

Toronto and Region Conservation Authority
York Region – ORMCP Subwatershed Planning
2004 Year End Status Update

Year End 2004 - Toronto and Region Conservation Authority Highlights

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*). Watershed planning studies have been completed to various degrees in all four watersheds through partnerships between the TRCA, its member municipalities, and the community. Therefore, the approach to fulfilling the ORMCP requirements has been tailored to fill information gaps and address the needs of each watershed and its community.

The final 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 half of 2005.

Highlights of the accomplishments as of December 31, 2004, by Watershed, include the following:

Rouge Watershed Plan

- Established a 35 member, multi-stakeholder Task Force to guide the development of the watershed plan. York Region representative, Councillor Frank Scarpitti, is 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. Incorporated stakeholder and peer review comments and will maintain the SOW Report as a draft document during the study, so that updates can be made as new information emerges.
- 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.
- Defined future scenarios of watershed land use and management approaches for modeling analysis to determine watershed response and effective management strategies. Initiated modeling and analysis studies.
- Formed an Implementation Subcommittee of the Task Force to guide the development of more strategic implementation directions for the final watershed plan.

Humber Watershed Plan

- Prepared a detailed workplan in consultation with municipal staff and with the broader community via the Humber Watershed Alliance (York Region representative - Regional Councilor Linda Jackson).
- Completed 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 calibrated a hydrological/water quality/water budget model.

Don Watershed Plan

- Prepared a study workplan in consultation with the Don Watershed Regeneration Council and municipal staff.
- Completed 2004 data collection and assessment including: baseflow monitoring, field verification of water use, and terrestrial natural heritage system.
- Initiated water budget model development.

Duffins Creek Watershed Plan

- A *Watershed Plan for the Duffins and Carruthers Creek Watershed* was completed in 2003.
- Model implementation policy project has been initiated, but was delayed pending the completion of a broader generic policy project.

Next Steps for the 2005 Watershed Planning Year - Toronto and Region Conservation Authority

Rouge Watershed Plan

- Completion of the modeling and analysis of future land use scenarios and management strategies (Phase 2 report).
- Preparation of a Preliminary Watershed Plan (Draft Phase 3 Report), including summary of background conditions, preferred management strategy and implementation plan.
- Development of draft model implementation policy, including water budget and water allocation strategy.
- Consultation and partner involvement in reviewing analytical results and developing the draft plan.

Humber Watershed Plan

- Completion of reports of current conditions pertaining to groundwater quality and quantity, surface water quality and quantity, fluvial geomorphology, and aquatic and terrestrial systems.
- Completion of modelling and analysis of future land use scenarios and management strategies (Phase 2 report).
- Preparation of preliminary watershed plan including summary of current conditions and preliminary management strategy (draft Phase 3 report).
- Development of implementation plan outline, including model policy.

- Consultation and partner involvement in reviewing analytical results and developing the draft management plan.

Don Watershed Plan

- Development of an updated and integrated understanding of current watershed conditions, based on new technical information, including groundwater modelling, water budget, terrestrial systems, aquatic systems, and surface water modelling.
- Preliminary screening to identify regeneration priorities to direct additional field work.
- Definition and analysis of a limited number of future scenarios describing potential management approaches, including retrofits of stormwater management infrastructure to determine effectiveness.
- Consultation and partner involvement.

Duffins Creek Watershed Plan

- Completion of model policy to guide implementation of the Watershed Plan.

2004 Year End Status of Deliverables – Toronto and Region Conservation Authority

Watershed Plan Component	Total York Region Budget	Actual York \$ Spent to date	Status of Deliverables as of December 31, 2004	Key 2005 Deliverables
Water Use Assessment	\$9300	\$9300	Rouge River Watershed - Draft report of water use survey complete, addressing permitted and non permitted water uses, purpose of use, and estimates of water use at a subwatershed scale. Undergoing revisions based on Task Force comments. - Water User database complete (TRCA/ Golder data merged) - Future demand defined, as part of scenario development Humber River Watershed - Staff training for water use surveying complete - Identification and location of permitted water uses complete - Analysis of potential effects of future land and water use underway Don River Watershed - Draft report of water use survey complete, addressing permitted and non permitted water uses, purpose of use, and estimates of use at a subwatershed scale. - Water User database complete (TRCA/ Golder data merged)	Rouge River Watershed - Analysis of effects of future land use and management scenarios on water supply - input to development of a water allocation strategy and model policy regarding water use (e.g. minimum baseflow targets) Humber River Watershed - Phase 1 report on water use survey results addressing permitted and non-permitted water uses at a subwatershed scale; - Analysis of potential effects of future land and water use and management scenarios on water availability; - Input to development of a water allocation strategy and model policies regarding water use (e.g., minimum baseflow targets). Don River Watershed - analysis of effects of future land use and water use on water supply and natural systems
Water Budgets/ Base Flow Monitoring	\$48,100	\$48,100	Rouge River Watershed - Draft low flow report complete and undergoing finalization, based on review comments. Humber River Watershed - Water budget model and technical report completed in 2003;	Rouge River Watershed - Analysis of effects of future land use and management scenarios on natural systems - Input to development of water allocation strategy and model policy regarding water budget management - SWM criteria for infiltration

Watershed Plan Component	Total York Region Budget	Actual York \$ Spent to date	Status of Deliverables as of December 31, 2004	Key 2005 Deliverables
			- Phase 1 report on baseflow monitoring underway (60% complete) - Water User database complete (TRCA / Golder data merged) Don River Watershed - Water budget study underway via a consulting contract. - Low Flow distribution mapping complete - Draft low flow report complete and undergoing finalization.	Humber River Watershed - Phase 1 report updating current surface water quantity conditions including baseflow monitoring results; - Analysis of potential effects of future land and water use and management scenarios on water budget and low stream flows; - Input to development of a water allocation strategy and model policies regarding water use (e.g., minimum baseflow targets); - Input to development of stormwater management criteria for groundwater infiltration. Don River Watershed - input to Phase 1 summary of current watershed conditions for water budget and low flow distribution components
Aquatic Ecosystem & Habitat	\$80,000	\$80,000	Rouge River Watershed Plan - Draft Phase 1 Report of fish and benthic community, habitat, and thermal conditions complete. - Comments from Task Force reviewed - Additional historical data obtained from MNR - Fish community map to be generated - Imperviousness and Regional Reference Community Models for testing scenarios obtained. Humber River Watershed Plan - Enhanced analysis of historic conditions underway - Processing and analysis of 2004 sampling data and summary of current conditions underway. - Analysis of effects of alternative land	Rouge River Watershed Plan - Analysis of effects of future scenarios on aquatic systems - input to Watershed Plan recommendations and model policy - aquatic resource management plan Humber River Watershed - Phase 1 report updating current condition of the aquatic system including fish and benthic invertebrate communities and aquatic habitat; - Analysis of potential effects of future land and water use and management scenarios on aquatic system health;

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			and water use scenarios underway Don River Watershed Plan • Collection of Background fisheries Data complete • Initiating data entry early 2005 • Preliminary analysis of historic species distribution and conditions underway • Preliminary gap analysis complete	• Input to watershed plan recommendations and model policies Don River Watershed • input to Phase 1 summary report of existing and historical aquatic communities • analysis of effects of future land and water use scenarios on aquatic systems
Terrestrial Natural Heritage	\$124,200	\$124,200	Rouge River Watershed • Update of natural cover mapping, based on 2002 Aerial photos, is complete • Field inventories for 1700 ha of natural cover have been completed • Landscape Analysis on 1999 aerial photo data is complete. Landscape Analysis based on 2002 data underway. • Comparisons of conditions (1999 to 2002) underway. • Target system for Region will be adapted to the Rouge watershed by Feb. 2005 • Phase 1 SOW draft report complete. Review comments being incorporated. Humber River Watershed • Update of natural land cover mapping data based on digitizing 2002 aerial photos complete; • Field inventories of vegetation communities and flora and fauna species complete; • Processing and analysis of 2004 field inventory data underway. Don River Watershed • Updated natural cover mapping based on 2002 Aerial photos will be complete	Rouge River Watershed Plan • Analysis of effects of future scenarios on terrestrial scores. • input to watershed plan recommendations and model policy Humber River Watershed • Landscape analysis on updated natural land cover data to assess terrestrial system quality/function at habitat patch and watershed scales; • Refine regional terrestrial natural heritage system target for the Humber watershed; • Analysis of potential effects of future land and water use and management scenarios on terrestrial system health; • Input to watershed plan recommendations and model policies. Don River Watershed • Landscape analysis of existing conditions to determine patch scores • Refinement of regional targets for quantity and quality to watershed • Input to Phase 1 summary report of current watershed conditions for terrestrial component • Analysis of effects of future land use and management scenarios on the terrestrial system

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			by the end of December, 2004 • Landscape Analysis on 1999 aerial photo data is complete. Landscape Analysis will be re-done on 2002 data once digitization is complete • Field inventories of natural cover are completed	
Water Quality	\$111,500	\$111,500	Rouge River Watershed • Updated water quality assessment is complete and input to Phase I report has been provided • Water quality contaminant modelling for existing conditions and one future scenario has been finalized in draft form and is undergoing final edits. • A contract has been awarded to model additional future scenarios, including the SW pond retrofit strategy. The modeling is scheduled to be completed in 2005. Humber River Watershed • Updated summary and analysis of surface water quality data underway; • Contract established to model water balance, hydrology and water quality for current conditions and alternative land and water use and management scenarios; • Humber watershed water balance/hydrology/water quality model set-up and calibrated for water quantity and quality.	Rouge River Watershed Plan • update of surface water quality assessment and input to Phase 1 Report • Water quality/ contaminant modelling and analysis of future scenarios and their effects on water quality • assessment of effectiveness of SW Retrofits through 416/905 HSP-F model integration Humber River Watershed • Phase 1 report updating current condition of surface water quality • Analysis of potential effects of future land and water use and management scenarios on surface water quality; • Assessment of effectiveness of planned stormwater retrofits in 416 and 905 area municipalities; • Input to watershed plan recommendations and model policies. Don River Watershed • limited updated water quality assessment and input to Phase 1 summary report on current conditions • modelling of (905) SW retrofit scenario
Groundwater Studies	\$70,000	\$70,000	Rouge River Watershed • Draft Phase 1 report on groundwater system is complete and undergoing	Rouge River Watershed Plan • Analysis of effects of future scenarios on groundwater system

Watershed Plan Component	Total York Region Budget	Actual York \$ Spent to date	Status of Deliverables as of December 31, 2004	Key 2005 Deliverables
			revisions based on Task Force comments - Further groundwater modeling awaiting input from surface water budget model. Humber River Watershed - Expansion of YPDT regional groundwater model to cover entire Humber watershed underway - Field measurements to confirm or refine groundwater model assumptions complete - Phase 1 report on current condition of groundwater system underway.	- input to final watershed plan recommendations - model policy and water allocation strategy Humber River Watershed - Phase 1 report on current condition of the groundwater system; - Analysis of potential effects of future land and water use and management scenarios on groundwater quantity and quality; - Input to watershed plan recommendations and model policies. - Input to development of a water allocation strategy and model policies regarding water use. Don River Watershed - interpretation of groundwater system and input to Phase 1 summary report on current watershed conditions - modelling of effects of future land use and management scenarios on the groundwater system
Project Management, Policy Development, Legal Review & Communications	\$157,000	\$157,000	Rouge River Watershed - Project coordination and administrative support to Task Force - Draft Phase 1 (State of the Watershed) Report completed and revised based on reviewers' comments. - Workplan for Phase 2 (analysis) was completed, including definition of proposed future scenarios and modeling tools for analysis. Modelling studies were initiated. - Established 35 member multi-stakeholder Task Force to guide the watershed plan's development. Convened six Task Force meetings to seek input to: goals and objectives, draft SOW report, future scenarios and	Rouge River Watershed - Project coordination and administrative support to Task Force - Written summary of the results of modeling and analysis of future land use scenarios and management strategies (Phase 2 report) - Preliminary Watershed Plan (Draft Phase 3 Report), including summary of background conditions, preferred management strategy and implementation plan - Min. of two sets of community open houses and focus group meetings (seek input on Phase 2 and draft Phase 3); regular task force meetings - Draft model policy Humber River Watershed - Project coordination and administrative support; - Draft Phase 1 reports updating current

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			analysis, targets; and proposed provincial Greenbelt Plan. • Held watershed tour for the Task Force • Formed an Implementation Committee of the Task Force to advance work on implementation aspects of the final plan. Convened three meetings to review implementation strategies of other watershed plans, develop a proposed implementation framework for the Rouge and possible delivery mechanisms. • Held focus group meetings with golf course industry and various municipal staff to seek input to the draft SOW report and proposed modeling and analysis approach. • Held Watershed Initiatives update workshop of ongoing watershed studies for municipal staff. • Initiated a peer review program for the study. Sought and received peer review comments on draft Phase 1 and 2 workplans and relevant sections of the draft SOW Report. Humber River Watershed • Project coordination and administrative support ongoing; • Draft Phase 1 reports updating current conditions pertaining to groundwater quality and quantity, surface water quality and quantity, fluvial geomorphology, aquatic system, and terrestrial system underway; • Discussion paper on proposed approach to analysis and evaluation of future	conditions pertaining to groundwater quality and quantity, surface water quality and quantity, fluvial geomorphology, aquatic system, and terrestrial system complete; • Summary of results of the analysis and evaluation of future land use scenarios and management strategies and the draft management strategy (Phase 2 report); • Preliminary watershed plan including summary of current conditions, preferred management strategy and implementation plan (Phase 3 report); • Minimum of two sets of community open houses and focus group meetings (seek input on Phase 2 and draft Phase 3 reports); regular Humber Alliance meetings; • Draft model policies; Don River Watershed • Project coordination and administration. • Written summary report of watershed conditions, based on updated and new data (Phase 1 “state of the watershed”) • Confirmation of goals, objectives, indicators, targets • Detailed workplan for Phase 2 analysis • Report on Phase 2 analysis • Min. one set of community open houses and focus group meetings • Regular Don Council meetings

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			scenarios (phase 2) complete and under review • Consultation with municipal staff and stakeholders on proposed workplan and approach to analysis and evaluation of alternative scenarios (phase 2) complete; • Peer review program established concurrent with Rouge watershed planning process; • Phase 1 report on current planning and policy framework underway. Don River Watershed • Preliminary workplan report taken to TRCA's Board, Don Council, and York staff for comment • Draft workplan completed (Dec./04)	