

Rouge River Watershed

Scenario Modelling and Analysis Report

Section 4.6 Cultural Heritage

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SECTION
4.6

CULTURAL HERITAGE

4.6 Cultural Heritage

4.6.1 Key Indicators

The cultural heritage goal, objective, indicator and target developed for the Rouge River watershed are summarized in Table 4.6-1. Scenarios will be evaluated in terms of their potential to affect cultural heritage resources, which in the Rouge watershed include:

- known archaeological sites;
- potential or undiscovered archaeological sites;
- listed or designated built heritage properties; and
- living culture of the 21st century.

Table 4.6-1: Cultural Heritage Goals, Objectives, Indicators and Targets

GOALS	OBJECTIVES	INDICATORS	TARGETS
Cultural Heritage			
Recognition, preservation, and celebration of cultural heritage in the Rouge watershed to increase awareness and understanding of past human relationships with the environment	Identify, document and protect cultural heritage resources	Cultural heritage resources	Increase the database of known archaeological, historic and burial sites, and built structures.

4.6.2 Cultural Heritage Analysis Methods

The assessment and analysis of existing and potential cultural heritage in the Rouge River watershed was conducted with the aid of several sources as follows:

Ontario Archaeological Sites Database (OASD)

This database is maintained by the Ontario Ministry of Culture, and contains relevant information about archaeological sites that were registered with the Ministry of Culture. At the time this report was prepared, approximately 500 archaeological sites were registered for the Rouge River watershed with the Ministry.

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Built Heritage Inventory

This inventory is an ongoing, open-ended database compiled by TRCA's Archaeology Resource Management Services section, identifying built heritage structures that have been "listed" or "designated" by the different municipalities in the watershed. Designated structures are also recognized and protected under the Ontario Heritage Act and a database of these structures is maintained by the Ministry of Culture. It is not a complete list, as built heritage structures are constantly being evaluated and added to it. Unfortunately, at the same time, structures are being de-listed and demolished, as part of growing development in many areas of the GTA. At the time this report was prepared, approximately 1100 built heritage properties were listed or designated within the Rouge River watershed.

TRCA's probability model for archaeological potential

This GIS-based model was developed to assess the potential for pre-contact First Nation's archaeological sites, and is based on statistical relationships established between known archaeological site locations and distance from other known archaeological sites, distance from water, and soil type. High archaeological potential sites are those within 315 m of known sites, within 250 m of a waterbody and located on well drained soils. This model was initially developed in 1990 (MTRCA) and was updated in 2003. The criteria employed in the TRCA model are generally consistent with the Ontario Ministry of Culture guidelines for First Nations archaeological potential (See Table 4.6-2). Note that these criteria do not factor in the traditional knowledge of descendant Aboriginal peoples to recognize environmental features that would help identify places of past activity and/or sacred places.

Guidelines for Euro-Canadian Archaeological Sites

A qualitative assessment of the potential for Euro-Canadian archaeological sites was undertaken using the Ministry of Citizenship, Culture and Recreation's (now the Ministry of Culture) Guidelines (See Table 4.6-2)

Maps illustrating the locations of archaeological sites, built heritage sites and areas of archaeological site potential were visually interpreted in relation to the scenario maps, however due to legal restrictions around the publication of archaeological data; these maps cannot be reprinted as part of this report.

In addition to the above-noted sources, scenarios were examined and analyzed with the aid of historic mapping and selected historical background studies in the Rouge in order to evaluate the possible impact on cultural resources. Current conditions and issues relating to archaeological practices were evaluated and most critical issues were identified for action.

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Table 4.6-2: Guidelines for Archaeological Potential

<p>For First Nations Archaeological Sites</p> <ul style="list-style-type: none">•any undisturbed areas within 250 metres of a known archaeological site;•areas within 300 metres of water source, whether existing or ancient;•area within 200 metres of secondary streams, springs, or wetlands;•ancient beaches and shorelines;•elevated topography e.g. drumlins, eskers, knolls and plateaux•Pockets of sandy soil in clay or rocky area;•unusual land formations such as mounds, caverns and waterfalls. <p>For Euro-Canadian Archaeological sites</p> <ul style="list-style-type: none">•areas within 100 metres of historic roads. Some of these historic roads may be found on maps of the period, and some still exist in the same alignment;•areas within 50 metres of historic railways as outlined by period maps;•areas within 250 metres of possible location of historic feature such as, but not limited to, mills, cemeteries, et., as shown in historical maps or documents;•within core historical settlements, according to historical maps and documents;•any designated heritage properties, easements, or districts;•any areas within 250 metres of a known archaeological site,•any areas with a concentration of flora that is associated with homesteads. <p><i>(Ministry of Citizenship, Culture and Recreation, 1993)</i></p>

4.6.3 Baseline Conditions

Known and undiscovered archaeological sites

As of December 2005, roughly 500 known archaeological sites have been identified in the Rouge River watershed. These numbers reflect archaeological sites that are currently known and protected, as well as sites that were partially or fully excavated. This list should not be perceived as a complete list, but rather, as indicative to additional unknown sites that remain undiscovered at this time.

Areas having a significant number of sites and information associated with them are in most cases areas that have been urbanized, and where the controlled and documented destruction of many archaeological sites has occurred. Some exceptions are areas which were surveyed on the Oak Ridges Moraine and Rouge Park by TRCA's Archaeology Resource Management Services section for Rouge Park. These surveys targeted some of the areas that were not expected to be developed, but which displayed obvious gaps in the database. Systematic field surveys of ploughed farmer's fields produced over 200 newly discovered sites. This work significantly increased the knowledge base of past people's settlements and activities and contributed to a doubling of the previously known archaeological sites by bringing the total to the above-referenced 500 registered sites.

Results from TRCA's archaeological site probability model indicate that most areas of the watershed lie within the high probability category, followed by a small percentage of areas with medium potential (Figure 4.6-1). The percentage of areas with low potential for finding archaeological sites in the Rouge River watershed is negligible. This finding is not surprising, as the Rouge River was the eastern route of the ancient Carrying Place Trail and the watershed contains a rich association of cultural heritage resources pertaining to this and other periods

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throughout history. Refer to the Rouge River *State of the Watershed Report* for a full account of the watershed's cultural history (TRCA, 2007). With reference to the predicted information, clear gaps in the known site database lie in the agricultural areas in the upper portion of the watershed (e.g. upper Bruce Creek and Little Rouge River).

In addition, and not reflected in the TRCA's probability model, is the potential for Euro-Canadian archaeological sites and significant cultural assets. Those potential areas that stretch mostly 100 metres from the centre of historic roads (many of which exist in the same alignment as they did when originally constructed), would add significantly to the areas of high potential.

Built heritage and living culture

The Rouge River watershed holds over 1100 listed and designated built heritage structures. Living culture is increasingly reflective of the emerging diverse cultural demographic of the current population. The 2001 Canadian census showed that in the Rouge River watershed, people of Canadian or British heritage make up 31% of the population, with the remainder representing Chinese (21%), East Indian (9%) and at least 35 other cultures.

The *Rouge River State of the Watershed Report* contains an in depth interpretation of the watershed's cultural heritage and mapping of heritage sites. A more abstract notion of cultural heritage that has not yet been fully explored or defined in the Rouge River watershed is the idea of cultural vistas, which may include features such as roadscapes, agricultural fields, general mill sites, and plaques. The historical road grid, crossroads, transportation routes, and structures hold information about the past interaction of early settlers with their environment. Another indicator for Euro-Canadian settlements is the presence of a concentration of certain types of flora that are associated with homesteads (e.g. lilacs).

Artifact storage and other practice

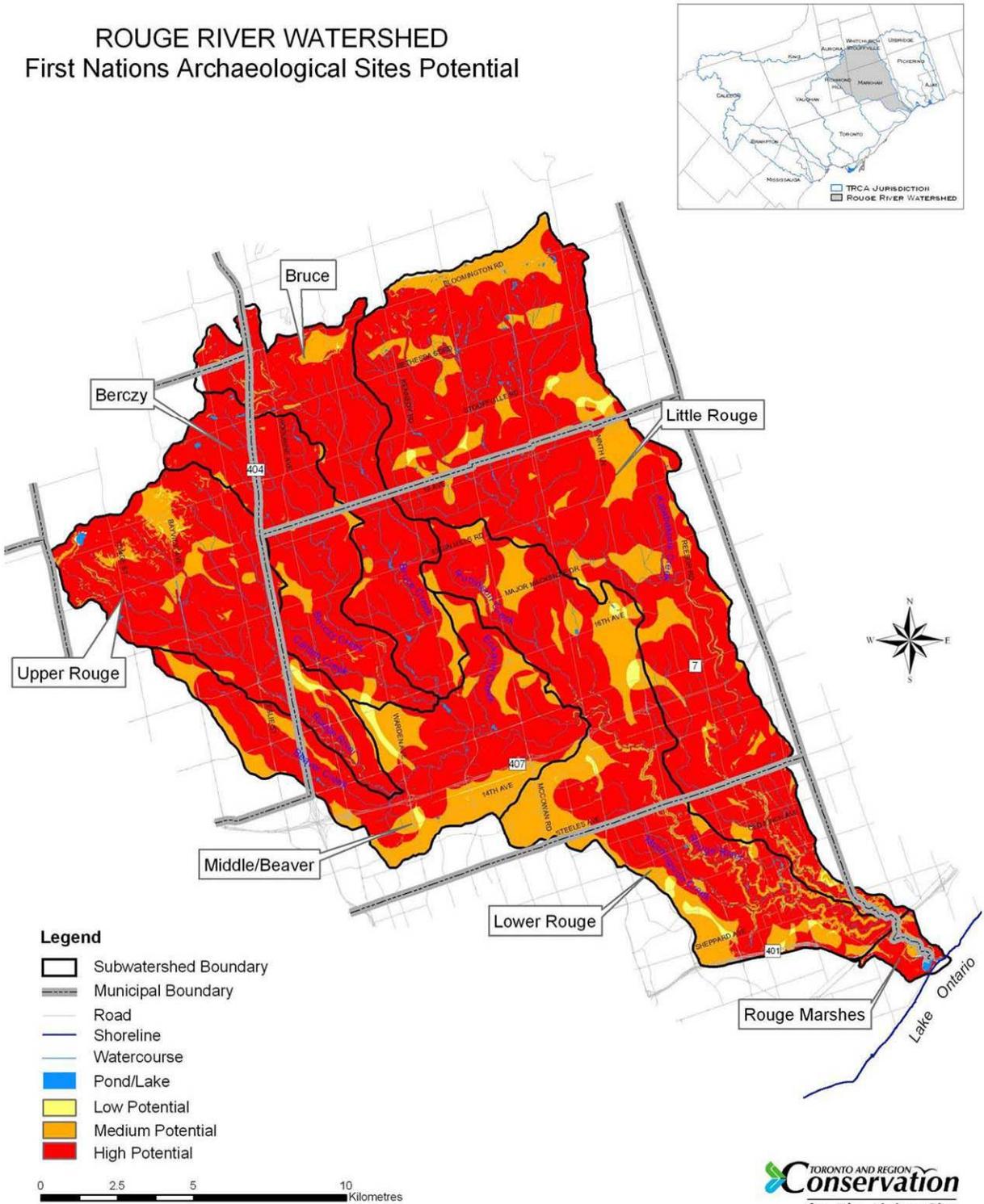
Under existing conditions, there are issues with artifact storage and other archaeological practices in Ontario. Currently it is the responsibility of the licensed archaeologist who removes artifacts from an archaeological site to store those artifacts appropriately; however, there is no artifact repository in Ontario to date. Many artifacts in Ontario are stored in basements, garages and other such unsuitable spaces, some deteriorating beyond repair, some destroyed due to lack of proper supervision.

In addition, archaeological assessments are not always carried out in the development of trails and other less obvious land disturbances, which may result in destruction of archaeological sites with no opportunity to avoid the destruction or to excavate and record those sites. In the case of existing built heritage structures, some heritage homes are being demolished to create more room in new developments, slowly diminishing Southern Ontario's cultural map.

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Figure 4.6-1: Rouge River Watershed Archaeological Site Potential

ROUGE RIVER WATERSHED First Nations Archaeological Sites Potential



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4.6.4 Effects of Future Land Use and Management Scenarios

Effects of Urban Development, Natural Cover, Stormwater Management

Future scenarios of urban growth, reforestation and stormwater management in the watershed pose common risks to cultural heritage resources, and therefore their potential issues and effects will be discussed collectively. The greatest risks are associated with the processes of development and implementation of regeneration projects, rather than with the fully implemented scenarios (as is the focus of scenario evaluation in most other watershed systems).

Potential loss of undiscovered sites

As noted, gaps in the archaeological site database remain in particular in the agricultural areas in the upper portion of the watershed, in the middle tributary and Little Rouge River subwatersheds). This happens to be the area targeted for future urban growth in the Provincial Growth Plan, therefore it is especially important that investigations done as part of the urban development planning process are coordinated well in advance of developments. This proactive approach will allow for careful development planning that may allow preservation of sites *in situ* rather than mitigation through excavation and removal. Involvement of descendant populations in the investigations is another way to further reduce the potential for loss of sites and associated knowledge of past peoples. Moreover, improved procedures for the storage of artifacts needs to be put in place.

Potential for damage or destruction

Other types of disturbances that may impact cultural heritage resources and which may not be as obvious as the construction of roads and communities are stormwater management, reforestation, trail and wetland creations. All of these can result in disturbance of land, change in drainage, vibration, and other effects, which in turn can result in negative impact on heritage sites.

The Ministry of Culture's guide *Heritage Resources in the Land Use Planning Process – Cultural Heritage and Archaeology Policies of the Ontario Provincial Policy Statement, 2005* describes potential impacts to cultural heritage resources including:

- Destruction of heritage attributes or features;
- Unsympathetic alteration;
- Shadows that alter the appearance of a heritage attribute or change the viability of a natural feature or plantings;
- Isolation of a heritage attribute from its surrounding environment, context or a significant relationship;
- Direct or indirect obstruction of significant views, or vistas within, from or of built and natural features;
- a change of land use, allowing new development or site alterations to fill in the formerly open spaces; and
- land disturbances such as change in grade that adversely affect an archaeological resource.

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Living culture

The population growth driving the future development scenarios will increasingly reflect a diversity of cultures, assuming the range of countries of origin of recent immigrants is an indication. Of the recent immigrants to the Rouge River watershed (i.e. those who have emigrated between 1996 and 2001), the predominant countries of origin were: Hong Kong (27%), China (18%) and India (10%). The remaining new immigrants came from over 35 different countries. There will be a need to provide more opportunities for raising awareness of the watershed's past cultural heritage and a basis for creating a new fabric of living culture.

4.6.5 Effects of Climate Change

Increases in temperature and precipitation, as well as the increased frequency in the occurrence of extreme events of high intensity and short duration, as predicted under climate change scenarios, may pose risks to the integrity and longevity of built heritage structures. Accelerated erosion of tablelands and streambanks, due to increased volume and power of runoff, particularly from these extreme events, may expose buried artifacts leaving them vulnerable to damage and loss.

4.6.6 Summary and Conclusions

The processes of urban development, implementation of regeneration projects, and climate change may pose risk of loss or damage to archaeological and built heritage structures. However, with proper planning and management, as well as the involvement of descendant populations and non-invasive technologies, these projects may also have the potential to discover and interpret new information about past cultures. The increased population will continue to enrich the "living" cultural diversity of the watershed.

4.6.7 Management Considerations

A summary of management implications is provided for consideration in the development of the watershed plan, such that future actions can contribute to the achievement of the goal and objective:

Create a repository for archaeological artifacts in Ontario; a repository may be at the watershed level, a joint effort by several watersheds, or at the provincial level.

Municipalities should ensure proper archaeological investigation is carried out before any development; including trails, reforestation, and other practices that may result in archaeological site destruction. Investigations should involve the appropriate culturally descendant communities.

Master plans, probability models and tools, such as maps of specific flora often associated with heritage sites, should be developed and consulted in conjunction with any plans for development.

Concepts such as cultural vistas should be considered as cultural resources and assessed before any proposed development; these may include disappearing agricultural communities, clusters of century homes, country roadscapes etc.

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Built heritage should be incorporated into proposed development rather than demolished, either as commercial venues or community buildings. Similarly, planning for the protection of First Nation archaeological sites should be coordinated with greenspace planning where possible, so that sites may be protected *in situ* rather than be removed from the ground by excavation.

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4.6.8 References

Metropolitan Toronto and Region Conservation Authority. 1990. *Archaeological Master Plan for the Metropolitan Toronto and Region Conservation Authority*.

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Ontario Ministry of Culture. 2006. *Heritage Resources in the Land Use Planning Process – Cultural Heritage and Archaeology Policies of the Ontario Provincial Policy Statement, 2005*. Queen's Printer for Ontario.

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