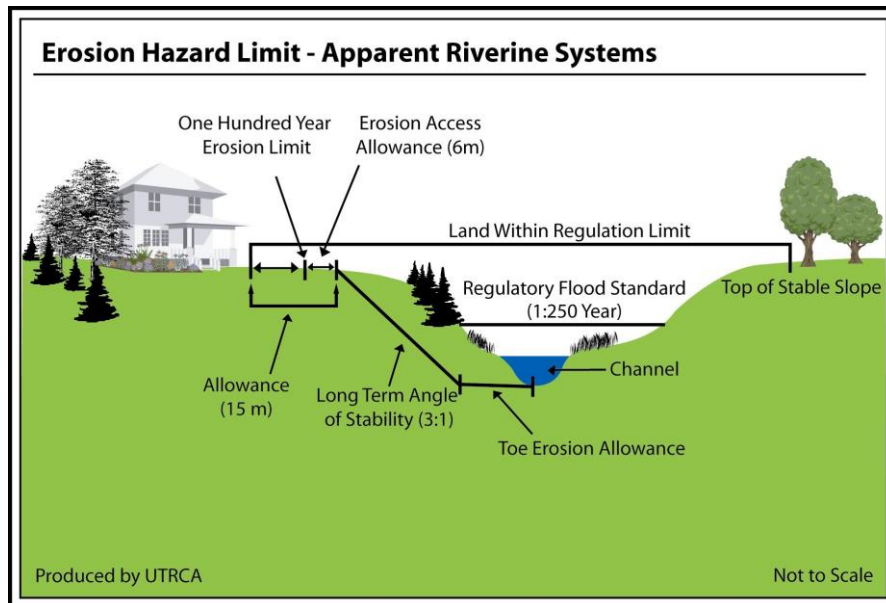


Figure 2-3

2. The Riverine Erosion Hazard Limit for *Not Apparent Systems* is the combined limit of:
- The *Meander Belt Allowance* which provides a limit to *development* within those areas where the river system is likely to shift. It is based on twenty (20) times the bankfull channel width.
  - The *Erosion Access Allowance* – a six metre allowance added to the *Valley Top of Slope* or the combined *Toe Erosion and Stable Slope Allowances*. The *erosion access allowance* is required for the purpose of maintaining sufficient access for emergencies, maintenance, and construction activities.

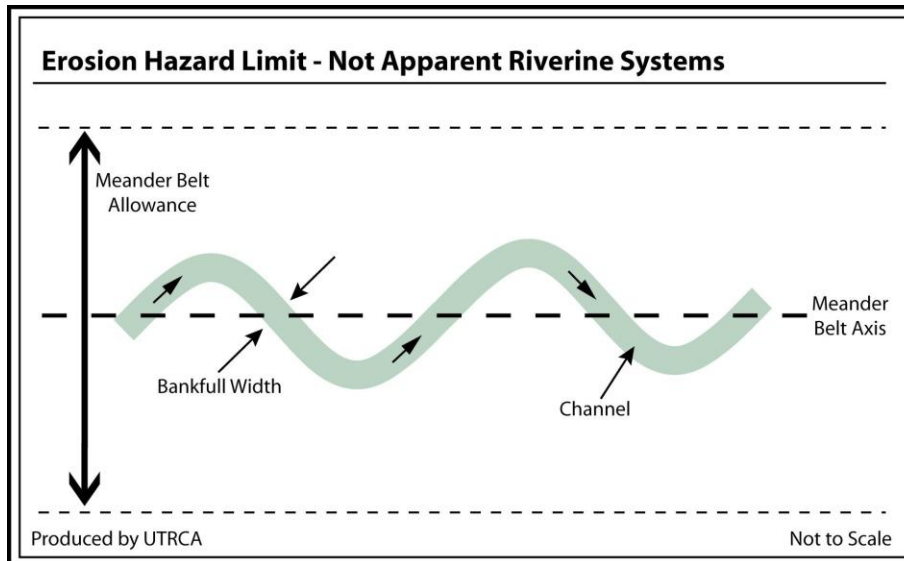


Figure 2-4

### 2.2.7.2.3 Riverine Erosion Hazard Allowance

A 15 metre Allowance is applied to Riverine Erosion Hazards.

## 2.2.7.3 Watercourses

### 2.2.7.3.1 Watercourses - Description

In accordance with Section 28(25) of the Conservation Authorities Act, a “watercourse” means an identifiable depression in the ground in which a flow of water regularly or continuously occurs. This may include rivers, stream creeks, ditches and municipal drains. Watercourses may be natural or they may be man made as is the case with open municipal drains. Watercourses play a critical role in the drainage of the landscape and any interference with a watercourse could have significant implications for *flooding* and *erosion* at the site of interference and for some distance upstream and downstream.

### 2.2.7.3.2 Watercourses – Determination of Limits

The UTRCA mapping of the *Regulation Limit* shows the location of watercourses at a planning area level of detail. Site specific information on the exact location and characteristics of a watercourse may be required as a prerequisite in reviewing any proposed *development* or *site alteration* in close proximity to a *watercourse*. The UTRCA considers open man-made channels and municipal or private drains to be watercourses.

### **2.2.7.3.3 Watercourses – Allowance**

A 15 metre Allowance is applied on both sides of all watercourses.

## **2.2.7.4 Wetlands**

### **2.2.7.4.1 Wetlands - Description**

*Wetlands* are addressed in the *natural hazards* and natural heritage sections of this manual. The specific definition for *Wetlands* is provided in the glossary. From a *natural hazard* perspective, the following functions and characteristics of *wetlands* are considered:

- flood storage, flood level and flow augmentation
- source area
- recharge area
- potential standing water or for the presence of organic soils (peat and muck)

Filling or draining can have an impact on the hydrologic functions of a *wetland* which in turn, may influence the *flooding* and *erosion* processes in the area. While it may be argued that the impact of *wetland* draining or filling in local areas is difficult to quantify, it is certain that the incremental impact of widespread *wetland* interference can have a significant impact on downstream hydrology.

### **2.2.7.4.2 Wetlands – Determination of Limits**

The UTRCA has identified *wetland* areas in the *Regulation Limit* mapping. Identified *wetland* areas include those areas which were evaluated using the Ontario Wetland Evaluation System, 3<sup>RD</sup> Edition (MNR, 1994) and unevaluated *wetlands* derived from a combination of information sources. Specifics about the mapping methodologies can be found in the Authority's Determination of Regulation Limits, UTRCA, March, 2006 (Appendix 9.1.7).

The UTRCA reserves the right to require the proponent to submit a detailed *wetland* boundary determination consistent with the Ontario Wetland Evaluation System, 3<sup>RD</sup> Edition (MNR, 1994) or other methodology acceptable to the UTRCA. It is noted that the revision of a *wetland* boundary may require the approval of the MNR.

### **2.2.7.4.3 Wetlands – Area of Interference**

*Wetlands* can be impacted by *development* and *site alteration* that is located outside of the wetland boundary. To address this concern, an *Area of Interference* is established around all *wetlands* in order to identify those lands which if developed could potentially have a negative impact on the *wetland*. The width of the actual *Area of Interference* will differ for each situation because it is based on a site by site assessment having regard for both the characteristics of the *wetland* and for the specifics of the proposed *development* or *site alteration*.

Consistent with the Provincial standards, and to ensure *wetland* protection, a standard *Area of Interference* has been applied to mapping of *wetlands* at a planning level. The *Area of Interference* for all *Provincially Significant Wetlands* and all *other wetlands* greater than 2 hectares is 120 metres. An *Area of Interference* of 30 metres is applied to all mapped *wetlands* that are less than 2 hectares in size and not *Provincially Significant*.

The term *Area of Interference* of a *wetland* is a term that applies to planning for *wetlands* as natural hazards. *Adjacent Lands* are identified around *wetlands* for natural heritage purposes. It should be noted that the extent of *adjacent lands* is not always consistent with the extent of *Area of Interference*.

## **2.3 NATURAL HERITAGE**

### **2.3.1 Natural Heritage Planning**

Planning for natural heritage resources involves making decisions for the plant and animal communities that are found on the landscape. All natural heritage planning is based on the underlying principle that *biodiversity* which includes both the number of species and the generic diversity within species is the key indicator of *ecosystem* health. In terms of land use management for natural heritage, decisions are often based on maintaining and enhancing the *biodiversity* of vegetative *habitat* so that it can support a diversity of animal populations. Natural heritage resources include *wetlands*, *woodlands*, threatened and *endangered species* (and their *habitat*), *Wildlife* (and their *habitat*) and fish (and their *habitat*).

### **2.3.2 Goals & Objectives**

1. To protect *natural heritage features* and systems from the potentially negative impacts of *development* and *site alteration*.
2. To maintain, restore and enhance the bio-diversity, ecological function and connectivity of *natural heritage features* and systems in the *watershed*.



### 2.3.3 Guiding Principles

- Decisions for natural heritage will be guided by an integrated systems approach;
- *Development* and *site alteration* will maintain or enhance natural heritage resources;
- The potential for *cumulative effects* from individual *development* and *site alteration* must be anticipated and in this regard, a precautionary approach is taken when reviewing proposals.

### 2.3.4 Natural Heritage Features Overview

*Wetlands, woodlands, prairies, shrub lands, thicket, valleylands, oil fields* and *watercourses* are *natural heritage features* which provide *habitat* for wildlife and contribute to our well being by providing opportunities for recreation, leisure and nature appreciation. These features are interrelated within the *ecosystem* and as a result, alterations to one feature likely will impact another.

The preferred approach for defining the limits or boundaries of *natural heritage features* is through local science based studies such as The Middlesex Natural Heritage Study. However, in the absence of a local comprehensive assessment and locally determined criteria, the Authority shall rely on the most current provincial Natural Heritage Training Manual and any updates thereto as well as information that is available from the Natural Heritage Information Centre or NHIC.

### 2.3.5 Environmental Impact Study (EIS) for Natural Heritage

*Development* or *site alteration* proposed within a natural heritage feature or within the *adjacent lands* needs to be supported by an *Environmental Impact Study (EIS)*. The *EIS* must:

- Confirm the extent of the natural heritage feature and the relationship of the specific feature to other features in the area;
- Confirm the significance of the feature;
- Identify any potential impact of the *development* or *site alteration* on the natural heritage feature or natural heritage functions;
- Identify avoidance and mitigation strategies; and
- Integrate natural hazard, natural resource and/or servicing considerations

The detailed requirements of an *EIS* will depend on the proposed *development* or *site alteration* or the specific characteristics of the natural heritage feature and the extent of encroachment on the feature. Minor projects may only require a scoped *EIS*. The factors to be considered for a scoped *EIS* include the extent of the encroachment, the potential impact of the use and the sensitivity of the feature. Major projects involving

more complex issues, will likely require a comprehensive *EIS*. Pre-consultation on the requirements of the *EIS* is strongly encouraged.

A description of the *watershed's natural heritage features*, including how their boundaries or limits are defined is provided. It is noted that it is difficult to draw boundaries around natural features because they are dynamic and always in a state of transition.

### **2.3.6 Pre-consultation**

Applicants are should meet with Authority Staff prior to submitting their *development* applications and proposals so that any issues and concerns can be identified early on. At such time, Staff can advise applicants whether the Authority can even support the proposed *development*. There may be site conditions and factors that simply will not allow any *development* to occur.

Through the pre-consultation process staff can also advise on:

- The need for technical studies and supporting information that may be required for the review process; and
- the requirement to obtain a permit under the UTRCA's *Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation*.

### **2.3.7 Natural Heritage Features**

#### **2.3.7.1 Wetlands**

##### **2.3.7.1.1 *Wetlands - Description***

*Wetlands* are addressed in both the *natural hazards* and natural heritage sections of this manual. *Wetlands* are areas that are seasonally or permanently *flooded* by shallow water, as well as areas where the water table is close to the surface. They are found in both terrestrial and aquatic *ecosystems* and include swamps, marshes, bogs and fens. A definition for *wetlands* is included in the glossary. From a natural heritage perspective, *wetlands* directly provide *habitat* for various species and many species indirectly benefit from the hydrologic functions that *wetlands* provide such as flow augmentation, recharge and discharge.

### **2.3.7.1.2 Wetlands – Determination of Limits**

The UTRCA has identified *wetland* areas in the *Regulation Limit* mapping. The areas identified as *wetland* include areas that have been evaluated using the Ontario Wetland Evaluation System, 3<sup>RD</sup> Edition (MNR, 1994) and unevaluated *wetlands* derived from a combination of information sources. Specifics about the mapping methodologies can be found in the Determination of Regulation Limits, UTRCA, March 2006 (Appendix 9.1.7).

The Ontario Wetland Evaluation System allows for the identification of some *wetlands* as being Provincially *Significant*. All *other wetlands*, whether they have been assessed under the Evaluation System or not, are considered to be of local significance. The UTRCA reserves the right to require the proponent to submit a detailed wetland evaluation consistent with the Ontario Wetland Evaluation System or other methodology acceptable to the UTRCA. It is noted that the revision of any wetland boundary or *wetland* classification may require the approval of the MNR.

### **2.3.7.1.3 Wetlands – Adjacent Lands**

The *adjacent lands* for *Provincially Significant Wetlands* is 120 metres. For all *other wetlands*, the *adjacent lands* is 50 metres.

It is noted that *adjacent lands* is the term applied to the planning for *wetlands* as *natural heritage features* whereas an *Area of Interference* is applied around *wetlands* for Natural Hazard purposes. The extent of *adjacent lands* is not always consistent with the extent of *Area of Interference*.

## **2.3.7.2 Woodlands**

### **2.3.7.2.1 Woodlands - Description**

*Woodlands*, some of which are also *wetlands*, fulfill many functions, including:

- protecting and building the soil (humus layer);
- producing oxygen and taking up pollutants;
- moderating the climate;
- protecting *groundwater*;
- providing *habitat* for game and other wildlife;
- providing products such as fuel wood, timber and maple syrup;
- providing areas for recreation and education;
- contributing to the function and integrity of the ecosystem;
- water absorption during storms; and
- contributing to our natural heritage.

*Woodlands* are treed areas that provide environmental and economic benefits such as *erosion* prevention, water retention, provision of habitat, recreation and the sustainable harvest of woodland products. The *watershed's Woodlands* can range from natural,

native mixed forests to monoculture plantations to canopy trees with manicured lawns below. While natural mixed *woodlands* with fully functional canopy, mid-storey and ground cover vegetation are preferred from an ecological point of view, other types of *woodlands* and individual trees can provide important linkages or complementary *habitat* functions.

#### **2.3.7.2.2 Woodlands – Determination of Limits**

The Authority prefers that woodland significance be determined as part of a comprehensive study of the natural heritage system for the planning area. In the absence of such a study, the following factors from the MNR Natural Heritage Technical Manual are considered:

- Size;
- Shape;
- Proximity to other *woodlands* or *natural heritage features*;
- Linkage functions;
- Uncommon characteristics; and
- Diversity and management value.

The specific requirement for each of the factors will depend on the general characteristics of the natural heritage found in the planning area. *Woodlands* that meet one or more factors are considered to be significant in the planning area.

#### **2.3.7.2.3 Woodlands – Adjacent Lands**

The *adjacent lands* for *woodlands* is 50 metres.

### **2.3.7.3 Valleylands**

#### **2.3.7.3.1 Valleylands - Description**

*Valleylands* are linear systems that provide important linkages between different *habitat* features. *Valleylands* are often associated with riverine flood or erosion hazard areas. All *valleylands* are considered to be *significant*.

#### **2.3.7.3.2 Valleylands – Determination of Limits**

The minimum limit of the *valleyland* is determined by the methodology used to map the Riverine Erosion Hazard Limit for *Apparent Systems* as described in Section 2.2.7.2.2 of this manual. The *valleyland* limit may be expanded to include connecting areas such as *not apparent systems* to make the *valleyland* continuous. Contiguous natural heritage areas which extend out of the valley may also be considered for addition to the *valleyland system*.

### **2.3.7.3.3 Valleylands – Adjacent Lands**

The *adjacent lands* for all *valleylands* is 50 metres.

### **2.3.7.4 Wildlife Habitat**

#### **2.3.7.4.1 Wildlife Habitat - Description**

A considerable amount of *wildlife habitat* has been degraded or lost in the Upper Thames *watershed*. Much of this loss is attributed to the *fragmentation* of wooded areas due to urban *development* and the clearing of land for agricultural production. *Wetland*, prairie, savannah and mature hedge rows have also been lost. The provision of *habitat* is a primary ecological function of *natural heritage features and areas*. Ultimately, the loss of habit will lead to the loss of the species that rely on these features.

#### **2.3.7.4.2 Wildlife Habitat – Determination of Limits**

The Authority prefers that *wildlife habitat* significance be determined as part of a comprehensive study of the natural heritage system for the planning area. In the absence of such of a comprehensive study, the following factors are considered when evaluating *wildlife habitat*.

- Seasonal concentrations of animals;
- Rare vegetation communities and/or specialized *habitats* for wildlife; and
- Wildlife movement corridors.

Authority staff will rely on the *Significant Wildlife Habitat Technical Guide* (MNR, 2000) to determine the limits of *wildlife habitat*.

#### **2.3.7.4.3 Wildlife Habitat – Adjacent Lands**

The *adjacent lands* for *wildlife habitat* is 50 metres.

### 2.3.7.5 Habitat of Endangered, Threatened, Species of Special Concern & Locally Rare Species

#### **2.3.7.5.1 Habitat of Endangered, Threatened, Species of Special Concern & Locally Rare Species - Description**

Any plant or animal which is threatened by, or vulnerable to, extinction is considered to be a species at risk. In the absence of Authority listings for *endangered and threatened species*, Authority Staff shall consult with the Ontario Ministry of Natural resources list of Species at Risk in the province [www.ontarioparks.com/english/sar.html](http://www.ontarioparks.com/english/sar.html) and the Federal list of Species at Risk in Ontario.

The natural areas in the *watershed* play an important role in preserving the province's and the country's *endangered species, threatened species, species of special concern* as well as locally rare species. The loss of habitat is a major factor that influences the survival of species. Increased pressures from urban and rural land uses and human activities are impacting the habitat of flora and fauna in the Upper Thames River *watershed*. An [Ecosystem Recovery Plan](#) has been initiated for the Thames River and pertinent findings of the Ecosystem Recovery Plan will be incorporated into this policy manual as they become available.

#### **2.3.7.5.2 Habitat of Endangered, Threatened, Species of Special Concern & Locally Rare Species – Determination of Limits**

The extent and location of the habitat of species at risk may be identified through local comprehensive natural heritage studies, site specific inventories and/ or an EIS. These habitat evaluations are then reviewed and approved by the Ministry of Natural Resources. General information on the location of Species at Risk may also be available from the MNR Natural Heritage Resource Information Centre.

#### **2.3.7.5.3 Habitat of Endangered, Threatened, Species of Special Concern & Locally Rare Species – Adjacent Lands**

The *adjacent lands* for the habitat of endangered, threatened, species of *special concern* and locally rare species is 50 metres. It is possible that the size of the *adjacent lands* may be increased based on the significance and/or necessity of the species on a case by case basis.

## 2.3.7.6 Aquatic Ecosystem Habitat & Fish Habitat

### **2.3.7.6.1 Aquatic Ecosystem Habitat & Fish Habitat - Description**

The aquatic ecosystem of the Thames River and its tributaries refers to connected *watercourses* (streams, rivers, creeks, ditches, swales and municipal drains), *waterbodies* (lakes and ponds), and *wetlands*. These features provide habitat for all life stages for aquatic species, and specific life stages for semi-aquatic species. Included are corridors for movement, food for sustenance, cover for protection, and habitat for reproduction and the raising of young. Fish Habitat includes the spawning grounds and nursery, food supply and migration areas which fish rely on to live.

Over the last century, human activities in the *watershed* have impacted the surface water quality of the Thames River. Some of the *pollution* sources that are impacting the water quality in the *watershed* include improper sewage treatment plant discharges, industrial discharges as well as urban and agricultural runoff. Land use and the application of *best management practices* largely influence water quality parameters such as temperatures, chemical composition and pollutants, and nutrient and sediment loads. While great strides have been made to improve the surface water quality in the *watershed*, much work is still needed.

There is a variety of federal and provincial legislation that addresses the components of the aquatic *ecosystems* that Authority Staff have regard for when evaluating *development* applications. Through its Watershed Report Cards which are updated every 5 years, Authority Staff continue to study and monitor water quality and make recommendations regarding the protection of surface water. The Authority is also involved with a province-wide initiative for *Source Water Protection* planning which will include an evaluation of surface water sources.

### **2.3.7.6.2 Aquatic Ecosystem Habitat & Fish Habitat - Determination of Limits**

The criteria to identify aquatic ecosystem habitat and their locations is determined by local comprehensive studies.

### **2.3.7.6.3 Aquatic Ecosystem Habitat & Fish Habitat – Adjacent Lands**

The *adjacent lands* for *fish habitat* is located within 30 metres of the habitat. It is possible that the size of the *adjacent lands* may be increased based on the significance and/or necessity of the species on a case by case basis.

### 2.3.7.7 Areas of Natural & Scientific Interest (Life Science)

#### **2.3.7.7.1 Areas of Natural & Scientific Interest (Life Science) - Description**

*Areas of Natural and Scientific Interest (ANSIs)* include lands and water that have natural features or landscapes containing life or earth science values that should be protected for science and education purposes. *ANSIs* have an important role in the protection of natural heritage because they represent the full range of biological communities, environments and natural landforms in the province. In terms of natural heritage planning, the UTRCA focuses on Life Science *ANSIs*.

Life science *ANSIs* may include forests, valleys, prairies and *wetlands* including their native plants, animals and supporting environments. They tend to correspond with other *significant* features like *wetlands*, *woodlands* and *valleylands*. The MNR is responsible for determining if a life science *ANSI* is considered to be *significant*.

#### **2.3.7.7.2 Areas of Natural & Scientific Interest (Life Science) – Determination of Limits**

The limits of Life Science *ANSI*'s are determined by the MNR.

#### **2.3.7.7.3 Areas of Natural & Scientific Interest (Life Science) – Adjacent Lands**

The *adjacent lands* for Life Science *ANSIs* is 50 metres.

## 2.4 NATURAL RESOURCES

### 2.4.1 Natural Resource Planning

An integrated approach is needed when evaluating the *watershed's* natural resources which include *groundwater*, aggregates and agricultural lands. These resources are all connected to the hydrologic cycle and therefore have an impact on the water quality and quantity in the *watershed* as well as the entire *ecosystems*.

### 2.4.2 Goals & Objectives

1. To ensure that the natural resources of the *watershed* are protected over the long term.



### 2.4.3 Guiding Principles

- The Authority encourages and promotes the conservation and wise management of natural resources in its efforts to protect the environmental quality of the *watershed* over the long term.

### 2.4.4 Natural Resources in the Watershed

#### 2.4.4.1 Groundwater

Across Ontario, increasing demands for safe drinking water and requirements to maintain healthy *ecosystems* are leading to renewed interest in water management. The UTRCA requires scientific assessments of the potential for *groundwater* resources to become contaminated from anthropogenic, as well as natural sources of contamination. Trade offs must be carefully considered among the competing influences of study cost, scientific defensibility and the amount of acceptable uncertainty.

Within the *watershed*, *groundwater* is the sole source of drinking water for many urban communities and virtually all rural residents. It is also an essential part of the *ecosystem* because of its strong linkages with streams, rivers and lakes. *Groundwater* comprises the major portion of stream/river flow during summer low flow conditions. There are several factors that can impact *groundwater* quality including nutrient contamination from livestock, industrial impacts and private septic systems to name a few.

A more thorough understanding of groundwater recharge areas, the susceptibility of *groundwater* to contamination and a strategy to ensure a safe and secure water resource for the future is needed. These issues and concerns will be addressed through *Source Water Protection* Planning which as previously noted, is a province-wide initiative that the Upper Thames River Conservation Authority is participating in. It is anticipated that the process will lead to the preparation of strategies to protect drinking water from the source to the tap. Protecting water at the source is the first barrier in a multi-barrier approach in protecting surface and groundwater resources.

#### 2.4.4.2 Aggregate Resources

Aggregate is a non-renewable resource that must be managed effectively. It includes any material prescribed under the Aggregate Resources Act such as sand, gravel, clay and bedrock as well as stone used in cement, lime or clay bricks or tiles. There are a number of areas within the Upper Thames River *watershed* that are endowed with substantial aggregate resources. These resources play an important part of aggregate production in Southwestern Ontario as well as in local economies.

Aggregates deposits are a key element of the *watershed's* hydrologic cycle as they provide *groundwater* recharge and discharge zones.

### 2.4.4.3 Agricultural Lands

As previously noted, agriculture is the predominant land use in the Upper Thames *watershed*. Surface water and *groundwater* quality may be impacted by farm practices and agricultural run off which may contain livestock manure, pesticides, fertilizers and milkhouse wastewater. Municipal drains are a common feature across the agricultural landscape and also can have an impact on the hydrologic cycle.

## 2.5 SERVICING & MITIGATION

### 2.5.1 Planning for Services

Land *development* typically involves a change in land use which requires the implementation of municipal services such as stormwater management facilities, road construction, and sanitary sewers. The installation of these services can considerably alter the natural drainage patterns of the landscape and can have serious negative impacts on the hydrologic cycle and the *ecosystem*.

The Authority's review of *development* proposals and proposed servicing strategies prior to construction ensures that the natural hazard, natural heritage, and natural resource components are not negatively impacted. This review includes any permanent alteration to local drainage patterns and considers the capacity of the *watercourse* and its physical and natural characteristics. It also includes any temporary or permanent facilities which are to be constructed and maintained to reduce sediment loss by *erosion*.

### 2.5.2 Goals & Objectives

1. To effectively mitigate the impacts of land *development* and servicing.
2. To protect the *watershed* from potentially harmful impacts associated with land *development* and the installation of services including roads, sewers and stormwater management facilities.

### 2.5.3 Guiding Principles

- The Authority supports the preparation of Watershed and Subwatershed Management Plans which provide a comprehensive systems approach for assessing and addressing the impacts of services within a defined planning area or community on *natural hazards*, *natural heritage features* and natural resources. These Plans should logically be undertaken at a catchment or collection of catchments level.
- Some adjustment may be required in the preparation of watershed and subwatershed management plans to recognize those areas where urban expansions or community planning areas may not logically follow catchments.
- Natural designs for stormwater management are supported.

## 2.6 INTEGRATED RESOURCES & SYSTEMS PLANNING

The *watershed* is an integrated system of human and natural resources and processes that need to be managed in a holistic and balanced way in order to achieve a healthy sustainable *ecosystem*. The policies contained in this Manual support the UTRCA's integrated, comprehensive and long-term approach to planning and recognize and respect the linkages among the *watershed's* resources and systems. The policies also have regard for the potential for *cumulative effects* of the decisions that are made through the Authority's planning advisory and regulatory services.

The Authority's approach to integrated resources planning is consistent with the direction provided by the PPS which recognizes the linkages between the policies for natural hazard, natural heritage and natural resource features and advocates the *watershed* as the "ecologically meaningful scale" for planning. Keeping this in mind, all of the policies in the manual should be considered when reviewing *development* proposals.

### 2.6.1 Goals & Objectives

1. To protect and enhance the resources and processes and their linkages which are needed to achieve a healthy *ecosystem*.
2. To consider the potential impact of decisions on all of the components and features that together form the integrated *watershed* system including *natural hazards*, natural heritage, natural resources and servicing.

### 2.6.2 Guiding Principles

- The Authority advocates an integrated approach to planning and managing the *natural hazards*, *natural heritage features* and systems, natural resources and servicing within the *watershed*.
- The Authority supports that decisions be guided by comprehensive studies of natural hazard, natural heritage and natural resource features and processes on appropriate management scales.
- The potential for cumulative impacts must always be considered and even in cases where the impact is considered to be minor, a precautionary approach needs to be taken.

## 3 MUNICIPAL PLAN REVIEW

### 3.1 OVERVIEW

The following policies are designed to assist UTRCA staff with providing their input on comprehensive planning documents such as Official Plans and Area Studies as well as with their review of Planning Act applications. These policies must be read in conjunction with the information provided in Section 2. Consistent with the format established in Section 2, the policies are presented in the following order:

1. Natural Hazards
2. Natural Heritage
3. Natural Resources
4. Servicing & Mitigation
5. Integrated Systems Planning

### 3.2 NATURAL HAZARDS

#### 3.2.1 Overview

The Authority's Municipal Plan Review policies for *natural hazards* have been organized under the following main headings:

1. General Policies for *Natural Hazards* – applies to all hazard types and *allowances*.
2. Riverine Flooding Hazards – applies to the *flood plain* and its components including the *floodway*, the *flood fringe* and *special policy areas* and *allowances*.
3. Riverine Erosion Hazards – applies to steep slopes, *valleylands*, ravines, the *meander belt* and *allowances*.
4. *Wetlands* – applies to all wetlands (including ponds and organic soils such as peat or muck) and the areas of interference surrounding *wetlands*.

#### 3.2.2 General Natural Hazard Policies

1. New *development* and *site alteration* generally will be directed away from *hazard lands*.
2. Any *development* and *site alteration* which is permitted in *hazard lands* must meet the following conditions to the satisfaction of the UTRCA:
  - a) Appropriate *floodproofing* measures, *protection works* and safe or dry *access* during times of *flooding*, *erosion* and other emergencies are provided;
  - b) No new hazards will be created and existing hazards will not be aggravated;

- c) No adverse environmental impact will result.
3. *Development* will not be permitted to locate in *hazard lands* where the use is:
    - a) an institutional use associated with hospitals, nursing homes, pre-school, school nurseries, day care and schools, where there is a threat to the safe evacuation of the sick, the elderly, persons with disabilities or the young during emergency as a result of *flooding*, failure of *floodproofing* measures or *protection works*;
    - b) an essential emergency service such as that provided by fire, police and ambulance stations and electrical substations, which would be impaired during an emergency as a result of *flooding*, the failure of *floodproofing* measures and or *protection works*; and
    - c) uses associated with the disposal, manufacture, treatment or storage of *hazardous substances*
  4. The Authority may require the submission of an Environmental Impact Study (EIS) to assist with the characterization of a natural hazard feature. An EIS prepared for this purpose must integrate any relevant natural heritage or natural resource features or processes.
  5. The Authority does not support the *fragmentation* of *hazard lands* through lot creation. It is recognized that it is not practical to avoid *fragmentation* in all cases. Exceptions to this policy may include, but are not limited to the following:
    - a) Large agricultural parcels of sufficient size to accommodate a farming operation;
    - b) The remaining *hazard lands* would be inaccessible for practical management due to division by a watercourse or slope;
    - c) The *hazard lands* are *flood fringe* and are being planned for incorporation into the development.

### 3.2.3 Riverine Flooding Hazard Policies

1. In cases where detailed *flood plain* mapping is not available, the Authority may require that the *Regulatory Flood Plain* be mapped as part of an *EIS*, prepared by a qualified professional, to the satisfaction of the UTRCA.
2. Uses which may be established in the *flood plain*, subject to satisfying UTRCA Permit requirements, include:
  - a) open space/recreation uses, including golf courses and playing fields, which do not require permanent structures or any major alteration of the landscape;
  - b) uses which by their nature must locate within the *floodway*, such as flood and erosion control works, outlets, fish habitat improvements. See *restricted uses* in the Glossary.
  - c) *accessory buildings*;
  - d) non-structural uses such as forestry, wildlife management, gardens, nurseries and arboretums; and
  - e) *replacement structures* or *minor works*.

3. The Authority, in cooperation with watershed municipalities, implements a *One Zone Policy Approach* for rural areas and un-serviced settlement areas. Where this approach is applied, the entire flood plain is considered to be *floodway*.
4. The Authority, in cooperation with watershed municipalities, may apply a *Two Zone Policy Approach* in serviced settlement areas. In areas where the Two Zone Policy Approach is applied, the *flood plain* consists of a *Floodway* area and a *Flood Fringe* area. Any extension of the Two Zone Policy Approach beyond serviced settlement areas must be approved by the Authority and must be supported by the municipality.
5. In very unique situations, the Province may identify specific areas as *Special Policy Areas*.

### 3.2.3.1 Floodway Policies

1. *Floodway* policies apply to all land within the *Regulatory Flood Plain* except for specifically identified *flood fringe* areas and specifically identified *Special Policy Areas*.
2. *Development* and *site alteration* is generally prohibited within the *floodway* of any *watercourse* regardless of whether the area of inundation contains high points of land not subject to *flooding*.
3. Parking is considered to be a component of *development*. The expansion of parking in a *floodway* to service new *development* that is not located in the *floodway* is not permitted. Parking must be located in the same zone as the use (e.g. parking for a residential use must be zoned residential).
4. For new *development*, vehicular and pedestrian access must be dry (at or above the Regulatory Flood Elevation).
5. For existing legal non-conforming uses, the Authority will encourage improvements to parking, *access* and *floodproofing*.
6. Where a *development* proposal which contains *flood plain* lands is submitted in a municipality that has a *flood plain* assembly scheme, the Authority shall recommend that those lands be dedicated to the Authority and/or the municipality.

### 3.2.3.2 Flood Fringe Policies

1. *Flood fringe* policies are applied in those specific cases where a Two Zone Policy Approach is implemented.
2. *Development and site alteration* is permitted in *flood fringe* areas subject to satisfying the Authority's *floodproofing* requirements. These requirements are implemented through the Section 28 Permit process.
3. Parking for existing, *infill* and re-development as a minimum must be provided at the 1:100 Year Flood elevation and this elevation must be within 0.3 metres of the *Regulatory Flood Elevation*.
4. Parking for new *development* must be at the *Regulatory Flood Elevation*.
5. For new *development*, vehicular and pedestrian *access* must be dry (at or above the Regulatory Flood Elevation).
6. For *infill development* and re-development, vehicular and pedestrian *access* must be safe, within 0.3 metres of the Regulatory Flood Elevation or determined using the *Technical Guide - River & Stream Systems: Flooding Hazard Limit* (OMNR and Watershed Science Centre, 2002).

### 3.2.3.3 Special Policy Areas

1. The following *Special Policy Areas* have been approved by the Province:

- St. Marys SPA, Town of St. Marys
- Coves SPA, City of London

*Development* in these areas will be consistent with the specifically approved SPA policies.

2. Potential *Special Policy Areas* which are currently under consideration for the City of London include;
  - West London
  - Ada Street.
3. The following interim policies are applied in the potential *Special Policy Areas*:
  - a) Intensification of use, either through the creation of lots or through zoning, is not permitted;
  - b) New basements are not permitted;
  - c) The conversion of non-residential use to residential is not permitted. Conversion of residential uses to commercial uses is encouraged;
  - d) Specific construction requirements, including maximizing flood proofing, are implemented through the Section 28 Permit process.

### 3.2.4 Riverine Erosion Hazard Policies

1. Where *development* or *site alteration* is proposed within the limit of the riverine erosion hazard or an *allowance* from the riverine erosion hazard, the Authority may require that the erosion hazard be mapped as part of an *EIS*, prepared by a qualified professional.
2. *Development* and *site alteration* is generally not permitted in *meander belt* areas or on the face of steep slopes, ravines and distinct valley walls.
3. The establishment of the limit of the *hazard land* and safe setbacks must be based on the natural state of the slope, and not through re-grading or the use of structures or devices to stabilize the slope.
4. For new development adjacent to riverine erosion hazards, the development limit will be:
  - a) For the meander belt: the meander belt limit plus an *erosion access allowance* of 6 metres;
  - b) For *stable slopes* with no toe erosion: the top of slope plus an *erosion access allowance* of 6 metres
  - c) For *stable slopes* with toe erosion: the top of slope plus an allowance for toe erosion plus an *erosion access allowance* of 6 metres
  - d) For unstable slopes with no toe erosion: the point where the calculated stable angle of repose intersects the table land plus an *erosion access allowance of 6 metres*;
  - e) For unstable slopes with toe erosion: the point where the calculated stable angle of repose intersects the table land plus a *Toe Erosion Allowance* plus an *erosion access allowance of 6 metres*.
5. Subject to Section 28 Permit requirements, erosion and sediment control structures and other associated structures may be permitted within the riverine erosion hazard limit.

### 3.2.5 Watercourse Policies

1. The conversion of open surface *watercourses* and open drains to closed surface drains is generally discouraged.
2. Subject to satisfying UTRCA and other agency requirements, alterations to watercourses may be permitted provided:
  - a) Stream flow is not impeded;
  - b) Flood conveyance and flood control are not compromised;
  - c) Erosion processes are not aggravated and transferred to other areas; and
  - d) The alteration addresses other natural hazard, natural heritage and natural resource policies of this manual.



### 3.2.6 Wetland Policies

The following policies relate to the natural hazard characteristics and functions of *wetlands* (whereas Section 3.3.2 sets out the policies applied to *wetlands* as *natural heritage features*).

1. Where *development* or *site alteration* is proposed within the limit or the area of interference of a wetland, the Authority may require that the wetland boundary be mapped as part of an *EIS*, prepared by a qualified professional. The wetland boundary may need to be approved by the Ministry of Natural Resources.
2. *New development* and site alteration is not permitted in *wetlands*. Some *restricted uses* may be permitted provided that they are supported by an *EIS* or an Environmental Assessment.
3. Development and site alteration may be permitted within the *area of interference* of a *wetland* provided that there is no impact on the hydrological function of the *wetland* and no potential hazard impact on the development. The potential for *development* and *site alteration* within the *area of interference* of a *wetland* shall be determined through the completion of an *EIS*, prepared by a qualified professional, to the satisfaction of the UTRCA.

## 3.3 NATURAL HERITAGE FEATURES & AREAS

### 3.3.1 Overview

Natural heritage features and *adjacent lands* are described in Section 2.3 of the manual. The policies for *natural heritage features and areas* are organized under the same headings.

### 3.3.2 Wetland Policies

The following policies pertain to *wetlands* as *natural heritage features* (whereas the policies in Section 3.2.5 pertain to *wetlands* as natural hazard features).

1. *New development* and *site alteration* is not permitted in Provincially *Significant* or *other wetlands*. Some *restricted uses* may be permitted provided that they are supported by an *EIS* or an Environmental Assessment.
2. *New development* and *site alteration* is not permitted in *adjacent lands* associated with *wetlands* unless an *EIS* has been completed, to the satisfaction of the UTRCA, with no negative impact on the feature or its ecological function

### **3.3.3 Woodland Policies**

#### **3.3.3.1 Significant Woodlands**

1. New *development* and *site alteration* is not permitted in *Woodlands* considered to be *significant*.
2. New *development* and *site alteration* is not permitted on *adjacent lands* to *Significant Woodlands* (within 50 metres) unless an *EIS* has been completed, to the satisfaction of the UTRCA, with no negative impact on the feature and its ecological function.

#### **3.3.3.2 Other Woodlands**

1. *Development* and *site alteration* is not permitted in other *Woodlands*, or the 50 metre *adjacent lands*, unless an *EIS* has been completed, to the satisfaction of the UTRCA, which demonstrates that there will be no negative impact on the feature and its ecological function. The creation of strategically placed new habitat, linkages or restoration of other *ecosystem* functions may be considered as mitigation measures.
2. Municipalities will be encouraged to include *woodlands* in parkland and other open space dedications and to use other measures to secure the long term protection of other *woodlands*.

### **3.3.4 Valleyland Policies**

1. The Authority will strive to maintain all existing *valleylands* in their natural state by prohibiting and/or minimizing *development* and *site alteration* within these areas.
2. New *development* and *site alteration* is not permitted in natural *Valleylands*.
3. New *development* and *site alteration* is not permitted on *adjacent lands* to *Valleylands* (within 50 metres) unless an *EIS* has been completed, to the satisfaction of the UTRCA, which demonstrates that there will be no negative impact on the feature and its ecological function.
4. For complex slopes, where benches of developable land are located mid-slope, development may be permitted only when a detailed *EIS* demonstrates that there will be no negative impact on the feature or the ecological function of the overall *valleyland* system.
5. Increased *fragmentation* of ownership, through lot creation, within natural *valleylands* is discouraged.

### 3.3.5 Policies for Wildlife Habitat

1. *Development and site alteration* is not permitted in *Wildlife Habitat* unless an *EIS* has been completed which demonstrates that there will be no negative impact on the feature and its ecological function.
2. *Development and site alteration* is not permitted on *adjacent lands* to *Wildlife Habitats* (within 50 metres) unless an *EIS* demonstrates that there will be no negative impact on the feature and its ecological function.
3. The Authority encourages the maintenance and enhancement of wildlife movement corridors.

### 3.3.6 Policies for the Habitat of Endangered Species, Threatened Species, Species of Special Concern & Locally Rare Species.

1. *Development and site alteration* is not permitted in the *habitat of endangered species and threatened species*.
2. *Development and site alteration* may only be permitted in *habitats* where the presence of species of *Special Concern* or locally rare species is known when an *EIS*, completed by a qualified professional and approved by the UTRCA, demonstrates that the habitat can be avoided or the impacts of the *development* on the habitat can be mitigated.
3. *Development* is not permitted on lands adjacent to (within 50 metres) the habitat of *endangered species, threatened species, species of special concern* or locally rare species unless an *EIS* has been completed which demonstrates that there will be no negative impact on the feature and its ecological function. The size of the *adjacent lands* may be increased based on the significance and/or needs of the species.

### 3.3.7 Policies for Aquatic Ecosystems & Fish Habitat

1. *Development and site alteration* is not permitted in *fish habitat* except in accordance with provincial and federal requirements and where the habitat to provide for the life requirements of aquatic systems will not be reduced.
2. *Development and site alteration* is not permitted on *adjacent lands* (30 metres) unless an *EIS*, completed by a qualified professional to the satisfaction of the UTRCA, demonstrates that there will be no negative impacts on the feature or on its ecological functions. The size of the *adjacent lands* may be increased based on the significance and/or necessity of the species.
3. When reviewing *development* applications which are likely to result in a harmful alteration, destruction or disruption to *fish habitat*, the proposal will be referred to the

Federal Department of Fisheries and Oceans (DFO) as specified in the Authority's Level II agreement with DFO.

4. The rehabilitation or restoration of aquatic *ecosystems* including habitat, rehabilitation and fish recruitment is encouraged.
5. The conversion of open surface *watercourses* and open drains to closed sub-surface drains is discouraged.

### **3.3.8 Policies for Areas of Natural & Scientific Interest (Life Science)**

1. *Areas of Natural & Scientific Interest* (Life Science) will be protected over the long-term.
2. *Development and site alteration* is not permitted in *Areas of Natural & Scientific Interest* (Life Science) unless an *EIS*, completed by a qualified professional to the satisfaction of the UTRCA, demonstrates that there will be no negative impact on the natural feature and its ecological functions.
3. *Development and site alteration* is not permitted on *adjacent lands* to *Areas of Natural & Scientific Interest* (within 50 metres) unless an *EIS*, completed by a qualified professional to the satisfaction of the UTRCA, demonstrates that there will be no negative impact on the feature and its ecological function.

## **3.4 NATURAL RESOURCES**

### **3.4.1 Overview**

The Authority promotes the conservation and wise use of natural resources over the long term.

### **3.4.2 Groundwater Policies**

The following policies on groundwater are general in nature and are intended to be used in the interim until a *Source Water Protection* Plan is developed. It is anticipated that the *Source Water Protection* Plan will provide updated information on groundwater processes, threats and strategies for protection. The following policies will be reviewed and updated once the source water protection planning process is completed.

1. Where comprehensive *groundwater* studies have been undertaken, protection of identified *groundwater* wellhead protection areas, areas that contribute to recharge (recharge zones), areas of *groundwater* susceptibility and discharge areas will be encouraged.

2. *Development* and *site alteration* will be limited in or near sensitive *groundwater* features in order to protect, improve and restore these features and their related hydrologic functions.
3. The decommissioning of abandoned wells to protect *groundwater* sources and to ensure public safety in accordance with Ministry of the Environment standards is encouraged.

### **3.4.3 Aggregate Resources Policies**

1. The Authority will provide watershed municipalities and MNR with natural heritage, natural hazard and natural resource information related to aggregate proposals. The Authority will also provide technical review assistance to watershed municipalities to assist with their decision making responsibilities.

### **3.4.4 Agricultural Lands Policies**

1. The Authority will provide natural heritage, natural hazard and natural resource information and technical review assistance to municipalities to assist with their decision making responsibilities.

## **3.5 SERVICING & MITIGATION**

### **3.5.1 Overview**

Changes in land use associated with urban development may temporarily or permanently alter the quality and quantity of water transferred between the various components of the hydrologic cycle. Unmitigated alterations to the hydrologic cycle could potentially have a negative impact on the *watershed ecosystem*. The Authority advocates for the protection and enhancement of natural hazard, natural heritage and other natural resources from the indirect impacts of development.

### **3.5.2 Policies for Stormwater Management and Erosion & Sediment Control Measures**

The Authority provides stormwater management (SWM) and sediment and erosion control commenting and technical review services to all municipalities in the watershed. In those cases where the municipality has the required expert staff available to undertake detailed reviews, the Authority may limit its review to catchment level plan preparation and defer the review of detailed projects to the municipality. Where the review is deferred to the municipality, the Authority may still comment on natural heritage and natural resource matters.

1. The Authority advocates for the planning and implementation of SWM facilities on a catchment area basis through the completion of Subwatershed Plans, Master Drainage Plans or Catchment Strategies. Catchment planning is required for proposals where there is development potential for properties located beyond the subject property. Exceptions to this policy are limited to minor *infill* developments or cases where the coordination of stormwater management for the catchment cannot be practically achieved.
2. The Authority generally does not support:
  - a) on-line SWM ponds designed to enhance water quality;
  - b) the use of natural *wetlands* for SWM;
  - c) SWM facilities within *natural hazards*; and
  - d) SWM facilities within *significant* natural heritage features.
3. Consistent with Section 3.5.2.3, SWM facilities, with the exception of outlets, will be directed to areas located outside of the defined limits of the *natural hazard*. SWM facilities and associated measures may only be permitted in the *flood plain* if it can be demonstrated that there is a net public benefit in selecting the *flood plain* location and if all other potentially viable locations have been dismissed. Encroachment of SWM facilities into the *flood plain* must be justified with a catchment scale assessment as part of a Catchment Strategy, Area Plan, Subwatershed Plan, Master Drainage Plan or *Environmental Assessment Act* process. This type of assessment provides the opportunity to evaluate the location and function of SWM facilities based on technical, environmental, economic, and social factors. The following principles will be considered when assessing proposals to locate SWM facilities in the flood plain:
  - a) The impact of the SWM facility on *flood plain* function (conveyance, flood storage etc) and implications for other *natural hazards*;
  - b) The *net ecological benefit* of locating the SWM facility in the *flood plain*; and
  - c) Cultural benefits of locating the SWM facility in the *flood plain*. While cultural benefits are considered, the natural hazard and natural heritage implications are paramount.
4. A SWM report for a site must address the following:
  - a) The characteristics of the catchment area including physical characteristics, existing or approved development and the opportunities or constraints for stormwater management at the specific property within the context of the catchment;
  - b) Identify and integrate the findings of any previous reports for the site or the catchment;
  - c) Water balance must be addressed. Requirements are based on maintaining the existing hydrologic cycle in and surrounding a development area to the extent technically, physically and economically practicable:
    - (i) Water quality requirements are to be established based on characteristics of the receiving waterbody and/or natural heritage feature, including but not

limited to aquatic habitat, local and/or regional significance, human and wildlife water use.

- (ii) Water quantity control requirements will be based on both flooding and downstream erosion considerations. Quantity control typically ensures that post-development flow rates approximate pre-development rates for all return period increments from the 2 year to the 250 year. Any modifications to pre-development hydrology must be justified on the basis that they enhance the pre-development condition and must consider factors such as flood severity, flood timing and in-stream erosion potential of the receiving *watercourse*.
  - (iii) Monitoring and maintenance plans are required.
- d) The Authority requires that a conceptual SWM report be submitted for review and approval prior to supporting development proposals to create multiple lots (multi lot severances, draft plans of subdivision or condominium). The report must be prepared by a qualified professional and must address the areas of concern previously outlined. The report must be completed at a sufficient level of detail to establish the type, size and location of stormwater facilities.
  - e) The Authority requires that *erosion* control at the source be implemented along with supplementary treatment between the source and receiving watercourse..
  - f) Sediment and *erosion* control measures are to be used on all construction sites to limit the effects of the proposed development on the surrounding natural environment and receiving drainage network.

### 3.5.3 Policies for Servicing

1. Private services are considered to be part of *development* and are subject to the policy requirements of this manual.
2. New servicing corridors or extensions to existing corridors will be reviewed by the Authority with regard for the policies in this manual. Authority comments will be provided through the appropriate mechanism, typically, through the Class Environmental Assessment Act process.

## 3.6 INTEGRATED RESOURCES & SYSTEMS PLANNING

The Authority advocates an integrated approach for planning and managing the watershed ecosystem. The following policies are intended to support this approach.

### 3.6.1 Policies for Integrated Resources & Systems Planning

1. All *development* and *site alteration* will be assessed with regard for the potential impacts on natural hazard, natural heritage and natural resource systems. The assessment of the resource, the identification of the development limit and mitigation measures must be undertaken through the completion of a comprehensive EIS.

2. The Authority recommends that studies to support development consider the implications for the affected planning area and should be based on logical natural boundaries or planning area boundaries. Studies completed at this scale are capable of characterizing the cumulative effects of development.
3. Notwithstanding Section 3.6.1.2, an EIS for a specific property or group of properties may be acceptable due to the scale of the development or the limited development area available. Although the EIS has a narrower scope, it must address the broader natural hazard, natural heritage or natural resource systems of the area. It should be noted that due to its narrower scope, the site a specific EIS is less capable of assessing cumulative impacts on the system and as a result, the Authority will take a more precautionary approach when assessing the acceptability of impacts.
4. The Authority will work with watershed municipalities to identify the need for comprehensive studies on priority issues. Comprehensive studies based on logical management boundaries are required to support large scale urban expansions.



## 4 SECTION 28 REVIEW & APPROVAL PROCESS

### 4.1 OVERVIEW

Section 28 of the Conservation Authorities Act provides the UTRCA with the legislative responsibility to regulate activities such as the placing or dumping of fill, the construction of buildings or structures in or on *flood plains*, wetlands, or ponds through a permit process within the Authority's areas of jurisdiction. Through its Permit Process, the Authority regulates development in order to prevent the creation of new hazards or aggravating existing ones. Staff responsible for the review of Section 28 applications must note that the principle of development will be established through prior approval of related planning applications, where necessary, in advance of Section 28 approval from the UTRCA.

### 4.2 REGULATION LIMIT

*Regulation Limits* are the result of several components, each of which addresses a specific hazard. These include:

- Riverine Flooding Hazard and Allowance
- Riverine *Erosion* Hazard and Allowance
- *Wetlands* and *Area of Interference*
- *Watercourses*

The final *Regulation Limit* for each system is taken as the greater of the applicable hazard limits. *Regulation Limit* mapping prepared by the Upper Thames River Conservation Authority has been completed in full accordance with guidelines from the Ministry of Natural Resources and Conservation Ontario. The Authority's policies for the *Regulation Limit* have been organized under the following main headings:

1. General Policies for the *Regulation Limit* – applies to all hazard types
2. Riverine Flooding Hazards – the Authority's area of interest is the *flood plain* and its main components including the *floodway*, the *flood fringe* and *special policy areas*
3. Riverine *Erosion* Hazards - the Authority's area of interest includes steep slopes, valley lands, ravines, and the *meander belt*.
4. *Wetlands* - the Authority's area of interest includes swamps, marshes, bogs, fens and ponds as well as organic soils (e.g. peat) and the areas of interference surrounding *wetlands*.

## 4.2.1 General Policies for Hazard Limit

1. *Development* and *site alteration* shall be directed away from *hazard lands* where there is an unacceptable risk to public health or safety or property damage and shall be directed to areas located outside of the defined limits of the hazard.
2. *Development* and *site alteration* may only be permitted in *hazard lands* provided that all of the following conditions can be implemented to the satisfaction of the Authority:
  - a) Appropriate *floodproofing* measures, *protection works* and safe and dry *access* during times of *flooding*, *erosion* and other emergencies are provided.
  - b) No new hazards will be created and existing hazards will not be aggravated.
  - c) No adverse environmental impacts will result.
  - d) The *development* does not include institutional uses or essential emergency services or the disposal, manufacture, treatment or storage of *hazardous substances*.
3. All *development* and *site alteration* proposed within the *Regulation Limit* shall require prior written approval from the Authority in accordance with Section 28 of the Conservation Authorities Act and be consistent with policies contained herein.
4. Any *development* or *site alteration*, permitted in accordance with policies 4.2.1 (1., 2. and 3.), with the exception of watercourse alterations, will maintain a minimum setback of 30 metres from the bank of any coldwater/coolwater *watercourse* and warmwater sportfish *watercourse* and 15 metres from the bank of any warmwater baitfish *watercourse*. Exceptions may be considered on a site-specific basis in areas of existing development, where the works will not encroach into the setback any further than the existing building/structure and where no other alternative exists. Additional setbacks may be required as per other agency guidelines.
5. Fencing – Fencing is normally considered exempt from permission required under the Section 28 regulation. However, the UTRCA generally discourages fencing in natural hazard areas. Where necessary, fencing should be constructed in such a manner that it does not impede conveyance of flow of the *watercourse* and does not require the use of *fill* within flooding hazard limits and *wetlands*.
6. Integration – While this section of the manual is devoted to policies associated with the review and approval of applications made to the UTRCA pursuant to Section 28 of the Conservation Authorities Act, it is imperative that staff integrate natural heritage policies, goals and objectives into the decision-making process. Similarly, staff must be familiar with and have full regard for other environmental legislation which may have a direct bearing on whether development, interference with *wetlands* and alterations to shorelines and *watercourses* may proceed.

#### 7. Passive Low Intensity Recreational Uses – Flooding Hazards

*Passive low intensity recreational uses*, associated with public parks, outdoor recreation and education, *pathway and trail systems*, water access points or conservation activities may be permitted within a *flooding hazard* provided it can be demonstrated that:

- there is no feasible alternative site outside of the flooding hazard;
- where unavoidable, intrusions on hydrologic functions are minimized;
- best management practices including site, facility, and/or landscape design and appropriate remedial measures will mitigate disturbance to hydrologic functions; and,
- the risk of property damage is minimized through site, facility, and/or landscape design and flood emergency plans.

#### 8. Passive Low Intensity Recreational Uses – Erosion Hazards

*Passive low intensity recreational uses* associated with public parks, outdoor recreation and education, *pathway and trail systems*, watercourse access points or conservation activities may be permitted within *erosion hazards* provided that it can be demonstrated that:

- there is no feasible alternative to locate the *development* outside of the erosion hazard and that the *development* will be located in an area of least (and acceptable) risk as determined through appropriate technical reports (e.g., topographic survey, geotechnical study);
- there is no negative impact on existing and future slope stability;
- the potential for erosion has been addressed through the submission of proper drainage, erosion and sediment control and site stabilization/restoration plans; and
- the use will not prevent access into and through the valley in order to undertake preventative actions or maintenance or during an emergency.

### 4.2.2 Riverine Flooding Hazard Policies

1. *Floodway* – New *development* is generally not permitted within the *floodway* of any *watercourse*.
2. *Flood Fringe* – *Development* and *site alteration* is permitted in identified *flood fringe* areas, subject to satisfying *floodproofing* requirements through the UTRCA's Section 28 Permit Process. Specific policies are provided below.
  - a) Residential – For new development, no building openings are permitted below the *Regulatory Flood* Elevation. Construction drawings with *floodproofing* considerations must be prepared by a qualified professional. If a basement is proposed, *dry, passive floodproofing* measures must be presented on detailed drawings prepared by a qualified professional. Sufficient surveys and inspections will be required to allow for provision of as-built drawings upon completion of the project. Additions will be permitted (including bedrooms and associated increases in density) if access is safe or dry and *floodproofing* is achieved to the level of the *Regulatory Flood* Elevation. If *floodproofing* to the Regulatory Flood Elevation is not feasible, additions must be less than 25 per cent of the existing ground floor area and must not include bedrooms or require zoning by-law amendments to increase population density.

- b) Industrial/Commercial – Access must be at a minimum of the *floodway* elevation and within 0.3 metres of the *Regulatory Flood* Elevation. *Dry, passive floodproofing* is preferred, with no building openings below the Regulatory Flood Elevation. If a basement or lower level is proposed, there must be engineering certification that the building is *floodproofed* with design components (i.e. backflow valves, foundation reinforcement) shown on construction drawings. Sufficient surveys and inspections must be undertaken to allow for the provision of as-built drawings following project completion. *Wet floodproofing*, with the same requirements as above will only be deemed acceptable if *dry floodproofing* is not feasible. For additions greater than 50 per cent of the existing floor area, requirements are the same as for new construction.
  - c) Institutional – “Lower risk” uses such as arenas and libraries must satisfy the same requirements as listed for Industrial/Commercial.
- 3. Special Policy Areas – Development within approved Special Policy Areas shall be consistent with the approved policies. For potential Special Policy Areas such as West London and Ada Street in the City of London, the following interim policies apply:
  - a) Intensification of use, either through the creation of lots or through zoning is not permitted. Conversion of residential uses to commercial uses is encouraged.
  - b) New basements are not permitted
  - c) Permitted activities will include additions less than 100 per cent increase in size, *accessory* buildings to existing uses and other minor works
  - d) *Floodproofing* measures to the *Regulatory Flood* Elevation will be required if feasible or at a minimum to the height of the main floor (first floor) of the higher of adjacent structures
  - e) For new structures, detailed *floodproofing* measures must be submitted on drawings prepared by a qualified professional, with sufficient surveys and inspections to allow for provision of as-built drawings upon completion of the project
- 4. Additions to existing buildings and *replacement structures* may be permitted in the *flood plain* subject to satisfying the Authority’s requirements.
- 5. *Accessory* buildings may be permitted in the *flood plain* subject to satisfying the Authority’s requirements.
- 6. *Replacement Structures* in the *Floodway* – *Replacement structures* are structures that replace existing building or structures, including buildings and structures designated as architecturally or historically important and that have (recently) been demolished or destroyed but does not include reconstruction on remnant foundations. *Replacement structures* may be permitted by the UTRCA provided that the *replacement* structure, its construction and any new servicing requirements comply with the following:
  - a) The structure can be *floodproofed* to the level of the *Regulatory Flood*. If *Regulatory Flood* protection is not technically feasible, a lower level of flood risk protection may be permitted and must be provided to the maximum elevation possible as determined on the basis of site-specific evaluation.

- b) The proposed structure must not exceed the total “footprint” area of the original structure as it existed on (April 25, 2000).
  - c) The flood risk must not exceed the risk associated with the previous/existing structure or development such that:
    - i. The location of the *replacement* structure and services are not susceptible to higher depths and/or velocities of *flooding*;
    - ii. The use associated with the *replacement* structure and development does not increase risk to property damage or public safety (e.g. converting from habitable to non-habitable); and
    - iii. The use within the *replacement* structure and/or the property as a whole is not intensified.
  - d) The proponent agrees to carry out site-specific flood damage reduction measures such that, in order of priority:
    - i. *Dry, passive floodproofing* measures shall be implemented to the extent technically possible to achieve the required level of flood protection: and/or
    - ii. *Wet floodproofing* measures are incorporated as required to achieve and maximize the required level of flood protection.
  - e) Ingress and egress should be “safe” or “dry” pursuant to contemporary *floodproofing* guidelines in addition to Provincial Policy and/or achieve the maximum level of flood protection determined to be feasible and practical based on existing infrastructure.
  - f) The proposed *flood* damage reduction measures do not increase flood risk on adjacent, upstream and/or downstream properties.
  - g) All applications for *development* approval must be accompanied by engineering studies, prepared by qualified professionals, detailing such matters as *flood* frequency, depth and velocity of flow, soil conditions, proposed *flood* damage reduction measures including structural design details, stormwater management and other information and studies as may be required by the UTRCA and the local municipality.
  - h) Approval of an application under this policy will be subject to the consent of the UTRCA’s Hearings and Personnel Committee.
7. The construction of above-ground and in-ground swimming pools shall not be permitted in the *floodway* of any *watercourse*. Swimming pools will only be considered within the flooding hazard where an alternative outside the *flood plain* does not exist. There must be no loss of flood storage or flood conveyance due to the pool’s construction, fencing or associated grading. Electrical servicing must be *floodproofed*. An assessment of potential hydrostatic pressures under both normal and flood conditions may be required for below-ground pools.

8. Golf Courses - Golf course construction shall not be permitted in areas which are affected by *flood* events which occur more frequently than a 1:10 year storm. Associated structures including clubhouse and maintenance buildings must be located above the *Regulatory Flood Elevation* and outside of any erosion hazard. *Watercourse* crossings associated with golf course *development* shall be minimized and be designed by a qualified professional. Designs must take into consideration flood susceptibility, structural integrity in times of flooding, hydraulic capacity, fluvial geomorphic processes, approach ramp fill requirements and the potential for seasonal removal. Golf course will only be approved by the UTRCA upon completion of an *Environmental Impact Study* by qualified professionals which considers, in addition to those items noted above, vegetation communities, buffer requirements, stormwater management opportunities, erosion and sediment control requirements, site drainage and grading, integrated pest management opportunities, water taking requirements and other areas of concern identified through a scoping exercise.
9. Stormwater Management Facilities - Consistent with Policy 4.2.1, stormwater management facilities shall be directed to areas located outside of the defined limits of the natural hazard. Additionally, SWM facilities and associated measures may only be permitted in the *flood plain* if it can be demonstrated that there is a net public benefit in selecting the *flood plain* location and if all other potentially viable locations have been dismissed (on technical/environmental basis). The following principles will be considered when assessing such proposals:
  - a) The location of the SWM facilities in the *flood plain* will have no impact on natural hazard management or fluvial processes;
  - b) The location of SWM facilities in the *flood plain* will result in a *net ecological benefit* for the planning and catchment area;
  - c) Cultural benefits from the location of SWM facilities in the *flood plain* are accrued but encroachment in the *flood plain* cannot be justified solely on the merit of cultural benefits;
  - d) The SWM facilities must meet design and maintenance performance requirements for the receiving *watercourse*;
  - e) SWM facilities must satisfy the approval requirements of the local municipality, Ministry of the Environment and other affected environmental approval agencies; and
  - f) On-line SWM facilities will only be considered in the context of a current subwatershed plan and where the facility is within a not-apparent valley, where no *fish habitat* exists and no adverse environmental impacts will result from the works.
10. Cut and *fill* activities generally shall not be permitted in the *floodplain* of any *watercourse*.
11. Where the *flood plain* of a *watercourse* has not been calculated, the Authority shall require the applicant to prepare the calculations and mapping in accordance with *flood plain* mapping criteria established by the Ministry of Natural Resources.
12. Parking Lots – Parking lots will only be considered within the flooding hazard limit in cases where the flooding hazard limit is within a not-apparent valley or in areas of

existing development within the valley with acceptable access to the site. Parking lots associated with residential development must be located above the *1:100-year flood* elevation, within 0.3 metres of the Regulatory Flood Elevation, be designed to account for access and egress under *Regulatory Flood* conditions and must maintain the stage-storage-discharge relationship for a range of rainfall events.

13. *Access* – For new *development*, vehicular and pedestrian access must be dry, to an elevation matching or exceeding the Regulatory Flood Elevation. For existing *development* and *infill* proposals, vehicular and pedestrian access must be “safe”, within 0.3 metres of the Regulatory Flood Elevation or as determined through use of the following documents: a) Technical Guide – River and Stream Systems: Erosion Hazard Limit and b) Technical Guide – River and Stream Systems: Flooding Hazard Limit (Ministry of Natural Resources & Watershed Science Centre, 2002)
14. *Minor Works* - will be permitted within the *flood plain* subject to satisfying the Authority’s requirements.
15. *Agriculture* – The use of the flood hazard limits for ongoing cropland, livestock feeding and grazing, orchards, and nurseries and associated activities such as plowing, and fencing are not considered *site alterations*. The construction of farm buildings (excluding residences, commercial greenhouses and large-scale enclosed livestock facilities) may be considered within the flooding hazard limit, where no site can be reasonably utilized for the proposed works outside of the flooding hazard limit and where the structures will be floodproofed.

#### **4.2.3 Riverine Erosion Hazard Policies**

1. *Fill* and grading and related *site alteration* activities shall not be permitted in erosion *hazard lands*, unless associated with measures prescribed and/or approved by a municipality or environmental agency specifically intended to remediate *erosion* concerns.
2. The Authority shall encourage the *conservation of land* through the control of construction and placement of *fill* on existing or potentially unstable slopes.
3. Any *development* or *site alteration* proposal which is in close proximity to an erosion hazard and located within the *Regulation Limit*, must be supported by a favourable geotechnical report and an *Environmental Impact Study (EIS)* prepared by a qualified professional, to the satisfaction of the UTRCA.
4. Any *development* or *site alteration* proposal which is in close proximity to a *meander belt* and that is located within the *Regulation Limit*, must be supported by a favourable geomorphological study and an *EIS*, prepared by a qualified professional, to the satisfaction of the UTRCA.
5. In specific cases where buildings, structures or private access roads already exist on a valley wall, reconstruction or alteration may be permitted subject to the following:

- a) Best efforts must be undertaken to relocate the existing structure outside of the valley and associated tableland *Regulation Limit*.
- b) A qualified professional must complete a geotechnical study to determine the risk of the proposed work. The study will include an assessment of the stability of the valley wall, rate of *erosion* or recession of the valley wall, *access* issues and an assessment of the construction technique on the valley wall. The design of any works must ensure that the long-term stability of the valley wall is maintained and that no risk to life or property damage is anticipated.
- c) No adverse environmental impacts to existing natural features and functions.

#### 4.2.4 Wetland Policies

1. New *development* and *site alteration* is not permitted in wetlands. Some *restricted uses* may be permitted provided that they are supported by an EIS or an Environmental Assessment.
2. *Development* and *site alteration* within the *area of interference* of a *wetland* shall only be permitted by the Authority if the applicant can demonstrate that such activity will have no impact on the control of *flooding*, *erosion*, *pollution* or the *conservation of land*. This will involve a scoping process where the UTRCA and the proponent (with the help of a qualified professional as required) will assess a proposed undertaking, having regard for the sensitivity of the *wetland* features and functions, the extent of encroachment and impact of use. This initial assessment will assist with the formulation of the terms of reference for a *scoped EIS* or a *comprehensive EIS*.
3. The following policies shall apply to regulating *development* and *site alteration* on lands located within 120 metres of *Provincially Significant Wetlands* and *wetlands* greater than or equal to 2 hectares in size:
- 4.

##### **A. WITHIN 30 METRES**

- a) Where buildings and structures already exist within 30 metres of a *Provincially Significant Wetland* and *wetlands* greater than or equal to 2 hectares in size, any reconstruction, alteration or additions may be permitted subject to the following:
  - i) No new septic systems permitted
  - ii) Existing septic systems may be replaced provided there are no feasible locations available outside of the 30 metre *area of interference* and it does not encroach any closer to the wetland than the existing system
  - iii) Reconstruction, alteration or addition does not encroach any closer to the wetland than the existing development at its closest point
  - iv) Even if the existing development is closer than 15 metres to the wetland, no new development is permitted within 15 metres of the wetland



- v) A hydrologic study may be required to determine whether there would be a negative impact on the hydrologic functions of the wetland as a result of the proposed development
  
- b) Where there is an existing lot of record and residential dwelling, in existence prior to the adoption of these policies and where no land exists outside of the 30 metre *area of interference*, pools, decks and non-habitable accessory structures may be permitted subject to:
  - i) No *development* or *site alterations* permitted within 15 metres of the wetland
  - ii) A hydrologic study may be required to determine whether there would be a negative impact on the hydrological functions of the wetland as a result of the proposed *development* or *site alteration*.
  
- c) Except as provided for in policies 4.2.4 (3.) A(a) and 4.2.4 (3.) A(b.), no new development or site alteration is permitted within 30 metres of a Provincially Significant Wetland or a wetland greater than or equal to 2 hectares in size.

## **B. BETWEEN 30 & 120 METRES – LETTER OF CLEARANCE**

The following uses may be permitted and will only require a letter of clearance, if proposed within 30 to 120 metres from the limit of a Provincially *Significant* Wetland or a wetland greater than or equal to 2 hectares in size:

- i) Single family residential dwelling
- ii) Swimming pools, decks, non-habitable *accessory* structures
- iii) Minor additions to existing residential and agricultural buildings/structures
- iv) Residential septic systems

## **C. BETWEEN 30 & 120 METRES – PERMIT**

Any uses, other than those outlined in Policy 4.2.4 B., proposed within 30 to 120 metres of a wetland will require a permit pursuant to Ontario Regulation 157/06 and will need to be supported by a hydrological assessment, prepared by a qualified professional, that identifies whether the proposed development or site alteration would cause a negative hydrologic impact on the wetland features/functions

4. The following policies apply to regulating *development* and *site alteration* on lands located within 30 metres of *Other Wetlands* less than 2 hectares in size:

### **A. WITHIN 15 METRES**

- a) Where buildings and structures already exist within 15 metres of *Other Wetlands* less than 2 hectares in size, any reconstruction, alteration or additions may be permitted, subject to the following:
  - i) No new septic systems permitted;
  - ii) Existing septic systems may be replaced provided there are no feasible locations available outside of the 15 metre limit and it does not encroach any closer to the wetland than the existing system;
  - iii) The reconstruction, alteration or addition does not encroach any closer to the wetland than the existing development at its closest point;
  - iv) Even if the existing development is closer than 7.5 metres to the wetland, no new development is permitted within 7.5 metres of the wetland; and
  - v) A hydrologic study may be required to determine whether there would be a negative impact on the hydrologic functions of the wetland as a result of the proposed development.
  
- b) Where there is an existing lot of record and residential dwelling in existence prior to the adoption of these policies, and where no land exists outside of the 15 metres adjacent to a wetland, pools, decks and non-habitable *accessory* structures may be permitted subject to:
  - i) No development or site alteration permitted within 7.5 metres of the wetland; and
  - ii) A hydrologic study may be required to determine whether there will be a negative impact on the hydrologic functions of the wetland.

- c) Except as provided for in Policies 4.2.4 (5.) A. (a) and 4.2.4 (5.) A. (b), no new *development* or *site alteration* is permitted within 15 metres of *Other Wetlands* less than 2 hectares in size.

#### **B. BETWEEN 15 & 30 METRES – LETTER OF CLEARANCE**

The following uses may be permitted, and will only require a letter of clearance, if proposed within 15 to 30 metres from the limit of a *Other Wetlands* less than 2 hectares in size:

- i) Single-family residential dwelling;
- ii) Swimming pools, decks, non-habitable accessory structures;
- iii) Minor additions to existing residential and agricultural buildings/structures;
- iv) Residential septic systems; and
- v) Landscaping and minor grading associated with the above.

#### **C. BETWEEN 15 & 30 METRES – PERMIT**

Any uses, other than those outlined in Policy 4.2.4 (4.) B. above, proposed within 15 to 30 metres of a wetland will require a permit pursuant to the Authority's Ontario Regulation 157/06 and will need to be supported by a hydrological assessment, prepared by a qualified professional, that identifies whether the proposed development or site alteration would cause a negative hydrologic impact on the wetland feature and its function.

### **4.2.5 Watercourse & Flood Plain Alteration Policies**

1. Major *flood plain* alterations (including placement of *fill* to create a building lot) and major *watercourse* alterations (including enclosures) are generally not permitted. Such alterations may be considered where justification is provided through a subwatershed study, an *Environmental Assessment* or similar comprehensive study and are subject to conformity with municipal planning documents.
2. Minor *flood plain* and *watercourse* alterations will be evaluated on an individual basis, having consideration for the following:
  - a) No negative impacts on the natural features or on the ecological functions, including fish and wildlife requirements as set out by other federal, provincial or municipal legislation/plans/technical guidelines and a *net environmental benefit* is achieved;
  - b) Maintenance of the natural topography of the *watercourse* system, flood conveyance and flood storage;
  - c) No adverse impacts on fluvial processes (*meander belt*);
  - d) No adverse impacts on *groundwater* recharge/discharge;
  - e) Geotechnical issues are addressed; and
  - f) Implementation of recommendations within UTRCA-endorsed watershed or subwatershed studies or *Environmental Assessment*.

3. The straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream or *watercourse* will only be permitted with prior written approval of the UTRCA. An exception is made for activities conducted pursuant to the Drainage Act, where the Conservation Authority has an opportunity to work in cooperation with member municipalities and other approval agencies (including Fisheries and Oceans Canada – DFO) to consider and mitigate the environmental impacts of drain maintenance and new drainage proposals.
4. Notwithstanding policy 4.2.5.3, bridges and other major structures proposed on municipal drains will require prior written approval from the Conservation Authority.
5. The Authority encourages the retention of all *watercourses* and adjacent resource areas in their natural state.
6. *Watercourses* will be protected, improved or restored by minimizing potential negative impacts, having full regard for riparian rights and conditions.
7. Development and site alteration will be restricted in or near *watercourses* so that those features and their related hydrologic functions are protected, improved or restored.
8. Pit Licence Applications – Proposals for aggregate extraction will sometimes involve lands regulated by the Conservation Authority. Class A licence applications will require the preparation of plans showing existing features, operational plans, progressive rehabilitation, final rehabilitation and cross-sections. Accompanying documents will include hydrogeological reports, noise and dust studies, archaeological investigations and natural heritage assessments. The UTRCA will undertake a peer review of pertinent reports, often on behalf of member municipalities but also to ensure that requirements for Section 28 approval are satisfactorily addressed. Conservation Authority considerations will include: stockpiling and berming of soil relative to flood conveyance, site drainage, slope stability, proximity to wetlands, impacts on neighbouring lands (including UTRCA lands), rehabilitation options and extraction relative to the groundwater table. A scoping exercise with the applicant and/or the consultants will help to clarify *Environmental Impact Study* and reporting requirements where Section 28 approval is required by the UTRCA. This will help to ensure that there will no redundancy with report/plan submissions required in support of an application made pursuant to the Aggregate Resources Act.
9. Golf Courses – *Channelization* and/or *watercourse* realignments will not be permitted to facilitate new golf course proposals or for the purpose of protecting future golf course infrastructure. Where site-specific *erosion* control measures are proposed, bioengineering is the preferred method of remediation and must be based on accepted fluvial geomorphic principles. *Fish habitat* and associated riparian areas shall be maintained and enhanced where possible.
10. The Authority does not support the construction of in-stream, by-pass and connected ponds which link directly into a *watercourse*.
11. A minimum setback of 15 m from all *watercourses* is required for all ponds.

12. Ponds will not be permitted within *wetlands*.
13. Dugout ponds and off-line by-pass ponds may be permitted within the *flooding* hazard limit if it can be shown that the following general and specific requirements can be satisfied:
- a) No negative impact on natural features and ecological functions;
  - b) No negative impacts on water quality, including thermal *pollution*;
  - c) All *fill*, including dredged material is removed from the flooding hazard limit;
  - d) No net loss of *wildlife habitat*;
  - e) No impacts on *flood plain* fluvial processes; and

## 5 INQUIRY SERVICES

### 5.1 PROPERTY CLEARANCE LETTERS

Inquires are received on a daily basis from solicitors, real estate agents, and the general public interested in determining whether regulations made pursuant to Section 28 of the Conservation Authorities Act affects a given property. This information sharing process is important in developing a pro-active approach to land use planning and resource management for the Authority. The UTRCA views its inquiry service as an opportunity to educate landowners about the Natural Hazard and *Natural Heritage Features* on the subject property. It also provides an indication of the potential limitations for *development* to a landowner or prospective home-buyer.

1. A fee consistent with those identified in the Authority's Fee Schedule, a copy of which is provided in Appendix 9.1.1 of the Manual applies to all Property Clearance Letters prepared by the Authority.
2. A fee will be applied to each roll number for which a response has been requested.
3. The UTRCA will provide a letter to advise when the subject property is affected by the *Regulation Limit*.
4. The UTRCA will provide a letter to advise when the subject property is affected by a Natural Heritage Feature, utilizing the most recent information available at the time of the inquiry.
5. If the subject property is affected by the *Regulation Limit* and/or a Natural Heritage Feature, mapping will be provided to indicate its extent.
6. For inquiries not affected by the *Regulation Limit* and/or a Natural Heritage Feature, a letter or a stamped version of the inquiry indicated the concerns will be provided.
7. If an inquiry for a property outside the UTRCA jurisdiction is received, the inquiry will be directed to the appropriate Conservation Authority by providing a letter copying the letter to the Conservation Authority which has jurisdiction in a timely manner.
8. The UTRCA will endeavour to respond within two weeks of receiving the request.
9. The UTRCA may require that inquiries be accompanied by a survey or a roll number of Property Identification Number (PIN).

## 5.2 DATA REQUESTS

The UTRCA maintains a variety of data in electronic tabular and geospatial (GIS) databases. This includes primary UTRCA data such as: flood line elevations, flooding hazard limits, erosion hazard limits, digital ortho-photography and *natural heritage features*. The UTRCA also provides data from our monitoring programs which includes: stream flows, rain fall, snow course sampling data, ambient water quality information (as part of the Provincial Water Quality Monitoring Network) and aquatic community health data (benthic, fish, *fish habitat* and Species at Risk). In addition, secondary data<sup>1</sup> which is available through the UTRCA's partnership in the Ontario Geospatial Data Exchange (OGDE) may be provided with extended data sharing agreements (such as Ontario Base Mapping). Providing data allows consultants direct access to relevant information through common formats that are supported by industry standard software.

The sharing of digital data is subject to the following conditions:

1. Data sharing agreement(s) must be entered into between the Consultant, the UTRCA and where required, the Ontario Ministry of Natural Resources.
2. A fee consistent with those identified in the Authority's Fee Schedule, a copy of which is provided in Appendix 9.1.1 of this Manual shall apply to all Data requests filled by the Authority.
3. Geospatial data will be provided in tiles based on a standard index grid covering the Upper Thames *watershed*.
4. The UTRCA will endeavour to respond within two weeks of receiving the request for information.

---

<sup>1</sup> Data created and maintained by other agencies (Ontario Ministry of Natural Resources) that does not belong to the Upper Thames River Conservation Authority.

## 6 IMPLEMENTATION & INTERPRETATION

This section is intended to assist with the implementation and interpretation of the goals and objectives, the guiding principles and the policies contained in this manual.

### 6.1 GENERAL

1. This Environmental Planning Policy Manual applies to all applications, matters or proceedings commenced after June 27, 2006. Transition policies will be developed to address those situations where the Authority has imposed or signed off on conditions which have effectively established the principle of *development* (e.g. phased plan of subdivision, Area Plan). In general, applications received on or prior to June 27, 2006 will be processed using previous guidelines and all applications received after June 27, 2006 will be processed using the new policies.
2. This manual will be posted on the Authority's web-site to allow ready access to this information by landowners, municipalities, development professionals and other stakeholders.
3. The Environmental Planning Policy Manual is to be read in its entirety and all relevant policies are to be applied to each situation.
4. Italicized terms in this Policy Manual are defined in the glossary. The defined terms are intended to capture both the singular and plural forms of these terms in the manual.
5. Authority Staff will undertake an annual review of the Environmental Planning Policy Manual to evaluate the effectiveness of the policies and to incorporate new policies which reflect the findings of up to date research and studies. Any recommended changes will require the approval of the UTRCA Board of Directors.
6. The policies in this manual will guide the UTRCA's decision making. It is the responsibility of the proponent to research and address the requirements of other legislation, policies and standards that are administered by other agencies or municipalities.
7. The UTRCA relies on Technical Manuals and Implementation Guidelines that are prepared and updated by other agencies such as the Ministry of Natural Resources or the Ministry of Environment. It is the responsibility of the proponent to ensure that the most up to date information is being used.
8. In cases where both a Planning Act approval and a Section 28 (Conservation Authorities Act) approval are required, the UTRCA will rely on the broader Planning Act approval process to establish the land use and the Section 28 process will then be utilized to implement specific requirements. The same policy applies to other legislation such as the Environmental Assessment Act. UTRCA permit requirements



will be identified through these other processes. UTRCA participation in these processes does not release the proponent from the requirement to obtain specific UTRCA approval in Regulated areas.

9. Applicants are encouraged to meet with Authority Staff prior to submitting their *development* applications and proposals so that any issues and concerns can be identified. This pre-consultation should also include municipalities and other agencies where appropriate. Through pre-consultation, Staff can advise applicants of technical studies and supporting information that may be required for the review process. This process allows for the early identification of potential constraints and opportunities which will assist with the scoping of information and study needs, the identification of realistic time lines and the assessment of project viability by the proponent.
10. Proponents are encouraged to work through the approval process in steps in order to manage expenditures of time and resources. For example, it is recommended that the principle of development be established with the appropriate approval bodies before proceeding to detailed design. The identification of appropriate milestones can be included in the pre-consultation process.
11. The UTRCA needs to establish and maintain a cooperative relationship while continuing to educate *watershed* municipal building officials to ensure that Conservation Authority policies and permit responsibilities are understood, thereby encouraging them to advocate for UTRCA policies.

## 6.2 PROCESSING PLANNING ACT APPLICATIONS

### 6.2.1 Notification

In accordance with Planning Act, the Authority shall be notified and circulated with all applications that relate to lands that are located within the jurisdiction of the UTRCA. Furthermore, the Authority shall be notified of the resulting Staff, Committee of Adjustment and/or Council decisions (e.g. adopted, refused, and appealed). The Authority may, in cooperation with interested municipalities, implement a pre-screening protocol to limit applications sent for Authority comment to only those that are necessary. A draft standard pre-screening protocol is included in Appendix 9.1.2 of the Manual.

## 6.2.2 Review

The main objectives of the Authority's review process are to:

1. screen *development* applications to determine if and where a Provincial or Authority interest may be impacted;
2. identify the need for technical reports; and
3. specify conditions for approval or alternatively, provide rationale why the *development* cannot be supported.

In reviewing all *development* applications, Authority Staff will consider applicable policies and provisions contained in this manual. Authority Staff will prepare and provide mapping to locate the regulated areas, *natural heritage features* and relevant natural resource features and advise applicants of any issues or requirements. While conditions for each application are determined on a site-by-site basis, they are prepared with regard for the potential cumulative effect on the *watershed*.

As required, the Authority's Planning Staff, review applications with the UTRCA's expert staff in ecology, hydrology, forestry, fisheries, biology and engineering to ensure that all matters of interest at the provincial and *watershed* level have been addressed. In its advisory capacity, any concerns or issues that are identified by the Authority will be directed to the appropriate decision making authority, within the timeframe specified by the circulating agency, provided that all of the necessary supporting information is available.

Authority Staff shall also determine whether an application should be referred to the Department of Fisheries and Oceans (DFO) under the federal Fisheries Act as part of the UTRCA's Level 2 agreement with DFO. Under this agreement, the Authority has the responsibility to recommend mitigation measures to alleviate potential harmful alterations, destruction, or disruptions (*HADD*) to *fish habitat*.

## 6.2.3 Appeals

Upon receipt of a Notice of Decision, Staff will review it to ensure that all of the Authority's concerns have been adequately addressed. In cases where the Authority's concerns have not been properly addressed, Staff shall determine if an appeal should be filed with the Ontario Municipal Board. The Authority may decide to appeal a decision that has been made by a Municipal Council or a Committee of Adjustment on the basis that the decision is not consistent with the requirements of the PPS or the policies contained in this policy manual. UTRCA Staff will prepare and submit a formal appeal within the established timeframe, indicating that the decision to appeal needs to be confirmed by the Board of Directors. Subsequently, a report is filed with the Board of Directors for consideration and based on their decision, staff will either confirm or withdraw the administrative appeal.

## 6.2.4 Approval

In order to ensure that the Authority's areas of interest are addressed, through the approval process specific conditions can be requested to be included in the subdivision agreement and site plan control agreement.

## 6.2.5 Technical Studies

When reviewing Planning Act applications, Authority Staff frequently require additional information in the form of technical supporting studies in order to undertake their analysis. The following list represents the supporting documentation which is most commonly requested by the UTRCA to assist in the review of *development* proposals:

- Cut and *Fill* Plan
- *Environmental Impact Study (EIS)* – Comprehensive or Scoped
- *Stormwater Management Plan*
- Erosion and Sediment Control Plans
- Aquatic Habitat & Fisheries Habitat Assessment
- Geotechnical Study
- River Morphology Study
- Grading and Leveling Plan
- Hydraulic Analysis
- Hydrogeological Study
- Landscape Plan
- Monitoring and Maintenance Plan
- Natural Habitat Retention Plan
- Site Restoration Plan
- Subwatershed Study or Plan
- Watercourse and/or Valley Wall Stabilization Plan
- Wildlife Management Plan

Consultants may be required to prepare a Terms of Reference for any technical study that is requested by the UTRCA in accordance with Authority approved submission requirements. Consultants are strongly encouraged to meet with Authority Staff before undertaking the technical study to ensure that the prepared terms of reference address all of the UTRCA's requirements. This step is recommended because in many cases, there is no obvious industry protocol or accepted methodology for undertaking certain types of technical studies or for preparing inventories.

The technical study will be reviewed and Staff will advise whether the submission:

1. addresses the Authority's area of interest and *development* can be supported; or
2. is incomplete and more information is required and therefore the *development* application cannot proceed; or
3. does not address the Authority's area of interest and the *development* cannot be supported.

All technical submissions will identify all available information that provides a historical context for the related application, *development* or subject lands. This may include previous approvals, agreements, and area/community plans. A copy of this information must be appended to the technical study for the Authority's review process.

### **6.2.6 Peer Review**

Technical reports are peer reviewed by Authority staff. Peer review is a process used to evaluate the work performed by one's peers to ensure that it meets specific criteria. The process of peer review subjects an author's work to the scrutiny of other experts in the general field. The UTRCA's expert Staff which includes planners, biologists, engineers, ecologists and water quality and GIS specialists are frequently called upon to undertake peer reviews.

Through the peer review process, the UTRCA will assess the technical report for the following:

- Confirm that it has been prepared by a qualified professional;
- Ensure that accepted technical guidelines, standards, methodologies or procedures have been followed;
- Check that appropriate data was utilized or if other data could have been used and if the information was properly analyzed;
- Check that relevant existing comprehensive studies for the area have been utilized or cross referenced; and
- Determine if the technical conclusions are reasonable and if recommendations for future monitoring are included or are necessary.

The peer review process can involve review of the entire report or be limited to specific sections of a report. The Authority reserves the right to choose the extent to which a report is scrutinized based on the experience of the peer reviewers with the report authors and the specific resource issue. Peer review is not intended to be a substitute for professional design services.

### **6.2.7 Fees**

The Authority's fee schedule for Planning Act review is provided in the Appendix of the Manual.

## 6.3 PROCESSING SECTION 28 PERMIT APPLICATIONS

### 6.3.1 The Process

The Authority's approval is required for the issuance of permits under the *Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation*, in accordance with Section 28 of the Conservation Authorities Act. The UTRCA administers this regulation from the perspective of water quantity management and related hazards, *pollution* and the conservation of land.

As previously noted, it is the Authority's policy to resolve land use planning issues first before considering any *development* proposal on lands which are affected by the UTRCA's Regulation. The Authority will not endorse *development* proposals which require zoning changes, severances, minor variances or Official Plan Amendments within its *Regulation Limit*.

The intent of the Authority's application review process is to minimize the creation of new problems or the aggravation of existing ones, both on the site where *development* is proposed as well as on the neighbouring lands. Applications which conform to the requirements of the Regulation may be recommended for approval by Authority Staff who have been granted responsibility to process such proposals.

All of the conditions of an approved application must be completed to the satisfaction of the Authority, within one year of the decision. If the conditions are not satisfied within this time frame, the approval shall become null and void. If the intended scope of work remains unchanged, an applicant may request a one-year extension. This request must be made in writing within one year of the original permit issuance date.

### 6.3.2 Building Code

Chapter 51, Section 6 (1) of the Building Code Act stipulates that a chief building official may only issue a building permit where a proposed building does not contravene any other applicable law. It is essential for all building officials to ensure that all applicable laws have been adhered to including whether an Authority permit has been secured for a *development* in the regulated area prior to issuing a building permit. Copies of all permits issued by the Authority shall be forwarded to the building officials of local *watershed* municipalities as soon as possible thereby advising that the Authority's concerns and requirements have been addressed.

### 6.3.3 Hearing

Without the benefit of a hearing, the Authority cannot refuse an application made pursuant to Ontario Regulation 157/06. If an application is contrary to UTRCA policies, staff will offer the applicant an opportunity for a hearing. Only the UTRCA Board can refuse the application.

### **6.3.4 Approval Period**

The Authority's permission shall be valid for a period of one year from the date of permit issuance. Requests for an extension of one year, provided that the scope of work remains unchanged from the original application, must be made in writing prior to the one-year expiration date of the original permit. An extension beyond that timeframe may be requested but may be subject to a full re-circulation and review of the *development* proposal to the satisfaction of the Authority.

### **6.3.5 Enforcement**

The objective of enforcement is to ensure compliance with the policies, requirements and regulations that have been adopted by the Authority. Every reasonable attempt will be made to work cooperatively with a "violator" to resolve matters without pursuing legal recourse.

### **6.3.6 Technical Studies and Peer Review**

The requirements of Section 6.2.5 and 6.2.6 shall apply.

### **6.3.7 Fees**

The Authority's fee schedule for Section 28 reviews is provided in the Appendix of the Manual.

## **6.4 OTHER TECHNICAL REVIEW PROCESSES**

### **6.4.1 Environmental Assessment Act**

The Municipal Class *Environmental Assessment (EA)* is the class that is most frequently directed to the Authority for consideration and comment. This process applies to municipal infrastructure projects such as roads, water and wastewater undertakings.

UTRCA Staff review and provide comments on all Class and Individual Environmental Assessments that are proposed within the *watershed*. Staff ensure that environmental and resource concerns pertaining to air, land and water as well as plant, animal and human life are identified through this process. UTRCA input is guided by the policies in this manual. In addition to ensuring that the resource implications are properly considered, Staff need to work with the Environmental Assessment proponent to ensure that there is an appropriate balance between the level of detail needed to support a decision while allowing specific detailed design to be deferred to a later point in the process.

## **6.4.2 Drainage Act**

The Drainage Act provides a procedure whereby municipalities may, with a valid petition of landowners in the "area requiring drainage" for agricultural practices, provide a legal outlet for surface and subsurface waters not attainable under common law. In return, the landowners within the defined drainage *watershed* pay for the privilege of the drainage outlet. Provisions for the distribution of future maintenance and repair costs are included as part of the drainage report.

The Ministry of Agriculture, Food and Rural Affairs (OMAFRA) is responsible for the Drainage Act with implementation activities occurring at the municipal level. The UTRCA is provided the opportunity to comment in accordance with notification requirements outlined in the Drainage Act for certain types of activities. UTRCA input is guided by the policies in this manual. The Authority's comments must also incorporate requirements related to the Level 2 agreement between DFO and the UTRCA on Fish Habitat.

The Conservation Authority provides comments on both new drainage proposals and drain maintenance (in accordance with approved policies and procedures). The UTRCA can issue "Class Authorizations" for drain maintenance on Class A, B and C Drains.

## **6.4.3 Aggregate Resources Act**

While Conservation Authorities do not regulate aggregate extraction activities, they actively participate in the review of applications made pursuant to the Aggregate Resources Act. Section 28 (11) of the Conservation Authorities Act is intended to minimize the duplication of review and approval processes for aggregate applications and to integrate the Ministry of Natural Resources' resource management approach. Pre-consultation with the UTRCA will help to ensure that proposals are consistent with environmental policies and the Generic Regulation and will avoid natural hazards and significant natural heritage features.

## 7 GLOSSARY & COMMON ABBREVIATIONS

### 7.1 GLOSSARY

The definitions in this manual and in the glossary are consistent with those provided in the Authority's Generic Regulation as well as in the Provincial Policy Statement.

**Accepted Engineering Principles:** means those current coastal and hydraulic engineering principles, methods and procedures that would be judged by a peer group of qualified engineers (by virtue of their training and experience), as being reasonable for the scale and type of project being considered, the sensitivity of the location, and the potential threats to life and property.

**Accepted Geotechnical Principles:** means those current geotechnical engineering principles, methods and procedures that would be judged by a peer group of qualified engineers (by virtue of their training and experience), as being reasonable for the scale and type of project being considered, the sensitivity of the location, and the potential threats to life and property.

**Accepted Scientific Principles:** means those current principles, methods and procedures, which are used and applied in disciplines such as geology, geomorphology, hydrology, botany and zoology, and would be judged by a peer group of qualified specialists and practitioners (by virtue of their training and experience), as being reasonable for the scale and type of project being considered, the sensitivity of the location, and the potential threats to life and property.

**Access** (ingress/egress): means the standards and procedures currently applied in engineering practice associated with providing safe passage for vehicles and people to and from a shoreline or river-side property during an emergency situation as a result of flooding, other water related hazards, the failure of floodproofing and/or protection works, and/or erosion that have been reviewed and approved by the Conservation Authority and/or the Ministry of Natural Resources.

**Accessory:** when describing a use, building or structure means a use, a building or structure that is subordinate and exclusively devoted to a main use, building or structure and located on the same lot.

**Active Floodproofing:** means floodproofing techniques which require some action prior to an impending flood in order to make the flood protection operational (e.g. closing water tight doors).

**Adjacent Lands:** means those lands which are contiguous to a natural heritage feature or area where there is a potential that development or site alteration will have a negative impact on the feature or area. The adjacent lands provide a trigger for the need of an EIS.



**Apparent System:** means a riverine system where the physical presence of a valley corridor containing the system is visibly discernible. Also “well-defined system”.

**Area of Interference:** means the area located outside of the wetland that could impact the wetlands if development were to be permitted.

**Areas of Natural and Scientific Interest (ANSIs):** means areas having life science and earth science values designated by the MNR for protection, scientific study or education, chosen as representative of certain biological regions.

**Bankfull Discharge:** means the formative flow of water that characterizes the morphology of a fluvial channel. In a single channel stream, “bankfull” is the discharge, which just fills the channel without flowing onto the flood plain.

**Bankfull Width:** means the width of a bankfull channel measured at the widest riffle section of the channel.

**Baseflow:** means the stream flow derived from groundwater.

**Best Management Practices (BMPs):** means methods, facilities and structures which are designed to protect or improve the environment and natural heritage features from the effects of land development activities. BMPs can include land use restrictions, source control of pollutants, stormwater management ponds, grassed swales, underground storage facilities, woodlot management, soil erosion control, crop rotation, tree windbreaks and natural fencerows.

**Bioata:** means all plant and animal life.

**Biodiversity (Biological Diversity):** means the variability among living organisms from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.

**Buffers:** means planned and managed strips of land and vegetation located between natural heritage features/areas and development sites which are intended to protect the natural heritage feature.

**Channelization:** means the straightening, widening and/or deepening of a watercourse channel.

**Conservation of Land:** means the protection, preservation, management, or restoration of lands within the watershed that include natural heritage features such as wetlands, woodlands and wildlife habitat as well as natural resources including surface and ground water.

**Cumulative Effects:** means the combined effects of all activities in an area over time and the incremental effects associated with individual projects in an area over time.

**Development:** in the PPS means the creation of a new lot, a change in land use or the construction of buildings and structures which require approval under the Planning Act but does not include:

1. activities that create or maintain infrastructure authorized under an environmental assessment process;
2. works subject to the Drainage Act; or
3. for the purposes of policy 2.1.3 (b), underground or surface mining of minerals or advanced exploration on mining lands in significant areas of mineral potential in EcoRegion 5E, where advanced exploration has the same meaning as under the Mining Act. Instead those matters shall be subject to policy 2.1.4(a)

**Development:** under the Conservation Authorities Act means:

- the construction, reconstruction, erection or placing of a building or structure of any kind; or
- any change to a building or structure that would have the effect of altering the use or potential use of the building or structure, increasing the size of the building or structure, or increasing the number of dwelling units in the building or structure; or
- site grading; or
- the temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere.

**Development, Interference with Wetlands and Alterations to Shoreline Regulation:** means the regulation under the Conservation Authorities Act that allows the UTRCA (and all Conservations Authorities across the province) to:

- Prohibit, regulate or provide permission for straightening, changing, diverting or interfering in any way with the existing channel of a river, creek, stream, watercourse or changing, or interfering with a wetland.
- Prohibit, regulate or provide permission for development if the control of flooding erosion, dynamic beaches, pollution or the conservation of land may be affected by the development.

**Drainage Area:** means, for a point, the area that contributes runoff to that point.

**Dry Floodproofing:** means protecting a building or structure by sealing its exterior walls to prevent the entry of flood waters.

**Ecosystem:** means systems of plants, animals and micro-organisms together with non-living components of their environment, related ecological processes and humans.

**Ecosystem Approach:** means the linkages and relationships involving air, land, water and living organisms. The approach is adaptive and recognizes the dynamic nature of watersheds and watercourses and their respective landforms. It is intended to restore and maintain the integrity, quality, productivity and well being of the watershed and subwatersheds.

**Endangered Species:** means any indigenous species of fauna or flora which on the basis of the available scientific evidence is facing imminent extinction or extirpation.

**Environmental Assessment Process:** means a process that is used to predict the environmental effects of proposed initiatives before they are carried out. It is used to identify measures to mitigate adverse effects on the environment and can predict whether there will be significant adverse environmental effects, even after the mitigation is implemented.

**Environmental Impact Study (EIS):** means a report prepared by qualified professionals (engineers, biologists) to address the potential impacts of development on natural heritage features and areas. The types of Environmental Impact Studies include

Comprehensive EIS – is a landscape scale study which identifies natural heritage features for protection, potential development areas and development setbacks that are ecologically sustainable.

Scoped EIS – is an area specific study that addresses issues of particular concern not previously addressed in sufficient detail in a comprehensive study. The factors which may be considered for a scoped EIS include:

- The extent of the encroachment;
- The potential impact of the use; and
- The sensitivity of the feature.

**Environmentally Significant Areas (ESAs):** means natural areas including wetlands or ANSIs which have been, designated for protection by a regional or local municipality.

**Erosion:** means the process of gradual washing away of soil by water movement or seepage which may occur in one of the following ways:

- Rainfall or snowmelt and surface runoff (sheet, rill or gully erosion);
- Internal seepage and piping;
- Water flow (banks or base of river, creek channel); and
- Wave Action (shoreslines of ponds, lakes bays)

Erosion impacts soil at the particle level by dislodging and removing the particles from the parent mass (with water being the transporting agent). Wind and frost may also weather and transport soil particles.

**Erosion Access Allowance:** means the allowance of 6 metres that is needed for the purpose of maintaining sufficient access for emergencies, maintenance, and construction activities within Apparent and Not Apparent Valley Systems.

**Fill:** means any material used or capable of being used to raise, lower or in any way affect the contours of the ground, whether on a permanent or temporary basis, and whether it originated on the site or elsewhere.

**Fish Habitat:** means the spawning grounds and nursery, food supply and migration areas which fish rely on to live.

**Flood/Flooding:** means a temporary rise in the water level which results in an influx of water in areas located adjacent to a watercourse that are usually not covered by water.

**Flood Fringe:** means the outer portion of the flood plain between the floodway and the limit of the regulatory flood. Flood depths and velocities have a tendency to be less severe in the flood fringe as compared to those in the floodway.

**Flood Plain:** means the area, usually low lands, adjoining a watercourse which has been, or may be covered by flood water.

**Floodproofing:** means a combination of structural changes and/or adjustments incorporated into the basic design and/or construction or alteration of individual buildings, structures or properties subject to flooding so as to reduce or eliminate flood damages.

**Floodway:** means the channel of a watercourse and the inner portion of the flood plain where flood depths and velocities are generally greater than those experienced in the flood fringe. The floodway represents that area required for the safe passage of flood flow and/or that area where flood depths and/or velocities are considered to pose a potential threat to life and/or property damage.

**Fragmentation:** means the breaking up of a once large system into smaller parts. The interruption of continuous forest cover has resulted in isolated forest fragments and limited forest ecosystem function.

**Groundwater:** means (1) Water occurring below the soil surface that is held in the soil itself. (2) Subsurface water or water stored in the pores, cracks and crevices in the ground below the water table. (3) Water occurring in the zone of saturation below the earth's surface.

**Habitat:** means the particular type of local environment occupied by an individual or a population.

**HADD** - means a harmful alteration, disruption or destruction of fish habitat.

**Hazard Land Allowance:** means the allowance of 15 metres that is added to the Riverine Hazard Limit giving an extra factor of safety, providing protection against unforeseen conditions that may adversely affect the land located adjacent to a natural hazard area.

**Hazard Lands:** means land that could be unsafe for development because of naturally occurring processes associated with flooding, erosion, dynamic beaches, or unstable soil or bedrock.

**Hazardous Substance:** means substances which individually, or in combination with other substances are considered to pose a danger to public health and safety and the environment. These substances include a wide range of materials that are toxic, ignitable, reactive, corrosive, radioactive or pathological.

**Headwater:** means the source and extreme upper reaches of a stream, drain or river.

**Hyporheic Zone:** means the biologically active saturated zone in the bed of a watercourse which sometimes extends metres beneath the stream and laterally beneath the flood plain.

**Infill:** means the development of previously undeveloped lots or the creation of a residential lot between two existing developed lots of a similar size and which are located on the same side of the road and are not more than 100 metres apart.

**Meander Belt:** means the area of land in which a watercourse channel moves or is likely to move over a period of time.

**Meander Belt Allowance** - means a limit for development within the areas where the river system is likely to shift. It is based on twenty (20) times the bankfull channel width, where the bankfull channel width is measured at the widest riffle section of the reach. A riffle is a section of shallow rapids where the water surface is broken by small waves. The meander belt is centred over a meander belt axis that connects the riffle sections of the stream.

**Meander Belt Axis:** means the line or “axis” that the meander belt is centred over which connects all of the riffle sections of a stream.

**Mineral Aggregate:** means a non-renewable resource that has no substitute available either in the required quantities or at the same reasonable cost. They consist primarily of sand, gravel, clay and bedrock (including stone used in cement, lime or clay bricks or tile).

**Minor Works:** means a category of development within the flood plain which has relatively small economic value and will not lead to significant economic hardship if lost in times of severe flooding. The construction of minor works does not require detailed floodproofing measures and therefore there is an assumption of risk associated with the development.

**Natural Hazards:** means physical environmental processes operating near or at the surface of the earth and sites of unstable soils that limit potential uses of some lands. They may include floods, ice jams, soil erosion, and slope failures that have resulted in damage to property, injury to humans and loss of life. Marine clay, organic soils and karst topography are also considered to be natural hazards because they are unstable and sensitive.

**Natural Heritage Features and Areas:** means features and areas including significant wetlands, woodlands, valleylands, wildlife habitat, fish habitat, and significant portions of the habitat of endangered and threatened species which are important for their environmental and cultural values.

**Natural Heritage System:** means a system made up of natural heritage features and areas, linked by natural corridors which are necessary to maintain biological and geological diversity, natural functions, viable populations of indigenous species and ecosystems. These systems can include lands that have been restored and areas with the potential to be restored to a natural state.

**Net Ecological Benefit:** see Net Environmental Benefit

**Net Environmental Benefit:** (interchangeable with net ecological benefit) means striving to achieve a relative increase in environmental features and functions as a result of new development or land uses and/or from a rehabilitation plan associated with an aggregate extraction operation. Net environmental gain is measured by considering a variety of factors such as biological diversity. It is determined by comparing the state of the environment prior to development or rehabilitation occurring with the projected long-term results of measures that are intended to protect and enhance the environment. Net environmental gain does not mean that the state of the environment will stay the same. There may be some unavoidable losses on a project by project basis that will need to be reinstated and enhanced.

**Not Apparent System:** means a river or stream system where there is no discernible valley slope or bank that can be detected from the surrounding landscape. Also “ill-defined system”.

**Observed Flood Event:** means a flood actually experienced in a particular watershed or portion thereof.

**One Hundred Year Erosion Limit:** means the total combined distance of the Toe Erosion Allowance, the Long Term Angle of Stability and the Erosion Access Allowance.

**One Hundred Year Erosion Rate:** The predicted lateral movement of a watercourse over a period of one hundred years.

**One Hundred Year Flood:** means that flood which is based on an analysis of precipitation, snow melt, or a combination thereof, having an average return period of 100 years or having a 1% chance of occurring or being exceeded in any given year. It is the minimum acceptable regulatory flood standard.

**One Zone Approach:** means the approach where the entire flood plain as defined by the regulatory flood is treated as one unit and all development is prohibited or restricted.

**Other Wetlands:** means any wetland that meets the definition of a wetland that is not Provincially Significant.

**Passive Floodproofing:** means floodproofing techniques which are permanently in place and do not require advance warning and action in order to make the floodproofing and/or flood protection measure effective.

**Passive Low Intensity Recreational Uses:** such as passive parks, trails and *river access* points and other uses deemed appropriate by the UTRCA, but not including new campgrounds, new golf courses or expansions to existing golf courses, or permanent docks.

**Pathways and Trails:** ‘pathways’ refers to paved surface, multi-use routes. ‘Trails’ refers to natural dirt, limestone screening, or woodchip surfaces.

**Pollution:** means any deleterious physical substance or other contaminant which has the potential to be generated by development in an area where the Authority's regulation applies.

**Protection Works:** means structural or non-structural works which are intended to appropriately address damages caused by flooding, erosion and/or other water related hazards.

**Provincially Significant Wetlands** – means protected under Provincial planning policy.

**Regulation Limit:** means the outside limit of all hazards and wetlands.

**Regulatory Flood Plain:** means the approved standard(s) which is used in a particular watershed to define the limits of the flood plain for regulatory purposes. In the case of the Upper Thames River watershed, the 1937 observed flood event serves as the Regulatory Flood level.

**Replacement:** means the removal of an existing structure and the construction of a new residential or habitable structure of the same or smaller size.

**Replacement Structure:** means structures that replace existing building or structures, including buildings and structures designated as architecturally or historically important and that have (recently) been demolished or destroyed but does not include reconstruction on remnant foundations.

**Restricted Uses:** means

- Conservation uses or activities such as wildlife or fisheries management, forestry or passive recreation;
- flood and/or erosion control structures;
- facilities which by their nature must locate near water or traverse water;
- ancillary facilities of an adjacent land use which are of a passive, non-structural nature and do not adversely affect the natural hazard or natural heritage feature or function; and
- municipal infrastructure including roads and utilities/servicing (i.e. sewer lines, gas pipelines, hydro facilities).

The establishment of restricted uses must be supported by an EIS or an Environmental Assessment.

**Riffle:** means is a section of shallow rapids where the water surface is broken by small waves.

**Riparian Rights:** means the common law rights of owners of property along a river or shoreline or other bodies of water. The rights include making reasonable use of the water flowing past their land.

**Riverine Hazard Limit:** means the limit which encompasses the Flood Hazards, the Erosion Hazards and the Watercourses.

**Significant:** as defined in the PPS -

- a) In the case of wetlands means an areas identified as provincially significant by the MNR using evaluation procedures established by the Province as amended from time to time.
- b) In the case of endangered species and threatened species, means the habitat as approved by the MNR that is necessary for the maintenance, survival, and/or recovery of naturally occurring or reintroduced populations of endangered species or threatened species, and where those areas of occurrence are occupied or habitually occupied by the species during all or any part(s) of its life cycle.
- c) In the case of woodlands, means an area which is ecologically important in terms of features such as species composition, age of trees and stand history; functionally important due to its contribution to the broader landscape because of its location, size or due to the amount of forest cover in the planning area; or economically important due to site quality, species composition, or past management history.
- d) In the case of other features and areas including valleylands and wildlife habitat, it means ecologically important in terms of features and linkages, function representations or amount, and contributing to the quality and diversity of an identifiable geographic area or natural heritage system.

**Site Alteration:** in the PPS means activities such as grading, excavation and the placement of fill that would change the landform and natural vegetative characteristics of a site.

For the purposes of policy 2.1.3(b), site alteration does not include underground or surface mining of minerals or advanced exploration on mining lands in significant areas of mining potential in Ecoregion 5E, where advanced exploration has the same meaning as the Mining Act. Instead, those matter shall be subject to policy 2.1.4(a).

**Source Water Protection:** means the action taken to prevent the pollution of drinking water sources, including groundwater, lakes, rivers, and streams. Source water protection includes developing and implementing a plan which may include the management of land uses and potential contaminants. The Province has initiated a strategy to protect Ontario's drinking water from source to tap and has released draft Source Water Protection legislation which if approved, will guide the development and approval of watershed-based source protection plans.

**Special Concern** (formerly "vulnerable"): means those species which have characteristics that make them particularly sensitive to human activities or natural events.

**Special Policy Area (SPA):** means an area in a community that has historically existed in the flood plain and where strict adherence to certain Province-wide policies pertaining to new development would result in social and economic hardship for the community. As a result, site specific policies are formulated and applied within the defined limits of the Special Policy Area.

**Stable Slope:** means a slope that shows no sign of stress such as tension cracks, localized sloughing, seepage and or creep, or erosion. A stable slope tends to be well vegetated and the ratio of the forces resisting movement over the active forces such as gravity and seepage exceeds 1.5.



**Stable Slope Allowance:** means the angle implemented to buffer development from the hazards of slope instability and to prevent the influence of development on the rate of slope movement. In the absence of detailed geotechnical information, this angle is based on an assumed stable slope gradient of 3 horizontal units to 1 vertical unit (3:1) measured landward from the toe of slope. The term Stable Slope Allowance can be interchanged with the terms “Long Term Angle of Stability” and “Stable Angle of Repose.”

**Stewardship:** means the responsible care of natural resources and wildlife on a watershed basis so that it is preserved for future generations.

**Subwatershed:** means a small watershed or subsection of a watershed, usually a tributary.

**Threatened Species:** means species which are likely to become endangered in Canada if limiting factors are not reversed.

**Toe Erosion Allowance:** means the allowance implemented to buffer development from the hazardous effects of erosion at the base of a slope. The allowance also buffers the natural river processes from the influences of development. This allowance is determined based on the natural river processes.

**Two Zone Approach:** means the approach where certain areas of the flood plain are considered to be less hazardous than others and where development could safely occur. The flood fringe defines the area where development may be permitted subject to appropriate floodproofing. The floodway defines that portion of the flood plain wherein development is prohibited or restricted.

**Valleylands:** means a significant natural area that occurs in a valley or other landform depression that has water flowing through or standing for some period of the year. Natural valleylands refers to valleylands that are generally undisturbed and have natural vegetation cover.

**Valley Top of Slope:** means the break in slope point between the valley side slope and the tableland.

**Watercourse:** means an identifiable depression in the ground in which a flow of water regularly or continuously occurs. A watercourse includes rivers, streams, creeks, swales, ditches and municipal drains

**Watershed:** means all the lands drained by a river or stream and its tributaries.

**Wetland:** means land that

- a) Is seasonally or permanently covered by shallow water, or has a water table close to or at its surface;
- b) Directly contributes to the hydrological function of a watershed through connection with a surface watercourse;
- c) Has hydric soil, the formation of which has been caused by the presence of abundant water; and
- d) Has vegetation dominated by hydrophytic plants or water tolerant plants, the dominance of which has been favoured by the presence of abundant water.

But does not include periodically soaked or wet land that is used for agricultural purposes and no longer exhibits a wetland characteristic referred to in clause c) or d).

**Wet Floodproofing:** means those measures taken to reduce or eliminate the potential for flood hazards to damage a building or structure by allowing water to enter a building with mechanisms to prevent structural damage.

**Wildlife Habitat:** means areas in the natural environment which wildlife depend upon for their survival as self-sustaining populations including land, and water needed for shelter, protection and food supply. Wildlife includes all wild mammals, birds, reptiles, amphibians, fishes and invertebrates. Areas may include deer yards, nesting areas, aquatic habitat, waterfowl staging areas and habitat of endangered, threatened and vulnerable species.

**Woodlands:** means treed areas that provide environmental and economic benefits such as erosion prevention, water retention, provision of habitat, recreation and the sustainable harvest of woodland products.

## 7.2 COMMON ABBREVIATIONS

BMPs – *Best Management Practices*

CA – *Conservation Authority*

DFO – *Fisheries and Oceans Canada*

EA – *Environmental Assessment*

EIS – *Environmental Impact Study*

HADD – Harmful Alteration, Disruption, or Destruction

MMAH – Ministry of Municipal Affairs and Housing

MNR – Ministry of Natural Resources

MOE – Ministry of the Environment

OMAFRA – Ontario Ministry of Agriculture and Rural Affairs

PPS – Provincial Policy Statement

SWM – Stormwater Management

UTRCA – Upper Thames River Conservation Authority

## 8 REFERENCES

British Columbia Ministry of Water, Land and Air Pollution. 2004. *Guidelines and Best Management Practices for Amphibians and Reptiles in Urban and Rural Environments in British Columbia*. <http://wlapwww.gov.bc.ca/wld/BMP/bmpintro.html>

Commission on Planning and Development Reform in Ontario. 1993. *New Planning for Ontario – Final Report Summary and Recommendations*. Queen's Printer for Ontario.

Conservation Ontario website - <http://conservation-ontario.on.ca>

County of Middlesex. 1997. *County of Middlesex Official Plan*.

County of Oxford. 1995. *County of Oxford Official Plan*.

County of Perth. 1997. *County of Perth Official Plan*.

City of London, January 2005., Consolidated Official Plan,

Dillon Consulting in association with Golder Associates. 2004. *Middlesex Elgin Groundwater Study Final Report (Draft)*. Dillon Consulting in association with Golder Associates.

Environmental Commissioner of Ontario. 2005. *2004-2005 Annual Report – Planning Our Landscape*. Environmental Commissioner of Ontario.

F.J. Galloway Associates Inc.. 2004. *Upper Thames River Conservation Authority Strategic Plan*.

Fisheries & Oceans Canada Parks Canada, Conservation Ontario and MNR. 2000. *A Protocol Detailing the Fish Habitat Referral Process in Ontario*.

Fisheries & Oceans Canada Parks Canada, Conservation Ontario and MNR. (not dated). *Fact Sheet T-1 - Fish Habitat and The Effects of Silt and Sedimentation..*

Golder Associates. 2001. Report on *Phase II: Groundwater Protection Study – County of Oxford, Ontario: Volume 1*. Golder Associates.

Grand River Conservation Authority. 2003. *Grand River Conservation Authority Wetlands Policy*.

Hamilton Conservation Authority. 2005. *Hamilton Conservation Authority Planning & Regulations, Policies & Guidelines*. HCA

Lake Simcoe Region Conservation Authority. 2005. *Lake Simcoe Region Conservation Authority Watershed Development Policies*. LSRCA.

Maitland Valley Conservation Authority. 2004. Draft Policy and Procedure Manual – Land Use and Development Programs. MVCA.

Marshall Macklin Monaghan Limited, Paragon Engineering Limited, Aquafor Beech Limited. 1995. *City of London Subwatershed Studies – Implementation Plan*, Marshall Macklin Monaghan Limited, Paragon Engineering Limited, Aquafor Beech Limited.

Ministry of Environment and Energy. 1993. *Water Management on a Watershed Basis: Implementing an Ecosystem Approach*. Queens Printer for Ontario.

Ministry of Municipal Affairs. 1994. *Comprehensive Set of Policy Statements*. Queen's Printer for Ontario.

Ministry of Municipal Affairs and Housing. 2005. *Provincial Policy Statement*. Queen's Printer for Ontario.

Ministry of Natural Resources. 1996. *Bill 52 – An Act to Promote Resources Development, Conservation And Environmental Protection through the Streamlining of Regulatory Processes and The Enhancement of Compliance Measures in the Aggregate and Petroleum Industries*. Legislative Assembly of Ontario.

Ministry of Natural Resources. 1988. *Flood Plain Planning Policy Statement: A Statement of Ontario Government Policy issued under the authority of Section 3 of the Planning Act 1983*. Ministry of Natural Resources.

Ministry of Natural Resources. 1997. *Natural Hazards Training Manual*. Ministry of Natural Resources.

Ministry of Natural Resources. 1999. *Natural Heritage Training Manual*. Ministry of Natural Resources.

Ministry of Natural Resources. 1999. *Natural Heritage Reference Manual*. Ministry of Natural Resources.

Ministry of Natural Resources. 1980. *Conservation Authorities Act R.S.O. 1980*.

Ministry of Natural Resources. 2004. *Conservation Authorities Act O. Reg 97/04 Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Ontario Regulation. (Generic Regulation)*.

Ministry of Natural Resources. 2001. *Understanding Natural Hazards – An Introductory Guide for Public Health and Safety Policies 3.1 Provincial Policy Statement*. Queen's Printer for Ontario.

Monteith Brown Planning Consultants. 2003. *Municipality of Thames Centre Official Plan*. Monteith Brown Planning Consultants

Niagara Peninsula Conservation Authority. 2003. *Niagara Peninsula Conservation Authority Resources Planning Program Plan Input and Review Policies/Guidelines*.

Ontario Ministry of Natural Resources and Watershed Science Centre. 2002. *Technical Guide – River & Stream Systems: Erosion Hazard Limit*. Queen's Printer for Ontario.

Ontario Ministry of Natural Resources and Watershed Science Centre. 2002. *Technical Guide – River & Stream Systems: Flooding Hazard Limit*. Queen's Printer for Ontario.

Stream Corridors Project Management Team. 2001. *Adaptive Management of Stream Corridors in Ontario*. The Queen's Printer for Ontario.

The Community Development Group Limited for WWF. 1999. *Natural Heritage Planning Policy in Ontario*. The Community Development Group Ltd.

Toronto and Region Conservation for the Living City. 1994. *MTRCA Valley and Stream Corridor Management Program*.

Township of Middlesex Centre. 2000. *Official Plan of the Township of Middlesex Centre*.

Upper Thames Conservation Authority. 1993. *Fill, Construction and Alteration to Waterways Regulation 170/90*. UTRCA .

Upper Thames River Conservation Authority. 1983. *Upper Thames River Conservation Authority Interim Watershed Plan*. UTRCA.

Upper Thames River Conservation Authority. 1993. *Municipal Plan Review Guidelines of the Upper Thames River Conservation Authority*, UTRCA.

Upper Thames River Conservation Authority. 1993. *Policy and Procedure Manual for the Administration of the Upper Thames River Conservation Authority Fill, Construction and Alteration to Waterways Regulation*. UTRCA.

Upper Thames River Conservation Authority. 1997. *The Oxford County Terrestrial Ecosystems Study (OCTES) - A Natural Heritage Study for Oxford County*. UTRCA.

Upper Thames River Conservation Authority. 2001. *Upper Thames River Watershed Report Cards*. UTRCA.

Upper Thames River Conservation Authority in cooperation with the Middlesex Natural Heritage Steering Committee. 2003. *The Middlesex Natural Heritage Study - A Natural Heritage Study to Identify Significant Woodland Patches in Middlesex County* . UTRCA.

## 9 APPENDICES

### 9.1 APPENDICES ATTACHED

1. UTRCA Fee Schedule
2. Draft Pre-screening Protocol for Planning Act Applications
3. UTRCA Regulatory Flood Standard Approval Letter
4. Delegation Letter for Natural Hazards from MNR
5. Memorandum of Understanding on Delegated Authority (MNR and MMAH)
6. UTRCA Fragmentation of Hazard Lands
7. Determination of Regulation Limits, UTRCA, March 2006

### 9.2 LIST OF KEY REFERENCE DOCUMENTS/LINKS

1. Provincial Legislation and Regulations – [www.e-laws.gov.on.ca](http://www.e-laws.gov.on.ca)
2. Federal Legislation and Regulations - [www.laws.justice.gc.ca](http://www.laws.justice.gc.ca)
3. Conservation Authorities Act –  
[http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90c27\\_e.htm](http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/90c27_e.htm)
4. Conservation Authorities Generic Regulation –  
[http://www.e-laws.gov.on.ca/DBLaws/Source/Regs/English/2004/R04097\\_e.htm](http://www.e-laws.gov.on.ca/DBLaws/Source/Regs/English/2004/R04097_e.htm)
5. Provincial Policy Statement -  
[http://www.mah.gov.on.ca/userfiles/HTML/nts\\_1\\_8198\\_1.html](http://www.mah.gov.on.ca/userfiles/HTML/nts_1_8198_1.html)
6. MMAH Land Use Planning Tools –  
[http://www.mah.gov.on.ca/userfiles/HTML/nts\\_1\\_3077\\_1.html](http://www.mah.gov.on.ca/userfiles/HTML/nts_1_3077_1.html)
7. Ontario Wetland Evaluation System, 3<sup>RD</sup> Edition (MNR, 1994)
8. Natural Heritage Reference Manual (MNR, 1999)
9. Natural Hazards Technical Manual (MNR, 1997)
10. Significant Wildlife Habitat Technical Guide (MNR, 2000)

## Appendix 9.1.1 - UTRCA'S FEE SCHEDULES

The most recent Fee Schedules are posted on the UTRCA's website at:

Section 28 Permit Fees:

<http://thamesriver.on.ca/wp-content/uploads//PlanningRegulations/UTRCA2020-Section28PermitFees.pdf>

Plan Review Fees:

<http://thamesriver.on.ca/wp-content/uploads//PlanningRegulations/UTRCA2020-PlanReviewFees.pdf>

Technical Review Fees:

<http://thamesriver.on.ca/wp-content/uploads//PlanningRegulations/UTRCA2020-TechnicalReviewFees.pdf>

Other Service Fees:

<http://thamesriver.on.ca/wp-content/uploads//PlanningRegulations/UTRCA2020-OtherFees.pdf>



## **Appendix 9.1.2 – Draft Pre-Screening Protocol for Planning Act Applications**

### **Planning Act Application Screening Protocol**

This screening protocol is intended to be used by municipalities to assist with determining which Planning Act applications need to be circulated to the UTRCA for comments. The use of the pre-screening protocol by municipalities can streamline the review process and eliminate the need for applicants to pay the UTRCA Planning Act review fee for those applications that do not need to be reviewed by the UTRCA.

### **Subdivisions, Condominiums and Official Plan Amendments**

Because of the potential for large scale impacts on the natural environment, all plans of subdivision within the UTRCA watershed are to be circulated for review and comment. Sediment and erosion control and stormwater management quality control will be required for most plans of subdivision. Stormwater quantity control needs will be determined based on the availability of a master drainage plan or the physical characteristics of the receiving watercourse.

All official plan amendment applications need to be forwarded for UTRCA review.

### **Other Planning Act Applications**

For other site specific development proposals, a screening process has been developed with the objective of minimizing the number of applications that need to be forwarded to the UTRCA for review. Application review fees are required only for those applications that are identified for circulation to the UTRCA.

The pre-screening protocol is map based. The maps will reflect the most current location information available for natural hazard, natural heritage and natural resource areas. Adjacent lands, allowances and areas of interference are included on the maps to ensure that the area of potential interest is reflected. Copies of the maps and training will be provided to municipal staff.

It is recommended that all applications where the subject property is within the feature or area or within the identified adjacent land, allowance or area of interference, be circulated for UTRCA review and comment. The decision to circulate an application for Conservation Authority review is to be made by the municipality that receives the application. The municipality may consult the Conservation Authority on this issue. The UTRCA, in cooperation with the municipality, may develop procedures for streamlining the collection of fees.

# Appendix 9.1.3 – UTRCA Regulatory Standard Approval Letter



Ministry of  
Natural  
Resources

Minister

Ministère des  
Richesses  
naturelles

Ministre

Queen's Park  
Toronto, Ontario  
M7A 1W3  
416 / 965-1301

FEB. 21 1989

Mr. H. Munro, Chairman  
Upper Thames River Conservation Authority  
Box 6278, Stn. D  
London, Ontario  
N5W 5S1

Dear Mr. Munro:

**Subject: Request to Change the Regulatory Flood Standard  
for Watersheds within the Jurisdiction of the  
Upper Thames River Conservation Authority**

In accordance with established procedures, I approve the request to change the regulatory flood standard for all watersheds within the jurisdiction of the Upper Thames River Conservation Authority, effective this date. For this area, the standard will be changed from the Hurricane Hazel Storm to an observed flood event based on the 1937 flood.

I have requested the City of London to prepare a local communication plan in consultation with your Conservation Authority.

If any further clarification is required concerning this matter, please contact the Conservation Authorities and Water Management Branch. When the communication plan is finalized, I would appreciate a copy being forwarded to the above mentioned Branch.

Yours sincerely,

Vincent G. Kerrio  
Minister

Received by UTRCA
to <i>GRC, Warden</i>
DATE FEB 27 1989
By _____
To _____

## Appendix 9.1.4 – Delegation Letter for Natural Hazards



Ministry of  
Natural  
Resources

Minister

Ministère des  
Richesses  
naturelles

Ministre

Queen's Park  
Toronto, Ontario  
M7A 1W3  
416 / 314-2301

APR 19 1995

95-01252-MIN

Mr. Donald Hocking  
Chair  
Upper Thames River Conservation Authority  
R.R. #6  
London, Ontario  
N6A 4C1

Dear Mr. Hocking:

This letter is with regard to the responsibilities of Conservation Authorities in commenting on development proposals.

The Government of Ontario is continuing to move forward on reforms promoting greater local involvement in decision-making, streamlining of municipal planning and other approval processes, and improved environmental protection. Ontario's Conservation Authorities continue to be important partners in this process.

In 1983, Conservation Authorities were delegated commenting responsibility on flood plain management matters. This was followed in 1988 by a similar delegation of commenting responsibility for matters related to flooding, erosion, and dynamic beaches along the shorelines of the Great Lakes-St. Lawrence River system.

At present, the Ministry and Conservation Authorities continue to independently review and provide input to municipalities and the Ministry of Municipal Affairs on development matters related to riverine erosion, slope, and soil instability. Although Authorities and the Ministry share similar objectives, this overlap and duplication of efforts have occasionally led to differences in comments which, in turn, have sometimes resulted in confusion, delays and expense for development proponents. As part of the current Planning Reform initiative, there is an opportunity to clarify the roles and responsibilities related to these important hazard management issues.

... 2

Through their flood plain, watershed and Great Lakes-St. Lawrence River shoreline management planning initiatives, Conservation Authorities have made good progress in streamlining approval processes and strengthening provincial-municipal partnerships. By extension, I believe that it would be appropriate to recognize the well-developed expertise and capabilities of Conservation Authorities in the evaluation of riverine erosion, slope and soil instability matters and to formally confirm Conservation Authorities as the lead commenting agency. This would result in further streamlining of approval processes, the promotion of environmentally sound development, and the provision of an economic stimulus for the province.

As of March 29, 1995, Conservation Authorities, where they exist, will have sole commenting responsibilities on development proposed in areas subject to riverine erosion, slope instability and soil instability, such as in areas of high water tables, organic or peat soils, and leda, or sensitive marine clay, soils. Implementation of this policy by authorities would continue to be eligible for provincial grant. Where Conservation Authorities exist, I have asked Ministry staff to focus their comments on all other matters of direct interest and concern to the Ministry. Where Conservation Authorities do not exist, the Ministry will continue its commenting role on these matters.

The Ministry of Natural Resources will continue as lead administrative Ministry having overall Government responsibility for hazard management policies and programs. In this regard, the Ministry will continue to provide leadership, policy direction and advisory assistance to the Conservation Authorities.

Your continued participation in the delivery of this important component of the overall provincial hazard management program will serve to strengthen the partnership between the Ministry and the Conservation Authorities.

Yours sincerely,



Howard Hampton  
Minister

## **Appendix 9.1.5 – MOU on Delegated Authority (MNR, MMAH)**

### **CONSERVATION ONTARIO, MINISTRY OF NATURAL RESOURCES & MINISTRY OF MUNICIPAL AFFAIRS AND HOUSING**

#### **MEMORANDUM OF UNDERSTANDING ON PROCEDURES TO ADDRESS CONSERVATION AUTHORITY DELEGATED RESPONSIBILITY**

##### **PURPOSE OF THE MOU**

The MOU defines the roles and relationships between Conservation Authorities (CAs), the Ministry of Natural Resources (MNR), and the Ministry of Municipal Affairs and Housing (MMAH) in planning for implementation of CA delegated responsibilities under the Provincial One Window Planning System.

##### **BENEFITS TO SIGNATORY PARTIES**

It is beneficial for all parties to enter into this agreement because it clarifies the roles of CAs and the unique status of CAs in relationship to the Provincial One Window Planning System.

##### **DELEGATED RESPONSIBILITY FOR NATURAL HAZARDS**

CAs were delegated natural hazard responsibilities by the Minister of Natural Resources. A copy of the delegation letter is attached. This letter (dated April 1995) went to all CAs and summarizes delegations from the MNR including flood plain management, hazardous slopes, Great Lakes shorelines, unstable soils and erosion which are now encompassed by Section 3.1 "Natural Hazards" of the Provincial Policy Statement (1997). In this delegated role, the CA is responsible for representing the "Provincial Interest" on these matters in planning exercises where the Province is not involved.

This role does not extend to other portions of the PPS unless specifically delegated or assigned in writing by the Province.

## ROLES AND RESPONSIBILITIES

### Ministry of Natural Resources

- a) MNR retains the provincial responsibility for the development of flood, erosion and hazard land management policies, programs and standards on behalf of the province pursuant to the *Ministry of Natural Resources Act*.
- b) Where no conservation authorities exist, MNR provides technical support to the Ministry of Municipal Affairs and Housing on matters related to Section 3.1 of the Provincial Policy Statement in accordance with the "Protocol Framework – One Window Plan Input, Review and Appeals".
- c) MNR, in conjunction with MMAH, co-ordinates the provincial review of applications for Special Policy Area approval under Section 3.1 of the PPS.

### Ministry of Municipal Affairs and Housing

- a) MMAH coordinates provincial input, review and approval of policy documents, and development proposals and appeals to the Ontario Municipal Board in accordance with the "Protocol Framework One Window Plan Input Review and Appeals".
- b) Where appropriate, MMAH will consult conservation authorities as part of its review of policy documents and development proposals to seek input on whether there was "regard to" Section 3.1 of the PPS.
- c) Where there may be a potential conflict regarding a Conservation Authority's comments on a planning application with respect to Section 3.1 of the PPS and comments from provincial ministries regarding other Sections of the PPS, the Ministry of Municipal Affairs and Housing will facilitate discussions amongst the affected ministries and the Conservation Authority so that a single integrated position can be reached.
- d) Where appropriate, MMAH will initiate or support appeals to the OMB on planning matters where there is an issue as to whether there was "regard to" Section 3.1 of the PPS.
- e) MMAH, in conjunction with MNR, coordinates the provincial review of application for Special Policy Area approval under Section 3.1 of the PPS.

---

Conservation Authorities (CAs)

- a) The CAs will review policy documents and development proposals processed under the *Planning Act* to ensure that the application has appropriate regard to Section 3.1 of the PPS.
- b) Upon request from MMAH, CAs will provide comments directly to MMAH on planning matters related to Section 3.1 of the PPS as part of the provincial one window review process.
- c) Where there may be a potential conflict regarding a Conservation Authority's comments on a planning application with respect to Section 3.1 of the PPS and comments from provincial ministries regarding other Sections of the PPS, the Ministry of Municipal Affairs and Housing will facilitate discussions amongst the affected ministries and the Conservation Authority so that a single integrated position can be reached.
- d) CAs will apprise MMAH of planning matters where there is an issue as to whether there has been "regard to" Section 3.1 of the PPS to determine whether or not direct involvement by the province is required.
- e) Where appropriate, CAs will initiate an appeal to the OMB to address planning matters where there is an issue as to whether there has been "regard to" Section 3.1 of the PPS is at issue. CAs may request MMAH to support the appeal.
- f) CAs will participate in provincial review of applications for Special Policy Area approval.
- g) CAs will work with MMAH, to develop screening and streamlining procedures that eliminate unnecessary delays and duplication of effort.

## FURTHER CA ROLES IN PLAN INPUT, PLAN REVIEW AND APPEALS

CAs also undertake further roles in planning under which they may provide plan input or plan review comments or make appeals.

### 1. Watershed Based Resource Management Agency

CAs are corporate bodies created by the province at the request of two or more municipalities in accordance with the requirements of the *Conservation Authorities Act (CA Act)*. Section 20 of the *CA Act* provides the mandate for an Authority to offer a broad resources management program. Section 21 of the *CA Act* provides the mandate to have watershed-based resource management programs and/or policies that are approved by the Board of Directors.

CAs operating under the authority of the *CA Act*, and in conjunction with municipalities, develop business plans, watershed plans and natural resource management plans within their jurisdictions (watersheds). These plans may recommend specific approaches to land use and resource planning and management that should be incorporated into municipal planning documents and related development applications in order to be implemented. CAs may become involved in the review of municipal planning documents (e.g., Official Plans (OPs), zoning by-laws) and development applications under the *Planning Act* to ensure that program interests developed and defined under Section 20 and 21 of the *CA Act* are addressed in land use decisions made by municipal planning authorities. In this role, the CA is responsible to represent its program and policy interests as a watershed-based resource management agency.

### 2. Planning Advisory Service to Municipalities

The provision of planning advisory services to municipalities is implemented through a service agreement with participating municipalities or as part of a CAs approved program activity (i.e., service provided through existing levy). Under a service agreement, a Board-approved fee schedule is used and these fee schedules are coordinated between CAs that "share" a participating municipality. The "Policies and Procedures for the Charging of CA Fees" (MNR, June 13, 1997) identifies "plan review" activities as being eligible for charging CA administrative fees.

The CA is essentially set up as a technical advisor to municipalities. The agreements cover the Authority's areas of technical expertise, e.g., natural hazards and other resource management programs. The provision of planning advisory services for the review of *Planning Act* applications is a means of implementing a comprehensive resource management program on a watershed basis.

In this role, the CA is responsible to provide advice on the interpretation of the Provincial Policy Statement (PPS) under the terms of its planning advisory service agreement with the municipality. Beyond those for Section 3.1 "Natural Hazards" where CAs have



---

delegated responsibility, these comments should not be construed by any party as representing the provincial position.

### 3. CAs as Landowner

CAs are landowners and as such, may become involved in the planning process as a proponent or adjacent landowner. Planning Service Agreements with municipalities have anticipated that this may lead to a conflict with our advisory role and this is addressed by establishing a mechanism for either party to identify a conflict and implement an alternative review mechanism.

### 4. Regulatory Responsibilities

#### a) *CA Act* Regulations

In participating in the review of development applications under the *Planning Act*, CAs will (i) ensure that the applicant and municipal planning authority are aware of the Section 28 regulations and requirements under the *CA Act*, and, (ii) assist in the coordination of applications under the *Planning Act* and the *CA Act* to eliminate unnecessary delay or duplication in the process.

#### b) Other Delegated or Assigned Regulatory/Approval Responsibility

Federal and provincial ministries and municipalities often enter agreements to transfer regulatory/approval responsibilities to individual CAs (e.g., Section 35 Fisheries Act/DFO; Ontario Building Code/septic tank approvals). In carrying out these responsibilities and in participating in the review of development applications under the *Planning Act*, CAs will (i) ensure that the applicant and municipality are aware of the requirements under these other pieces of legislation and how they may affect the application; and, (ii) assist in the coordination of applications under the *Planning Act* and those other Acts to eliminate unnecessary delays or duplication in the process.

### **CANCELLATION OR REVIEW OF THE MOU**

The terms and conditions of this MOU can be cancelled within 90 days upon written notice from any of the signing parties. In any event, this document should be reviewed at least once every two years to assess its effectiveness, its relevance and its appropriateness in the context the needs of the affected parties. "Ed. Note: 90 days is to provide time for the parties to reach a resolution other than cancellation".

**MEMORANDUM OF UNDERSTANDING ON PROCEDURES TO ADDRESS  
CONSERVATION AUTHORITY DELEGATED RESPONSIBILITY**

I hereby agree to support the provisions contained in this Memorandum of Understanding as an appropriate statement of the roles and responsibilities of relevant Ministries and Conservation Authorities in the implementation of the Provincial Policy Statement.

**Jan 19, 2001: Original signed by**

\_\_\_\_\_  
David de Launay  
Director  
Lands and Waters Branch  
Ministry of Natural Resources

\_\_\_\_\_  
Date

**Feb 12, 2001: Original signed by**

\_\_\_\_\_  
Audrey Bennett  
A/Director  
Provincial Planning and Environmental Services Branch  
Ministry of Municipal Affairs and Housing

\_\_\_\_\_  
Date

**Jan 01, 2001: Original signed by**

\_\_\_\_\_  
R.D. Hunter  
General Manager  
Conservation Ontario

\_\_\_\_\_  
Date

## Appendix 9.1.6 – Fragmentation of Hazard Lands

### FRAGMENTATION OF HAZARDOUS LANDS (*Information Brief: June 1998*)

Many Conservation Authorities have adopted municipal plan review policies which discourage the fragmentation of flood plains and hazardous slope areas. The basis for this policy approach at the UTRCA office has been:

- 1) our interpretation of previous and existing Provincial Planning Policy
- 2) minimizes the number of owners of land that is subject to Fill, Construction and Alteration to Waterways Regulations
- 3) for new development, hazard avoidance is the preferred method of management

### Provincial Policy Statement (1997)

The Provincial Policy Statement provides the following direction (words that are in *italics* are defined in the definition section of the PPS):

- 3.1.1 Development will be generally directed to areas outside of:
  - b) *hazardous lands* adjacent to *river and stream systems* which are impacted by *flooding* and/or *erosion hazards*;
- 3.1.2 *Development and site alterations* will not be permitted within:
  - c) *a floodway*

### PPS Definitions:

*development* means the creation of a new lot, a change in land use, or the construction of buildings and structures, requiring approval under the Planning Act;...

*hazardous lands* means property or lands that could be unsafe for development due to naturally occurring processes....Along *river and stream systems*, this means the land, including that covered by water, to the furthest landward limit of the *flooding* or *erosion hazard* limits.

*site alteration* means activities, such as fill, grading and excavation, that would change the landform and natural vegetative characteristics of a site.

The PPS provides a policy basis for discouraging, if not prohibiting, fragmentation of flood plain lands. The PPS also provides a general policy direction that development, which can be interpreted to include lot creation, should avoid slope hazards.

## **Implementation**

The Conservation Authority's concern with allowing the severance or fragmentation of hazard lands relates to our responsibilities for regulating these areas. Section 28 of the Conservation Authorities Act deals with Fill, Construction and Alteration to Waterways. Under this legislation, and its enacting Regulations, a Conservation Authority may regulate any watercourse alteration. The Authority may also regulate construction within the flood plain area of a watercourse. The Conservation Authority may also identify broader hazard areas for fill regulation. Under the existing legislation these fill regulation areas must be mapped and properly registered in order for the Authority to implement the Fill Regulation provisions of Section 28 of the Conservation Authorities Act. Most Conservation Authorities have included hazardous areas beyond the flood plain in the fill regulated area in order to enact a comprehensive hazard management program.

It is certainly recognized that all lot creation involving hazardous lands can not, and should not, be prohibited. In practice there are cases where the inclusion of some flood plain/hazard land with each parcel is the best solution. However, it must be recognized that each time that a new parcel is created that includes an area of land regulated by the Conservation Authority, the Authority has an additional landowner to keep advised of the regulated areas and to potentially deal with through the permitting or violation process. In the case of large rural parcels, the number of additional lots created is probably manageable, however, in areas where multiple lot creation is occurring for residential purposes, the potential exists for an extreme increase in the number of additional owners of regulated land.

In the case of residential lot creation, the ultimate owners of the lot often have an expectation that they will be able to develop/use their entire lot. In cases where flood plain or hazardous lands have been included with the lot, the following type of conflicts can arise:

Utility sheds and other types of secondary structures (i.e. pools, pool sheds, play houses, elaborate fencing/landscaping etc.) can end up being located in the flood plain or slope hazard area of the parcel. These types of structures are often established without a building permit and as a result the municipality and the Conservation Authority may not be made aware of the encroachment until well after the fact. When a flood or slope failure occurs, there can be significant property damage and the area of flooding or slope failure can actually be significantly expanded due to the illegal structures/uses aggravating the hazard process. The landowners at the time of the occurrence will demand that the flooding/slope failure be arrested or that they be compensated for loss.

## **Summary**

To address the potential for hazard land fragmentation, many of the Conservation Authorities encourage the inclusion of policies in planning documents that discourage fragmentation of hazard lands. It is our opinion that there is a basis in Provincial Policy for this type of approach. By having this type of policy in municipal planning documents, the potential conflicts that may arise are dealt with proactively, the potential for damage is reduced and the long term cost of implementing a hazard regulation program is minimized.