Award process for a quality-based biosolids management program in Durham region

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ABSTRACT: Currently, biosolids generated at the Corbett Creek and Harmony Creek Water Pollution Control Plants (WPCPs) in Durham Region are beneficially utilized on agricultural land, with contingency disposal available by incineration at the Region’s Duffin Creek WPCP. The previous contract for biosolids management services expired at the end of 2005 and, in anticipation of this, the Region set out to award a quality-based contract through a competitive process.

The Region is pro-active in fostering environmental responsibility, and an important component of the biosolids land application program is the implementation and continuous improvement of best management practices. Qualified proponents offering land application services to the Region were required to address and to demonstrate compliance with the Region’s best management practices, in accordance with the resulting contract. The Region anticipated that minimum regulatory compliance requirements would be exceeded by the Request for Proposal (RFP) terms, and the subsequent services delivered by the successful proponent.

This paper describes the detailed process undertaken by the Region to develop the interest of proponents in the quality-based program requirements, prepare the RFP for land application services through a collaborative approach, communicate with Council and Works Committee, evaluate the proposals received based on defined criteria, select a preferred contractor and agree on contract terms through a negotiated process. A number of municipalities have utilized the document and process developed by Durham Region in aspects of tendering their respective biosolids management programs, because of this quality-based approach.

KEY WORDS: Biosolids, Agricultural Land Application, Terms of Reference, Award Process, Best Management Practices

INTRODUCTION

The Region has completed a long-term Biosolids Management Master Plan to review the existing biosolids management program and to prepare a sustainable, reliable, environmentally sound and cost effective plan for biosolids management through the year 2021. The master planning study produced short and long term options for biosolids management, both of which include continuing with agricultural land application, when conditions permit.

Currently, biosolids generated at the Corbett Creek and Harmony Creek Water Pollution Control Plants (WPCPs) are beneficially utilized on agricultural land, with contingency disposal available by incineration at the Region’s Duffin Creek WPCP.

The existing contract for biosolids management services expired at the end of 2005, and the Region set out to award a quality-based contract through a competitive process. The scope of the contract included management of both wastewater residuals (undigested solids) and biosolids from the Region’s seven WPCPs. Wastewater residuals are hauled to the Duffin Creek WPCP for incineration, while biosolids are intended for beneficial use on agricultural land. Biosolids not beneficially used on agricultural land are taken to the Duffin Creek WPCP for incineration.
The Region is pro-active in fostering environmental responsibility, and an important component of the biosolids land application program is the implementation and continuous improvement of best management practices (BMPs). Therefore, the Request for Proposal (RFP), and the resulting contract with the successful proponent are reflective of that enhanced approach that exceeds the regulatory minimum through the implementation of BMPs.

This paper describes the detailed process undertaken by the Region to develop the interest of proponents in the quality-based program requirements, prepare the RFP for biosolids management services through a collaborative approach, communicate with Council and Works Committee, evaluate the proposals received based on defined criteria, select a preferred contractor and agree on contract terms through a negotiated process. A number of municipalities have utilized the document and process developed by Durham Region in aspects of tendering and negotiating their respective biosolids management programs, because of this quality-based approach.

**METHODOLOGY**

**Background**

The Region of Durham owns and operates seven WPCPs that treat wastewater generated within the urban serviced areas (Figure 1). The estimated 2005 total sanitary service population is 520,000.

The Region also operates the Duffin Creek WPCP that is co-owned with York Region. The Duffin Creek facility services an estimated population of 746,000 from York Region. In addition, a new facility, the Courtice WPCP, is scheduled to be commissioned in 2007.

At present, two plants produce biosolids that are beneficially utilized on agricultural land – the Harmony Creek WPCP and the Corbett Creek WPCP. Anaerobically digested biosolids are hauled to agricultural fields for land application from May through November and, during the non-application season, hauled to Corbett Creek for storage or to Duffin Creek WPCP for further processing.

**Figure 1. Water Pollution Control Plants in Durham Region**

*Source: Region of Durham Biosolids Master Plan, 2004*
The Harmony Creek WPCP has a design capacity of 68,200 cubic metres per day and includes a trickling filter facility constructed in 1952 and a conventional activated sludge facility commissioned in 1976. It services the east portion of the City of Oshawa and the Municipality of Clarington.

The Corbett Creek WPCP is a conventional activated sludge facility servicing the east portion of the Town of Whitby and the west portion of the City of Oshawa. It has a rated capacity of 72,700 cubic metres per day.

In addition, Corbett Creek WPCP has onsite storage with a capacity of 16,300 cubic metres that serves as a centralized storage facility for the Region's biosolids. All biosolids from Corbett Creek are transported from the plant via the storage tank. Biosolids from Harmony Creek and occasionally anaerobically digested biosolids from the Port Darlington and Pringle Creek WPCPs are added to this centralized storage facility, prior to land application.

The Harmony Creek WPCP was captured by the Nutrient Management Regulation (O. Reg. 267/03, as amended), on January 1, 2005. Therefore, the Region was obliged to prepare and comply with their approved Nutrient Management Strategy (NMS) by that date. The NMS formalized the five-year projected biosolids management program, including estimated biosolids quantities, projected nutrient application per year, ultimate biosolids destinations, and contingency planning options. Since the storage facility at Corbett Creek also stores biosolids from other Region plants, the Regulation considers it a centralized storage facility or intermediate generator and, as such, Corbett Creek is not required to implement a NMS until January 1, 2007. The NMS requirements were reflected in the RFP and the resulting contract.

**Award Process**

Management of the Region's land application program evolved over time through the historical relationship with the previous land application contractor. As a result, the Region's program operated under a very different approval system from the provincial model, and the Region has two full time staff dedicated to the daily management of the program to meet their compliance obligations, as well as their commitment to fostering best management practices and continuous improvement.

With the expiration of the existing contract, there was an opportunity for the Region to change the regulatory approach to be more consistent with the provincial model, realign their internal resources dedicated to the biosolids management program, and enhance the BMP component of their program.

The timeline for the overall process was developed by determining an appropriate amount of time for the successful contractor to gear up in advance of termination of the existing contract, and working backwards to allot timelines to each step of the process. Milestones, such as meeting Works Committee and Council meeting schedules, were incorporated into the timeline. As a result, the award process took place over an eight month timeline.

To achieve these goals, the Region took the following stepped approach to awarding their biosolids management contract:

1. **Retain Qualified Consultant**

   In order to develop and move through the award process in a timely manner, and combined with the Region's commitment to BMPs, the decision was made to seek external assistance from a qualified consultant familiar with the Region's land application program, provincial and national programs, and applicable biosolids legislation.

   To this end, the Region retained CH2M HILL to assist with development of technical aspects of the RFP and the award process. CH2M HILL has a number of wastewater residuals experts on staff, with experience in all facets of residuals management, including previous work with the Region of Durham.

2. **Meet with MOE**

   To kick off this project, Regional and CH2M HILL staff met with the MOE District Office to discuss the existing approach to regulating Durham's land application program. Previously, the Region's program was regulated via a Waste Management Systems Certificate of Approval (CoA), issued jointly to the Region and the previous
contractor. The Systems CofA outlined roles and responsibilities, requiring Regional staff to set application rates and inspect and sign off on every site application. Site CofAs for land application sites were added to the Systems CofA in a Schedule.

Because this approach was very different from the provincial model, the Region investigated the possibility of severing the existing Systems CofA, in the interest of moving towards the more common approach where the contractor holds the Systems CofA, sets application rates and applies for site CofAs. By meeting with the relevant parties at the MOE District Office, and through contacts with MOE’s Approvals Branch, the Region was able to effectively determine their best approach towards CofAs and to move towards a system more in line with the provincial model.

3. Develop Contractor Interest

In order to inform the industry that the Region was preparing for a competitive, quality-based award for their biosolids program, Region staff communicated with contractors running similar-sized land application programs in the province. Meetings with selected contractors were also carried out to discuss the Region’s approach to land application and to hear the industry’s suggestions and standard BMPs. Feedback received at these meetings assisted the Region in developing a well-scoped RFP, reflective of the Region’s approach to best management practices.

4. Council and Works Committee Communications

Communications with Works Committee and Council were initiated prior to issuing the RFP, to secure endorsement for the enhanced biosolids management program, and to create awareness of the forthcoming contract award for land application services. This proactive approach to communications facilitated the issuance of the RFP and subsequent award of the biosolids management contract in a timely manner.

5. RFP Preparation

The RFP was drafted by the consultant, in concert with Regional technical, operations and purchasing staff, through a series of discussions and workshops. The technical scope of the RFP was based on a document originally developed in 2004 to amend the Region’s existing contractual agreement, with further BMP enhancements. The collaborative approach, including technical expertise as well as purchasing and legal representation from the Region, contributed to a streamlined approach.

It was important that the resulting RFP be reflective of the best management practices approach to the program, while ensuring that proponents clearly understood the contract requirements and program intentions. The detailed RFP allowed proponents to accurately scope and price the desired program, allowing for competitive and comparable bids.

After thorough legal review, the RFP was released through the Region’s Finance Department, in keeping with Regional policy. The RFP was distributed by direct invitation as well as open distribution.

6. Mandatory Bidders’ Meeting

A mandatory bidder’s meeting was planned, in order to allow all proponents to view access and loading facilities at the seven WPCPs in the Region. Proponents who did not attend the meeting were precluded from proposing on the project. The face-to-face meeting also allowed for discussion and clarification of the RFP, with all proponents present.

Subsequent to the Bidder’s Meeting, a large number of questions were received from the prospective bidders. With assistance from the consultant and the Region’s purchasing department, questions were reviewed and detailed answers provided in a timely manner, via issuance of three addenda.
7. RFP Evaluation
The Region chose a two step approach to proposal evaluation – the consultant and the Region’s technical and purchasing staff evaluated the proposals independently for technical and administrative compliance against the evaluation criteria, then evaluation results were discussed in a workshop format. The workshop was facilitated by the consultant’s senior technical staff. This allowed the Region the desired outcome of selection of a preferred proponent endorsed by the team. The Region ultimately reserved the right to select the successful proponent.

8. Contract Negotiations & Award
The RFP was crafted in such a way as to minimize the need for substantial negotiations after the selection of a preferred contractor was made. The RFP process was open and fair, with the requirement that contract pricing, based upon specified volumes per facility, be submitted with the proposal. Submitted prices were not negotiable. As a result, negotiations focused upon contractual language, billing practices, indemnification and insurance issues, as well as numerous slight issues of importance to both the Region and the contractor.

Timelines for award of the contract had been established at the beginning of the process, based upon industry requirements, ensuring that the successful proponent would have adequate time to gear up prior to termination of the existing contract.

DISCUSSION
The Region adopted a stepped approach to collaborative development of the RFP, evaluation of the proposals, selection of the preferred contractor, and award of contract. Regional staff felt the following aspects contributed to the success of the process:

• Taking the time to develop the overall process, including the steps involved, the timing, the resources required, and who needed to be involved, became the successful plan of action for the project.
• Meeting with selected contractors prior to development of RFP ensured that the document was reflective of similar sized land application programs, addressed the Region’s needs, and recognized industry BMPs and concerns.
• Communications with contractors was important to inform the industry and develop confidence of prospective bidders with respect to the evaluation and award process for the quality based program.
• A well scoped RFP document, detailing obligations and responsibilities of both parties, reduced time spent on these issues later on in the process.
• The collaborative approach to RFP preparation – including the Region’s operations, technical, financial, and legal staff – streamlined the process.
• Consultation with other municipalities and sharing experiences allowed the Region to learn from what worked well, or not, for others.
• Retaining services of a qualified consultant to facilitate the development of RFP and evaluation of proposals reduced the overall time spent on these tasks.
• Communications with Works Department staff, Works Committee and Council throughout the process was critical - emphasis was placed upon the changing regulatory environment, the need for enhanced program BMPs, and the anticipated increase in program costs associated with a quality-based program, and the broadened scope of services to be provided by the successful proponent.

Notwithstanding the success of the Region’s approach to the award process, a number of significant lessons were learned and certain aspects of the process would be addressed differently next time. These include:

• The Region was surprised by the large number of questions from prospective bidders during the RFP process, in spite of the effort put into the development of the RFP document. It is important that adequate time and resources be factored into the process to ensure that questions and issues brought forward are carefully addressed in a timely fashion.
The negotiation phase was prolonged for a few reasons including, differing expectations with respect to insurance requirements, and extensive discussions about contractual language and legal aspects such as indemnification and performance bonds. It is important to have detailed discussions with prospective bidders and the successful contractor about these issues.

To facilitate negotiations and ensure that timelines are met, all parties must be available to meet for discussion after selection of the preferred contractor has been made and prior to the official award – the contractor’s team and Municipal team (operations, technical, purchasing, finance, risk management, and legal) all must play an active role until negotiations are complete.

**CONCLUSIONS**

The Region is pro-active in fostering environmental responsibility, and an important component of the biosolids land application program is the implementation and continuous improvement of best management practices (BMPs). Therefore, the Request for Proposal (RFP), and the resulting contract with the successful proponent are reflective of that enhanced approach that exceeds the regulatory minimum through the implementation of BMPs.

The Region undertook a detailed, stepped process to award the quality-based contract, that included developing the interest of proponents in the quality-based program requirements, preparing the RFP for biosolids management services through a collaborative approach, communicating with Council and Works Committee to streamline the process, evaluating the proposals received based on defined criteria, selecting a preferred contractor and agreeing on contract terms through a negotiated process.

The Region feels that communicating with the industry about the upcoming contract award, and meeting with contractors at the outset of the process contributed to the successful process. A well-scoped RFP document, developed in collaboration with the Region’s technical, finance, purchasing and legal staff, addressed many issues early on in the process. Retaining a consultant to facilitate the RFP development and technical evaluation processes, as well as communications with other municipalities, significantly reduced the amount of time spent on these aspects of the process. Also, communication with Regional stakeholders was imperative to the success of the process.

In spite of the success of the process, the Region was surprised by the large number of questions from prospective bidders during the RFP process, the length of time required for negotiations and the differing expectations between the Region and the contractor with respect to many legal and administrative issues in the agreement, including insurance requirements, indemnification and performance bonds. In retrospect, the Region would have allowed more time for the negotiation component of the process and would have spent more time solidifying the Region’s perspective on some of the legal/administrative aspects of the agreement. It is also important that the collaborative approach to development of the RFP is continued throughout the negotiation process, and that all parties from the Region’s and the contractor’s perspective participate in the negotiations.

A number of municipalities have utilized the document and process developed by Durham Region in aspects of tendering and negotiating their respective biosolids management programs, because of this quality-based approach.