
Biophysical Assessment

Date of Approval by Council: 6/28/05; 02/09/2010

Resolution No.: 467/2005; 45/2010

Lead Role: Chief Commissioner

Replaces: N/A

Last Review Date: January 8, 2013

Next Review Date: 01/2016

Administrative Responsibility: Planning & Development Services

Special Notes:

Cross reference with Policy SER-008-015, Dedication of Municipal Reserve, Environmental Reserve and Environmental Reserve Easement, Policy SER-009-031, Dedication of Conservation Easements, Policy SER-008-019, Conceptual Schemes, Policy SER-009-034, Tree Conservation During Development, Policy SER-009-035, Tree Management, and Policy SER-009-036, Wetland Conservation.

Policy Statement

As per the Strategic Plan, “Strathcona County is a safe, caring and autonomous community that treasures its unique blend of urban and rural lifestyles while balancing the natural environment with economic prosperity; and through strong, effective leadership is a vibrant community of choice”. In the interest of sustaining our natural environment Strathcona County’s **CONSERVATION GOAL** is to protect the integrity of our heritage and natural resources while providing opportunities for appropriate forms of use that will benefit the community. Our conservation goal includes:

- (a) maintaining viable sustainable populations of native plants and wildlife in their natural habitats;
- (b) maintaining heritage resources and values, whether it be a building, monument, or landscape feature;
- (c) identifying a network of conservation areas to promote the sustainable use of native habitat and heritage resources to enhance quality of life for all;
- (d) restoring and rehabilitating degraded ecosystems, where practical;
- (e) developing and implementing management plans to ensure long term viability of the natural and heritage resources; and
- (f) educating the public on conservation and sustainability.

Strathcona County shall require a biophysical assessment of future development areas. The results of a biophysical assessment shall be used for prioritizing and dedicating Environmental Reserve, Environmental Reserve Easement, Municipal Reserve and Conservation Easement lands based on municipal, community and environmental needs.

Definitions

Biophysical Assessment (BA) means

an assessment of the biological and physical elements of an ecosystem, including geology, topography, hydrology and soils.

Conservation Easement (CE) means

a binding voluntary legal agreement between Strathcona County and the landowner for the purposes of conserving an environmentally significant area or important wildlife habitat. The agreement is registered on the title of the land in perpetuity.

Environmental Reserve (ER) means

lands defined as Environmental Reserve in the Municipal Government Act.

Environmental Reserve Easement (ERE) means

an easement created for purposes specified in the Municipal Government Act.

Municipal Reserve (MR) means

lands defined as Municipal Reserve in the Municipal Government Act.

Guidelines

During the Area Concept Plan, Area Structure Plan, Conceptual Scheme and/or subdivision application process, each property will require a BA to identify potential ER, ERE, MR and CE lands. The BA must be completed by a qualified professional in the environmental field. A BA should include the following:

- 1 INTRODUCTION
 - 1.1 Scope (subject property location)
 - 1.2 Development Project Description (proposed development as per the current Municipal Development Plan)
 - 1.3 Objectives
- 2 DISCUSSION
 - 2.1 Study Area
 - 2.1.1 Location (in context of surrounding landscape)
 - 2.1.2 Climate (average precipitation, seasonal temperatures)
 - 2.1.3 Physiographic Description (in context of Natural Regions and Subregions of Alberta)
 - 2.2 Approach and Assessment Methods (information review, field surveys, inventories)
 - 2.3 Applicability of Federal, Provincial and Municipal Legislation
- 3 ASSESSMENT RESULTS
 - 3.1 Historical Air Photos (dating back to 1950, focus on surface water, wetlands, land use changes)
 - 3.2 Field Reconnaissance, Sampling and Surveys (landscape characteristics, species lists, plant community mapping)
 - 3.3 Topography (landform classification)
 - 3.4 Geology (surficial geology classification)
 - 3.5 Soil (soil classification)
 - 3.6 Hydrology
 - 3.6.1 Surface water (ephemeral and permanent drainage patterns)
 - 3.6.2 Groundwater (potential for groundwater recharge)
 - 3.7 Wetlands (wetland classification)
 - 3.7.1 Wetland delineation (vegetation community classification, species list, exotic species)
 - 3.7.2 Wetland classification
 - 3.7.3 Wetland mitigation (avoidance, minimization, compensation)
 - 3.8 Uplands (vegetation community classification, species list, exotic species)
 - 3.8.1 Tree conservation at single tree and/or tree stand scale (resource evaluation, conservation suitability)

3.9 Wildlife (species list of direct and indirect observations)

- 3.9.1 Birds
- 3.9.2 Fish
- 3.9.3 Herptiles (reptiles and amphibians)
- 3.9.4 Invertebrates
- 3.9.5 Mammals
- 3.9.6 Rare, threatened and endangered species (as per Alberta Natural Heritage Information Centre, Alberta's Biodiversity Species Observation Database and/or Committee on the Status of Endangered Wildlife in Canada)

4. CONSERVATION RECOMMENDATIONS

- 4.1 Environmental Reserve/Environmental Reserve Easement (boundaries of ER/ERE lands)
- 4.2 Municipal Reserve (potential upland habitats for ecological/pedestrian connectivity)
- 4.3 Conservation Easement (potential upland habitats for ecological connectivity)
- 4.4 Wetland Mitigation

5. CONCLUSIONS

6. REFERENCES

Several ecological assessment documents specific to Strathcona County are available for reference to determine the environmental sensitivity and significance of natural areas. The documents include:

- ✓ Strathcona County Open Space and Recreation Facility Strategy (Strathcona County 2008)
- ✓ Assessment of Environmental Sensitivity and Sustainability in Support of the Strathcona County MDP Review (Spencer Environmental Management Services Ltd. 2005)
- ✓ Prioritized Landscape Ecology Assessment of Strathcona County (GEOWEST 1997)
- ✓ Strathcona County Southeast Watershed Ecosystem Assessment (Griffiths 1992)
- ✓ Environmentally Sensitive Areas: County of Strathcona and M.D. of Sturgeon (Infotech 1989)
- ✓ A Survey of Wetland Wildlife Resources in Strathcona County (Griffiths 1987)
- ✓ Significant Natural Features and Landscapes of Strathcona County (Westworth 1987)

Roles and Responsibilities

1. Planning & Development Services (PDS)

(a) The Manager of Environmental & Open Space Planning is responsible for reviewing the Biophysical Assessment and assessing the recommended dedication of ER, ERE, MR and CE lands. Representatives of Environmental & Open Space Planning will review reports, provide recommendations and conduct inspections. Representatives of Environmental & Open Space Planning will assess potential Conservation Easement lands, educate the landowner regarding the Conservation Easement process and draft the Conservation Easement Agreement.

(b) The Manager of Land Management Services is responsible for finalizing a Conservation Easement Agreement. The Manager of Land Management Services is responsible for maintaining complete and accurate records of all properties acquired or with registered Conservation Easements pursuant to this procedure.

(c) The Manager of Land Development Services is responsible for ensuring appropriate subdivision approval conditions regarding reserves pursuant to the subdivision process, including MR owing. The Manager of Land Development Services is responsible for taking the Biophysical Assessment report and recommendations to Council.