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CONSULTANT SELECTION FOR IMPLEMENTATION PLANNING OF THE LONG TERM WATER CONSERVATION STRATEGY

The Environmental Services Committee recommends the adoption of the recommendation contained in the following report dated October 27, 2011, from the Commissioner of Environmental Services.

1. RECOMMENDATION

It is recommended that:

1. Freeman Associates be retained to develop detailed implementation plans, calculation of water savings and cost benefit analysis for the program components identified in the Long Term Water Conservation Strategy (March 2011), as outlined in this report, at an upset limit of \$520,860.00, excluding taxes.

2. PURPOSE

This report requests Council authorization to award a consultant assignment to develop detailed implementation plans, calculation of water savings and cost benefit analysis for program components identified in the Long Term Water Conservation Strategy.

The Purchasing Bylaw requires Council authorization to award Requests for Proposals (RFP) over \$500,000 or when the recommended proponent does not have the low cost. In this instance, the bid from Freeman Associates has a total cost greater than \$500,000 and is the lowest responsive bid.

3. BACKGROUND

York Region continues to demonstrate leadership through implementation of the Long Term Water Conservation Strategy

The Region has more than a decade of successful conservation and efficiency programming. Through *Water For Tomorrow* York Region is saving an estimated 23.7 million litres of drinking water each day. The Long Term Water Conservation Strategy enhances and extends, to 2051, the Region's commitment to innovative water conservation and efficiency programming.

York Region submitted proposals to the Ministry of the Environment for both the expansion of sewage flow capacity in the Southeast Collector Trunk Sewer Individual

Environmental Assessment and for an Intra-basin Transfer of drinking water from Lake Ontario to the communities of Aurora, Newmarket and East Gwillimbury. Conditions of approval for these undertakings required development of a 40-year Long Term Water Conservation Strategy.

The Long Term Water Conservation Strategy, submitted to the Ministry of the Environment on March 31, 2011, recommends a suite of enhanced conservation program components to provide York Region with the framework to reduce potable water demand as the population grows. On October 14, 2011 York Region received notification from the Ministry of the Environment that The Long Term Water Conservation Strategy has demonstrated significant leadership in the creation of the strategy and meets the requirements of the conditions of approval.

Recommended programs were developed based on results of a best in class review of water conservation and efficiency programs world-wide and on input from members of the Alliance for Water Efficiency peer reviewers. Program components include:

- Governance and Administration
- Policies and Bylaws
- Rebates and Other Financial Instruments
- New Development
- Full Cost Recovery Conservation-Oriented Pricing
- Marketing, Outreach and Education
- Municipal Infrastructure

A phased approach to implementation of the Long Term Water Conservation Strategy

Creation, submission and approval of the Long Term Water Conservation Strategy marks the completion of Phase 1 of the Region's work to deliver enhanced conservation programming. Phase 2 marks the beginning of the testing and initial implementation phase between 2011 and 2015. Detailed implementation plans including cost benefit analysis for existing and new components will be completed to determine effectiveness, amount of water saved, timing, resource requirements and cost. This detailed implementation phase has been used by York Region in the 2007 Water Efficiency Master Plan and by other municipalities across North America including Peel Region, City of Guelph, City of Calgary and many others. Results of this work will provide the Region with the true cost and resource needs for each water conservation program and initiative versus the cost to construct and purchase new water supplies.

Water conservation programs are delivered at less than the cost of building new water systems. Between 1998 and 2004 The Regional Municipality of York *Water for Tomorrow* conservation program deferred an estimated \$40 million in new infrastructure

at a cost of only \$10 million. York Region has already achieved significant water conservation savings since 1998 by implementing the most cost-effective programs.

The feasibility of implementing additional program components recommended in the Long Term Water Conservation Strategy will be determined based on market demand and detailed cost benefit analyses. Significant additional water conservation gains through implementing the innovative strategy components may require a more intense investment over the long term. Collaboration with the Province and other stakeholders will also be required to achieve the most aggressive conservation scenario of “no new water by 2051”.

Phase 3, the implementation phase will use these results to modify existing programs and implement new programs based on cost effectiveness and resourcing requirements. It is anticipated that the consultant will commence the project before the end of 2011 with a completion date end of 2013. Examples of program components to be evaluated as part of Phase 2 are provided below.

Policies and Bylaws – feasibility and costs to implement at both the Regional and local municipal level

- Summer water conservation bylaw
- Low impact development and water efficient fixture bylaws for new developments
- Unit metering for multi-family residences
- Water conservation plans and bylaws for new industrial, commercial and institutional facilities

Rebates and Other Financial Instruments – review of incentive levels, potential for market uptake and costs to implement

- Review of existing rebates for toilets, rain barrels, furnace humidifiers, clothes washers and pre-rinse spray valves
- Incentives for low income housing
- Incentives and rebates for landscape services
- Industrial, commercial and institutional water audits and capacity buy-back and fixture rebates

Marketing Outreach and Education – review of delivery methods and determination of possible water savings achieved

- Review and evaluation of current workshops and landscape assessments

Pilot Projects – developing project plans including detailed monitoring and evaluation protocol

- Expedited approvals process for ‘green building’
- Residential water efficient landscaping
- Irrigation systems for industrial, commercial and institutional facilities
- Rainwater harvesting and water re-use

Full Cost Recovery Conservation-Oriented Pricing – including full public and stakeholder consultation

- Review of alternate rate structures at levels that meet full cost revenue targets while accounting for demand fluctuations seasonally and by customer type

Regional staff and team of specialized consultants delivering leading water conservation and efficiency programs

In 2010 Regional Council authorized Environmental Services to retain additional staff to support the development and implementation of the Long Term Water Conservation Strategy and water efficiency programs. Those staff include the hiring of a Program Manager, Coordinator and Technologist. In addition to staff, several consultant support contracts are required to provide the highly specialized support required to enable York Region to deliver a large number of public programs in a cost effective manner.

Attachment 1 Status of Long Term Water Conservation Strategy Priority Initiatives illustrates the role that both York Region staff and contracted staff play in the delivery of water conservation and efficiency programs.

As of September 30, 2011 the *Water for Tomorrow* has saved an additional 1.07 million litres of water per day, compared to the total 0.97 million litres of water per day saved in 2010. Total water savings is currently 23.7 million litres of water per day which is enough water to service a community of approximately 90,000 people.

4. ANALYSIS AND OPTIONS

Response to Request for Proposal received by two qualified consulting firms

In accordance with the Purchasing Bylaw and through the Supplies and Services Branch, a Request for Pre-Qualification was issued and advertised electronically on the Region's Bids and Tenders website as well as on *Biddingo.com* and in Daily Commercial News. A total of six consulting firms submitted a formal response to the Request for Pre-Qualification. A selection committee consisting of staff from Environmental Services evaluated the six proposals based on the following criteria:

- Completeness of submission
- Customer references
- Understanding of the project requirements
 - o Methodology and approach towards each of the program components
 - o Quality of innovative methods and approaches proposed
- Project team experience

- o Demonstrated success in the development of water efficiency strategies; municipal environmental programs and plans; development of 'green', efficient or low impact development policies, programs and evaluation
- o Market research, market trends, water demands and water efficiency best practices
- o Technology evaluation and resource assessment

Due to the technical, highly specialized nature of this project, the criteria set out by the selection committee was stringent. Based on the information received in the formal response to the Request for Pre-Qualification, the following two firms were pre-qualified and were invited to submit a proposal in response to a Request for Proposal.

- CH2M HILL Canada Limited
- Freeman Associates

Proposals evaluated using two-envelope system

Proposals were evaluated using a two-envelope system with technical and financial information submitted in separate envelopes. Technical proposals were evaluated prior to any knowledge of the financial information.

Technical content was weighted at 70 per cent and the financial evaluation was weighed at 30 per cent of the total. Invited proponents had already passed a stringent pre-qualification screening which ensured only proponents with the suitable technical experience would be submitting detailed proposals.

Technical proposals were reviewed based on the following criteria:

- Experience and Qualifications of the Firm, Project Manager and Project Team on Similar Projects
- Methodology and Approach
- Innovation

Technical and financial results are summarized in Table 1.

Table 1
Consultant Proposal Evaluation Summary

Consulting Firm	Technical Score (Out of 70)	Financial Score (Out of 30)	Total Score (Out of 100)	Upset Limit Cost (Exclusive of Taxes)
Freeman Associates	50.8	30.0	80.8	\$520,860.00
CH2M Hill Canada Limited	35.5	20.7	56.2	\$753,280.00

Evaluation of proposals resulted in Freeman Associates achieving highest total score

The proposal from Freeman Associates had the highest total score, including highest technical score and lowest price. Their proposal demonstrated a clear understanding of the project and a thorough working knowledge of developing implementation plans using innovative methods and approaches.

Freeman Associates has significant experience in researching and developing strategies and implementation plans for water conservation and efficiency programs and other water resource management and environmental initiatives. Freeman Associates is a recognized Canadian leader in the field of water conservation and efficiency, water management and Low Impact Development (LID) and market research. Financial and technical support is being provided through sub-consultants to Freeman Associates.

Freeman Associates has extensive experience with the Long Term Water Conservation Strategy. Freeman Associates conducted the water conservation and efficiency practices research required for the Long Term Water Conservation Strategy Best in Class Report and wrote relevant sections of the final Best in Class Report. Information for the Long Term Water Conservation Strategy was compiled and coordinated by Freeman Associates who also drafted the final version of the strategy document.

Link to Key Council-approved Plans

Integrating water conservation programming with water and wastewater infrastructure planning and sustainable community planning has been and continues to be a Regional priority. This commitment is reinforced in both the 2011-2015 Strategic Plan and the Regional Official Plan.

An objective of the Strategic Plan states that The Region will focus on continuing to deliver and sustain critical infrastructure necessary to support our growing communities

by identifying and leveraging capacity available in the existing infrastructure. One mean to achieve this objective is through increased water conservation per capita.

An objective of the Regional Official Plan is to ensure adequate water resources for today's residents and future generations, through conservation and efficiency.

- To investigate full cost pricing of water, in co-operation with local municipalities, to encourage water conservation and facilitate system improvements
- To pursue with local municipalities and conservation authorities the implementation of water efficiency innovations such as water reuse systems, rainwater harvesting and innovative stormwater management
- To investigate innovative wastewater treatment technologies and approaches including grey water reuse, naturalized wastewater treatment and water recycling in residential, commercial, institutional and industrial uses

The Regional Official Plan also highlights specific policies to ensure water conservation is integrated into new developments to create high-quality sustainable communities by encouraging new buildings achieve 20 per cent greater water conservation efficiency than the Ontario Building Code.

5. FINANCIAL IMPLICATIONS

There are sufficient funds available in the approved 2011 budget under the *Water for Tomorrow* program for this project. \$520,860 has been budgeted and is available in the 2011 10-year plan.

6. LOCAL MUNICIPAL IMPACT

Local municipal staff have been involved in the development of the Long Term Water Conservation Strategy and will continue to be involved in all stages. Moving forward, it is critical for the Region to determine accurate water consumption data by user type (i.e. residential, industrial, commercial) to accurately report the amount of water saved while ensuring programs are cost effective and achieving expected results. To ensure this is achieved, cooperation by the local municipalities in providing local water consumption data is of utmost importance.

The continued commitment of local municipalities in working with the Region to develop detailed implementation plans is critical to the success of the strategy and will ensure that water conservation and efficiency programs that are cost effective and beneficial to the communities of York Region will be implemented in the future.

7. CONCLUSION

The Long Term Water Conservation Strategy is a long term strategy that recommends a host of program components to provide York Region with the necessary framework required to reduce potable water demand as the population grows over the next 40 years. Developing implementation plans is the next step in the process and is necessary to move forward with full implementation of recommendations in the strategy.

It is recommended that Freeman Associates be retained to develop detailed implementation plans and cost benefit analysis for the Long Term Water Conservation Strategy, at a cost of \$520,860.00, exclusive of taxes.

For more information on this report, please contact Laura McDowell, Director Environmental Promotion and Protection at 905-830-4444 Ext. 5077.

The Senior Management Group has reviewed this report.

(The attachment referred to in this clause is attached to this report.)

Program Component	Tactics	Region Role	Consultant Role
Rebates and Other Financial Instruments	Toilet, humidifier and clothes washer rebates Free ICI water audits Pre-rinse spray valve for commercial kitchens	• Manage consultant contracts • Public communication & education including marketing, advertising, website • Manage consultant contracts • Public communication & education including marketing, advertising, website	• Process rebate cheques • Schedule and conduct participant audits • Conduct ICI water audits • Schedule commercial kitchen visits
New Development	Increase uptake of Sustainable Home Incentive Program and LEED Programs Create Industrial Commercial Institutional conservation and efficiency guideline Expedited approvals process for residential developments	• With Local Municipalities, Regional Planning Department, and the Building Industry and Land Development Association (BILD) evaluate and develop methods to achieve LTWCS target of 10% uptake • Research jurisdictions based on Best in Class Review • Coordinate and facilitate stakeholder consultation on draft contents • Facilitate adoption of guideline by local municipalities • Proposal submitted to MOE for Showcasing Water Innovations funding	• Provide recommendations for additional water efficient fixtures and processes • Develop monitoring process as required • Compile draft guideline including recommended water efficient fixtures and processes

Program Component	Tactics	Region Role	Consultant Role
Governance and Administration, Policies and Bylaws	Multi-stakeholder advisory group Implementation plans with full cost-benefit and return on investment assessments Advocacy to encourage water efficiency	• Develop processes to create and maintain a multi stakeholder group • Create presentations and other communications material for meetings • Manage consultant contract • Coordinate and facilitate stakeholder consultation as required • Attended engagement sessions on proposed building code updates and supported, with local municipal input, water efficiency updates to the Ontario Building Code	• Facilitation support for 2012 including orientation session • Calculation of water savings full cost to implement, technical feasibility
Regional-Municipal Infrastructure	Leak reduction and IWA audit	• Manage consultant contract • Obtain data from local municipalities • Provide Regional data • Coordinate and facilitate stakeholder consultation as required	• Complete IWA audit • Develop and deliver training program for local municipal staff
Regional-Municipal Processes	Develop process for collecting water consumption data	• Develop and document process with local municipal staff • Ensure timely delivery of data from local municipal staff	

Program Component	Tactics	Region Role	Consultant Role
	Develop monitoring and evaluation program	• Using GIS and data obtained from local municipal water billing, program participation rates and Toronto and Region Conservation Area education programs • Calculate water savings annually • Review participation rates and adjust programs accordingly • Develop marketing plans as required	• Recommend practices and methodologies to evaluate water savings
Regional-Municipal Processes continued	Determine consumption by sector	• Obtain local municipal billing data	• Develop process and methodology using local municipal billing data • Train staff
	Guidelines for retrofits of municipally owned buildings	• Coordinate and facilitate stakeholder consultation on draft contents • Facilitate adoption of guideline by local municipalities	• Compile draft guideline including recommended water efficient fixtures and processes
	Retrofit and showcase municipal facilities	• Create ‘inventory’ of all municipal building already incorporating water efficiency and conservation and other sustainable components or those implementing guideline • Develop communications plan to publicly showcase	

Program Component	Tactics	Region Role	Consultant Role
Outdoor Water Use	Industrial Commercial Institutional outdoor water use reduction pilot Water efficient demonstration in Richmond Hill	• Manage consultant contract • Enhanced the Toronto Region Conservation Authority Sustainable Neighbourhood Retrofit Program in Lake Wilcox to include pilot – contest for water efficient landscape make-over • Provide input to public education and promotional material	• Conduct irrigation audits at 10 ICI/multi unit facilities • Assist with homeowner landscape visits
	Water efficient landscape seminars	• Manage consultant contract • Review and provide input to seminar content and locations • Review participation rates and adjust programs accordingly • Public communication & education including marketing, advertising, website • Develop and promote partnerships for delivery of additional seminars	• Conduct landscape seminars
	Landscape Assessments and Advice	• Manage registration of participants • Manage consultant contract and registration of participants • Review and provide input to material provided to residents • Review participation rates and adjust programs accordingly • Public communication & education including marketing, advertising, web	• Conduct landscape assessments

Program Component	Tactics	Region Role	Consultant Role
Education and Outreach	Children's Water Festival	• Deliver annual water festival • Public communication & education including marketing, advertising, website • Manage registration of schools and volunteers	
	Revised School Curriculum	• Coordinate and facilitate stakeholder consultation • With conservation authorities review and optimize program delivery • Review and provide input on content of material provided through in-school and out of school programs	
	Outreach through local groups	• Presentations to local community groups • Participate in festivals and events	
	Outreach to new Canadians	• Translation of brochures, advertisements • Participation in festivals and events	

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