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WATERSHED PLANNING STUDIES OAK RIDGES MORaine CONSERVATION PLAN LSRCA AND TRCA PROGRESS REPORT TO JUNE 30, 2004

The Planning and Economic Development Committee recommends the following:

- 1. The presentation by Gary Wilkins, Humber River Specialist, Toronto and Region Conservation Authority, be received; and**
- 2. The recommendations contained in the following report, July 27, 2004, from the Commissioner of Planning and Development Services and Commissioner of Transportation and Works be adopted:**

1. RECOMMENDATIONS

It is recommended that:

1. The semi-annual progress report on Watershed Planning studies to fulfill requirements of the Oak Ridges Moraine Conservation Plan (ORMCP), submitted by the Lake Simcoe Region Conservation Authority (LSRCA), and the Toronto and Region Conservation Authority (TRCA), as outlined in this report, be received for information.
2. Regional staff continue to work with staff of the Conservation Authorities to ensure the timely and cost efficient delivery of these watershed planning components in keeping with our requirements under the ORMCP.
3. The next progress report will be provided in February of 2005 and will detail accomplishments for the balance of 2004.

2. PURPOSE

The purpose of this report is to update Committee and Regional Council on the work accomplishments of the LSRCA and TRCA to mid-year 2004 on Watershed Planning studies on the Oak Ridges Moraine as requested by Regional Council at its meeting of February 19, 2004

3. BACKGROUND

The *Oak Ridges Moraine Conservation Act, 2001* required that York Region and local municipalities bring their Official Plans and zoning bylaws (in the case of local municipalities) into conformity with the ORMCP by April 22, 2003 and October 22,

2003 respectively. This conformity date was achieved by the Region and has been achieved by area municipalities in the Region.

The Moraine Plan also contains several other critical target dates relating to the completion of Watershed Planning, including commencement of watershed planning for each watershed originating on the Moraine by April 22, 2003 (Section 24(1)); and completion of watershed plans by April 23, 2007.

LSRCA and TRCA have been actively working to develop and maintain watershed plans in York Region for many years. Subsequent to the introduction of the ORMCP, Regional staff and staff of the conservation authorities (CAs) worked together to develop a comprehensive work plan to fulfill the ORMCP watershed planning requirements. This five year workplan along with an annual update of work undertaken in 2003 was adopted by Regional Council on February 19, 2004 with the request that the Toronto and Region Conservation Authority and the Lake Simcoe Region Conservation Authority provide semi-annual yearly progress reports to Committee and Council on the watershed planning process required under the ORMP. In addition, Authority staff were requested to provide an itemized listing of deliverables for each year of the program along with their estimated annual budgets actual costs incurred.

The update to the 5-year work plan is described in Section 4 of this along with estimated and actual budget costing in *Attachments 1 and 2*.

4. ANALYSIS

The watershed plan requirements of the ORMCP encompass a wide number of disciplines and the resultant watershed plans are expected influence planning and development initiatives in and beyond York Region.

Twice yearly updates provided by the LSRCA and TRCA to Planning and Economic Development Committee will help to ensure that significant progress is being made towards fulfilling the requirements of the ORMCP according to schedule and budget requirements.

4.1 Highlights of the Mid Year 2004 Watershed Planning Budget Year

The key mid-year 2004 accomplishments by each Conservation Authority are outlined below. *Attachments 1 and 2* contain detailed accounts for each workplan component funded (in part or in whole) by York Region and status of deliverables along with their estimated budgets and actual costs incurred.

4.1.1 Mid Year 2004 - Lake Simcoe Region Conservation Authority

The LSRCA has proceeded to implement work concurrently for all four of its watersheds originating on the Moraine to ensure compliance with ORMCP. This approach is more cost effective and guarantees that consistent protocols and procedures have been applied to each subwatershed. The majority of the work on these watershed plans is required to

fill data gaps of existing watershed plans and bring them up to the standards and information levels required by the ORMCP.

The four LSRCAs watersheds draining from the Oak Ridges Moraine in York Region are the West Holland River, East Holland River, Maskinonge River and the Black River (See Map *Attachment 3*). Within the LSRCAs watersheds work being undertaken on the East Holland and Maskinonge River Watershed Plans are updates to the existing plans to bring them into conformity with the expected requirements of the ORMCP. On the Black and West Holland Rivers, the ORMCP requirements were incorporated into the work plans for these new Watershed Plans. The expected completion date of all four of these plans is 2006 to allow time for review and finalization before the 2007 deadline.

Significant progress has been made in working to complete the proposed 2004 ORMCP activities. The focus in 2004 has been to continue efforts that began in 2003 to characterize the watersheds in a much higher level of detail, scope and understanding than in previous studies. Every aspect of the 2004 proposed activities is underway in various stages of completion, with a focus on collecting detailed information on ground and surface water quality and quantity, terrestrial natural heritage and the aquatic ecosystem.

Highlights to June 30, 2004, by watershed include the following:

East Holland River Watershed Plan

Completed

- Data collection initiatives including spring benthic sampling (sampling of organisms that live in bottom sediments), water use surveys, and baseflow monitoring.
- Ecological Land Classification (ELC) and land use mapping.
- Initial water budget analysis to satisfy the ORMCP requirements for the area serviced by the Yonge Street Aquifer.

In Progress

- Fish community and habitat assessment.
- Hydraulic/Hydrologic modelling and floodline mapping project.
- Surface water toxic contaminant screening.

West Holland River Watershed Plan

Completed

- Data collection initiatives including spring benthic sampling, water use surveys, and baseflow monitoring.
- Ecological Land Classification (ELC) and land use mapping.
- Initial water budget analysis to satisfy the ORMCP requirements for the area serviced by the Yonge Street Aquifer.

In Progress

- State of the Watershed Report.
- Fish community and habitat assessment.
- Hydraulic/Hydrologic modelling and floodline mapping project.

- Surface water toxic contaminant screening.

Maskinonge River Watershed Plan

Completed

- Data collection initiatives including spring benthic sampling and water use surveys.
- Ecological Land Classification (ELC) and land use mapping.

In Progress

- Fish community and habitat assessment.
- Baseflow monitoring.
- Hydraulic/Hydrologic modelling and floodline mapping project.
- Surface water toxic contaminant screening.

Black River Watershed Plan

Completed

- Data collection initiatives including spring benthic sampling and water use surveys.
- Ecological Land Classification (ELC) and land use mapping.
- Surface water budget analysis.

In Progress

- Fish community and habitat assessment.
- Baseflow monitoring.
- Hydraulic/Hydrologic modelling and floodline mapping project.
- Surface water toxic contaminant screening.

4.1.2 Mid Year 2004 - Toronto and Region Conservation Authority

Watershed planning studies have been completed to various degrees in all four watersheds (Rouge, Don, Humber and Duffins) through partnerships between the TRCA and its member municipalities. These past studies have engaged the participation of the broader community of watershed stakeholders, who have defined a unique identity for each watershed and actively cooperate in implementation activities within their watershed. Therefore, the approach to fulfilling the Oak Ridges Moraine Conservation Plan requirements has been tailored to fill information gaps and address the needs of each watershed and its community. The target date for completion of all work listed below as part of the 2004 budget year is December 31, 2004

The four TRCA watersheds draining from the Oak Ridges Moraine in York Region include: Humber River Watershed, Don River Watershed, Rouge River Watershed, and Duffins Creek Watershed (See Map *Attachment 4*). The delivery of each of these watershed plan updates is staggered between the end of 2005 and the end of 2006. A draft of the Rouge Watershed Plan is scheduled to be completed by the end of 2005 with final delivery by June 2006. On the Humber and Don Rivers, a draft plan is scheduled for delivery by the end of June 2006 with finalization towards the end of 2006 and on the Duffins Carruther's, the watershed Plan has been completed and the implementation policies are scheduled for completion in the first quarter of 2005.

Highlights of the accomplishments as of June 30, 2004, by Watershed, include the following:

Rouge Watershed Plan

- Establishment of a 35 member, multi-stakeholder Task Force to guide the development of the watershed plan. York Region representative, Councillor Frank Scarpitti, was elected Vice-Chair.
- Published a draft State of the Watershed Report, including an assessment of watershed functions and current conditions, based on a set of watershed management goals and objectives.
- Interpretation of newly collected field data and results of other ongoing regional studies in an integrated watershed context, addressing: groundwater systems and their interaction with stream baseflow, surface water use, thermal monitoring, water quality, aquatic system and terrestrial natural heritage system.

Humber Watershed Plan

- Preparation of a detailed workplan and initiation of consultation with municipal staff and with the broader community via the Humber Watershed Alliance (York region representative - Regional Councilor Linda Jackson).
- Initiation of 2004 data collection and assessment including: baseflow monitoring, water use assessment, surface and ground water quality, aquatic system, and terrestrial natural heritage system.
- Set up and calibration of hydrological/water quality/water budget model.

Don Watershed Plan

- Initiation and preparation of proposed workplan.
- Initiation of 2004 data collection and assessment including: baseflow monitoring, terrestrial natural heritage system.

Duffins Creek Watershed Plan

- *A Watershed Plan for the Duffins and Carruthers Creek Watershed* was completed in 2003.
- Model implementation policy is being developed.

4.2 Next Steps for the 2004 Watershed Planning Year

The following sub-sections identify work for the balance of the year by each of the Conservation Authorities.

4.2.1 Lake Simcoe Region Conservation Authority

During the remainder of 2004, two Region-wide projects will be undertaken. A public consultation and communication process will be initiated, and, via a funding partnership with Federal Department of Fisheries and Oceans, ecosystem thresholds to low water conditions will be investigated (i.e., what reduction in baseflow is tolerable). Watershed projects will focus on the following:

East Holland River Watershed Plan

- Fish community and habitat assessment.
- Hydraulic/Hydrologic modelling and floodline mapping project.
- Refinement of water budget analysis.

West Holland River Watershed Plan

- Refinement of water budget analysis.
- State of the Watershed Report.
- Fish community and habitat assessment.
- Hydraulic/Hydrologic modelling and floodline mapping project.

Maskinonge River Watershed Plan

- Initiation of water budget analysis (will continue into 2005).
- Fish community and habitat assessment.
- Hydraulic/Hydrologic modelling and floodline mapping project.

Black River Watershed Plan

- Geomorphic assessment.
- Initiation of water budget analysis (will continue into 2005).
- Fish community and habitat assessment.

4.2.2 Toronto and Region Conservation Authority

During the remainder of 2004, work will focus on the following activities:

Rouge Watershed Plan

- Confirmation of future scenarios (e.g. land use, management approaches) and predictive tools, with input from watershed stakeholders and peer reviewers and proceed with modelling and analysis.
- Baseflow monitoring at selected indicator sites.
- Inventory of 1700 ha of natural cover and refinement of a targeted natural heritage system.

Humber Watershed Plan

- Completion of 2004 data collection, analysis and interpretation.
- Report on current conditions.
- Confirmation of future scenarios (e.g. land use, management approaches) and predictive tools, with input from watershed stakeholders and peer reviewers and initiate modelling and analysis.

Don Watershed Plan

- Consultation with watershed municipalities and other stakeholders on proposed work plan.
- Development of a surface water budget model.

- Initiation of a riparian habitat survey and aquatic community management plan update.

Duffins Creek Watershed

- Development of model policy to guide implementation of the watershed plan.

4.3 Outlook for the Remaining Watershed Planning Program to 2007

The work programs for all watershed planning efforts are on track for the regulatory target of April 22, 2007. At this time, work is proceeding in the absence of Technical Guidance documents to be delivered by MOE. It remains possible that the content of these documents may affect the currently planned schedules, however there should be sufficient flexibility built into schedules to accommodate these inputs. The work plans for each of the conservation authorities to 2007 are summarized in the following sections.

4.3.1 Lake Simcoe Region Conservation Authority

The overall program endorsed by Council in February 2004 and appended as *Appendix 2* is on schedule and no difficulties are anticipated at this time. The comprehensive approach adopted by the LSRCA ensures a timely transition from characterization through implementation on all four watersheds.

Primary data collection activities to inventory natural features and understand their functions will be completed in 2005. Detailed modelling of the natural heritage features and surface water quantity and quality will continue in 2005 involving the evaluation of various future growth and rehabilitation scenarios. The results of the modelling analyses will be used in the development of management plans for the four watersheds, which will be the primary focus in the latter half of 2006. All of these efforts will culminate in 2007 with the development of watershed implementation plan including potential rehabilitation projects and policies for the ORMCP Area. The policies will be provided to the stakeholder municipalities to be incorporated, where appropriate, in Regional and area municipal official plans.

4.3.2 Toronto and Region Conservation Authority

The approved workplan sets out the annual activities, necessary to fulfill the Oak Ridges Moraine Conservation Plan's watershed planning requirements by early 2007. All activities appear to be proceeding as scheduled, with two exceptions:

Rouge watershed flow/water quality modelling and analysis, while being well underway in 2004, is now expected to extend into 2005, due to delays of approximately 2-3 months in assembling the required data and preparing models. The delay will, however, allow access to several improved databases that will enhance the final product. The draft Phase 2 report, summarizing the results of the future scenario modelling and evaluation, originally anticipated at year-end 2004, is now anticipated in early 2005.

The approach to Humber watershed flow/water quality modelling and analysis has been revised, such that 2004 and 2005 work has been combined into one project. As a result some aspects of the work have been accelerated and some delayed, such that some of the

modelling products originally anticipated in 2004 may not be developed until early 2005. The year-end 2004 report will describe these changes in activity in greater detail.

Neither of these scheduling adjustments is expected to affect the final completion dates for the watershed plans.

4.3.3. Water Conservation Plan Component of the ORMCP

Section 24 of the ORMCP also requires that the Region prepare water conservation plans as part of watershed planning efforts.

At the time the ORMCP was filed, the Region was in year five of the proactive *Water for Tomorrow* program, which is currently estimated to save over 20 million litres of water per day across the Region.

In an extension of their role in overseeing the *Water for Tomorrow* program, United Utilities Canada Limited (UUCL) are working with LSRCA and TRCA and York Region to develop watershed-specific water conservation programs to meet the water conservation requirements of the ORMCP. The first deliverable from this effort is anticipated in late 2004 to address the requirements for producing a conservation plan for the area served by the Yonge Street Aquifer. Further progress on this will be reported in early 2005 as part of the 2004 year-end progress report.

5. FINANCIAL IMPLICATIONS

The 2004 watershed planning allocations to the Conservation Authorities were approved by Regional Council as part of the 2004 budget. Both Authorities are to provide twice yearly progress reports to Planning and Economic Development Committee and Regional Council on the watershed planning process required under the ORMCP. In addition, Authority staff were requested to provide an itemized list of deliverables for each year of the program along with their estimated updated budgets and the incurred costs. This itemized list is provided in *Attachments 1 and 2*.

Table 1 provides an estimate of the expected costs of watershed planning over the next 4 years.

Table 1
Five -year Watershed Planning Budget Estimates

Conservation Authority	2003	2004	2005	2006	2007	Total Work Plan Length 2003-2007
LSRCA	\$300,000	\$600,000	\$360,000	\$260,000	\$250,000	\$1,760,000
TRCA	\$330,000	\$600,000	\$500,000	\$400,000	\$200,000	\$2,030,000
Total	\$630,000	\$1,200,000	\$860,000	\$660,000	\$450,000	\$3,790,000

These annual budget estimates will be confirmed each year during yearly budget discussions and allocations to the CAs. For the period from 2003 to 2007 funds these projects are funded as special Capital Projects from Regional water rates. After 2007, funding for watershed planning will solely be funded under normal operating allowance to the Conservation Authorities from the Region's tax levy.

6. LOCAL MUNICIPAL IMPACT

Local municipalities have been invited to actively participate in the watershed planning process through advisory committees and during policy formulation. Ultimately, implementation of the objectives and principles of watershed plans may be implemented through amendments to Regional and/or local planning documents.

7. CONCLUSIONS

The ORMCP requires that watershed plans be completed by April 22, 2007 for all streams with headwaters on the Moraine and that water budget and conservation plan components be completed by April 22, 2004 for areas in York Region on the Oak Ridges Moraine served by the Yonge Street Aquifer. Watershed planning work is well advanced in the Region and the CAs work plans are well underway at this time with no significant issues or delays expected at this time.

Regional staff is confident that the target dates for completion of watershed plans required by the ORMCP can be met.

In order to ensure that efforts remain on track, the Conservation Authorities will continue to provide semi-annual updates to Committee on the workplan elements.

Funds for the 2005 budget year are included in the 2005 Transportation and Works budget and funds to 2007 are included in the 10 year Capital Plan. Funding for watershed planning activities after 2007 will proceed through the normal Regional/CA budget allocation and approval process. Regional staff will continue to work with Conservation Authority staff to improve the relationship between budget allocations and specific deliverables

The Senior Management Group has reviewed this report.

(A copy of the attachments referred to in the foregoing has been forwarded to each Member of Council with the September 8, 2004 Planning and Economic Development Committee Agenda and is also on file in the Regional Clerk's office.)