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City of Regina Wastewater Treatment Plant Upgrade

Business Case Submission to PPP Canada

MARCH 04 2013
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Executive summary

The City of Regina must upgrade its wastewater treatment plant (WWTP) to meet new effluent quality standards, address population growth, and upgrade/replace aging infrastructure. The Saskatchewan Ministry of Environment requires the City to meet new wastewater effluent quality standards by the end of 2016. This requires the City to undertake a significant project, one of its largest ever, to upgrade and expand the wastewater treatment plant. With a construction cost estimate of $238.5 million, the Project will rectify current deficiencies, improve energy efficiency, reduce energy consumption and GHG emissions, expand capacity to accommodate growth, and improve water quality in Wascana Creek and Qu'Appelle system.

The City has determined that the Project entails significant risk, and has explored over a dozen potential project delivery models, guided by the analytical method outlined in the City's P3 Policy. The screening assessment confirmed that the Project could be delivered as a P3. The Strategic Assessment concluded that the Design-Build-Finance-Operate-Maintain (DBFOM) delivery model presents the lowest project risk profile, and best meets the City's resource capacity, economic, strategic, and social criteria.

A Value for Money (VFM) assessment compared the estimated risk-adjusted net present value of lifecycle costs of DBFOM and traditional design-bid-build. The VFM of DBFOM is positive and robust, and DBFOM is expected to have a total project cost over the design, construction, and operations and maintenance period that is more certain, and almost guaranteed to be less in net present value terms, than DBB. As a result, DBFOM is the City's preferred delivery model.

The choice of DBFOM model is broadly based on: its ability to satisfy the City's many objectives and constraints; the significant reduction in project risk and retained risk; and the ability to defer payment for construction, which assists with near-term City cashflow management and debt management.

Through submission of this Business Case to PPP Canada, the City is requesting a contribution from the P3 Canada Fund of up to $58.7 million (nominal, as-spent dollars) based on a 25% contribution towards eligible costs. The requested P3 Canada Fund investment incrementally improves the project in two key ways. Firstly, it improves the preliminary value for money realized by the City from an estimated 7.3% to an estimated 16.5%. This provides an impetus for the City to manage any political risk that may be associated with the DBFOM delivery model. Secondly, it reduces the impact of the Project on the City's total debt load. Absent the investment, the City could approach its debt limit, which in turn could limit the City's ability to make other important (and perhaps urgent) investments in the near to mid-term.

A procurement strategy was developed for DBFOM based on the City's P3 Policy and Canadian best practice, with the objective of having a contractor selected in early 2014. An implementation plan for the strategy has been developed. The procurement of several key advisors is complete and plans have been developed to proceed with key procurement document development.

On February 25, 2013, City Council approved the *WWTP Upgrade Procurement Recommendation* which delegates all necessary authority to the City Administration to proceed with the DBFOM procurement. The only external approval remaining to execute the procurement strategy is confirmation of funding from the P3 Canada Fund. Just prior to financial close, the City will also need to issue a borrowing bylaw, which Council has approved in principle. The City has dedicated sufficient and qualified resources to the DBFOM procurement, and established a Project Charter to ensure an effective and efficient governance of the DBFOM procurement.

Revision history

#	Status	Date	Summary of Revisions
n/a	Draft	Jan 18 2013	• First draft submitted to PPP Canada
Revision 1	Draft	Jan 25 2013	• Updated Figure 11 (Project Governance Structure) • Additional information provided in Section 8 on RFQ and RFP evaluation • Additional information provided in Section 9 on implementation plan • Standardized term “business advisor” throughout for consistency with Council recommendation
Revision 2	Draft	Feb 05 2013	• Added Section 7.7 Payment Mechanism and Performance Indicators • In Section 6.1 clarified that funding and affordability analysis is based on upper end of capital cost estimate • Completed Appendix I (Project Team Biographies) • Revised Table 30 to illustrate correlation to City’s “capital commitment” in Council recommendation and to illustrate the makeup of the P3 Canada Fund request.
Revision 3	Final	Mar 04 2013	• Updates to Section 2.5 to break down the project’s physical scope into 3 components for greater clarity • Updates to Section 2.8 to provide additional detail on environmental benefits • Revised Section 4 (VFM) using the upper end of the capital cost estimate so VFM analysis section is consistent with funding request • Deletion of previous Section 6 as no longer necessary with revision of Section 4 as noted above • Updates to Section 7 to reflect final project charter • Updated to reflect City Council approval of recommendations • Addition of Appendices L and M

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1.1 Project Name

City of Regina Wastewater Treatment Plant Upgrade

1.2 Contact information

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1.3 Objectives of Business Case

The City of Regina (the "City") submitted an application for P3 Canada Fund support to PPP Canada for the Project. The application was for a Project delivery model that transfers design, construction, operation, maintenance, and possibly financing to a private sector contractor. The application passed PPP Canada's pre-screening and the City has been invited by PPP Canada to submit a business case (this document) for the Project. The business case provides the information required by PPP Canada to make its decision regarding providing P3 Canada Fund support.

This business case compares the traditional design-bid-build methodology to the public-private partnership Design-Build-Finance-Operate-Maintain (DBFOM) model to determine if it the DBFOM offers strategic and quantitative benefits. It makes a recommendation on an optimal delivery model to be pursued and provides a transaction structure and implementation plan.

1.4 Limitations

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2 Project description and investment decision

2.1 Project Sponsor: The City of Regina

Overview

The City of Regina is located in the heart of Canada's prairie provinces, in the southern region of the province of Saskatchewan, approximately 180 kilometers north of the US border. Regina is the capital city of Saskatchewan, and is a civic and cultural hub within the Province; home to a major university, prominent research and development institutes, international airport and several sports and cultural groups.

The population of Regina is approximately 200,000, and is expected to increase significantly within the next 10 – 20 years. The economy of Regina is linked to the province's natural resources and agricultural industries, however, within the City, commercial offices and services provide the main source of employment.

Governance

Regina is a municipality created and empowered by the Province of Saskatchewan. City Council is responsible for governance, guided by provincial legislation including *The Cities Act* and *The Cities Regulations*. Regina consists of 10 wards with a City Councilor elected in each. *The Cities Act* establishes The City of Regina's authority to undertake the Project.

Budget and Fiscal Capacity

The City's water and sewer systems are operated as a self-funding utility, with costs recovered from user rates. Section 22.3 of The Cities Regulations requires Council to adopt a rate policy that sets out the rates or fees to be charged to consumers for the use of water. In establishing Utility rates, the following policies have been adopted in the past by City Council[1]:

1. Utility rates are to be established such that they are sufficient, based on long term projections, to fully fund Utility operating costs, interest cost and debt repayments, capital requirements, and transfer policies, taking into account the operating and infrastructure requirements of the Utility required to meet the service goals of the Utility, as determined by City Council or prescribed by legislation. The objectives for the Utility's rate structure are:
    a. Financial Self Sufficiency – Utility rates must generate revenue adequate to meet all operating and capital costs of the Utility in both the short and the long term.
    b. Conservation – Utility rates should encourage customers to use water responsibly.
    c. Reduction of Peak Demand – The Utility rates should encourage water conservation during summer months, reducing the need for infrastructure investment and higher rates.

[1] Proposed 2012 City of Regina Water & Sewer Utility Budget

d. Equity – The Utility rates should result in a charge to customers according to the cost of services utilized.

The fiscal capacity for the Project stems from the City's authority to set rates and its policy to set rates such that they cover the full cost of service provision, including "pay-as-you-go" capital, financed capital, and operating costs. The Utility is backed by the City of Regina, which has a strong credit rating (AA+, Standard & Poor's).

Major Capital Project Experience

As owner/operator of the full suite of municipal infrastructure, including transportation, water, wastewater, solid waste, and various forms of accommodation, the City has experience with the procurement of a wide range of capital projects. The primary delivery model used is traditional design-bid-build.

The WWTP upgrade project is significantly larger than the capital projects routinely managed by the City, and therefore the City has considered a wide range of alternative procurement models that can, to various extents, supplement the City's in-house capacity and transfer risk to qualified parties.

2.2 Summary of Needs Assessment

Current wastewater treatment in Regina dates back to 1956 when the first lagoons were put into service. Shortly thereafter in 1958, new wastewater pumping, comminution, grit removal and chlorination processes were added. A fine bubble aeration system was introduced to the lagoons in 1965 and two deeper lagoons were constructed in 1975. The tertiary phosphorus clarification system was also put into service in 1975. The primary treatment systems, anaerobic digestion and dewatering processes were added in the early 1980s. The UV system was put into service in 1995 and one of the original aerated lagoons was converted to sludge storage and another lagoon was added in 1996.

With continued and projected growth in the City and more stringent regulatory requirements, which are due to take effect at the end of 2016, the City of Regina is undertaking a comprehensive review of its wastewater treatment processes and is planning a major wastewater upgrade program. Between now and the year 2035, which is the planning horizon for the wastewater upgrade program, the population in Regina is expected to grow significantly from approximately 200,000 to 258,000 and average day wastewater flows discharged to the WWTP from the McCarthy Boulevard Pump Station are projected to increase from 70 ML/d to 92 ML/d.

In summary, the Project is needed to:

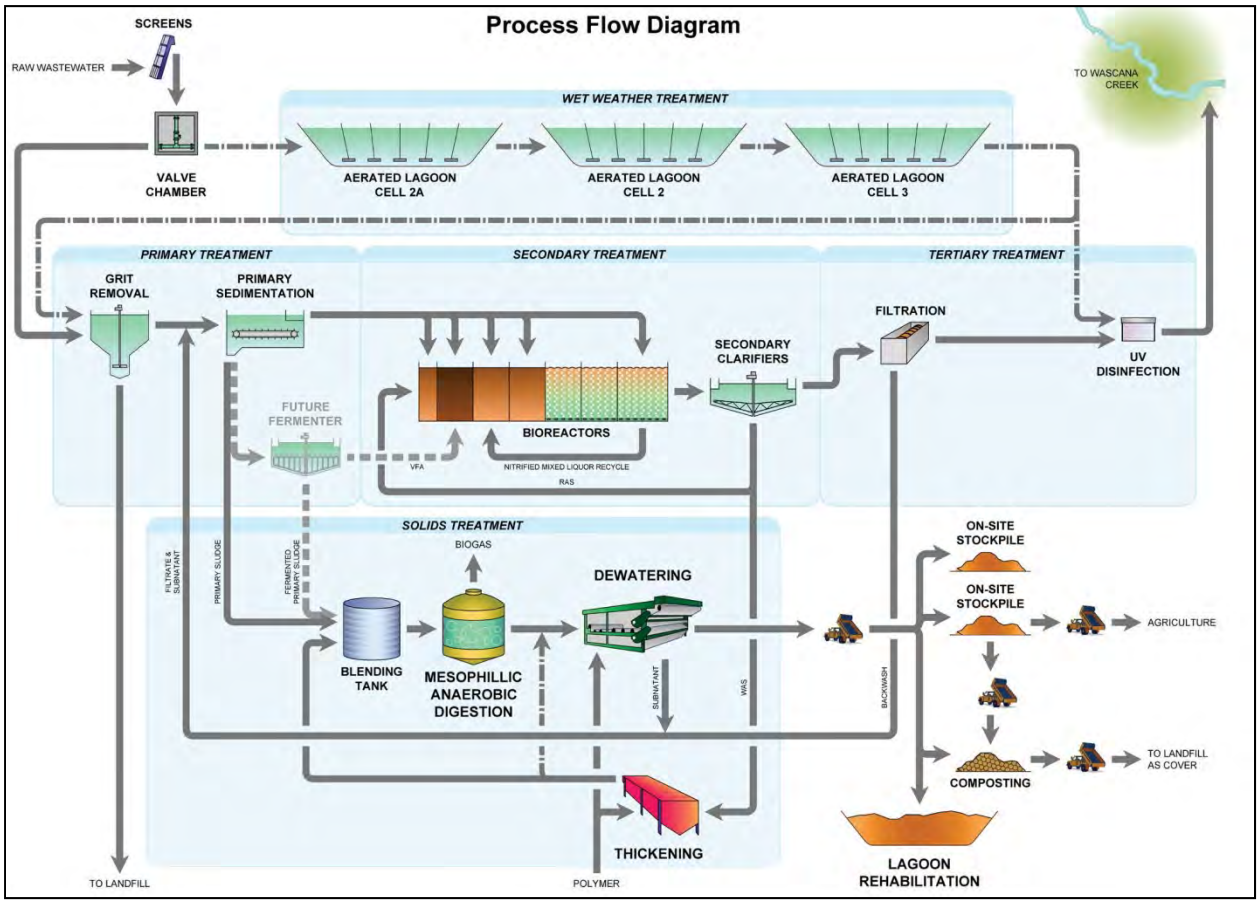
- Rectify current deficiencies by replacing/refurbishing infrastructure, some of which (e.g. HVAC equipment) is now well beyond its normal service life;
- Improve energy efficiency of the WWTP to reduce energy consumption and GHG emissions;
- Expand the hydraulic capacity of the plant by approximately 30% to accommodate anticipated growth over the 25-year project planning horizon; and
- Upgrade the treatment process to remove nutrients as required by the new Permit to Operate a Sewage Works (the "Permit") which imposes higher effluent standards at the end of 2016.

The upgraded WWTP will be required (by the new permit requirements) to nitrify on a year-round basis and remove both nitrogen and phosphorus prior to discharging treated effluent to Wascana Creek.

As currently envisaged, the upgrades to the WWTP will include improvements to the existing grit removal system, new secondary treatment facilities, including biological reactors and secondary clarifiers, sludge thickening, effluent filtration, UV disinfection upgrades, wet weather attenuation, odour control

and improvements to the existing anaerobic digesters and biogas systems. Also, a significant amount of existing equipment at the WWTP will be replaced as it is nearing the end of its service life.

Figure 1 - Project Concept Process Flow (from Preliminary Concepts Report)



Extensive detail on the technical needs assessment and development of the solution is available in the Preliminary Concepts Report[2]. The Executive Summary of this report is provided in Appendix A.

2.3 Project Feasibility

Alternative Solutions Assessed

Alternative approaches to meeting the technical requirements at the existing WWTP site were assessed. There is no practical alternative to upgrading the existing plant as it is located strategically with respect to the upstream collection infrastructure, and it has considerable remaining value in the site and infrastructure.

A comprehensive range of solutions for each project component was examined as documented in the Preliminary Concepts Report. Alternatives were screened down in each category by pass/failing on three key criteria:

- The technology has been proven in a similar scale and similar application to Regina;

[2] City of Regina, Wastewater Treatment Plant Upgrade Preliminary Concepts Report, Draft April 13,2012, AECOM

- The technology is a practical consideration given the regulatory, environmental and socio-economic framework in Regina; and
- The technology is not cost prohibitive.

Screened-in alternatives were then subjected to a more detailed assessment resulting in a short list of alternatives that were carried forward for conceptual design development.

Table 1 - Project Component Alternative Screening Assessment

Project Component	Alternatives Examined	Alternatives Short-listed
Liquid Treatment	37	8
Biosolids Treatment for Acceptable End Uses	9	7
Wet Weather Flow Treatment/Handling	15	4

The short-listed processes were evaluated using a Triple-Bottom-Line methodology to identify preferred alternatives which were integrated into an overall treatment system that is the currently-envisioned approach shown on Figure 1.

Opportunities for water reuse (i.e. other than discharge to Wascana Creek), green energy, and nutrient recovery were also investigated. These opportunities do not fundamentally define the project and may be examined on a cost/benefit basis to determine if they benefit the Project.

Market Interest

A preliminary market sounding has been completed with a sampling of firms that would be expected to have interest in some or all of the delivery models under consideration. The prime objective was to establish the extent to which the delivery models are likely to attract competition in the marketplace. The firms interviewed included water/wastewater specialty firms (designers and operators), general contractors (constructors), and P3 developers (equity investors/financing arrangers).

All models with the exception of the Alliance are well understood by the participants and are likely to attract the competition of the relevant market sectors assuming that standard/best practices are utilized for each model. There are specific concerns with each of these models, and different views on the pros and cons of each, but no fatal flaws were identified.

More information on market sounding is provided in Section 3.8.

Precedent Projects

Wastewater treatment plant upgrades are a routinely-executed type of project worldwide. The predominant delivery model worldwide is likely traditional Design-Bid-Build (DBB). Design-Build (DB) and Construction Management (CM) approaches are quite common, and there is some use of Design-Build-Operate-Maintain (DBOM) and a few occasions of Design-Build-Finance-Operate-Maintain (DBFOM). There is no apparent constraint on project feasibility due to lack of precedent projects.

Consideration of Project Costs and Funding

The estimated capital cost of the Project is $207.4 million ($2015) +/- 15% assuming it is delivered with the DBB model. This figure includes engineering (design, tendering, and construction services) and PST.

Estimated annual operations and maintenance for DBB is $7.6 million ($2017). This includes labour, power, chemicals, and equipment and materials. A 30-year major capital replacement (i.e. "lifecycle") schedule has also been estimated for the preliminary design.

The projected project costs have been incorporated into the 2012 – 2016 Utility Capital Program. The City's rate-setting policy dictates that the costs be recovered from user rates, which the City has the authority to set and collect. In anticipation of the Project, an annual 9% increase in rates from 2008 to 2013 was approved and an estimated utility reserve balance of $51.3 million will be available in Q4 2014 to support the Project.

2.4 Strategic Alignment and Priority

Strategic Alignment

The City's Vision for Regina is as follows:

> *Canada's most vibrant, inclusive, attractive, sustainable community, where people live in harmony and thrive in opportunity.*

The four Strategic Priorities of the Corporate Strategic Plan (Appendix B) are:

1. *Strengthen City Infrastructure and Manage Assets*
2. *Ensure Organizational Capacity and Effectiveness*
3. *Manage Growth and Community Development*
4. *Achieve Operational Excellence*

Flowing from these priorities are a number of actions that the City is committed to that are of direct relevance to the Project:

- *The development and implementation of long term asset management strategies which will promote the utilization of best practices that ensure the sustainability of City assets and infrastructure* (from Priority 1*); and*
- *Expansion of the wastewater treatment plant to meet new regulatory requirements and City growth* (from Priority 3).

The objectives of these actions are some key achievements:

- *Reliable water, wastewater, storm and roadway infrastructure* (from Priority 1);
- *Optimization of existing infrastructure capacity* (from Priority 3); and
- *A safe living and working environment for the community* (from Priority 3).

The Project is clearly aligned with, and in fact is part of, the City's Strategic Plan.

Project Priority

The Project is high priority due to the deadline imposed by the Permit for improved effluent quality by the end of 2016. As well, there are current deficiencies at the WWTP that need to be rectified whether or not the overall upgrade proceeds, to ensure that the plant can be operated reliably and perform its important environmental protection function.

2.5 Proposed Project Scope

The Project's physical scope consists of the following:

1. Upgrade of the wastewater treatment process to remove both nitrogen and phosphorus to meet the new Permit effluent standards by the end of 2016. This is the key trigger for the Project, however in addressing this need the capacity and condition of the existing plant must also be addressed.

2. Expansion of the hydraulic capacity of the WWTP to accommodate population growth and the attendant increase in wastewater generated by the City. The plant is now running almost at its design capacity and it would be uneconomic not to accommodate growth in wastewater flow when addressing the treatment upgrade.

3. Rehabilitation and replacement of existing WWTP components which are at or beyond the end of their normal service lives. Rather than simply replace what is there, however, it is necessary to consider the treatment process upgrade and capacity expansion to determine the most appropriate course of action.

These three physical scope components are dependent on each other, and the design of the Project must take all into consideration simultaneously.

In addition to the design and construction of the upgrade, the Project comprises the ongoing operation, maintenance, and rehabilitation of the infrastructure. The Project will be owned by the City of Regina regardless of the delivery model selected.

The Project's development scope, regardless of delivery model, broadly includes the following:

- Selection of treatment process technology;
- Designing, constructing, and commissioning the upgrade;
- Obtaining permits to construct the upgrade and operate the upgraded plant; and
- Arranging financing.

The Project's operational scope broadly includes the following:

- Acceptance of wastewater flow delivered to the WWTP by the City's McCarthy Boulevard pump station;
- Management of normal and wet weather flows within the WWTP;
- Operation of all process equipment to meet Permit effluent standards;
- Routine maintenance of all WWTP infrastructure;
- Major maintenance (i.e. replacement, rehabilitation) of all WWTP infrastructure;
- Compliance testing, monitoring, and reporting; and
- Management of residuals (i.e. dewatered sludge) on the WWTP site.

The delivery model and procurement process must allocate responsibility for these development and operational activities to either the City or a contractor[3]. Of note, because the WWTP is currently in service, operations must be sustained throughout the design and construction of the upgrade.

[3] In this document, "contractor" usually refers to a P3 Contractor: the City's counterparty in a P3 project agreement.

2.6 Project Goals and Key Constraints

The City's goals for the Project as documented in the Preliminary Concepts Report are to:

1. Meet permit obligations;
2. Deliver the project on time and on budget;
3. Demonstrate innovation in municipal infrastructure;
4. Incorporate sustainability and value added principles such as reuse of water and resource recovery;
5. Raise awareness of this large investment and connect it to the City's environmental stewardship efforts;
6. Utilize procurement processes that connect the designer and the constructor;
7. Ensure the design is easily constructible and efficient; and
8. Satisfy the City's rate payers and customers.

Key constraints influencing delivery model selection are as follows:

- City's lack of capacity to be actively involved in design of the Project.
- City's lack of capacity to administrate the purchasing for a large number of small supply and construction contracts.
- City's capacity for recruiting and retaining qualified staff for WWTP operations.
- Concern that local construction escalation may be significant in the coming years, although there are signs that the SK construction market may be cooling.
- The Permit deadline.

2.7 Preliminary Project Schedule

The schedule driver for the Project is the Permit requirement for improved effluent quality by the end of 2016. Regardless of the delivery model, procurement will commence in 2013.

Table 2 - Preliminary Project Schedules

Year	DBB	DBFOM Delivery Model
2012	Planning, preliminary design, procurement model selection	Planning, preliminary design, procurement model selection
2013	Design, tendering and award, construction	RFQ, RFP, contractor selection
2014	Tendering and award, construction	Design, construction
2015	Construction	Construction
2016	Construction, commissioning	Construction, commissioning

Further schedule information is included in Section 4.3.

2.8 Project Benefits

Social Benefits

Wastewater collection and treatment is fundamental to public health and together with provision of safe drinking water are credited with significant influence on modern western standards of health and wellness. The Project will allow the City to continue to provide reliable and effective wastewater treatment while better protecting the natural environment, which in turn may enhance recreational opportunities and their benefits for residents.

Environmental Benefits

Regina and the surrounding regions are located on the semi-arid plains, and therefore water is an important resource, which must be protected. The immediate receiving environment of the Regina WWTP effluent includes Wascana Creek, the Qu'Appelle River and Pasqua Lake, which is the first of a series of lakes (the Fishing Lakes) along the Qu'Appelle River downstream of its confluence with Wascana Creek. There is intensive use of water from the watershed, including:

- Water from Wascana Creek is used for agricultural water supply (livestock).
- Market gardens just below the confluence of Wascana Creek and the Qu'Appelle River abstract water for irrigation.
- The Fishing Lakes support commercial and subsistence fisheries and extensive recreational uses.

Farther downstream, the Qu'Appelle River flows through Crooked and Round lakes and then into the Assiniboine River in Manitoba.

Effluent from the City's WWTP is the largest contributor of nutrients to the receiving watershed, and a major contributor of flow in Wascana Creek and the Qu'Appelle River Basin. Once the Project is completed, the WWTP will be a less significant local and regional point source of nutrient loading. For example, over 400 tonnes per year of nitrogen is expected to be removed from the environment, due to the upgrade at the WWTP. This is expected to improve the condition of local and regional aquatic environments.

The plant currently uses 40% more energy than the average Canadian WWTP. By replacing aged components with more energy efficient equipment, the Project will reduce energy consumption (which is largely coal-generated in Saskatchewan) and reduce GHG emissions.

Economic Benefits

Saskatchewan has been growing quickly, recording the largest population growth in any census period since Statistics Canada started doing the census every five years in 1956[4]. Looking ahead, the Province is predicted to lead the nation in economic growth for the next several years, and the rich and diverse natural resources of the Province will continue to drive economic growth.

Regina is a key piece of the Provincial economic picture. As reported in April 2012, Regina has the lowest unemployment and last year had the highest economic growth of any Canadian city. Significant private investment in transportation, manufacturing, and natural resources is underway. Underlying the growth opportunity are core municipal service such as water and wastewater that enable the functioning of the City.

While the Project itself is a very significant infrastructure investment and will generate significant construction activity over a multi-year period, more important is the Project's role in supporting the City and the regional economy. The key economic benefits of the Project are:

- Sustainment of current industrial/commercial activity;
- Enabling development for additional industrial/commercial activity;
- Enabling development and densification of housing to support population expansion; and
- Enhancement of the City's reputation and profile as an attractive and sustainable community.

[4] Saskatchewan Provincial Budget, 2012-2013, Keeping the Saskatchewan Advantage, Budget Summary

2.9 Investment Decision

The City must invest in the Project to meet its Permit requirements, address existing deficiencies, and accommodate future growth. The Project is not discretionary, given that the Permit requirements are applied externally by the Saskatchewan Ministry of Environment[5] (MOE), and given that continued operation of the City's wastewater system is a fundamental to the economic, environmental, and public health of the City.

[5] The Government of Saskatchewan has recently created the Saskatchewan Water Security Agency that is responsible for all water issues, including wastewater regulations. For consistency, the regulator is identified as MOE herein.

3 Procurement decision

3.1 Introduction

The City has been actively evaluating alternative delivery models for the Project for many months, with a wide range of models considered and a number of techniques used to surface the differences between the models and home in on the preferred delivery model. Since the spectrum of models considered includes P3 models, the City's P3 Policy has guided the evaluation. This section presents a subset of the qualitative analysis (or "Strategic Analysis", in the parlance of the P3 Policy) that has been undertaken, with the primary objective of identifying the preferred P3 model this is carried forward into the Value for Money analysis in Section 4.

For purposes of this business case, the DBB and DBFOM models are of greatest interest, but due to the comprehensiveness of the City's delivery model assessment, reference to other models appears in the analysis that follows.

3.2 Procurement Objectives and Considerations

Project objectives and desired outcomes have been developed specifically for assessment of delivery models (i.e. procurement objectives). The objectives were developed by consolidating input from several workshops with City staff, including:

- Partnering workshop (June 28-29, 2011);
- Treatment process triple bottom line workshop (February 20-21, 2012);
- Delivery model screening workshop (April 3, 2012);
- Accelerated project delivery workshop (April 30, 2012); and
- Qualitative risk assessment workshop (July 10, 2012).

The procurement objectives map to the City's project goals, strategic priorities, and key constraints (See Sections 2.4 and 2.6).

Table 3 - Procurement Objectives and Desired Outcomes

Category	Procurement Objectives	Desired Outcomes
City Resource Capacity	Minimize demand on existing City resources procurement	• On-time project delivery (meet Permit) • Avoid staffing up for a one-time project
	Minimize design-related demands on City resources	
	Minimize construction-related demands on City resources	
	Solve WWTP O&M resourcing challenges	• Qualified WWTP staff attracted and retained to manage the plant • Reliable infrastructure • Capacity to operate new treatment technologies
Economic	Minimize exposure to construction cost escalation	• Minimize project costs over the long term • Align with Strategic Priorities • Demonstrate innovation in municipal
	Maximize capital cost certainty (i.e. degree of cost certainty)	

Category	Procurement Objectives	Desired Outcomes
	Earliest capital cost certainty (degree of certainty varies per criteria above)	infrastructure • Satisfy the City's rate payers and customers
	Maximize O&M cost certainty over 20+ years	
	Optimize whole-of-life costs (between capital and O&M)	
	Maximize flexibility for future expansions and upgrades or other changes	
	Maximize scope for innovation (i.e. design, construction, operation)	
	Maximize competitive pressure on capital costs	
	Maximize competitive pressure on O&M costs	
	Maximize costs covered by other levels of government	
Alignment With Managerial Goals & Strategy	Ensure a robust and easy to operate WWTP	• Reliable infrastructure
	Avoid deferring major maintenance	• Protect investment and align with Strategic Priorities
	Transfer design risk (rather than embrace it)	• Satisfy the City's rate payers and customers
	Transfer construction risk (rather than embrace it)	
	Transfer O&M risk (rather than embrace it)	
	Maintain labour support for project	• On-time project delivery (meet Permit)
Social	Maintain public support for project	• On-time project delivery (meet Permit) • Satisfy the City's rate payers and customers

These objectives are used in Section 3.9 as criteria to qualitatively evaluate and compare project delivery models.

3.3 Traditional Procurement Approach

The procurement approach for capital projects traditionally used by the City is the Design-Bid-Build (DBB) approach. This model entails the City contracting with a consulting engineer for the development of detailed design drawings and specifications. Then, a small number of separate construction tender packages would be issued and awarded on low-bid basis. The WWTP would be operated and maintained by City staff. Coordination of tenders and construction inspection would be done under contract by the design engineer.

The multiple-tender approach has been selected to reduce exposure to construction cost escalation by getting a portion of the work into the construction market as early as possible.

The City has used this model for hundreds of projects and has the capacity and expertise to fulfil its project role in DBB for several small to mid-size projects annually. However, the WWTP project, due to its size, is expected to overwhelm the capacity of the City's engineering and purchasing resources to the extent that Project delivery could be significantly delayed and/or more routine (but nonetheless important) projects would suffer.

3.4 Alternative Procurement Models Considered

A wide range of delivery models have been considered for the Project. From an original list of 12, the potential models were narrowed down to the following candidates (in addition to DBB):

- Construction Management at Risk (CMAR);
- A hybrid of CMAR for refurbishment of existing WWTP infrastructure and Design-Build (DB) for new infrastructure;
- Design-Build-Operate-Maintain (DBOM); and
- Design-Build-Finance-Operate-Maintain (DBFOM).

All of these models are "alternative delivery" models with respect to traditional design-bid-build.

Table 4 - High Level Allocation of Risk and Responsibility in Delivery Models[6]

Areas of Responsibility / Risk	1 DBB	2 CMAR	5 DB	6 DBOM	7 DBFOM
Ownership	City	City	City	City	City
Standard Setting	City	City	City	City	City
Oversight & Rate Setting	City	City	City	City	City
Design	City	City	Contractor	Contractor	Contractor
Construction	Shared	Shared	Contractor	Contractor	Contractor
Operation	City	City	City	Contractor	Contractor
Maintenance / Renewal	City	City	City	Shared	Contractor
Long Term Financing[7]	City	City	City	City	Shared
Funding (who pays?)	City	City	City	City	City

It was determined during the Multiple Criteria Assessment (described in Section 3.9.3) that DB delivery models cannot be used for the Project in its entirety due to the significant interface risk between the DB contractor and the party operating the WWTP during the upgrade (i.e. the City). This risk is less significant in DBB and CMAR because risk transfer to the contractor is not as significant. The hybrid CMAR+DB model in the bullet point list above was developed in response to this finding.

The last line in the table highlights an important fact: none of the delivery models is an alternative source of funding. In all cases, the City's wastewater utility customers will support the cost of building and operating the project through the utility rates. The DBFOM model is sometimes misconstrued as a source of funding due to the private financing; however, this financing is paid back in full over time by the utility rate payers.

Each model is briefly described below.

Construction Manager at Risk (CMAR)

This model would involve the City appointing a construction manager that would work with the owner's engineer and the City in design advancement and at some point in the process would bid either a guaranteed maximum price or target cost for the construction. The Construction Manager may self-delivery a portion of the work, and may be required by the City to tender a portion of the work to ensure that a portion of the construction is competitively procured. This model is different from DBB in the following key ways:

[6] Delivery model numbering is as shown to maintain consistency with other documentation

[7] It is expected in DBFOM that the contractor will provide financing for a portion of the project and the City will be responsible for the remainder.

- It delegates considerable administrative responsibility to the construction manager and thereby is less demanding on City resources;
- It allows for a more integrated design-construction approach (although not as integrated as the DB-style models) which may lead to lower capital costs and/or smoother construction progress;
- It achieves some degree of capital cost-certainty for the City (although not to the same extent as the DB-style models.

As with DBB, the City would pay the capital costs as construction proceeds, and would have paid out 100% of the capital costs when construction is complete.

Fixed Price Design-Build (DB)

This model involves selecting a design-builder based on a date and cost-certain price for construction of the Project. The competition would be based on a performance specification developed by the City and the owner's engineer. The model is different form DBB in the following key ways:

- The City is responsible for developing a performance specification instead of detailed design and tender documents; and
- The competitive procurement process creates a design competition among the bidders for the best overall solution (with the competition primarily limited to capital cost).

The capital costs may be paid during construction as progress is made, on significant milestone achievements, or at substantial completion. The latter has been assumed for purposes of this business case as it provides a strong incentive for the DB contractor to complete construction and put the infrastructure into service.

Design-Build-Operate-Maintain (DBOM)

Under this model a contractor with bundled responsibility to design, build and then operate and maintain the Project for a period of up to 30 years would be selected based primarily on the net present value of the total capital and O&M cost that is bid. They key differences from DBB are as follows:

- The City is responsible for developing a performance specification instead of detailed design and tender documents;
- The procurement amounts to a design competition not just on design and capital costs, but on long term operations and maintenance costs as well; and
- The model requires that the City transfer existing WWTP staff to the contractor.

The capital costs may be paid during construction as progress is made, on significant milestone achievements, or at substantial completion. The latter has been assumed for purposes of this business case as it provides a strong incentive for the DBOM contractor to complete construction and put the infrastructure into service.

Design-Build-Finance-Operate-Maintain (DBFOM)

Under this model a contractor with bundled responsibility to design, build, partially finance and then operate and maintain the Project for a period of up to 30 years would be selected based primarily on the net present value of the total capital and O&M cost that is bid. This model is the same as DBOM with the exception of the provision of private financing.

The portion of the capital that is not financed by the contractor is paid to the contractor by the City either on a milestone basis during construction or upon substantial completion. The latter has been assumed for purposes of this business case as it provides a strong incentive for the DBFOM contractor to complete construction and put the infrastructure into service.

3.5 Relative Quality of Long Term Performance Security in DBOM and DBFOM

In a DBFOM, the long term performance of the contractor is secured by the direct investment in the Project by the contractor. The security for the City arises from the ability, using the payment mechanism, to hold back payments for non-performance, including if it becomes apparent that the handback conditions are not likely to be met by the contractor. If the City needed to utilize its security, it would not need to actively pursue the contractor or seek funds from a third party, it would withhold payments as permitted by the contractual payment mechanism. This would either spur the contractor to perform (including prodding from its equity and debt investors) or would leave the City with the funds to self-perform[8].

In a DBOM, the long term performance of the contractor may be secured either by a letter of credit or parent company guarantees from one or more of the contractor parent companies. If the contractor provided a letter of credit, the City would need to seek the funds from the guaranteeing bank[9]. If the contractor provided a parent company guarantee, the City would need to pursue the parent company for performance and/or funds, and if the company did not respond appropriately, sue the parent company.

The relative quality of the security in a DBFOM is higher than in a DBOM because the City is in control of the funds needed to rectify non-performance. In a DBOM, it is not in control of the funds, and has to make a claim to third parties to rectify non-performance. A related concern with parent company guarantees is the ability to fairly compare guarantees from different companies. In a DBFOM, there is a commitment to fund the project investment bound into the proposal. The ability of the contractor and its debt and equity providers to fund the investment can be verified during the procurement process and compared between bidders if needed. The availability of the security can be determined objectively.

In a DBOM using parent company guarantees as security there is no way to verify that the parent company guarantee will be acted upon appropriately by the parent or its successor companies at the time it may be needed, which could be 20 or more years hence. Therefore evaluating the backstop quality of a parent company guarantee at bid time requires either speculation as to the future financial and technical state of the parent company, or requires that the guarantee simply to be taken at face value based on the reputation of the company and perhaps, if available and reliable, its record of action on its parent guarantees. This would be a subjective appraisal.

On a related note, if there are any problems with the funding of the contractor's investment in a DBFOM (and therefore with the availability of the security) it will be discovered early, during the financial close period before design/construction begin.

This discussion should not be read as a dismissal of the value of a parent company guarantee or the viability of DBOMs, but rather a contrasting of the quality of security provided by a guarantee as compared to a direct investment in a project as in a DBFOM. If there is a choice between the two delivery models for a project, this difference is an important consideration.

3.6 Screening for P3 Suitability

The Project is screened against two sets of high-level P3 suitability criteria below. Screening against City criteria was conducted in a workshop with City staff. Screening against PPP Canada criteria (as

[8] In such a situation, it is important that that amount of private financing be large enough that withholding of payments would provide sufficient funds to rectify any handback non-performance. This is one consideration in determining the upper limit of capital contribution by the owner that may be made during construction in a DBFOM. The other consideration is that there needs to be enough private financing in the project to interest the market of debt and equity providers.

[9] It is unlikely that a letter of credit of sufficient size to provide the necessary security would be an attractive alternative for the market, and therefore parent company guarantees are the most likely approach.

presented in the P3 Business Case Development Guide) is based on adaptation of the City criteria screening results.

Table 5 - High-Level Screening Analysis for P3 Suitability (City's P3 Policy Criteria)

Category	City Criterion	Assessment	Suitable for P3?
Demand	Are the long term operation or service needs and performance requirements relatively stable and/or predictable?	Yes	Yes
Duration and Technological Change	Is the capital asset of an enduring, long-lived nature and is the service life of the asset at least 20 years?	Yes	Yes
	Is there a significant long term maintenance, operation, or service need associated with the capital project	Yes	Yes
	Are the capital asset and service needs sustainable and the risk of technological change minimal over the entire service life of the P3	Yes	Yes
Innovation	Is there scope for innovation in the design of the solution and/or the provision of operation, maintenance, and services, which may lead to cost efficiencies?	Yes	Yes
Legal Barriers	Is the proposed P3 approach or the provision of the service free of any potential legal conflict with legislative or regulatory prohibitions or substantial restrictions (that cannot be changed in the short term)?	Yes	Yes
Market	Are there likely to be at least 3 bidders for the project if it is procured as a P3?	Yes	Yes
	Are there precedent projects (examples of similar projects) in other jurisdictions?	Yes	Yes
	Has the City received unsolicited proposals for P3-style delivery of the project, or similar projects?	No	n/a
	Does the private sector have the expertise and capacity to deliver on the performance specification?	Yes	Yes
Procurement	Is there enough time available for a P3 procurement process?	Yes but little slack	Potentially
Availability Payments, Revenue Potential, Affordability	Can payment be tied to measured performance?	Yes	Yes
	Is there a potential revenue opportunity for the private sector partner, which can be also tied to performance?	Yes	Yes
	Does the City have the financial capacity to undertake the project?	Yes	Yes
Project Risk	Are there risks associated with traditional procurement that might be better managed by a private partner?	Yes	Yes
Project Size	Is the estimated capital cost significant enough to attract the market?	Yes	Yes
	Can the project be bundled with one or more other similar projects to achieve economies of scale and a larger project size more suitable for P3?	Not necessary	Yes
Specifications	Can the capital asset and related services be defined in a performance or output specification?	Yes	Yes
Land	Is the land for the project being provided by the City?	Yes	Yes
Project Stage	Is the project new build or greenfield?	No – brownfield.	Potentially
Integration	Is the project relatively independent of other City projects, infrastructure, or control systems?	Yes, except for McCarthy Boulevard Pump Station	Yes
Human Resources	Does the project, if delivered by a private partner, obviate any current City staff positions?	Yes. But P3 can be designed to protect staff.	Yes

Table 6 - High-Level Screening Analysis for P3 Suitability (PPP Canada Criteria)

Category	PPP Canada Criterion	Assessment	Suitable for P3?
Project Size	Is the project's size sufficient to support the P3 costs?	+/- $200M	Yes
Contract Bundling	Is there potential to bundle a number of contracts into a single long term contract?	No	Yes
Nature of the Project	Is the project a new build or refurbishment?	Refurbishment	Potentially
Project integration	Is the project separated or integrated with existing assets or networks?	Integrated, at downstream end of collection system	Yes
Consistency	Will the performance requirements and use of the project be relatively stable over time?	Yes	Yes
Performance measurement	Can service performance be easily described and measured?	Yes	Yes
Duration	Is the service life of the capital asset at least 20 years?	Yes	Yes
	Is there a long term maintenance, operation, or service need associated with the capital project?	Yes	Yes
Innovation	Is there scope for innovation in the design of the solution and/or the provision of operation, maintenance, and services?	Yes	Yes
Legal Barriers	Are there any legislative or regulatory prohibitions to a P3 approach for the project?	No	Yes
Market	Are there likely to be a sufficient number of bidders for the project if it is procured as a P3?	Yes	Yes
	Are there precedent projects in other jurisdictions?	Yes	Yes
	Does the private sector have the expertise to deliver on the performance specification?	Yes	Yes
Project risk	Are there risks associated with the project that might be better managed by a private partner?	Yes	Yes
Land	Does the sponsor have a project site?	Yes	Yes

The screening suggests that the Project is suitable for P3 delivery models and that there is merit in examining P3 delivery further in the spectrum of delivery models considered.

3.7 P3 Precedent Transaction Review and Jurisdictional Scan

3.7.1 Municipal P3

While most of the P3 activity as guided by the Provincial agencies in BC, Ontario, Quebec, and Alberta in recent years has been on Provincial projects, Canadian municipalities do have experience with P3 procurements. There are approximately 10 operational Canadian municipal DBFM/DBFOMs plus many other examples from other areas of the delivery model spectrum. The two recent Winnipeg transportation P3 projects (Disraeli Bridges and Chief Peguis Trail) are notable, in that the project documentation is based on an adapted provincial (Alberta) project agreement and Chief Peguis Trail received PPP Canada support.

3.7.2 Precedent Projects

The DB and DBOM models are quite commonly used in North America for municipal water and wastewater projects. Many more examples than those below may be found.

Table 7 – Examples of Operating DBOM Projects

Project	Approx. Capital Cost ($millions)	Owner
New Wastewater Treatment Plant	14	Town of Jasper, AB
Wastewater Treatment Plant Upgrade	11	Town of Okotoks, AB
New Water Treatment Plant	4	Town of Port Hardy, BC
New Wastewater System	23	Town of Sooke, BC
New Wastewater Treatment Plant	16	Lac La Biche County, AB
New Water Treatment Plant	81	City of Seattle (Cedar), WA
New Water Treatment Plant	65	City of Seattle (Tolt), WA
Wastewater Plant Upgrade and New Combined Sewer Overflow Facility	24	City of Holyoke, MA
New Wastewater Treatment Plant	20	City of Cle Elum, WA
New Wastewater Treatment Plant	43	City of Filmore, CA
New Water Treatment Plant	> 100	Lake Pleasant, AZ
New Wastewater Treatment Plant (Awarded, not yet operational)	172	Pima County, AZ
New Wastewater Treatment Plant	170	Spokane County, WA
New Water Treatment Plant	160	San Diego County (Twin Oaks), CA

The DBFOM model has not been used as extensively as the DBOM model. The table below presents all known Canadian examples, and recent research has not revealed any U.S. examples.

Table 8 - Canadian Water Sector DBFOM Projects

Project	Approx. Capital Cost ($millions)	Owner
New Water Treatment Plant	23	City of Moncton, NB
New Wastewater Treatment Plant	16	Province of BC (Britannia)
Wastewater Treatment Plant Upgrade[10]	15	Town of Taber, AB
Cartier (New) Water System	10	Manitoba Water Services Board
Wastewater Treatment Plant	10	Dysart, ON
New Water and Wastewater Systems[11]	30	Cavan-Millbrook, ON

[10] We understand that the privately financed amount in this project is quite a small proportion of the overall capital cost.

[11] This project was originally awarded as a DBFOM. The DBFOM approach was later abandoned and the project was procured conventionally.

Project	Approx. Capital Cost ($millions)	Owner
Evan Thomas Water / Wastewater Systems (Awarded, not yet operational)	40	Province of Alberta
New Biosolids Management Facility (Awarded, not yet operational)	45	City of Greater Sudbury, ON

The latter two projects were awarded in 2012 and are being supported by the P3 Canada Fund. A number of Canadian municipalities are considering DBFM/DBFOM models in the sector, notably the Capital Regional District (Victoria, BC) for a $200M Biosolids Energy Centre project. The City of Abbotsford, BC decided to pursue a DBFOM for a $200M water supply project in 2011, however the electorate voted not to proceed.

Although there are few examples of DBFOMs in the water/wastewater sector, the large number of successful DBFOMs in other sectors (such as transportation and accommodation) and the strong track record with water/wastewater DBOM suggest that there is no reason why the DBFOM model cannot be used successfully in the water/wastewater sector. It is expected that as municipal interest in the P3 model increases, so will the use of the DBFOM model, since the vast majority of water and wastewater infrastructure in Canada is municipally owned.

3.8 Market Sounding

Market sounding has been conducted in two phases for the Project. Phase 1 explored the general interest of the market in a wide range of models and the results were used primarily to eliminate the Alliance model from further consideration. Knowing that all models were generally attractive to the market, Phase 2 explored key issues related to DBOM and DBFOM, with a focus on the latter. Appendix C contains the market sounding guide prepared for Phase 2.

There is a well-developed and highly specialized market of firms, both Canadian and international, that undertake projects in the municipal water/wastewater sectors. The delivery models employed by these firms include DBB, O&M, DB, DBOM, occasional DBFOM, and regulated utility (private ownership) models. These firms were the primary focus of the Phase 2 market sounding, because the views of P3 developers / equity investors outside of the water sector are well understood and do not vary considerably from sector to sector, although a small number of such firms was included for completeness. Table 9 summarizes the firms interviewed. The firms are not named because they were assured confidentiality in exchange for frank feedback.

Table 9 - Market Sounding Participants' Project Roles and Project Interest

	Typical / Desired DBOM/DBFOM Roles					Project Interest	
	Design	Build	Operate	Equity	Bid Lead	DBOM	DBFOM
Firm 1*	✓					✓✓	✓✓
Firm 2				✓	✓		✓✓
Firm 3*	✓		✓	✓	✓	✓✓	✓✓
Firm 4*			✓	✓	✓		✓✓
Firm 5*	✓		✓				
Firm 6*			✓	✓	✓	✓	✓✓
Firm 7				✓	✓		✓✓
Firm 8				✓	✓		✓✓
Firm 9	✓	✓	✓	✓	✓	✓✓	✓✓
Firm 10*	✓		✓	✓	✓	✓	✓✓
Firm 11*	✓		✓		✓	✓✓	✓✓
Firm 12	✓	✓		✓	✓	✓✓	✓✓
*water / wastewater service specialty firms	✓ primary interest, likely role of firm in project					✓✓ strong interest ✓ some interest	

Based on the interviews, a number of key findings have been identified based on aggregating the common views of the participants, and noting where opinions diverged. Other key findings of the market sounding are taken into consideration throughout this document, with reference to "the market of service providers" or "the market".

Table 10 - Key Findings of Market Sounding

Topics	Key findings
Interest in Project	It is evident that there is considerable market interest in the Project as either a DBOM or DBFOM. Each company has a different outlook on the private financing component depending on their corporate focus – pure financial investors are only interested in the DBFOM model. All but one of the companies interviewed expressed their interest in the Project and would seriously consider an opportunity to participate in a procurement process for a DBOM or DBFOM in 2013 as indicated in Table 9.
Innovation	There is significant potential for innovation, given the range of applicable wastewater treatment processes, especially in the area of nutrient removal. To maximize innovation, the City should not be overly prescriptive with respect to the treatment process. However, if there are treatment processes that the City does not wish to consider, they should be identified at the outset of the procurement so as not to waste time and effort. There is also innovation potential with respect to the extent and manner in which the existing WWTP infrastructure is reused.
Risk Transfer	A standard allocation of risk according to contemporary Canadian P3 practice is generally acceptable and appropriate. The key project-specific risks of concern to the market sounding participants are latent defects in the existing WWTP infrastructure, change in environmental regulation, and permit compliance risk during construction. These are discussed separately below.
Risk: Latent Defects in Existing Infrastructure	This is the key Project risk of concern to the interviewees. A sensible sharing of this risk between the City and the Contractor is unanimously seen by the interviewees as needed to avoid high risk premiums in bid prices that the City may never realize any value from. A comprehensive condition assessment is also unanimously seen as critical information for proponents, as is proponent access to the WWTP during the RFP period for inspection and assessment. A number of approaches to sharing latent defect risk were discussed with interviewees. In general, a risk share structured around a condition assessment that proponents can rely on, and specified on an asset-by-asset basis (rather than a blanket basis), is favoured. There was also general acceptance of an initial multi-year "discovery period" during which the City retains latent defect risk, after which the risk is transferred to the

Topics	Key findings
	Contractor. A specified liability cap (dollar amount) for latent defect risk is another approach that would be accepted by proponents: this has the advantage of being simpler, but in the end it amounts to the City almost fully retaining the risk. One interviewee suggested that this risk, depending on the existing condition and age of the assets, and the risk-sharing approach decided upon, may drive them towards favouring an all-new WWTP which does not utilize the existing infrastructure at all. Based on the feedback received on this topic, it is clear that the approach that the City takes to share this risk could affect the attractiveness of the Project to the market, and/or the value received. Determining the most appropriate approach likely requires a comprehensive condition assessment that will allow an asset-by-asset assessment of the risk and an asset-by-asset approach to risk sharing.
Risk: Changes in Environmental Regulation	A number of interviewees noted that they would expect protection from changes in environmental regulation that stem not just from alterations of the City's Permit to Operate a Sewage Works, but broader environmental regulation that may have influence on operation and maintenance of wastewater treatment plants in general. An example of this non-permit-specific change in regulation are the broad monitoring and reporting regulations introduced in Ontario after the Walkerton drinking water contamination incident.
Risk: Permit Compliance During Construction	A number of interviewees noted that while they were willing and able (and would in fact need to) to take over WWTP operations during the design and construction period, the degree to which permit compliance risk during this period can be transferred may be limited. The City would have to retain any such risk associated with the condition of the assets when transferred, influent quality variations, the design of the existing plant, etc., during this period. It is not until the upgrade and expansion is complete that the Contractor would be able to assume all compliance risk.
Procurement Schedule	The preliminary schedule provided in the market sounding guide, which has a seven month RFP period, was generally seen to be appropriate with some interviewees seeing the RFP period as a bit too long. The concern with a long RFP period is that it can drive up bid costs. There was a suggestion to add a very early technical submission addressing the proponents' selected wastewater treatment process to get sign-off that the City will accept the process, although there was disagreement as to the ability of proponents to put forth a proposed process any sooner than midway through the RFP period.
Assuming City's Labour Force	The need to take on existing City WWTP and laboratory staff is <u>not</u> a concern to the interviewees. Most O&M providers have experience with such transactions and report no major problems. P3 developers have confidence in the ability of O&M providers to do so. The skills and familiarity of City staff with the WWTP are generally seen as an asset. A selection process whereby the Contractor does not necessarily have to take all current staff would help proponents mitigate HR risk and could improve pricing. (In this case the City would have to offer non-selected staff employment elsewhere). Several interviewees noted that standard employment eligibility screening may be needed before they can take on employees, e.g. trade ticket currency, criminal record checks, and drug testing. There is near-consensus that a two-month period should be sufficient to undertake the staff transition. On some P3 projects, the financial close period has been used to make the transition, raising the possibility that the Contractor could take over WWTP O&M immediately after financial close. However, some proponents may be reluctant to expend the time and effort prior to financial close.
Assuming Operations During Design & Construction Period	All interviewees understand the need for this and it is not a barrier. See the comments above re: compliance risk during construction and assuming labour force.

Topics	Key findings
DBFOM Financing	The stated minimum amount of private financing required to attract the market to a DBFOM varies by interviewee. Although $50 million was cited several times as an absolute minimum, there is some consensus that for this project the $100 million minimum rule of thumb for a standard 90:10 debt:equity financing applies. A private financing opportunity much less than $100 million can be expected to reduce the field of interested proponents somewhat. The interviewees generally agreed that the Project as a DBFOM could be expected to attract financing similar in price to that of other recent P3s that have closed in the market, with long term debt spreads of 185 to 230 bps likely. One P3 developer appeared to have greater technology risk aversion (or lack of familiarity with water/wastewater) and suggested that spreads could range between 240 to 260 bps. The City of Regina's strong credit rating was noted as a positive factor. Short term debt spreads of approximately 140 bps are expected. There is consensus that debt spreads can readily be held for 90 days under current market conditions and longer holds are possible in the view of some interviewees. And, while spread reset mechanisms are generally favoured by P3 developers, there is some agreement that the complexity of these mechanisms may be inappropriate for a municipal project. There was strong support for a quick selection of Preferred Proponent and limiting the financial close period to 60 days. It was noted that delayed award can impair not only debt spread, but construction prices. Several interviewees noted that lower than typical leverage may be required by lenders if too much latent defect risk is transferred to the Contractor. One interviewee noted that despite the City's credit rating, the City's position could change over time and that they would take comfort if the Province would guarantee the payment of any lump sum that may be payable to the Contractor in the event of early termination.
O&M Term	Given a range of 20 to 30 years, interviewees generally would accept any term in the range with an overall preference for longer terms. This applies both to O&M providers, and to financing providers. There was consensus that 20 years is too short if the City wishes to transfer a significant level of lifecycle risk.

In summary, the market sounding revealed that there is strong interest in the Project if procured as a traditional DBB, a DBOM, or a DBFOM. Market interest does not appear to be a limiting factor for selection of a procurement model.

3.9 Qualitative Evaluation of Delivery models

The delivery models were assessed qualitatively through three separate efforts:

- a delivery model screening workshop;
- a qualitative risk assessment; and
- a multiple-criteria assessment (MCA).

3.9.1 Delivery Model Screening Workshop

A delivery model screening workshop was conducted in April 2012. This workshop was the first consideration of P3 models for the Project. The models considered were as follows:

Table 11 - Delivery Models Considered at Delivery Model Screening Workshop

Model Class	Delivery Model
"Traditional"	Design Bid Build (DBB)
"Other"	Construction Management
	Construction Management At Risk (CMAR)
	Progressive Design Build (PDB)
	Fixed Price Design Build (DB)
"P3"	Design Build Operate Maintain (DBOM)
	Design Build Finance Operate Maintain (DBFOM)
"Private"	Divestiture / Privatization

The screening analysis documented in Table 5 was conducted at this workshop. In addition, the models were discussed with respect to their ability to meet over 20 different project objectives/constraints, to develop a preliminary shortlist of delivery models. Following is the summary taken from the workshop memorandum[12].

> *The workshop discussion narrowed down the full spectrum of delivery models to three:*
>
> - *Construction Management;*
> - *Construction Management At Risk; and*
> - *Design-Build-Finance-Operate-Maintain,*
>
> *all of which are alternative service delivery approaches.*
>
> *The selection between the two construction management approaches hinges largely on the extent to which the City favours construction cost certainty. The construction management models do not address the problems that the City has with attracting and retaining O&M staff.*
>
> *If the DBFOM approach is to be further considered, since it is a P3 approach, the P3 Policy requires that a strategic assessment and (likely) a value-for-money assessment be done, both of which are also required by PPP Canada if the Project is to be considered for a federal government contribution.*

This workshop and its findings led to the City making its application to PPP Canada for P3 Canada Fund support. DBOM was not shortlisted in the workshop due to the poor quality of long term security, relative to DBFOM, as described earlier in Section 3.5[13].

3.9.2 Qualitative Risk Assessment

A qualitative risk workshop was conducted in July 2012 to:

- Identify key project risks that may distinguish the delivery models under consideration;
- Stimulate discussion of the relative merits of the delivery models by the City's project team;
- Assess the probability and impacts of the risks, qualitatively, for each delivery model; and
- Prepare the project team for a future quantitative risk assessment to be done as part of the Value for Money Assessment.

[12] *WWTP Upgrade Project – Summary of Delivery Model Workshop*, May 2, 2012, Deloitte

[13] However, DBOM was carried forward into the Strategic Assessment so that a more thorough consideration of the model could be made.

Seven delivery models were assessed, including DBB and DBFOM. A register of project risks (approximately 50 risks) was assembled based on risk registers from past project assessments and modified to reflect Project and City-specific characteristics and issues. The definition of the risks evolved during the workshop through discussion. One additional risk was identified and added during the workshop. Several of the risks, upon discussion, were identified as not relevant to the project and/or to the distinguishing of delivery models as they were similar to other risks, or as very minor concerns, and as such were not assessed during the workshop. 27 risks were fully assessed by ascribing qualitative probabilities and impacts. Appendix D contains more information on the qualitative risk assessment.

Qualitative Risk Assessment Results

The figure below provides a graphical overview of the risk assessment results using a red-yellow-green colour scale where red represents relatively high risk and green represents relatively low risk. The lowest possible risk score is 1 (probability=rare, impact=negligible), and the highest is 25 (probability=expected, impact=extreme).

Figure 2 - Overall Qualitative Risk Assessment Results[14]

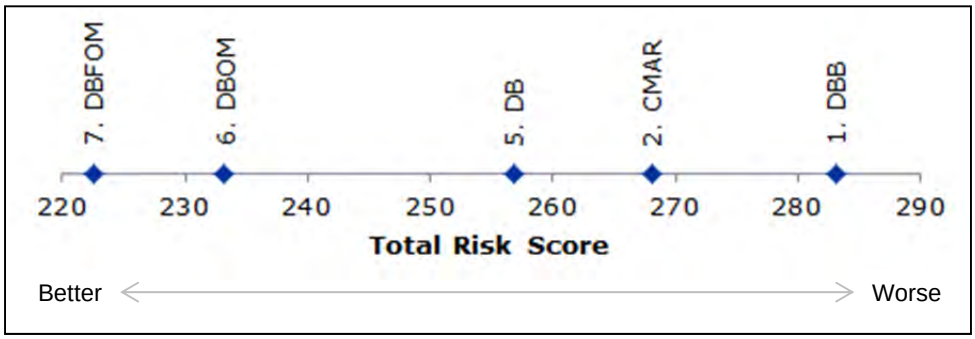
Phase	Risk	1 - DBB	2 - CMAR	5 - DB	6 - DBOM	7 - DBFOM
Planning and Procurement	Approval by Council	6	6	8	14	17
	Market capacity	9	9	9	9	9
	Resource capacity	18	13	9	14	17
	Financial markets	6	6	10	10	12
	Unclear project documentation	9	9	12	15	15
	Wastewater flow and quality projections	5	5	5	8	8
Design	Wastewater treatment process selection	8	8	12	11	8
	Facility design risk	12	10	9	8	8
	Design exceeds requirements	10	11	5	10	9
	Scope changes during design - scope creep	13	13	8	8	7
Construction	Delay by Owner	10	8	7	7	7
	Delay	14	8	7	4	3
	Construction cost	10	9	6	4	3
	Scope changes during construction	13	13	8	4	4
	Contractor default	10	10	10	10	10
	Construction / Operation Coordiation	16	16	17	9	10
Operations & Maintenance	Latent defects in new infrastructure	9	9	9	8	6
	Staffing	16	16	16	6	6
	Equipment failure	9	9	11	7	4
	Change in regulation	11	11	11	11	11
	Operating costs (other than power and chemicals)	8	8	8	5	5
	Power and Chemical Productivity	9	9	9	6	5
	Effluent quality	7	7	7	6	6
	Sludge quality	5	5	5	6	6
	Early expansion	10	10	10	10	10
	Major maintenance/rehabilitation	17	17	17	9	5
	Unknown condition of existing assets (latent defects)	14	14	14	14	14
TOTAL		**283**	**268**	**257**	**233**	**223**

The results illustrate that the greatest risk with the P3 models was perceived to be in the planning and procurement stages, primarily due to unfamiliarity with the model that would have to be overcome (by Council and by staff). In terms of the actual project delivery, these models are viewed to present lower risk due to the transfer of responsibility to a Contractor. Some of the risk in the planning and procurement stage reflected in the table above will be mitigated or eliminated at the point in time where the delivery model is finally selected.

[14] On this figure, the colour scale is applied across the entire matrix, i.e. each colour represents the same numeric risk rating across all of the delivery models

The total unweighted risk score is calculated for each delivery model. The risk score reflects the risk from an overall project perspective, and does not distinguish between a risk that is retained by the City versus transferred to contractors. The total risk scores provide a basis for comparing the overall risk profiles of the delivery models. The higher the total risk score, the higher the overall project risk profile. Plotted on a continuum, the results are as follows.

Figure 3 - Results of Qualitative Risk Assessment - Total Risk Scores



Based on this, it may be interpreted that DBB presents the highest overall project risk, and DBFOM the lowest. Relative weighting of the risks could change this conclusion but sensitivity conducted on the results (giving significantly more weight to risks that were assessed high for DBOM and DBFOM) did not change the relative order of the models, indicating that the order of the models shown above is a robust result.

The relative risk profiles of the different delivery models inform criteria 17,18, and 19 in the multiple criteria assessment.

3.9.3 Multiple Criteria Assessment

The MCA is a qualitative assessment of delivery models based on a number of weighted criteria that are scored relative to a base case. The base case delivery model for the MCA is the Design-Bid-Build using multiple tenders. The methodology used is the same as the "Triple Bottom Line (TBL)" methodology established for the assessment of wastewater treatment processes for the Project as documented in the Preliminary Concepts Report. Appendix E contains greater detail on the MCA assessment.

Assessment criteria were developed based on previous documentation, analysis, workshop sessions, and discussions with City staff. Twenty-one criteria were organized into four criteria categories as follows.

- City Resource Capacity 25% of weighting
- Economic 40% of weighting
- Alignment with Managerial Goals and Strategy 25% of weighting
- Social 10% of weighting

The category weightings were approved by staff and to the extent that the categories are consistent with the treatment process TBL categories, the weightings are the same (i.e. Economic criteria are 40% of the weighting, and Alignment with Managerial Goals and Strategy are 25% of the weighting).

The 21 criteria, organized into the four categories, are presented below. As with the TBL analysis, each criterion is assigned a relative weight within the category (Low, Medium, or High) which correspond to relative weightings within the category of 1, 2, or 4. The importance ratings were developed in consultation with City staff.

Table 12 - MCA Criteria (Procurement Criteria)

Category	No.[15]	Criterion	Criterion Relative Weight Within Category ("Importance")
City Resource Capacity	14	Minimize demand on existing City resources procurement	High
	24	Minimize design-related demands on City resources	High
	25	Minimize construction-related demands on City resources	High
	15	Solve WWTP O&M resourcing challenges	High
25.0%			
Economic	2	Minimize exposure to construction cost escalation	High
	3	Maximize capital cost certainty (i.e. degree of cost certainty)	High
	4	Earliest capital cost certainty (degree of certainty varies per criteria 3)	Low
	5	Maximize O&M cost certainty over 20+ years	Low
	6	Optimize whole-of-life costs (between capital and O&M)	Low
	23	Maximize flexibility for future expansions and upgrades or other changes	Low
	8	Maximize scope for innovation (i.e. design, construction, operation)	Med
	9	Maximize competitive pressure on capital costs	High
	10	Maximize competitive pressure on O&M costs	High
	11	Maximize costs covered by other levels of government	High
40.0%			
Alignment With Managerial Goals & Strategy	12	Ensure a robust and easy to operate WWTP	High
	13	Avoid deferring major maintenance	Med
	17	Transfer design risk (rather than embrace it)	Med
	18	Transfer construction risk (rather than embrace it)	Med
	19	Transfer O&M risk (rather than embrace it)	Med
	22	Maintain labour support for project	High
25.0%			
Social	21	Maintain public support for project	High
10.0%			

Each criterion was scored against the base case by the Advisory Team (i.e. AECOM and Deloitte[16]) in a workshop setting to arrive at consensus on the relative merits of each delivery model relative to the base case DBB. Consistent with the TBL, scores were assigned on a scale of +4 to -4 with positive scores being progressively better than the base case, and negative scores being progressively worse than the base case. A score of zero is assigned if the delivery model being assessed is the same as (i.e. no worse and no better) than the base case DBB.

MCA Results

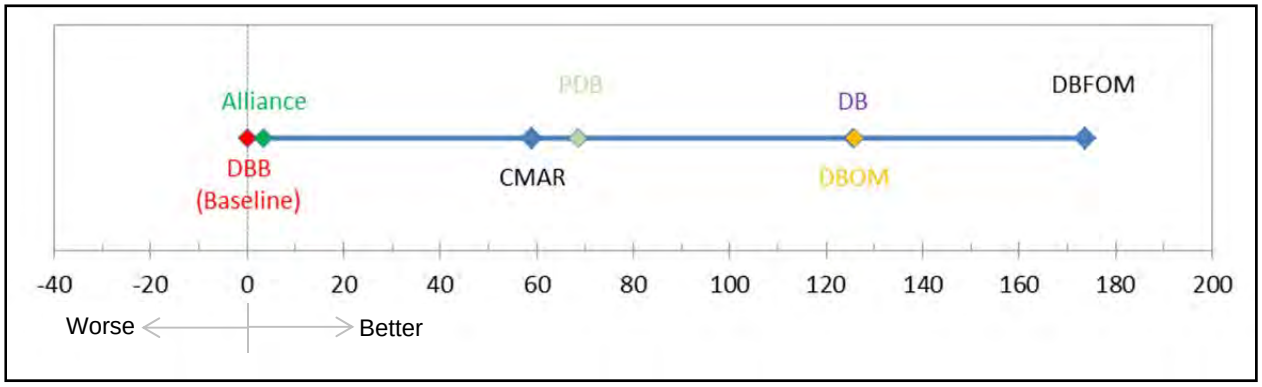
The methodology calculates an overall score for each delivery model relative to the base case DBB delivery model. Positive results indicate that a delivery model better meets the criteria than the base case, and negative results indicate that a delivery model is not as good as the base case at meeting the

[15] The criterion numbers allow reference to previous versions of the matrix and therefore are not consecutive

[16] The City requested that the Advisory Team do the scoring based on its understanding of the delivery models and the Project, and provide the results for review. The City provided the criteria weightings and importance weightings on a blind basis.

criteria. The numeric scores are relative only and have no absolute meaning. The results are presented graphically as follows.

Figure 4 – Total Score MCA Results[17]



These results indicate that all of the alternative models are believed to address the criteria better than DBB, with DBFOM having the greatest benefit. The general scoring outcome is that the more that a delivery model allows the transfer of project responsibility and risk to a contractor, the better it meets the City's criteria.

It is also possible to examine the relative scores within each of the four criteria categories. The graphical results are shown in Appendix E. The key findings are that in the Resource Capacity and Economic categories, the general order of the models does not change from the above. In the Alignment with Managerial Goals and Objectives category, there is strong clustering of DBB/CMAR/DB, with DBOM and DBFOM scoring progressively better. And, in the Social category, DBOM and DBFOM score negatively (due to potential public concern with the transfer of operational responsibility to a contractor, criteria 21), while all other models are the same as DBB. The concern is not the transfer itself, but rather the potential reduction in public support for the Project if delivered as a P3.

The sensitivity to the overall results of different category weightings was tested, with graphical results provided in Appendix E. Even with significant changes in the category weightings, the overall order of the models does not change from the order baseline shown above. The sensitivity analysis demonstrates the robustness of the MCA findings.

3.10 Recommended P3 Delivery model for Quantitative Analysis

Following is a distillation of the key findings of the qualitative analysis:

1. Screening against typical P3-suitability criteria confirmed that the Project could be delivered effectively using P3 delivery models.
2. A qualitative risk assessment determined that traditional DBB presents the highest project risk, and DBFOM the lowest project risk.
3. A multiple criteria analysis determined that DBFOM is superior to all other models in meeting the City's 21 procurement criteria.

Based on the qualitative assessment, DBFOM is clearly the preferred model. The P3 model to be compared to traditional DBB in the Value for Money assessment is therefore DBFOM.

[17] The Alliance and PDB models appear in the Figure as they were included in the MCA although they are not discussed elsewhere in this document. As noted in Section 3.4, the DB model is not applicable to the Project in its entirety. The hybrid CMAR+DB model would presumably score somewhere between the separate CMAR and DB models shown in the Figure.

4 Preliminary value for money analysis

4.1 Introduction and Value for Money Methodology

With the DBFOM delivery model identified as the preferred model based on a qualitative assessment, this section documents the analysis conducted to determine if DBFOM is expected to deliver "value for money" (VFM) through a quantitative assessment. The findings of the qualitative and quantitative analysis are then brought together in Section 5.

The City's P3 Policy states that a P3 delivery model will only be considered when, among other things, "value and affordability is demonstrated". Value is further defined as "The selected P3 delivery model must provide better value over the project lifecycle than traditional delivery methods, considering risk transfer, transaction costs, and opportunities for economic growth, and community issues". The City recently conducted a Value for Money analysis for its stadium project, using a project-specific risk matrix and the City's cost of capital as the discount rate. The same approach is used herein, and the approach is aligned with that described by PPP Canada in its *P3 Canada Fund Round Four Kick-Off Meeting Handbook.*

Broadly defined, VFM compares the risk-adjusted cost estimate for a P3 delivery model to the risk-adjusted cost estimate for the traditional delivery model. If the P3 model has a lower net present cost, then it offers VFM. The analysis outlined in this section consists of the following steps.

1. Identify the schedules that drive the timing of costs for each delivery model.
2. Establish cost estimates for each delivery model.
3. Estimate (quantify) the risks, taking into account the differences in risk probability and impacts that result from different risk allocations in the DBB and DBFOM delivery models.
4. Using cash flow models that encompass the planning, design, construction, and 27 years of post-construction operation of the facility, calculate the net present value (NPV) of the risk-adjusted cost estimate for DBB and DBFOM.
5. Compare the NPV estimates to determine if DBFOM is likely to offer VFM, and optimize the Project structure where possible to establish and/or enhance VFM.
6. Test the robustness of the VFM estimate through a sensitivity analysis.

The VFM analysis is a relative analysis, and therefore it is important that differences in costs between DBB and DBFOM be estimated, but less important that all project costs be accounted for. Accounting for all costs is more important for budgeting and affordability analysis. It must also be understood that VFM relies heavily on a significant number of estimates of cost, timing, and risk and is therefore in itself an estimate.

The VFM estimate at this stage of the Project evolution is referred to as "preliminary" because it is the first estimate produced and subject to updating in the future if a P3 procurement is embarked upon.

Common used VFM terminology includes Public Sector Comparator (PSC), which in this case is the DBB delivery model, and Shadow Bid (which in this case is the DBFOM model).

4.2 Term of Analysis

As a DBFOM, the Project involves the Contractor taking over operations and maintenance of the WWTP soon after financial close, and hence there is an Interim Operating Period (prior to completion of the expansion/upgrade) and a Long Term Operation Period (commencing at substantial completion). Different terms, conditions, and risk allocation will apply to these two periods.

The typical post-construction operating term (equivalent to a Long Term Operating Period) of a greenfield DBFOM in Canada is 30 years, resulting in total contract lengths varying from 32 to 34 years, taking into account the design/construction period as well as operations. The following criteria have been considered in determining the Long Term Operating Period for the Project:

- Legislative restrictions;
- City financing policy;
- O&M market preferences or limitations;
- Private finance market preferences or limitations;
- Transfer of "lifecycle risk";
- Transfer of treatment process selection risk;
- Affordability; and
- Value for Money.

Appendix F contains detail on the assessment of these criteria. In this case, legislative restrictions are the governing criteria in selecting the Long Term Operating Period, in that *The Cities Act* states that:

> *A council may grant a right to a person to provide a public utility service in all or part of the city for not more than 30 years.*

Therefore, the 30 year period for measurement against this restriction would start at the commencement of the Interim Operating Period. Applying this restriction, the Long Term Operating Period is estimated to be 27.3 years, as summarized below.

Table 13 - DBFOM Project Schedule

Period		Key Milestones	Estimated Date	Duration	
Procurement		Selection of Preferred Proponent	December 2013	2 months	
		Financial Close	February 2014		
Design & Construction	Interim Operating	Take-over of Existing Plant Operations	March 2014	34 months (2.8 years)	Total of 30 years providing a "public utility" service
		Construction Completion	December 2016		
Long-Term Operating		Commencement of Capital Payments & O&M Payments	January 2017	326 months (27.2 years)	
		Last Month of Service	March 2044		

The cash flow model calculates the estimated net present value[18] of project costs (as of March 31 2013[19]) for each delivery model over the period commencing October 2012[20] and ending March 2044. This approximately 32-year period covers the procurement, design, construction, interim operating, and long term operating of the Project.

[18] The City's cost of long term debt (3.818%) is used as the discount rate to calculate NPVs.

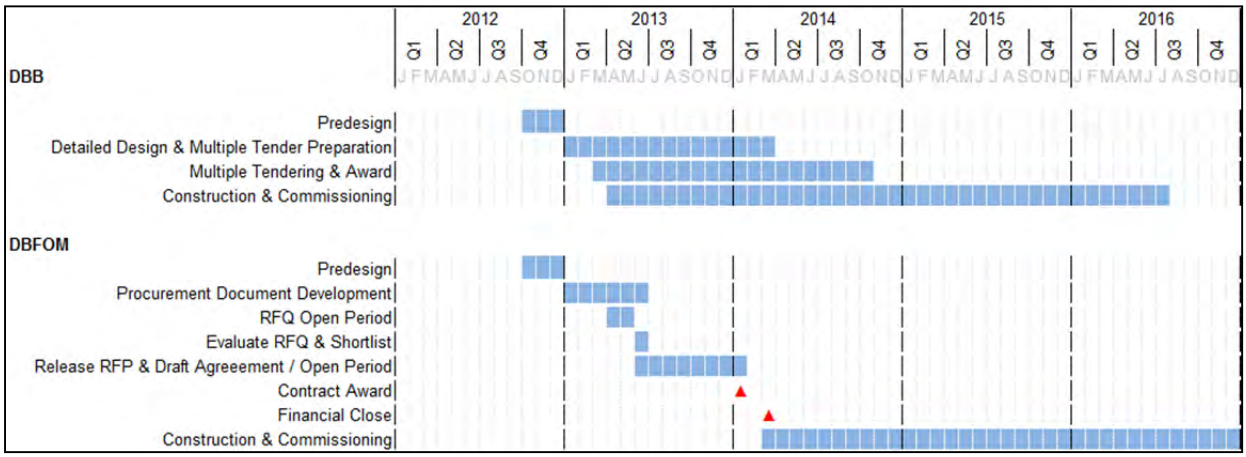
[19] This date is selected for NPV purposes as it is estimated to be the date by which the City will have made a final determination of delivery model.

[20] Although procurement has not commenced, some of the preparatory costs have started to be expended, e.g. preliminary design costs

4.3 Schedules

Figure 5 shows preliminary project schedules for DBB and DBFOM, based on an understanding of the current state, necessary approvals, and the procurement strategy and implementation plan detailed in later sections. The schedules timing and task durations were developed through collaboration between Deloitte, AECOM, and the City, initially as part of the April 2012 delivery model screening work.

Figure 5 - Preliminary Procurement Schedules

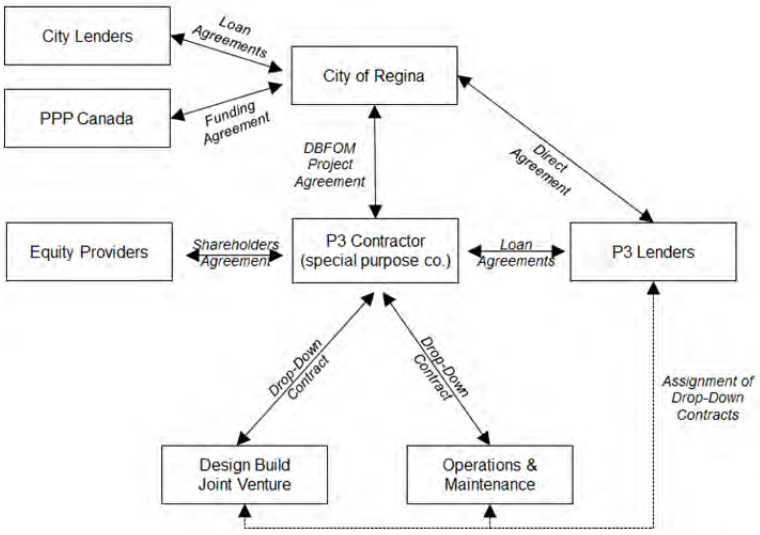


The DBB model has overlapping stages because it is planned utilize a multiple-tender approach in which several construction tenders will be released sequentially. As shown, it is expected that the DBB approach could have the upgrade completed ahead of the December 2016 deadline. The DBFOM model will take longer for construction to commence, but is expected to proceed more quickly once awarded.

4.4 Expected Transaction Structure

For DBFOM, the transaction structure will be typical for a Canadian DBFOM, as illustrated below.

Figure 6 - DBFOM Transaction Structure



The cash flow model for DBFOM reflects this structure.

4.5 Cost Estimates

4.5.1 Capital Cost Estimates

The estimated capital cost of the Project is $207.4 million ($2015) assuming it is delivered with the DBB model. This figure includes engineering (design, tendering, and construction services) and PST. The estimate is considered to have a range of +/-15%. Recognizing the plausibility that the capital cost could come in at the upper end of the +-15% range, **the VFM has been calculated using the upper end of the range, which is $238.5 million**. See Appendix A for more information on all of the cost estimates.

The figure above includes escalation to the midpoint of construction, and does not include any interest during construction. For purposes of value for money cashflow modelling, the corresponding unescalated capital cost (in $2012) is $205.7 million ($185.9 plus $19.8 for engineering).

P3 Efficiencies

For the DBFOM model, a 15% reduction in capital costs is expected to be achieved through the competitive process between integrated design/build/operate teams working to a performance specification. This expectation was arrived at in consultation with AECOM, and is based on observation of winning bid costs for design-build projects in the water/wastewater sector as compared to owners' estimates and AECOM's experience. While the greenfield portion of the Project will allow Proponents significant freedom for innovation, the brownfield portion will limit the opportunity for innovation: the 15% efficiency was determined to be a reasonable expectation given the brownfield/greenfield ratio of the Project.

To substantiate the existence of such efficiencies, the table below is provided, comparing the resultant capital cost of water and wastewater projects procured with DB-style models to the owners' estimates pre-bid.

Table 14 - Capital Cost Savings As Compared to DBB Estimate

Project	Owner	PPP Type	As-Built Capital Cost	Capital Cost Savings[1]
Dartmouth (New) Water Treatment Plant	Halifax Regional Water Commission	DB	$ 38 M	18 %
New Wastewater Treatment Plant	Town of Jasper, AB	DBOM	$ 14 M	25 %
Wastewater Treatment Plant Upgrade	Town of Okotoks, AB	DBOM	$ 11 M	50 %
New Water Treatment Plant	Town of Port Hardy, BC	DBOM	$ 4 M	38 %
New Wastewater System	Town of Sooke, BC	DBOM	$ 23 M	16 %
New Water Treatment Plant	City of Moncton, NB	DBFOM	$ 23 M	28 %
New Wastewater Treatment Plant	Province of BC (Britannia)	DBFOM	$ 16 M	16 % [2]
New Water Treatment Plant	City of Seattle (Cedar)	DBOM	$ 81 M	30 %
New Water Treatment Plant	City of Seattle (Tolt)	DBOM	$ 65 M	43 %
New Wastewater Treatment Plant	Pima County, AZ	DB	$170 M	32 %[3]

(1) Capital cost savings are as compared to owner's estimate for traditional procurement, information as made public by government owners of each project.
(2) Net present value savings over 21 year project life (i.e. capital and operating cost) is 31%. Source: Partnerships BC.
(3) Contract awarded, not yet constructed.

The average capital cost savings in the above table is approximately 27%. The 15% efficiency assumed for the value for money analysis is at the low end of the range documented savings.

4.5.2 Operations & Maintenance Cost Estimates

Estimated annual operations and maintenance for DBB is $7.6 million ($2017). This includes labour, energy, chemicals, biosolids management, and equipment and materials associated with routine (e.g. minor) maintenance.

Table 15 - Opinion of Probable O&M Cost ($2017)[21]

Description	Annual Cost
Labour	$ 3,024,000
Energy	$ 1,888,000
Chemicals	$ 847,000
Biosolids	$ 170,000
Equipment and Materials	$ 1,521,000
Other	$ 155,000
Total Plant O&M Cost (-/+15%)	**$ 7,605,000**

This estimate does not include PST. The City is exempted from paying PST on electricity used for sewage treatment. In both delivery models, it is expected that the City will pay electricity bills directly and so PST is not added to the energy costs. PST is added to all other costs, with the exception of labour in the DBB model. In the DBFOM model, labour will make up part of the O&M payment, which is assumed to be fully exposed to PST.

P3 Efficiencies

A 10% efficiency in energy and chemical costs is assumed for the DBFOM model, which was arrived at during the quantitative risk assessment. It was concluded that a Contractor will more actively manage commodity consumption, and rather than add an additional risk cost to the DBB model to account for this, the 10% efficiency for DBFOM was arrived at instead.

4.5.3 Major Maintenance ("Lifecycle") Cost Estimates

A 35-year major capital replacement (i.e. "lifecycle") schedule has also been estimated for the preliminary design which predicts the need for replacement of equipment in the process equipment, HVAC, electrical, and instrumentation/controls categories.

[21] Source: Wastewater Treatment Plant Upgrade Predesign Report – Draft, AECOM, Table ES.3

Table 16 - Major Maintenance Schedule ($2012)

Year	Process	HVAC	Electrical	I&C	Total
1	-	-	-	-	-
2	-	-	-	-	-
3	-	-	-	-	-
4	-	-	-	-	-
5	-	-	73,238	-	73,238
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	11,059	1,302,202	768,102	1,313,261
11	-	-	-	-	-
12	-	-	-	-	-
13	-	36,935	-	-	36,935
14	-	-	-	-	-
15	-	520,814	789,863	-	1,310,677
16	-	-	-	-	-
17	-	-	-	-	-
18	-	55,567	-	-	55,567
19	-	6,334	-	-	6,334
20	-	2,244,376	4,080,110	3,944,287	6,324,486
21	-	-	-	-	-
22	-	-	-	-	-
23	-	-	-	-	-
24	-	187,673	-	-	187,673
25	41,743,360	2,030,493	107,636	-	43,881,489
26	-	36,935	-	-	36,935
27	-	11,157	-	-	11,157
28	-	-	-	-	-
29	-	-	-	-	-
30	3,576,038	1,066,116	8,413,848	768,102	13,056,003
31	-	-	-	-	-
32	-	-	-	-	-
33	-	-	-	-	-
34	-	-	-	-	-
35	-	-	73,238	-	73,238
Total	45,319,399	6,207,460	14,840,134	5,480,492	66,366,992

The schedule predicts a major investment need in the 25th operating year which is captured by the planned operating period. The planned 27.3 year operating period is sufficient to capture 80.2% of the predicted 34-year major maintenance cost, and therefore with appropriate handback provisions considerable lifecycle cost responsibility can be transferred to the Contractor.

PST is added to these estimates in both models as it is likely that major maintenance will be done by contractors in both delivery models.

P3 Efficiencies

A 10% efficiency is assumed for the DBFOM model as there will be competitive pressure on major maintenance costs through the procurement process.

4.5.4 Ancillary Cost Estimates

Ancillary costs are those associated with implementing the delivery model, and may also be thought of as the procurement costs.

Table 17 - Ancilliary Costs ($2012, millions)

Category	DBB	DBFOM
Engineering design and construction services	19.8	-
Owners Engineer	-	2.4
Business advisor	-	1.0
Legal advisor	0.15	1.0
Communications advisor	0.10	0.25
Honorarium	-	0.5
SUBTOTAL	**20.05**	**5.15**

The cost of design is borne by the Contractor in the DBFOM model and therefore does not appear in the table above. The cost of design by the DBFOM Contractor is, however, accounted for in the VFM cashflow model.

The DBB model relies more heavily on City resources for procurement than DBFOM. The City has concluded that it would need to add additional staff resources to manage the project as a DBB, with a total annual incremental cost of $465,000. This additional staffing cost for DBB is included in the VFM cashflow model.

For the operating period, it is assumed that the equivalent of one full time position will be required to administer the DBFOM contract with an annual cost of $110,000. To reflect the relative additional complexity of operating and maintaining the WWTP in-house in the DBB model (hands-on management versus contract management), the annual cost noted above is assumed to continue through the operating period.

PST is considered to be included in the ancillary cost estimates and is not modelled explicitly.

4.5.5 Land Costs

The City owns all lands needed for the Project and there are no incremental land costs.

4.5.6 Cost of Operating During Procurement, Design, and Construction

The costs of operating the WWTP during procurement, design and construction is included in the VFM cashflow model. The costs are based on budget planning documentation and are approximately $8.3 million per year ($2012). This allows the VFM model to take into account any benefit of early completion that either model may offer (since post-construction costs are expected to be slightly lower due to improved efficiency). It also allows the cashflow model to provide all-in budget cost estimates for the City.

4.5.7 Financing Costs and Assumptions

The cost of City financing as needed for the DBB model (and for the City-financed portion in the DBFOM model) is included in the VFM financial model. While this has no impact on VFM (because the discount rate is equivalent to the financing rate) it allows the model to develop nominal cashflows that are helpful for budgeting and other purposes. The City's cost of capital is 3.818% as estimated by CIBC for the City in October 2012.

The following tables summarize the DBFOM financing approaches modelled, and the key financing assumptions, which are based on Deloitte's market observations and past experience, market sounding input, and other Project-specific data.

Table 18 - Short Term Debt Assumptions for DBFOM (used by DBFOM Contractor to Bridge Construction)

Assumption	Value (p.a.)	Notes
Base Rate	1.28%	Based on Government of Canada bond yields for Maturity date on Jan 2017 as of Dec 10, 2011.
Credit Spread	1.40%	Spread that reflects short term construction borrowing rates on current P3 projects, confirmed by market sounding
Arrangement Fee	2.00%	Typical observed upfront fee, applied against principal of the short term loan at financial close.
Commitment Fee	0.56%	Typical observed monthly fee, applied against estimate of undrawn amounts during construction
Debt type	Credit line	Allowing for prepayment of principal as contractor receives substantial completion payment.

Table 19 – Long-Term Debt Assumptions for DBFOM

Assumption	Value (p.a.)	Notes
Base rate	2.30%	Based on Government of Canada bond yields for Maturity date on Jan 2042 as of Dec 06, 2012.
Debt type	Private placement bond financing with drawdown structure	According to market sounding input, most likely long term solution is private placement bond debt.
Repayment frequency	Semi-annual	
Spread	2.15%	Based on market input and recent transactions, including an allowance for municipal premium
Bond arrangement fee	2.00%	Typical upfront cost for bond arranging
Minimum DSCR	1.25 times	Typical requirement
Gearing	89.4% debt : 10.6% equity	Typical P3 gearing. 89.4% of capital structure ($92.6M) is bond and 10.4% equity ($10.9M)
Tail	6 months	Lenders typically want to be out of the Project six months prior to the end of the operations period.
Term	320 months	Operation term less tail
Debt service reserve account requirements	Next 6 months of debt service	Typical approach seen on P3 projects
Major maintenance reserve account requirements	A three-year look forward lifecycle reserve (100%/50%/25%)	Common reserve structure. The lifecycle payment is matched to the requirements to the major maintenance reserve. The same reserve structure is used in the DBB model to ensure a fair comparison between DBB and DBFOM.
Equity return	13.0%	Typical pre-tax equity return target
Equity injection	The Equity Bridge Loan balance is repaid in a bullet repayment with the equity injection at the beginning of operation	Approach seen on several recent bond-financed DBFO/DBFOM proposals
Equity Bridge Loan all-in-rate cost	3.84%	Based on market input and recent transactions
Arrangement fee of the Equity Bridge Loan	2%	Based on market input and recent transactions
Commitment Fee	1.15%	Based on market input and recent transactions
Letter of Credit Fee	2.00%	Based on market input and recent transactions
Equity Bridge structure	After short-term bank loan is fully utilized	Equity Bridge Loan is drawn pro rata with the Bond proceeds after short term bank loan is fully withdrawn

4.5.8 Inflation, Sales Tax, and Discount Rate Assumptions

Following are the inflation and tax assumptions used in the cash flow model.

Table 20 – Financial/Economic Assumptions

Assumption	Value	Notes
Construction cost escalation	6.0%	As recommended by the City based on a report commissioned from AECOM
WWTP O&M cost escalation	3.5%	As recommended by the City
Ancillary cost escalation	3.0%	High end of the Bank of Canada published inflation target
Major maintenance cost escalation	3.0%	High end of the Bank of Canada published inflation target
GST	0.0%	GST paid by The City and contractor is fully refunded
PST	5.0%	The City pays PST to its contractors in all models. PST is calculated on Capital, O&M and Major Maintenance costs for both models with the exception of electricity. In the DBB model, no PST is calculated on City labour costs.
Income Tax	N/A	Target IRR is calculated on pre-tax basis, which is the common standard for bidders when submitting their proposals
Discount Rate	3.818%	Equivalent to the City of Regina's long term cost of capital
Net Present Value "To" Date	March 31, 2013	All net present values in this document are calculated as at the date shown, reflecting the time at which the City is expected to have finalized its delivery model decision.

4.5.9 Capital Contribution ("Deal Structure")

In current financial markets it is generally necessary for owners to contribute 25% to 50% of capital costs during construction to achieve positive VFM in DBFM and DBFOM procurements. The contribution reduces the amount of private financing, thus reducing the costs of the DBFOM relative to the traditional approach. In determining the appropriate capital contribution the following three constraints must be considered:

- Minimizing the amount of private financing so as to minimize owner costs; while
- Ensuring the amount of private financing is sufficiently large to attract the market; and
- Ensuring that the amount of private financing is large enough to ensure risk transfer until the end of the contract, especially with respect to anchoring the transfer of handback risk.

The Project is large enough that a DBFOM financing structure with third party debt (i.e. what is normally expected in Canadian P3) is feasible. This generally requires that the private financing "ticket" be of a substantial size, and the rule of thumb of $100 million introduced in the market sounding discussion (Table 10) is applied.

Through an iterative process using the VFM cashflow model, it was determined that an approximately 50:50 split of City funding and private financing was optimal. This amounts to a City contribution of $115 million at the completion of construction, with the Contractor financing $118.3 million (51%)[22].

A "handback test" for this capital contribution scenario shows that if the City withheld all payments to the contractor in the last 5 years of the operating period, the cash withheld would be approximately $186 million. The estimated nominal cost all of the major maintenance required over 30 years if assuming

[22] The ratio between City and Contractor financing must be held approximately constant to maintain a VFM result at varying capital costs. .

none of the required maintenance is completed until the end is approximately $161M. Therefore, even in an extreme worst case major maintenance scenario, the City would have sufficient liquid security to cover the necessary works.

4.5.10 No Competitive Neutrality Adjustments Required

Competitive neutrality adjustments are often made when comparing the financial cost of a shadow bid to a PSC to ensure a fair comparison. The two most common adjustments are for taxation and insurance. A taxation adjustment is only relevant if the government project owner receives the taxes paid by the shadow bid contractor in whole or in part, which is not the case for the City. An insurance adjustment is only relevant if the government owner is self-insured and therefore pays no insurance premiums, which is not the case for the City.

4.6 Risk Analysis and Quantification

4.6.1 Introduction

All major infrastructure investments have inherent risks related to their design, construction, operation and maintenance over their useful life. Risk is defined as "the threat or probability that an action or event, will adversely or beneficially affect an organization's ability to achieve its objectives." Understanding the risks is critical to enable the public sector owner to make informed and appropriate decisions and to select an appropriate project delivery model.

A prudent principle to follow when identifying and determining how to manage project related risks, is to allocate risks to the party best able to manage those risks. Certain risks are generally best managed by the public sector such as: policy, programming and approvals risks. Other risks may be better managed by the private sector, particularly in areas that fall into the private sector partner's core area of business or expertise. If the risks associated with a major infrastructure investment are not properly managed, risks materialize into substantial events that lead to increased costs through delay or cash outlays.

The delivery models described in Section 3 are defined by the allocation of responsibility for various project functions. With transfer of responsibility comes the transfer of risk. The delivery models are essentially different approaches to risk allocation between the public sector owner and private sector contractor for a project. The risk allocation used to define and select a preferred delivery model for a project must be maintained from the conceptual stage, through the procurement, and into the implementation stage of the project if the planned-upon value and benefits are to be achieved.

4.6.2 Risk Quantification Workshop

The risk quantification workshop was held on November 2, 2012. The City was represented by attendees from engineering, utilities, finance, legal, human resources and strategy units. AECOM was represented, and the workshop was facilitated by Deloitte. Appendix G provides further detail on the risk quantification workshop including the list of attendees and consensus results. Development of the risk register is described in Section 3.9.2.

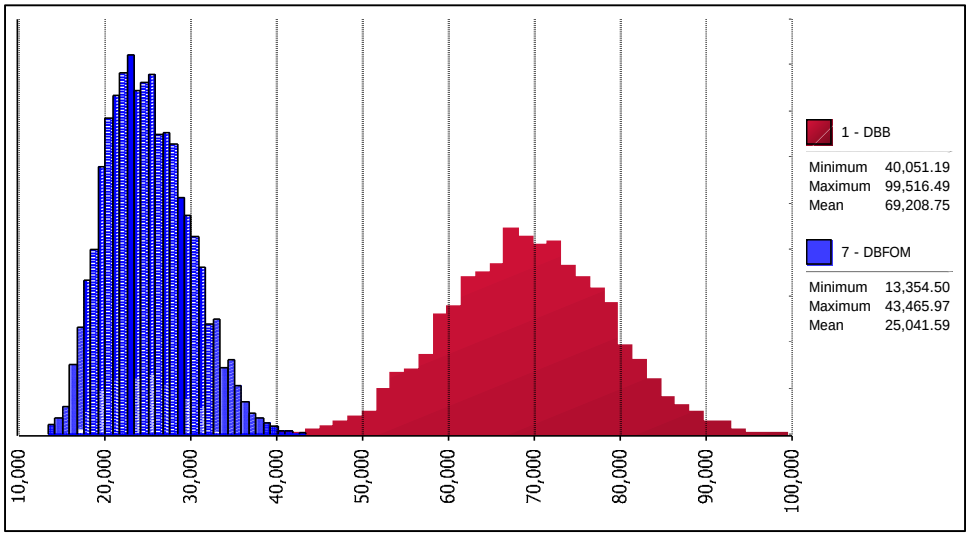
27 risks were brought forward from the qualitative risk workshop to the quantitative risk workshop. The probabilities assessed in the qualitative workshop were brought forward and revised if consensus dictated. Then, for each delivery model, best case, worst case, and expected case risk impacts in dollar terms were estimated, debated, and the consensus values recorded. Not all risks were quantifiable; 20 risks were quantified.

4.6.3 Estimated Risk Costs

Total Risk

Total risk refers to the overall cost of a risk to the project, regardless of which party the risk's costs are assigned. The estimated cost of each quantified risk takes the form of a risk distribution with a range of possible outcomes ranging from best case to worst case. To add the risks together into an estimate of total project risk, a Monte Carlo simulation is used. The figure below presents the total estimated project risk cost distribution[23] (in net present value terms) for each delivery model.

Figure 7 - Estimated Total Project Risk Costs (NPV, $thousands)



From these figures, it is concluded that based on the risk estimates:

- The DBFOM delivery model has a lower risk profile than DBB (because the entire risk distribution is located to the left of the DBB distribution); and
- The DBFOM delivery model has more predictable outcomes (because its distribution is narrower).

There is almost no overlap of the distributions, suggesting that the worst case risk cost outcome of DBFOM will almost always be better than the best case risk cost outcome of DBB. The estimated risk distributions also show a narrower range of outcomes for DBFOM, meaning that the model is viewed to have more certainty of outcome than DBB.

The magnitude of the risk costs is also worth noting: it was estimated that the DBB model could cost the City (since it retains nearly all the risk) up to $100 million (NPV) in risk. This is a significant amount, and justifies consideration of methods to reduce it – such as through alternative delivery models.

Capital-Related and O&M-Related Risk Cost Estimates

When reported on a point basis (rather than as a risk distribution), expected value (the mean value of the distribution) is typically used. In the tables below, the risk costs are presented as percentages of the relevant cost base[24] for the capital phase of the Project (the time encompassing procurement through the

[23] The Y-axis of the probability distribution indicates the number of occurrences of each total project cost within the Monte Carlo simulation, and is not meaningful in an absolute sense. What is important is the shape of the curves and their relative positions.

[24] The capital cost base consists of the procurement and capital costs, the O&M cost base consists of all operational costs

end of construction) and the operations and maintenance phase of the Project (27.3 years after construction is complete).

Table 21 – Capital Phase Expected Total Project Risk Cost (NPV, $thousands)

	DBB	DBFOM
Capital Phase Cost Base	214,092	227,846
Capital Phase Risk Cost	44,341	16,636
Risk %	20.7%	7.3%

A significant reduction in project risk related to the initial procurement and construction phase is predicted for DBFOM.

Table 22 - Operations & Maintenance Phase Expected Total Project Risk Cost (NPV, $thousands)

	DBB	DBFOM
O&M Phase Cost Base	216,425	215,739
O&M Phase Risk Cost	27,048	9,818
Risk %	12.5%	4.6%

Similarly, a significant reduction in project risk related to O&M is predicted for DBFOM.

Table 23 – Capital Phase + O&M Phase Expected Total Project Expected Risk Cost (NPV, $thousands)

	DBB	DBFOM
Total Project Cost	481,476	489,214
Total Risk	69,209	25,042
Risk %	14.4%	5.1%

Combining the phases, a significant reduction in overall project risk is predicted for DBFOM.

Individual Risk Cost Estimates

The table that follows provides the estimated expected risk cost for each of the 20 risks that were quantified, sorted from highest to lowest. A more detailed version of this table may be found in Appendix G.

Table 24 - Estimated Risk Costs (NPV, Expected Value, $thousands), Highest to Lowest

16(1)(a), 17(1)(d)

16(1)(a), 17(1)(d)

Procurement	Resource capacity	Risk that City does not adequately resource the procurement through to substantial completion
Design	Facility design risk	Design contains errors or omissions that are not discovered until construction period. (contractor-initiated change order risk)
Maintenance	Major maintenance/rehabilitation	risk that major maintenance / rehabilitation is deferred
Operations	Staffing	Risk associated with recruiting and retaining qualified operating staff
Construction	Delay by Owner	Facility not constructed on time - due to Owner (e.g. due to its internal approval regime)
Maintenance	Unknown condition of existing assets (latent defects in existing assets)	Risk that defects in the existing parts of the plant are discovered during the maintenance period.
Construction	Construction / Operation Coordiation	Risk associated with operating WWTP while upgrade/expansion is being done
Operation	Early expansion	Risk that WWTP capacity needs to be expanded sooner than anticpated
Construction	Scope changes during construction	Change orders by Owner during construction
Construction	Delay	Facility not constructed on time - not caused by Owner
Operation	Equipment failure	earlier-than-expected equipment failure earlier than planned life
Design	Wastewater treatment process selection	Risk that selected treatment process does not meet discharge permit rqeuirements
Design	Design exceeds requirements	"Goldplating" - facilities are better than needed to meet performance specification. i.e. "nice to haves" are included in the project. Does not encompass lifecycle optimization decision.
Construction	Construction cost	Total construction costs exceed expectations/budget - quantities, prices, complexity, weather. "Construction risk". Excludes costs assoicated with latent defects
Construction	Contractor default	General contractor bankruptcy
Procurement	Unclear project documentation	Risk that the project documentation (design/spec or performance specification) poorly defines project scope and/or risk allocation or is poorly coordinated.
Information	Wastewater flow and quality projections	Projections are inaccurate... realized flow and quality is different
Operation	Operating costs (other than power and chemicals)	operating costs (labour, supplies) higher than anticipated (and excluding inflation effects)
Operation	Latent defects in new infrastructure	Risk that construction defects are found after the warranty period expires
Design	Scope changes during design - scope creep	Owner alters project scope while design is in progress.

Risk Retained and Risk Transferred

The following table presents the retained and transferred risks for each delivery model, subtotaled by the risk categories.

Table 25- DBB - Quantification of Risks by Category (mean risk, NPV, $thousands)

Category	Total Risk	Retained	Transferred Risk Premium
Total	16(1)(a), 17(1)(d)		
Approvals			
Procurement			
Information			
Design			
Construction			
Operation			
Maintenance			

Table 26 - DBFOM - Quantification of Risks by Category (mean risk, NPV, $thousands)

Category	Total Risk	Retained	Transferred Risk Premium
Total	16(1)(a), 17(1)(d)		
Approvals			
Procurement			
Information			
Design			
Construction			
Operation			
Maintenance			

The tables show that the risk retained by the City in the two models is significantly different: approximately $68 million (NPV) for DBB and only $13.9 million (NPV) for DBFOM.

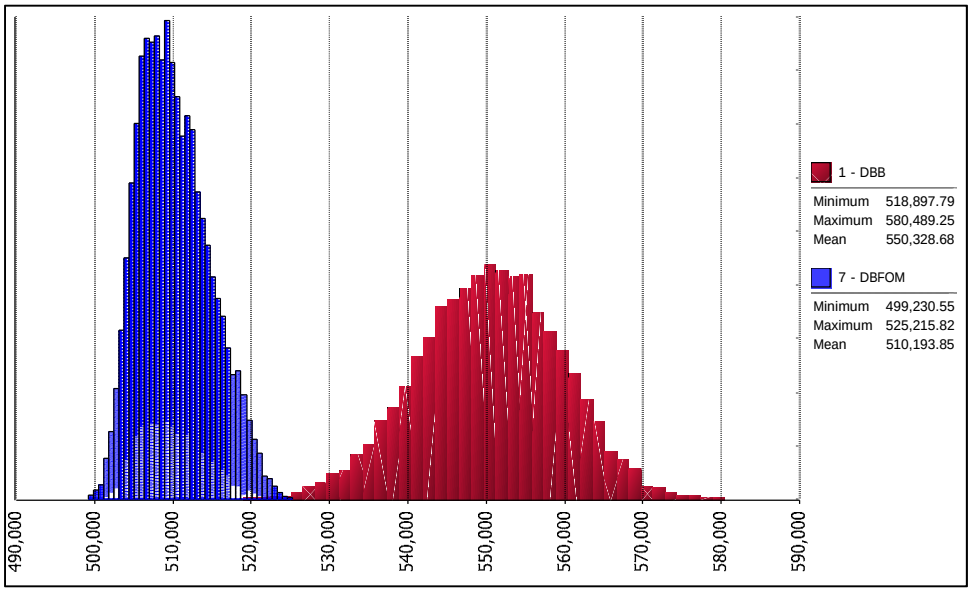
The risk that is transferred to the contractor in either model may be priced as a contingency by the contractor or left unpriced to be covered by profit margin, equity returns, and for a small number of risks in DBFOM, debt returns. An analysis of the treatment of transferred risk (priced, or not priced) was conducted based on reasonable assumptions as to how contractors will likely view their ability to mitigate each risk and on the understanding that all risks are priced under competitive tension. The resulting "transferred and priced" risk costs are reflective of the "risk premium" that contractors can be expected to charge. The risk premium shown in the tables above is the estimate of transferred risk that will be priced.

4.7 Value for Money Assessment

4.7.1 VFM Estimate

The cash flow models configured using the inputs described above provides the following VFM estimate for the DBFOM delivery model. VFM calculation uses net present value as the basis for delivery model comparison because the pattern of cashflows is very different between the models. The basis for comparison is the total expected cost to the owner, including estimates of risk. This metric is the "total risk-adjusted project cost", shown in the figure below.

Figure 8 Risk-Adjusted Project Cost (NPV, $millions)



Two important observations are drawn from the figure:

1. The potential range of total project cost outcomes for DBB is much wider than for DBFOM, reflecting greater cost uncertainty in the DBB model.

2. DBFOM is predicted to almost always have a lower total NPV project cost than DBB, because the best-case cost outcome for DBB is approximately equal to the worst case cost outcome for DBFOM.

In other words, the DBFOM is expected to have a total project cost over the design, construction, and operations and maintenance period that is more certain, and almost guaranteed to be less in net present value terms, than DBB.

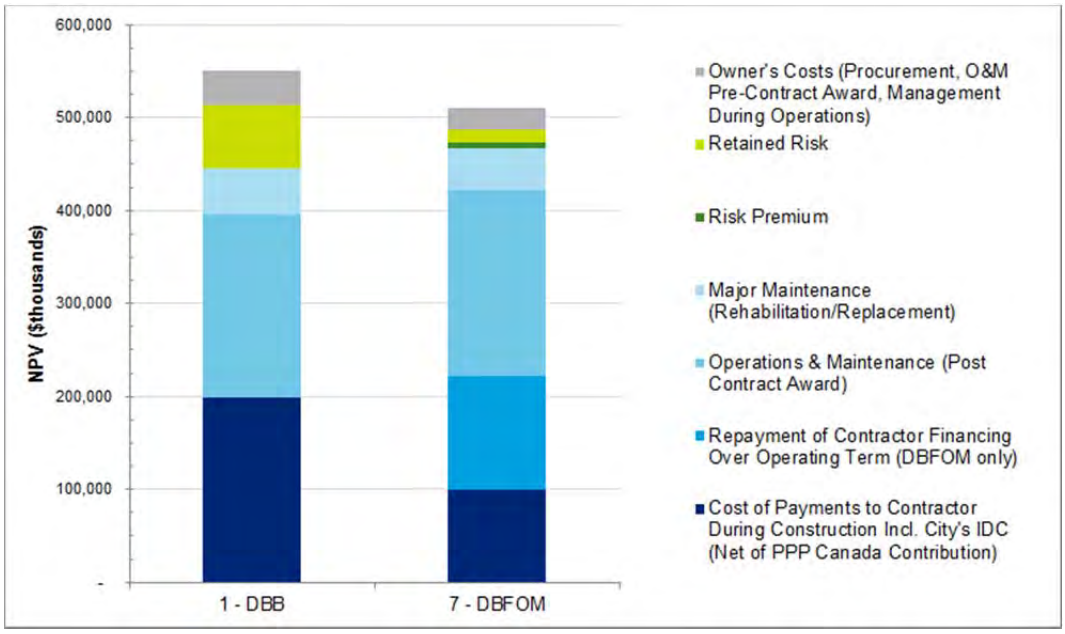
Calculating VFM using the expected value of the risk costs, the results are as follows. The VFM is referred to as "Project VFM" because it is calculated without consideration of any specific sources of funding to the City that may offset costs.

Table 27 – VFM Estimate (NPV, $thousands)

	DBB	DBFOM
Total Project Base Cost	481,476	489,214
Retained Risk	67,969	13,824
Risk Premium	883	7,155
Total Risk-Adjusted Project Cost	550,329	510,194
"Project VFM"		40,135
"Project VFM"		7.3%

The estimated project VFM is therefore approximately $40.1 million, or 7.3%. The chart below presents the same information graphically.

Figure 9 - VFM Estimate (NPV, $thousands)



4.7.2 Sensitivity Analysis

Sensitivity analysis was conducted to test the impact of different input assumptions on the VFM estimate, with a focus on the downside potential. The variables tested below are selected based on their ability to expose the cost differences between DBB and DBFOM, which relate primarily to the cost of private financing and the capital cost efficiencies of the DBFOM. The variance in the variables from the original inputs is selected to reflect a reasonably foreseeable downside scenario.

Table 28 - VFM Sensitivity Analysis ($millions)

Variable	Base	Adjustment	VFM	
			$	%
Base Case		**n/a**	**40.1**	**7.3%**
P3 Efficiencies	15% capital, 10% energy and chemicals, 10% major maintenance	0%, 0%, 0%	-19.2	-3.5%
		7.5%, 5%, 5%	10.5	1.9%
Contractor's Long Term Debt Spread	2.15%	1%	23.0	4.2%
		-1%	55.9	10.2%
Construction Cost Escalation	6.00%	1%	38.1	6.9%
		-1%	42.1	7.7%
Contractor Financing Gearing	89.4:10.6	85:15	32.9	6.0%

It is evident that VFM is predicated on obtaining some efficiency as compared to the DBB cost estimates, however the efficiencies used are modest and have some probability of being exceeded by bidders. Based on experience with integrated design-build in water/wastewater and other sectors, it appears very unlikely that no efficiencies will be realized.

Since the City's debt spread would likely move along with the contractor's debt spread (thus changing the discount rate) although perhaps a lesser amount, the actual sensitivity to changes in long term debt spread is lower than what is indicated in the table. In any case, VFM remains positive within the sensitivity range.

Because the schedule for DBB has construction starting earlier than DBFOM, an increase in construction cost escalation reduces VFM slightly. If construction cost escalation has been over-estimated, then VFM will improve.

Finally, the test on contractor financing gearing was conducted to explore the impact of a negative view of a proponent on project risk that demands higher debt service coverage. The reduction in gearing to 85:15 reduces VFM somewhat, but VFM remains positive. Canadian P3s rarely if ever approach gearing this low.

Overall, the VFM remains positive in all but one of the scenarios (which as noted is very unlikely) and therefore the VFM is considered robust.

5 Integrated recommendation

5.1 Qualitative Analysis

In Section 3 DBFOM was identified as the preferred delivery model based on qualitative risk assessment and multi-criteria assessment.

5.2 Quantitative Analysis

In Section 4 the value for money assessment established that DBFOM is expected to offer value on a risk-adjusted basis as compared to DBB. The VFM estimate is $40.1 million (NPV) or 7.3%. The VFM is robust and holds through a range of reasonable downside sensitivity tests, and the probability distribution of total risk-adjusted project costs further illustrates that DBFOM is more cost-certain and expected to cost less (in NPV terms) than DBB on a risk-adjusted basis.

5.3 Integrated Recommendation

DBFOM is the recommended delivery model based on the qualitative and quantitative assessments. The two analyses are not additive or duplicative: rather, the quantitative analysis confirms that monetary value is expected from the model that best meets the City's strategic objectives.

There is no legislation prohibiting the use of the DBFOM model. The recommended model has been identified by following the analytical processes outlined in the City's P3 policy.

The expected benefits to the City of the DBFOM delivery model include:

- Low likelihood of schedule slippage that could cause the permit deadline to be missed;
- Minimal demands on City resources during design;
- Minimal demands on City resources during construction;
- Transfer of responsibility for recruiting and retaining operations staff, potentially to a more flexible and attractive employer;
- Long-term cost certainty for treatment of wastewater;
- A more optimal balance of capital costs and O&M costs;
- Maximum scope for innovation and competition in lifecycle costs (not just capital costs);
- Ensuring all major maintenance is done and not deferred;
- Transfer of design, construction, and O&M risk to protect the City and ratepayers; and
- Strong liquid security for the performance of the Contractor and for the anchoring of the contractual risk transfer.

5.4 Amount of P3 Canada Fund Support Request

The amount of the funding request from the P3 Canada Fund is $58.7 million (nominal, as-spent dollars) based on a 25% contribution towards eligible costs. It is recognized that the actual amount received will be based on actual evidenced costs and that the contribution from the Fund is capped at the amount approved by PPP Canada. Table 29 provides a breakdown of the estimate of eligible costs.

Table 29 - Estimate of Eligible Costs ($nominal millions, as-spent)

Cost Component	Estimate
Construction Costs Including GST and Transferred Risks	204.1
Senior Debt IDC - Short-Term Financing during Construction	6.6
Senior Debt IDC - Long-Term Financing	13.1
Equity Bridge Loan IDC	0.3
Senior Debt Fees - Short-Term Financing during Construction	2.7
Senior Debt Fees - Long-Term Financing	2.1
Equity Bridge Loan Fees	1.3
Subtotal: Contractor Costs	**230.2**
Fairness Advisor	0.1
Owners Engineer During Procurement	2.5
Process and Financial	1.0
Communication	0.3
Honourarium	0.5
Subtotal: City Costs	**4.4**
Total Eligible Costs	**234.6**
P3 Canada Fund Support Request (25% of above)	**58.7**

6 Project funding and affordability

6.1 Fund Sources and Uses

The following tables summarize the fund sources and uses for the construction period and the operation period, and for the Project overall.

Table 30 - Sources and Uses To End of Construction (not risk-adjusted) ($nominal millions, as-spent)

		DBFOM	
Sources			
PPP Canada	Substantial completion payment	57.6	58.7 *P3 Canada Fund Support Request*
	City's eligible costs	1.1	
City	General Utility Reserve	49.0	
	Previously Approved Capital Funding	27.5	
	Utility Rates	25.9	
Contractor	Equity	12.5	
	Senior Debt	105.8	
	Total	**279.4**	
Uses			
City	Procuement Planning and Implementation (Non-Eligible Costs), Operation Costs During Procurement	15.8	224.3 *"Capital Commitment" as referenced in Recomendation to Council*
	Procurement Planning and Implementation (P3 Canada Fund Eligible Costs)	4.4	
Contractor	Construction cost	204.1	
	Senior Debt IDC - Short-Term Financing during Construction	6.6	
	Senior Debt IDC - Long-Term Financing	13.1	
	Equity Bridge Loan IDC	0.3	
	Senior Debt Fees - Short-Term Financing during Construction	2.7	
	Senior Debt Fees - Long-Term Financing	2.1	
	Equity Bridge Loan Fees	1.3	
	DSRA Prefund	3.4	
	MMRA, CIL and Other Reserve Prefund	2.0	
	Deposit Interest	(2.3)	
	Operational Cost during Construction	25.9	
	Total	**279.4**	

PPP Canada Eligible Uses (Costs) (sum of shaded cells above)	234.6
Requested Grant Funding (25% of eligible costs)	58.7

The "capital commitment" recommended to City Council is $224.3 million. The capital commitment is made up of the three sub-costs in the table above. The table also illustrates the cost components that comprise the requested P3 Canada Fund support.

Table 31 - Sources and Uses During Operation (not risk-adjusted) ($nominal millions, as-spent)

		DBFOM
Sources		
City	General Utility Reserve Through Utility Rates	652.4
	Utility SAF Reserve	44.6
Contractor	Movement in reserve accounts	5.4
	Deposit interest	2.6
	Total	**704.9**
Uses		
Payments to contractor	Operations & Maintenance Costs	251.6
	Chemicals and Energy Consumption	100.4
	Major Maintenance Costs	117.3
	Senior Debt Interest	75.1
	Senior Debt Principal	105.8
	Dividends	54.8
	Total	**704.9**

Table 32 – Summary Sources and Uses From Planning To End of Operations Period ($nominal millions, as-spent)

		DBFOM
Sources		
PPP Canada	Substantial completion payment	57.6
	City's eligible costs	1.1
City	General Utility Reserve	49.0
	Previously Approved Capital Funding	27.5
	Utility Rates	25.9
	General Utility Reserve Through Utility Rates	652.4
	Utility SAF Reserve	44.6
Contractor	Equity	12.5
	Senior debt	105.8
	Deposit interest	2.6
	Total	**979.0**
Uses		
City	Procurement Planning and Implementation, Operational Costs During Procurement, Construction Monitoring	20.2
Contractor	Construction cost	204.1
	Financing costs during construction	23.9
	Operational Cost during Construction	25.9
	Operational Cost during Operation	469.2
	Cost of Private Financing	235.7
	Total	**979.0**

The tables above show that all uses of funds over the full term of the Project have been matched to sources which, with the exception of PPP Canada funding, are fully within the control of the City.

6.2 Description of Fund Sources

The project will be funded through utility rates already accumulated in reserves, future utility rates, future collection of servicing agreement fees (akin to development cost charges, or development levies), and through the PPP Canada's contribution. The sources of funds for the Project as identified in the tables above are described below.

Table 33 - Sources of Funds

Fund Source	Timing	Key Terms and Conditions
PPP Canada	To fund substantial completion payment and eligible ancillary costs, late 2016 / early 2017	• Subject to PPP Canada approval • Amount is capped based on request made herein • The Project must proceed substantially as planned and described in the business case • PPP Canada reserves the right to conduct diligence on the procurement documents • DBFOM contractor and City must provide evidence of eligible costs for funds to be released • Other terms as may be negotiated
General Utility Reserve	To fund substantial completion payment, late 2016 / early 2017	• Use of reserve funds has been approved by Council • Fund balance will be sufficient
Previously Approved Capital Funding	• To fund ancillary costs prior to substantial completion (i.e. 2013 – 2016) • To fund substantial completion payment, late 2016 / early 2017	• Use of funds has been approved by Council Use of reserve funds has been approved by Council • Funds are available
Utility Rates *and* General Utility Reserve Through Utility Rates	• To fund operating and maintenance costs during the design and construction period • To fund operating, maintenance, major maintenance, and capital payments during the operating period	• Utility rates to be set periodically to cover all project costs in the short and long term, either as pay-as-you-go ("Utility Rates") or through the accumulation of reserves ("General Utility Reserve Through Utility Rates")
Utility Servicing Agreement Fee (SAF) Reserve	To fund capital payments during the operating period	• Approximately 22% of the construction cost of the Project is eligible for funding through the Utility SAF Reserve

Section 2.1 describes the City's authority to set utility rates and its rate-setting policy which requires that rates fully cover all costs of the water and sewer utility, of which the Project is only one cost consideration. The rate-setting policy ensures that the funds to support the DBFOM contract will be available for the duration of the contract.

The only federal funding is the requested contribution from the P3 Canada Fund in the amount of $58.7 million. The amount is calculated as described in Section 6, and will be applied to project capital and eligible ancillary costs of the City, in accordance with the anticipated funding agreement, so as not to violate any terms of the contribution's provision to the City.

Value for Money could be improved by paying for capital by milestone payments during construction (as this will reduce the contractor's carrying costs). This has not been explored given PPP Canada's strong preference for withholding capital contributions until the completion of construction, and the beneficial simplicity of aligning payment of the City's portion of the substantial completion payment with PPP Canada's portion. The City may investigate the benefit of making a milestone payment at the time the upgrade is certified to be meeting the permit's liquid effluent requirements, which may be prior to overall project substantial completion. This investigation would be done during development of the payment mechanism and technical specifications.

6.3 Affordability

The 2012 City of Regina Water & Sewer Utility Budget states the following:

> *Capital investments in the range of $150 million[25] are required over the next five years to upgrade and expand the City's wastewater treatment plant to meet more stringent provincial regulations and position us to meet federal regulations. While Utility rates were increased in 2008 – 2010 and again in 2011 – 2013 to begin to address these and other capital pressures, the timing and magnitude of the increased revenue is insufficient to offset the timing and financial impact associated with such regulatory changes and other ongoing capital improvements. While discussions continue with the federal and provincial governments on the new regulations and financial impact of the wastewater treatment plant expansion to meet those regulations, there is no certainty that such discussions will result in a shared funding agreement. Should no substantial funding be provided by other levels of government, the City will need to re-evaluate the proposed programs and budgets for 2012 – 2016 for further possible deferrals in capital investments, increased utility rates, alternative funding/delivery mechanism, and/or potential reductions in level of service to Utility customers.*

The Project is not discretionary, as the City has essentially been ordered to undertake the upgrade by the Province through the Permit requirements. The City's objectives with respect to affordability of the Project are to minimize the cost and maximize cost certainty (see Table 12). The determinant of the cost of the Project is its capacity (which has been set to a reasonable planning horizon) and what is needed to meet the new Permit. In other words, there is no ability to reduce scope to meet budget targets.

The City's expectation of Project costs is based on the preliminary design estimates. City Council has approved a funding model based on these estimates and an allocation of costs to the sources of funds outlined in Table 30. The P3 Canada Fund is one of those sources. City Council requires that if PPP Canada does not approve the funding requested, if the scope of the Project changes, or if the capital requirement (i.e., cost) increases that the matter be brought back to City Council for further direction.

There is therefore an implied capital affordability target in the approved funding model, of $253.5 million[26]. Whether or not this will be formally expressed as an affordability target (or as part of an affordability target) in the DBFOM RFP is yet to be determined. As noted above, without the possibility of a meaningful scope ladder, the utility of an affordability cap is limited.

[25] This is based on an outdated cost estimate

[26] Referring to Table 30, the capital cost is $ 279.4 million - $25.9 million (the cost of operations during construction) = $ 253.5 million

6.4 Incrementality of P3 Canada Fund Investment

The City has undertaken a rigorous examination of many delivery models for the Project, guided by the City's P3 Policy and PPP Canada's business case guidance. The recommended delivery model based on the Strategic Assessment (in the City's language) or Procurement Decision (in PPP Canada's language) is the DBFOM model. The Value for Money analysis confirms that DBFOM is expected to deliver value on a quantitative basis, and therefore the recommended delivery model is DBFOM. A non-refundable P3 Canada Fund investment of up to $58.7[27] million is being requested.

The choice of DBFOM model is broadly based on:

- its ability to satisfy the City's many objectives and constraints;
- the significant reduction in project risk and retained risk; and
- the ability to defer payment for construction, which assists with near-term City cashflow management and debt management.

The requested P3 Canada Fund investment incrementally improves the project in two key ways:

1. It improves the preliminary value for money realized by the City, from an estimated 7.3% to an estimated 16.5%. This provides an impetus for the City to manage any political risk that may be associated with the DBFOM delivery model.

Table 34 - VFM Estimate Taking P3 Canada Fund Grant Into Account (NPV, $thousands)

	DBB	DBFOM
Total Project Base Cost	481,476	489,214
Retained Risk	67,969	13,824
Risk Premium	883	7,155
Total Risk-Adjusted Project Cost	550,329	510,194
PPP Canada Grant		50,801
Total Cost Net of PPP Canada Grant	550,329	459,393
"VFM from City's Perspective"		90,936
"VFM from City's Perspective"		16.5%

2. It reduces the impact of the Project on the City's total debt load. Absent the investment, the City could approach its debt limit, which in turn could limit the City's ability to make other important (and perhaps urgent) investments in the near to mid-term.

In approving the DBFOM model and the request for the P3 Canada Fund investment, City Council has taken these two incremental benefits into account.

[27] which has an NPV of $50.8 million, as used in Table 34 above

7 Procurement strategy

7.1 Recommended DBFOM Procurement Process

The recommended procurement process is guided by the City's P3 Policy (included in Appendix H), which is based on based on Canadian best practice for procurements of this type. The recommended process is broadly outlined as follows, with all details subject to revision as the procurement process and documentation is developed in detail.

7.1.1 A - Premarket the Opportunity

Premarketing helps demonstrate commitment to the procurement process and generate competitive tension and pre-positioning for the RFQ by the bidder community, leading to better quality RFQ responses and potentially a higher number of responses. The potential for a DBFOM is already understood by the bidding community due to two stages of market sounding conducted for the delivery model assessment, and this business case. Premarketing will continue as a side-effect of the communications plan.

It is evident that premarketing through market sounding is working, as some firms not included in the market sounding have made unsolicited requests for information about the Project.

7.1.2 B - Request for Qualifications

A public RFQ will be issued by the City to qualify respondents based on their experience in design, construction, operation, maintenance, and financing of similar projects. In addition, respondents' financial strength and capacity to undertake the project and obtain the financing required will be assessed. The respondents will be scored on multiple criteria using a pre-determined scoring system which evaluates each respondent on a combination of pass/fail (financial) and scored basis (experience and plans). The top three respondents (now, "proponents") will shortlisted for participation in the proposal process.

The bidder community expects and prefers a shortlisting approach as it limits their investment to qualify for a project and gives them a strong enough chance of winning the proposal to invest the (sometimes very considerable) time and money in proposal development. For the public sector, shortlisting keeps the number of proponents, submissions, and bilateral meetings manageable.

The RFQ may contain considerable technical information on the existing plant, influent characteristics, Permit requirements, etc. to better equip respondents in tailoring their responses to the City's needs and to allow them to commence early conceptual design and/or innovation exploration should they wish to (i.e. in advance of being shortlisted, at their own risk).

RFQ Evaluative Procedure

The objective of RFQ evaluation is to identify the three respondents which are best qualified to respond to an RFP to design, build, finance, operate, and maintain the Project. Proponents are most likely to be made up of:

- A engineering consulting company, responsible for design;
- A general contractor, responsible for construction;
- An operator, responsible for operations and maintenance; and
- One or more equity investors, responsible for arranging debt as well as placing their own equity.

Teams may be more integrated than this, for example an equity investor may be the operator, etc.

The key abilities that the City requires of a proponent for the Project are:

- Design of similarly-sized wastewater treatment plants, including process selection, equipment specification, etc.;
- Construction of similarly-sized wastewater treatment plants or similar facilities;
- Operating and maintaining similarly-sized wastewater treatment plants;
- Raising third party debt financing;
- Assembling valid and binding proposals for DBFOM (or similar procurement model) projects; and
- Participating in structured competitive procurement processes.

In addition, all members of a proponent's team should be going concerns and have the financial capacity to support the RFP process and their respective roles in the project. The RFQ will ask respondents not only to illustrate their past experience, but their planned approach to the Project. The tables below summarize the evaluative approach.

Table 35 - RFQ Evaluative Criteria Part 1: Respondent Experience

Experience Category	Key Experience Needed	Key Evidence Required
Design Team Design of similarly-sized municipal wastewater treatment plants	• Treatment process selection • Design of civil, electrical, mechanical elements, controls and instrumentation • Equipment specification • Commissioning • Participation on DB-style procurements • Upgrade of operating plants	• Reference projects of similar size including performance history, both new-build and upgrade projects, including cold-weather locations and nutrient removal applications • Corporate experience of lead firms • Individual team member experience and qualifications
Construction Team Construction of similarly-sized municipal water and/or wastewater treatment plants	• Construction of civil, electrical, mechanical elements • Commissioning • Participation on DB-style procurements • Upgrade of operating plants	• Reference projects of similar size, both new-build and upgrade projects, including cold-weather locations • Corporate experience of lead firms • Individual team member experience and qualifications
O&M Team Operation and maintenance of similarly-sized municipal water and/or wastewater treatment plants	• Take-over of existing plants • Operation of plants in compliance with regulations • Wastewater compliance and performance testing • Maintenance of plants • Operation of plants during construction/major work • Participation on DB-style procurements	• Reference projects of similar size including operating history, including nutrient-removal from wastewater • Corporate experience of lead firms • Individual team member experience and qualifications
Financing Team Arrangement of short term and long term financing for P3 projects	• Arranging short-term construction financing • Arranging long-term non-recourse project financing • Commitment of equity to project financing	• Reference projects in water/wastewater or other sectors • Corporate experience of lead firms • Individual team member experience and qualifications

Experience Category	Key Experience Needed	Key Evidence Required
Proponent Lead Participation in P3 procurement processes	• Submission of valid technical and financial P3-style (e.g. DB, DBOM, DBFOM, buyouts) proposals • Completion of design-build phase of P3-style procurements • Counterparty to P3 contracts in operations phase of P3-style procurements	• Reference projects in water/wastewater or other sectors • Corporate experience of lead firms • Individual team member experience and qualifications

Respondent experience will be scored by the RFQ evaluation team. Scoring weights have not yet been determined.

In addition to past experience and qualifications, respondents will be asked to provide some insight into how they would approach the Project. Note that this will ***not*** entail asking respondents for their end solution, but rather how they will go about arriving at their technical solution and financial proposals.

The City intends to make an electronic data room available to registered RFQ respondents, allowing them to investigate the Project data to whatever depth they wish to inform the plans they put forth. The City also intends to allow respondent teams to visit the WWTP during the RFQ open period should they desire it. Both of these measures will allow respondents to tailor their submissions and better distinguish themselves from the competition should they wish to do so. The more differentiated the responses are from each other, the easier the shortlisting decision for the City.

Table 36 - RFQ Evaluative Criteria Part 2: Respondents Approach to the Project

Plan	Purpose	Key Plan Elements
Design and Construction Plan	Allow the City to assess how the respondent plans to develop an innovative and cost-certain project	• Organization and management of the design team • Assessment of existing infrastructure • Treatment process selection, including preliminary list of candidate processes that may be considered • Design process including QA/QC • Maintaining operation of the WWTP during design and construction • Obtaining permits to construct and to operate • Construction management • Construction staging • Tie-in and commissioning • Safety management • Environmental protection • Approach to assessing life-cycle cost optimization • Approach to determining plant efficiency guarantees for chemicals and electricity • Approach to delivering cost-certainty in construction and for the long term • Role of innovation
Operation & Maintenance Plan	Allow the City to assess how the respondent plans to meet the performance specification over the long term.	• Organization and management of the O&M team • On-boarding City staff and taking over management of the plant • Ensuring permit and other regulatory compliance • Maintenance management and asset management systems and approaches • Meeting handback requirements • Role of innovation • Approach to delivering cost-certainty and meeting efficiency guarantees

Plan	Purpose	Key Plan Elements
Financing Plan	Allow the City to assess how the respondent plans to arrange cost-effective financing for the Project	• Organization and management of the financing team • Determination of financing structure • Anticipated financing sources (should be highly specific for equity sources) • How funding commitments will be obtained • Approach to providing proposal security and preferred proponent security • Potential challenges to securing financing and proposed mitigation strategies
Consortium Management Plan	Allow the City to assess how the respondent will manage its various team members through the RFP period, financial close period, construction period, and long term operations period	• Consortium management structure and accountabilities • Identifying the directing mind and will of the consortium • Decision-making structure • Anticipated contractual relationships and risk allocations between consortium members

Respondent plans will be scored by the RFQ evaluation team. Scoring weights have not yet been determined.

In addition to the scored criteria, respondents' will be assessed on a pass/fail basis regarding their financial capacity to successfully design, construct, and operate the Project based on review of financial statements and calculation of standard financial ratios, as well as their capacity to fund their planned equity investments in the Project.

A Note On Treatment "Technology"

Wastewater is treated with a series of physical, chemical, and biological processes using facilities and equipment designed to facilitate those processes. A WWTP may use generic non-proprietary processes, or it may use specific pieces of manufactured equipment that are proprietary in nature – or both. The design of a WWTP will generally take all of these alternatives into account. The RFQ is not intended to pre-qualify manufacturers or vendors of wastewater treatment equipment. Such equipment decisions will be made by the proponents as part of their design processes. What the City needs from the proponents' Design Teams is proven experience in process design, the resultant equipment/technology specification, and the integration of same into the overall end-to-end treatment plant design.

7.1.3 C - Request for Proposal

The RFP stage will consist of the following key steps:

1. Issue RFP (including draft specifications and draft project agreement)
2. Confirm participation and status of proponents to ensure competitive field of three
3. Possible early technical submission of proponent's planned treatment process (or processes)
4. First round of separate bilateral meetings with each proponent on the following topics:
    a. Technical
    b. Financial and legal
5. If warranted, update draft specifications and draft project agreement reflecting proponent feedback at bilateral meetings
6. Preliminary technical submission by proponents
7. Review and clarification of technical submissions
    a. Determination of compliance with specifications
8. Second round of separate bilateral meetings with each proponent on the following topics:
    a. Technical
    b. Financial and legal

9. If warranted update draft specifications and draft project agreement reflecting proponent feedback at bilateral meetings
10. Issue final form of project agreement
11. Final technical submission by proponents
    a. Confirmation of compliance with specifications
12. Financial submission by proponents with compliant technical submissions
13. Evaluation of financial submissions to identify the preferred proponent

RFP Philosophy

As noted in Table 39, the City intends to provide considerable freedom for innovation to the Proponents for treatment process selection and design. This is possible because of the long term security provided by the private financing in the DBFOM project structure. The financing crystalizes the risk transfer, ensuring that proponents will only propose treatment processes and designs that they are confident can be reliably operated to meet the performance specifications for the long term.

With this in mind, the specifications are intended to be as performance-based as possible, with minimal prescriptive elements. While the preliminary design report will most likely be made available to proponents, there will be no requirement to use the preliminary design in full or in part. The City wishes to avoid constraining innovation in the belief that this will allow proponents to develop proposals that of greatest possible value to the City.

RFP Evaluative Procedures

The evaluative procedure is planned to be based on compliance with the technical requirements and price-based, based on the lifecycle cost of each proposal. Only proponents with compliant technical submissions will be invited to submit financial proposals.

The net present value of each proposal will be calculated, with the lowest cost proposal used to identify the preferred proponent. Only proponents with compliant technical submissions will be invited to submit financial proposals. The overall compliance and evaluation progression will be as follows:

- Compliance with proposal submission requirements (pass/fail); and
- Net present value of lifecycle costs (calculated).

Financial proposals will be required to contain a schedule of capital payments, O&M payments, and major maintenance payments in bid-year dollars over the 27.3 year operating period. They will also include the proponents' bid minimum commodity consumption efficiencies such as electrical consumption efficiency (kWh/cu.m effluent), natural gas consumption efficiency (BTU/cu.m effluent), fresh water consumption efficiency (cu.m/cu.m effluent) and treatment chemical consumption efficiency (kg/cu.m effluent for each chemical additive in the process). An indication of the proponent's capital cost will also be required so that the City's capital contribution can be calculated.

The net present value for each financial proposal will be calculated as the NPV of the City's capital contribution, the NPV of capital payments, NPV of O&M payments (indexed), NPV of major maintenance payments (indexed), NPV of electrical consumption at the minimum efficiency for an assumed annual effluent volume (indexed), and NPV of chemical consumption at the minimum efficiency for an assumed annual effluent volume (indexed). The end result of the calculation is the NPV of each proponent's offer under the same inflation and effluent flow scenarios for purposes of comparison. The indexation rates used for proposal evaluation and the discount rate used to calculate NPV will be stated in the RFP (and subject to update throughout the procurement process) and thereby known to proponents at the time of financial proposal submission. The same rates will be applied to each proponent.

It remains to be determined if an effluent flow-based variable payment component is valuable. If so, the financial proposal may also include a per-cubic-meter variable payment. The NPV of this payment would be calculated using the assumed annual effluent volume (indexed). It is also possible that such a payment would be bid at the proponent's option.

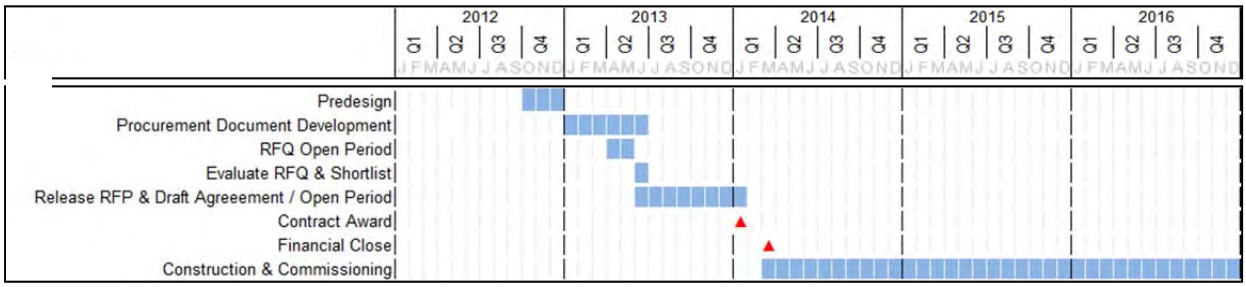
7.1.4 D – Commercial and Financial Close

The City will finalize the project agreement and coordinate the calculation of any payment adjustments that may be needed to reflect base rate and/or spread changes. It is currently anticipated that a base rate adjustment will be made, but not a spread adjustment, and that a 60-day maximum close period will be specified. The project agreement is executed to put the agreement into force.

7.1.5 Preliminary Procurement Process Schedule

The procurement process described is estimated to take approximately 11 months from release of the RFQ to selection of the preferred proponent. An allowance of 2 months for closing is made in the preliminary schedule, as shown below.

Figure 10 - Preliminary DBFOM Procurement Schedule



7.1.6 Value for Money Refreshes

Refreshing of the VFM analysis is likely to be done:

- If at any time the project scope or budget changes prior to issuance of the RFP;
- Just prior to receipt of final financial proposals, to establish a benchmark PSC that is uninfluenced by proposal contents and will be used to calculate the final VFM; and
- After receipt of financial proposals, comparing the PSC to the preferred proponent's bid to establish the final VFM.

7.2 Policy and Procurement Framework

The policy authority to undertake a DBFOM procurement is provided by the City's P3 Policy (Appendix H). City Council has designated the following key authorities to the Deputy City Manager of City Operations to enable the procurement:

- Authority to prepare procurement documents;
- Authority to prepare and issue an RFQ;
- Authority to shortlist RFQ respondents to three proponents;
- Authority to enter into a funding agreement with PPP Canada for a contribution from the P3 Canada Fund;
- Authority to prepare and issue an RFP and identify the preferred proponent; and
- Authority to enter into a P3 project agreement with the preferred proponent.

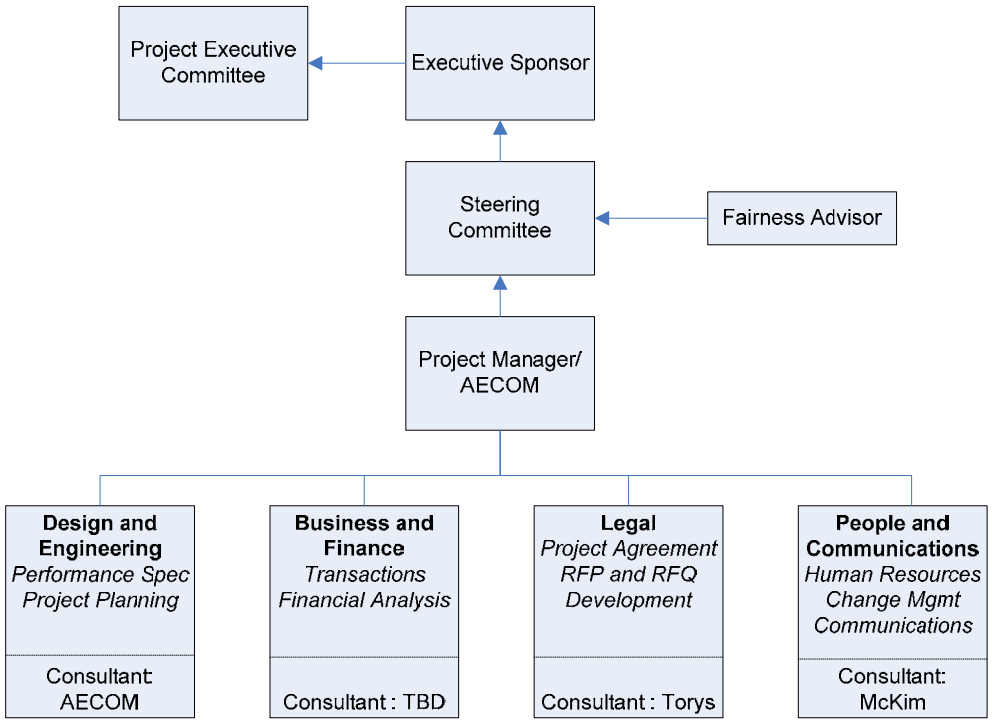
In turn the Deputy City Manager of City Operations will exercise these authorities through the project team as enabled through the governance structure (Section 7.3). The delegation of these authorities provides PPP Canada and the market of potential proponents confidence that the procurement can proceed in a timely manner according to the prescribed process.

7.3 Project Governance

7.3.1 Governance Structure

A project with the size and scope of the WWTP redevelopment requires the dedication of appropriate human and financial resources and a governance structure that will facilitate the efficient and effective execution of both the procurement process and project delivery. The City has developed a Project Charter to guide the implementation of the project. The Charter defines the fundamentals aspects of how this project will be administered and governed. The information in this section is based on the Charter (included in Appendix L).

Figure 11 - Project Governance Structure



7.3.2 Status Reporting

- The Executive Sponsor will report to City Council quarterly or when issues arise that require City Council to be advised;
- The Project Executive Committee will meet quarterly, at minimum, to review Project status and issues or more frequently when issues arise that require executive level resolution;
- The Executive Sponsor will receive updates by the Project Manager monthly, at minimum, or more frequently when issues arise that require executive sponsor level resolution;
- The Steering Committee will meet monthly at minimum or more frequently when issues arise that require Steering Committee level resolution; and
- The Project Team will meet once every two weeks at minimum or more frequently when issues arise that require Project Team level resolution.

7.3.3 Project Executive Committee

Members: Dorian Wandzura, Byron Werry, Chuck McDonald, Diana Hawryluk

Roles: The Project Executive Committee will provide Corporate oversight to the Project.

Responsibilities:

- Ensure Project is congruent with Corporate strategies, goals and objectives.
- Ensure resources are available to complete the Project.
- Monitor budget, scope, timelines and deliverables.
- Review and endorse Project Charter.
- Play an active role in the key decision-making and issue resolution.
- Take any action necessary to ensure the smooth integration of tactics and strategies within and between Projects.
- Be active and visible with City of Regina staff.
- Hold the Executive Sponsor and Steering Committee accountable for progress.

7.3.4 Steering Committee

Members: Rob Court, Derrick Bellows, Fabian Contreras, Jerry Cheshuk, Jayne Krueger, Pat Wilson, Deb McEwan

Roles: The Steering Committee will provide the overall direction to the Project.

Responsibilities:

- Ensure resources are deployed in a manner that benefits the Project and the corporation.
- Play an active role in the key decision-making, stakeholder management, risk management and issue resolution, removing obstacles and providing direction pertaining to the Corporate direction where necessary.
- Take any action necessary to ensure the smooth integration of tactics and strategies within and between projects.
- Hold the Project Manager accountable for progress.

7.3.5 Project Team

Members: Derrick Bellows, Rob Court, Jerry Cheshuk, Jayne Krueger, Dauna Ditson, Pat Wilson, Greg Jelinski, Greg Markewich

Roles: The members of the Project Team will provide subject matter expertise to different components of the Project.

Responsibilities:

- Ensures that his/her part of the project work is completed on time, within cost, and satisfies the need of the Project.
- Acts as a liaison with his or her supervisor (functional manager).
- Directs specialist outside consultants and advisors supporting the Project.
- Communicates back to the team on issues and status of their work.
- Participates in sub-project components of the overall Project.

7.3.6 Executive Sponsor

Name: Dorian Wandzura

Roles: Provide ongoing Project oversight on behalf of the Project:

- Ensuring that the Project Charter and plan meet the requirements of the Project and that appropriate consultation has occurred regarding all roles;
- Ensuring that the Project remains consistent with the approved Project Charter and Project Plans;
- Make decisions and commitments on behalf of the Corporation within authority delegated by City Council;
- Be the Administration champion of the Project.

Responsibilities:

- Be active and visible, building the change coalition with management and communicating to employees throughout the Project.
- Approve RFP/RFQ process and proponent selection.
- Enter into a P3 Project Agreement to deliver the Project.
- Submit a project application and negotiate funding agreements with PPP Canada.
- Monitor the implementation of Project plans as required by the particular Project.
- Hold the Project Manager/Steering Committee accountable for progress.

7.3.7 Functional Director

Name: Derrick Bellows

Roles: Provides leadership, ensures resources are present and elevates issues to the Executive Sponsor

Responsibilities:

- Ensures that the Project remains consistent with organizational objectives and helps the team overcome obstacles encountered during the Project.
- Ensures the Project has clear direction and support.
- Provides the resources to support the Project from the department.
- Ensures the organisation is utilizing the Project management process.
- Provides expertise in performing a specialized job, task, or skill related to the Project.

7.3.8 Project Manager

Name: Rob Court

Roles: Provides the day to day management of the Project

Responsibilities:

- Take actions necessary to ensure the smooth implementation of tactics and strategies associated with the execution of this Project, including, if necessary escalating conflicts to Functional Director as required.
- Facilitates the team process.

- Collaborates with the team to create and execute the Project Plan.
- Creates and updates the Project Charter.
- Acts as a liaison between the sponsor and the project partners.
- Works directly with PPP Canada on funding application.
- Monitors the progress of the Project and sub-projects.
- Takes any action necessary to ensure the smooth implementation of tactics and strategies associated with the execution of a particular Project, including, if necessary, escalating issues and/or conflicts to the Executive Sponsor.
- Works closely with the Change Management Lead.
- Works with Communications on the overall Communication Plan.
- Provides Status reports to the Sponsor.
- Ensures sign off by all roles indicated in the Project Charter.

7.3.9 Change Management Lead

Name: TBD

Roles: Provides change management support and advice throughout the Project

Responsibilities:

- Filled by an individual certified in the Prosci Change Management process, which is the City of Regina's corporate methodology.
- Develops a change management plan based on situational awareness of the details of the change and the groups impacted by the change.
- Conducts readiness assessments, evaluating results and presenting findings.
- Works closely with the Project Manager.
- Provides Prosci templates where required.

7.3.10 Legal Advisor

Name: Torys LLP

Roles: Provide Legal advice throughout the Project

Responsibilities:

- Legal advisor works with business advisor and other consultants in structuring the RFQ, RFP and Project Agreement.
- Lead responsibilities for the development of the main Project documentation (namely the RFQ, RFP and Project Agreement) and for coordinating the input of required schedules.
- Engages with proponents' legal counsel on Project Agreement amendments.
- May advise on procurement process matters, specifically compliance matters

7.3.11 Business Advisor

Name: TBD

Roles: Provide business and financial advice throughout the Project

Responsibilities:

- Business advisor works with project sponsor and other advisors to articulate commercial terms of the project and structures the overall transaction (e.g. Delivery model, payment mechanism, etc.)
- Develops and sometimes manages procurement process for the project sponsor, including working with legal counsel and other advisors to draft transaction documents (e.g. RFQ and RFP), facilitating commercially confidential meetings and devising and coordinating evaluation process.

7.3.12 Fairness Advisor

Name: TBD

Roles: To oversee the procurement process to ensure that it is fair and transparent

Responsibilities:

- Reviews key aspects of procurement process design;
- Monitors the execution of the procurement process; and
- Reports findings and conclusions on the Project's overall compliance with the defined procurement process.

7.4 Approval Matrix

Based on a delegation of authority delegated as described in Section 7.2, following are the key approvals required throughout the procurement process and an indication of approval authority or whether outcomes will be reported for information only.

Table 37 - Procurement Approval Matrix

	Steering Committee	Project Executive Committee	City Council	PPP Canada[28]
Develop RFQ	Approval	Information	Information	Approval
Short-list RFQ respondents	Recommend	Approval	Information	Information
Develop RFP	Recommend	Approval	Information	Approval
Develop project agreement	Approval	Information	Information	Information
Develop Technical Specifications	Approval	Information	Information	Information
Select preferred proponent	Recommend	Approval	Information	Information
Award contract / financial close	Recommend	Approval	Information	Information

The Project Manager will have day to day authority of the Project Team, which will collectively make the decisions that become enshrined in the key documents (outlined below) and which ultimately are brought to the Steering Committee for final approvals.

In addition to the approvals noted above, the City will procure a fairness advisor who will review and provide advice on the procurement process. The City will not tender or award either the RFQ or the RFP until the fairness advisor confirms that the procurement process is and was conducted in accordance with the pre-established process and evaluation criteria, including the City's P3 Policy. The fairness advisor will oversee the procurement process to ensure that it is fair and provide an independent opinion by observing and reviewing the transaction process

[28] It is assumed that as part of the funding agreement between PPP Canada and the City that PPP Canada will wish to approve any mention of the P3 Canada Fund investment that may be present in the documents.

7.5 Project Resourcing

The size and importance of the Project is recognized with a devotion of significant staff time to the Project, outlined as follows. The resources listed are the core group that will be assigned, however there are other City staff that will also support the project who are not listed but have reporting roles to the resources identified. Notable is the full time dedication of Rob Court as Project Manager, and the near full-time dedication of Derrick Bellows and Jerry Cheshuk. Also, the full spectrum of necessary City divisions is represented.

Table 38 - Project Resourcing (City Staff)

Resource	Division	Role(s)	Dedicated Time
Dorian Wandzura	DCM City Operations	Executive Sponsor, EC	20%
Derrick Bellows	City Operations (Special Projects)	Functional Director, SC, PT	70%
Rob Court	City Operation (Environmental Eng)	Project Manager, SC, PT	100%
Jerry Cheshuk	City Operations (WWTP)	SC, PT	80%
Fabian Contreras	Governance and Strategy (Strategy Mgmt)	SC, PT	30%
Pat Wilson	Corporate Services (Finance)	SC, PT	30%
Jayne Krueger	City Solicitor	SC, PT	20%
Deb McEwan	Governance & Strategy (Communications)	SC	10%
Greg Markewich	Corporate Services (Procurement)	PT	25%
Dauna Ditson	Governance & Strategy (Communications)	PT	20%
Greg Jelinski	Corporate Services (Human Resources)	PT	25%
Byron Werry	City Solicitor	EC	5%
Chuck McDonald	Corporate Services (Director of Finance)	EC	5%
Diana Hawryluk	Community Planning & Development (Director of Planning)	EC	5%
EC = Executive Committee, SC = Steering Committee, PT = Project Team			

7.6 Key Documents

The recommended procurement process described above dictates the use of the following documents. Market-accepted documents from a Canadian jurisdiction will be used as a base so as to limit the investment required by the City, and to help proponents manage bid costs. Using a market precedent is very important for the RFP and project agreement, but less important for the RFQ.

Table 39 - Key Procurement Documents

Document	Purpose and Rationale	Development Process
P3 Canada Fund Agreement	Sets out the terms and conditions for PPP Canada to advance the committed funds to the City.	A term sheet will be negotiated prior to formal funding announcement. The formal agreement encompassing the negotiated terms will be signed following the funding commitment.

Document	Purpose and Rationale	Development Process
Request for Qualifications (RFQ)	Signals the launch of the procurement process. Solicits responses from fully-formed potential DBFOM contractors. Sets out the basis for evaluation and shortlisting of respondents.	The RFQ will be based on a market-accepted document such as those used in Ontario, British Columbia, or Alberta. Modifications will be made to reflect the Project's specifics. No departures from standard practice are anticipated.
Request for Proposals (RFP)	Sets out the requirements for the shortlisted RFQ respondents (proponents) to submit proposals for the DBFOM contract. Sets out the evaluation process and criteria, timelines, submission requirements, proposal security requirements, rights of the City, etc.	The RFP will be based on a market-accepted document such as those used in Ontario, British Columbia, or Alberta. Modifications will be made to reflect the Project's specifics. No departures from standard practice are anticipated.
Project Agreement (PA)	The governing document that describes the contractual relationship between the City and the DBFOM Contractor for the duration of the contract term. Includes all terms and conditions required to crystalize the intended deal structure and risk allocation. Included in draft form with the RFP. Issued in final form prior to receipt of final proposals (i.e. not a negotiated contract, all proponents bid to the same terms).	The PA will be based on a market-accepted document such as those used in Ontario, British Columbia, or Alberta. Modifications will be made to reflect the Project's specifics. Departures from standard practice are anticipated for: • terms and conditions associated with reporting construction costs to meet PPP Canada requirements. The City has permission from the Province of Alberta to use the PA from the Evan Thomas project as a base, should it be determined suitable. The Alberta procurement documents have successfully been modified for use on municipal P3 previously, on the two City of Winnipeg transportation P3 projects – one of which received P3 Canada Fund support.
Specifications	The prescriptive and performance specifications for the project. Included as schedules to the PA and issued in draft and final forms alongside the PA. The City intends to provide considerable freedom for innovation to the Proponents for treatment process selection and design. Any restrictions on process, materials, etc. will be identified upfront in the specifications/RFP.	The owners' engineer will be responsible for the project specifications. The structure of the specifications will reflect the project agreement selected, although the unique aspects of the Project will dictate significant changes. The City has permission from the Province of Alberta to utilize the specifications from the Evan Thomas project as a base, should they be determined suitable.

Document	Purpose and Rationale	Development Process
Direct Lender Agreement	Gives the lenders the right to step in and operate the project if the DBFOM contractor fails to perform, protecting both the City and the lenders against contractor non-performance.	A standard direct lender agreement as typically used in Ontario, British Columbia, or Alberta will be the basis. The legal advisor and business advisor will make any necessary revisions. No departures from standard practice are anticipated.

The table below outlines the high-level risk allocation intended to be enabled through the procurement and the project documentation.

Table 40 - High Level DBFOM Risk Allocation

Areas of Responsibility / Risk	Allocation
Ownership	City
Standard Setting	City
WWTP Capacity Determination and Expansion Risk	City
Oversight	City
Rate Setting	City
Design & Permitting	Contractor
Construction	Contractor
Operation	Contractor
Energy & Chemical Efficiency	Contractor
Energy & Chemical Price	City
Effluent Permit Compliance	Contractor
Biosolids Quality Compliance	Contractor
Change in Environmental Regulations	City
General Non-Discriminatory Change in Law	Contractor
Routine Maintenance	Contractor
Major Maintenance (Renewal)	Contractor
End of Term Asset Condition (Handback)	Contractor
Latent Defects in Existing Assets	Shared
Construction Financing	Contractor
Long Term Financing	Shared
Changes in Base Rate Between Proposal Submission and Financial Close	City
Changes in Financing Spread Between Proposal Submission and Financial Close	Contractor
Inflation on Operating and Maintenance Costs	City

Precisely how each risk will be retained, shared, or transferred, will be determined through development of the key documents.

7.7 Payment Mechanism and Performance Indicators

The payment mechanism will follow Canadian best practice for availability-based P3 projects on a monthly payment schedule. The monthly total payment (post substantial completion) will be made up of the following three components:

- **Capital Payment**: a flat (un-indexed) payment consisting of repayment of principal and financing charges for the privately-financed portion of the capital cost;
- **O&M Payment**: an indexed payment covering routine/minor maintenance and operations costs (which will have a fixed component and may include a variable (monthly influent volume-based) component);
- **Major Maintenance Payment**: an indexed payment covering specific major maintenance investments planned by the Contractor, which may or may not be payable in any given month depending on the pattern of major maintenance payments bid by the Contractor.

Adjustments (i.e. deductions) will be made to the total payment to reflect any non-performance of the Contractor in the month. The full suite of performance indicators and the corresponding adjustments will be developed as part of the performance specification and project agreement. Both the Permit and the City's requirements will drive the development of the performance indicators.

Following is a preliminary list of likely key output metrics that will be used to measure performance and adjust payment.

- **Effluent quality** as required by the Permit:
    a. TSS
    b. CBOD5
    c. TP
    d. NH3-N (Summer and Winter limits)
    e. TN (Summer and Winter limits)
    f. Total Coliform
    g. E-Coli Coliform
    h. Total Chlorine Residual
    i. Acute Toxicity pH Adjusted;
- **Odour** at the WWTP site boundary or other specified location(s);
- Performance of **influent measurement, sampling and analysis** necessary to prove influent is within design/contract performance parameters (i.e. flow, volume, quality);
- Performance of **sampling and analysis** as required by the Permit:
    a. Within the WWTP;
    b. External sampling sites;
- **Operational requirements** of the Permit, including:
    a. Sufficient level of lead operator certification;
    b. Maintenance of an emergency response plan;
    c. Notification of process upsets or bypasses;
- **Reporting to the regulator** as required by the Permit;
- **Maintenance of operational records and logs** as required by the Permit;
- **Maintenance of plans required by the City:**
    a. Quality management plan
    b. Asset management plan

    c. Environmental health and safety plan
- **Commodity use efficiency** bid by the Contractor (electricity, gas, water, treatment chemicals, etc.);
    a. For commodities paid for directly by the City, commodity costs for any over-consumption will be deducted from the monthly total payment;
    b. For commodities paid for by the Contractor and flowed through on the monthly invoice, the City will reimburse the contractor only for the amount of the commodity that would be consumed if the bid plant efficiency had been met or exceeded.
- Weekly, monthly, and annual **reporting to the City** (the contractor will be required to report on operational performance, maintenance completed, upcoming projects, plan updates, etc. on a regular basis, with the routine and on-time reporting itself being a performance indicator);
- **Activity frequencies** (there may be specific operating or maintenance activities that the City does not wish to leave to the Contractor's discretion, in which case the performance of those duties will be a performance indicator);
    a. Calibration and maintenance of key instrumentation needed to ensure contract compliance and/or payment measurement;
    b. Testing of interfaces with City or other operational procedures;
- **Handback quality** (several years prior to handback, third party inspections will be done and the Contractor will be required to supply its remediation plan. If the plan is found wanting by the City, it will have the right to make payment adjustments equivalent to withholding the total monthly payment , adjustments to be released to the Contractor only upon satisfactory rectification of condition to meet the handback specification).

The Contractor's monthly invoice for payment will be accompanied by all records necessary for the City to confirm compliance with the performance indicators.

The payment mechanism during the design and construction phase will reflect the significantly lower level of risk transfer achievable in that period, and is anticipated to be considerably simpler and based on risk-share and some decision-making share with regard to operations decisions. The contractor cannot be held to commodity efficiencies during this period as it has no control over the existing infrastructure and no base of experience to commit to specific levels.

8 Implementation plan

8.1 Project Status

The project is in readiness to proceed with DBFOM procurement. All future work anticipated is related to the DBFOM procurement, such as condition inspections of the exiting WWTP infrastructure, preparation of the key documents listed in Table 39, and procurement of the business advisor and fairness advisor. The preliminary design, which is already complete, will inform the development of the technical specifications.

Stakeholder Consultation

The following table lists key stakeholders and the status and plans for consultation and communication. Considerable detail is provided in the Communications Strategy, included as Appendix J.

Table 41 - Stakeholder Consultation and Communication

Stakeholder	Consultation and/or Communication Planned
Citizens of Regina	The City has communicated the need for the Project and order of magnitude costs for several years in documents such as the Strategic Plan and Water and Sewer Utility budgets as routine course of business. The City has launched Phase 1 of the Communication Strategy, which updates the public on the need for the Project and the anticipated cost. Phase 1 deliberately does not introduce discussion of the delivery model. Phase 2 was launched upon public tabling of the DBFOM recommendation. This phase furthers the communication of the need for the Project and the selection of the DBFOM model as the best approach for project delivery during the "open period" between public tabling and Council approval. Phase 3 was launched upon Council's approval of the DBFOM recommendation. This phase proactively supports the decision post-approval until such time as the contract is signed. The City will also communicate Project status as a routine business practice throughout the construction and operation/maintenance stages.
Saskatchewan Ministry of Environment	Extensive consultations have led to the terms of the Permit. The City will continue to apprise MOE of its progress towards the identification of a Contractor, and educate MOE about the DBFOM process and the respective roles of the City and Contractor. The participation of MOE in the procurement process, in the provision of non-binding comment to Proponents on technical submissions, may be explored with MOE. This may be beneficial in reducing permitting risk in the eyes of proponents.
WWTP Employees / CUPE Local 21	WWTP employees and CUPE Local 21 were advised of the City's intent to examine delivery model options, including P3 options, in June 2012. They have also been advised of Council's approval of the DBFOM recommendation. The City has a Letter of Understanding with CUPE Local 21 which has consultation provisions to be followed related to contracting out, primarily notification and discussion. Legal requirements will govern the consultation with WWTP staff.

Stakeholder	Consultation and/or Communication Planned
Downstream Water Users	Targeted with the same information as citizens of Regina.
Others	The City has engaged with other stakeholders for information exchange, including First Nations and the federal government.

8.2 Approvals

With City Council's approval of the DBFOM recommendation, the Project is in a state of readiness to proceed to development of the procurement documents and initiate launch of the RFQ. All authority necessary to initiate the procurement and award the contract has been delegated to the City's Administration.

Remaining Procurement-Related Approvals

City Council has approved the following recommendation:

> *That City Council authorize the Deputy City Manager of City Operations to proceed with an RFQ while awaiting a PPP Canada funding decision, but the Deputy City Manager of City Operations shall not issue an RFP without first confirming that the City will receive PPP Canada funding for the Project.*

The commitment of P3 Canada Fund investment through the approval of the Minister of Finance (or sufficient assurance of pending approval in the judgment of the City) is the only external approval needed to fully execute the procurement strategy to the point of contract award and financial close. This presents a risk to the procurement strategy schedule that can only be mitigated through cooperation between the City and PPP Canada.

City Council has approved the following recommendation:

> *In principle, the ability to pursue up to 30 year debt up to $118.3 million. All debt issues require City Council approval through a debt borrowing bylaw, and will be brought forward to Council at a future date. In addition, the financial model includes payments to cover debt principal and interest payments that must be paid and recovered from revenue streams over 30 years.*

On February 25, 2013 City Council approved, in principle, the financial model for the Project, including the need to borrow money for the Project. Section 134 of *The Cities Act* requires that the precise amount of borrowing and the interest rate be known and incorporated into a borrowing bylaw, therefore the approval in principle is the strongest endorsement that City Council can legally make until the Preferred Proponent is identified and the financial close process is underway.

Post-Procurement Approvals

MOE has indicated that the Project does not require an environmental assessment. The two key permits required for the project to proceed are the Permit to Construct Sewage Works and Permit to Operate Sewage Works – both issued by MOE. A building permit will also be required from the Rural Municipality of Sherwood. There may be other authorizations required in the course of design and construction, as outlined in Appendix K. These are all relatively routine course-of-business permits and are low risk for the Project.

Approvals Received to Date

All necessary approvals were received with Council's approval of the WWTP Upgrade Procurement Recommendation on February 25, 2013. A copy of the recommendation was provided to PPP Canada at the time the documentation was made public.

Transfer of WWTP Staff to P3 Contractor

The Office of the City Solicitor, Human Resources Division, and the Project Legal Advisor have investigated the transfer of WWTP staff to the DBFOM contractor. In Saskatchewan, The Trade Union Act, requires that where an employer is taking on work formerly done by unionized employees, that the new employer must accept the collective bargaining agreement such employees were working under. Therefore, the DBFOM contractor will be required to accept the WWTP employees and the collective agreement in place with such employees. A letter of understanding with the union requires the City to meet with the union to discuss the contracting out before it occurs. It does not require the union's consent to any contracting out.

8.3 Project Schedule and Implementation Plan

The table below outlines the key steps in the implementation plan, and relevant dates, with the figure providing a view of the overall preliminary schedule.

Figure 12 - Preliminary DBFOM Procurement Schedule and Implementation Plan Stages

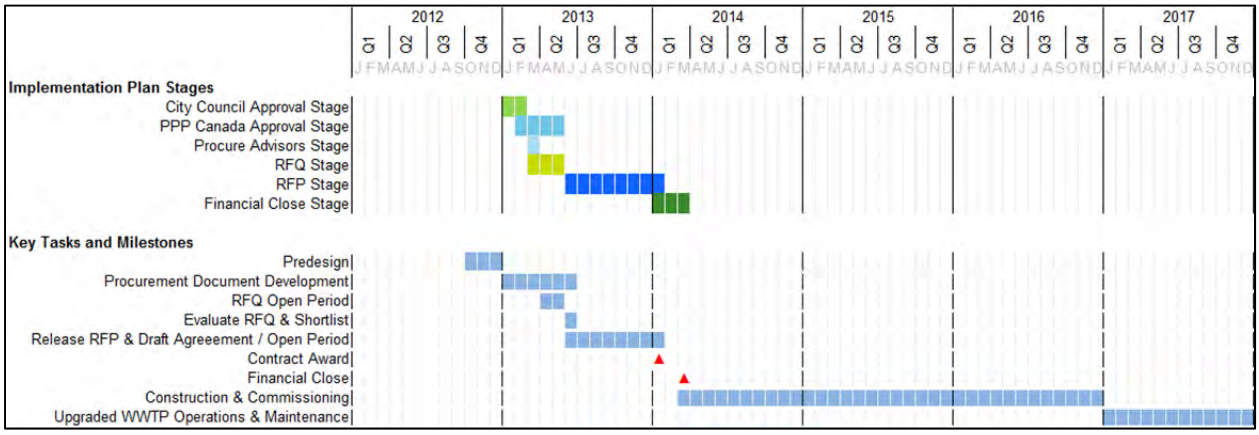


Table 42 - Implementation Plan Schedule

Step	Date
Submission of Draft Business Case to PPP Canada	January 17,2013
Council Meeting to Approve WWTP Upgrade – Procurement Recommendation	February 25, 2013
Submission of Business Case to PPP Canada	February 26, 2013
PPP Canada reviews submission	January to March 2013
Preparation of RFQ	March to April 2013
PPP Canada Board reviews recommendations	March 2013
PPP Canada approves P3 Canada Fund investment request	Spring 2013
City undertakes RFQ process to select proponents	April to June 2013
City selects three proponents to proceed to RFP	June 2013
City undertakes RFP process to select preferred proponent	June 2013 to January 2014
Borrowing bylaw approved	February/March 2014
Financial close and contract award	February/March 2014
Contractor begins DBFOM and assumes operation for 30 year period	Spring 2014
Construction begins	Spring 2014

Step	Date
Construction reaches substantial completion / permit compliance reached	Fall 2016 – Spring 2017

The key activities in the six implementation plan stages are described in the following sub-sections.

8.3.1 City Council Approval Stage

In this stage, City Administration will take forth the *WWTP Upgrade Procurement Recommendation* which delegates all necessary authority to the City Administration to proceed with the DBFOM procurement. The stage culminated on February 25, 2013, with City Council's approval of the recommendation and the subsequent submission of this business case to PPP Canada in support of a request for P3 Canada Fund support of 25% of eligible costs up to $58.7 million. The recommendation allows all subsequent stages of the implementation plan to proceed.

8.3.2 Procure Advisors Stage

As authorized by City Council through approval of the *Wastewater Treatment Plant Upgrade - Procurement Team Contracts Recommendation* on February 25, 2013, in this stage, the City will procure the remaining two advisors needed to round out the advisory team, namely:

- Business Advisor (i.e. procurement and financial advisor); and
- Fairness Advisor.

The City will procure these advisors using its Qualifications Based Selection process. This entails a Stage 1 submission of a description of respondents' capabilities to satisfy the City's requirements. For each of the advisory roles, the City then shortlists to one firm and requests a work program and fee estimate in anticipation of negotiation of a final contract.

The procurements for Owners Engineer and Legal Advisor have already been completed, with AECOM and Torys LLP filling those roles, respectively.

8.3.3 PPP Canada Approval Stage

This stage commences with submission of the business case to PPP Canada and culminates with PPP Canada's funding commitment. During this period, which runs in parallel with the RFQ Stage, the City will assist PPP Canada in its review of the business case and provide additional information and clarification as needed to enable PPP Canada's review.

8.3.4 RFQ Stage

This stage commences with preparation of the RFQ document and culminated with shortlisting of three respondents to be invited to participate in the RFP process.

Preparation

Key tasks in this stage include:

- Selecting the precedent RFQ document to use as a base (from Ontario, Alberta, BC, and City of Regina examples);
- Refinement of the evaluative criteria outlined in Table 35 and Table 36;
- Development of the scoring weights; and
- Drafting the RFQ document.

This work will be led by the Business Advisor and Legal Advisor and supported by the Project Team including the Owner's Engineer. The Steering Committee will approve the RFQ document.

In addition, prior to release of the RFQ, the data room and project office will be established by the Owner's Engineer. Protocols for site visits from registered RFQ respondents will also be developed.

Open Period

The RFQ will be released publically on the City website and Merx and relevant industry news media notified of same. Registered respondent teams will be provided access to the data room and with site access. The City's customary procedures for receipt of questions and providing clarification answers will be followed.

RFQ Evaluation

Prior to receipt of responses, the RFQ evaluation team will be formulated and an evaluation guide prepared. Evaluation sub-committees may be comprised of City and Advisor staff to ensure that the appropriate expertise is available for evaluation.

Sub-committees of the team will be assigned to evaluate and score the respondent experience in design, construction, O&M, financing, and proponent lead categories. The same sub-committees will evaluate and score the relevant respondents' plans (design and construction, operations and maintenance, financing, and consortium management). The Business Advisor will evaluate the financial capacity and capability and report to the project team on recommended pass/fail evaluations. Upon completion of the evaluation, overall respondents' scores will be calculated and the top three respondents identified.

The fairness advisor will observe the evaluation process and report out to the Steering Committee as may be requested.

8.3.5 RFP Stage

This stage commences with the preparation of the RFP document and draft Project Agreement, and concludes with the identification of the Preferred Proponent.

Preparation

Key tasks in this stage include:

- Mapping out the proposal schedule including the number and timing of technical and legal/financial bilateral meetings, form and timing of proposal submissions (technical and financial), and resourcing and timing of technical submission reviews
- Selecting the precedent RFP and Project Agreement documents to use as a base (from Ontario, Alberta, or BC likely), including an assessment of alignment with City policy and provincial law, and the philosophical approaches in each jurisdiction as to: degree of involvement in project financing, need for committed financing, reliance on financial model, need for transparency in capital cost to satisfy PPP Canada requirements, etc.
- Refinement of the risk matrix and development of allocation strategies and legal / payment mechanisms to enforce same, including approach to latent defect in existing infrastructure risk;
- Development of the payment mechanism and penalty regime;
- Determining the appropriate level and form of proposal security and Preferred Proponent security, including approach to release of the latter (all at once, staged, etc.);
- Development of the RFP document;

- Development of the Project Agreement, including determining the City's position on key deal points and issues such as Force Majeure, Compensation on Termination, Change Orders, staff transfer, etc.; and
- Development of the technical specifications (which are part of the Project Agreement) including performance requirements, minimum material/equipment standards, handback standards, etc.

The draft Project Agreement and technical specifications will be released with the RFP. The RFP will only be made available to the shortlisted RFQ respondents, i.e. the "proponents".

This work will be led by the Legal Advisor, with the exception of the technical specifications development which will be led by the Owner's Engineer, all with the support of the Project Team.

Open Period

Key tasks during the open period include:

- Responding to proponent written questions, responses to be coordinated by the Project Manager;
- Tracking necessary changes to the RFP and Project Agreement that stem from clarifications and question responses;
- Attending bilateral meetings to discuss technical and legal/financial concerns of proponents, and deliberating (among the Project Team) on possible changes to the project documentation in response to common and valid concerns of proponents;
- Reissuing project documents to proponents if necessary;
- Coordinating and facility proponent inspection of the WWTP;
- Evaluating technical submissions for compliance with specifications, including the clarification of proponent's intent through a written clarification process;
- Evaluating financial submissions for compliance and calculating NPV of financial offers to identify preferred proponent (see Section 7.1.3 for a description of the calculation approach).

The Project Manager will be responsible to coordinate the Project Team and ensure adherence to the proposal schedule. The fairness advisor will observe the bilateral meetings and changes to the project documents and report out to the Steering Committee as requested.

Evaluation

Prior to receipt of responses, the RFP evaluation team will be formulated and an evaluation guide prepared. Evaluation sub-committees may be comprised of City and Advisor staff to ensure that the appropriate expertise is available for evaluation.

Technical submissions will be reviewed to determine compliance with the technical specifications. Where necessary, the evaluation team will request clarification of the technical submissions as needed to confirm compliance. Just prior to submission of financial proposals, proponents will be required to resubmit their technical proposals "as clarified" as part of their firm and binding proposal. City staff and advisory team members will comprise the technical evaluation team.

Financial submissions will be checked for compliance and completeness. The Business Advisor will calculate and report to the City the net present value of the financial offers to determine the preferred proponent.

The fairness advisor will observe the evaluation process and report out to the Steering Committee as may be requested.

8.3.6 Financial Close Stage

This stage commences with the identification of the Preferred Proponent and concludes with financial close. During this stage, key tasks from the City's standpoint include:

- Obtaining City Council approval of the borrowing bylaw indicating the precise amount of principal and rate of interest on the contractor-provided financing, and (City financing if any is needed);
- Clearing any conditions precedent in the project agreement that are the responsibility of the City;
- Coordinating and calculating the base rate adjustment just prior to financial close; and
- Executing the project agreement.

8.4 Post-Procurement Contract Administration

The City will ensure that sufficient resources are dedicated to administering the DBFOM contract during the design/construction and operations/maintenance period to ensure that the contractually allocated risk transfer is in fact achieved in practice.

During design/construction, the Project Manager support of the Owners Engineer will have responsibility for monitoring construction progress and compliance with specifications and liaising with the contractor and its advisors in respect of any requests for milestone and/or completion payments.

During the operations/maintenance period, a contract manager will be responsible ensuring that the planned-for risk transfer is maintained by receiving and reviewing monthly performance reports and requests for payment from the contractor. A procedures manual will be developed to outline the review and payment procedures to be followed by the contract manager so that over time, as staff changes are made, a consistent approach is applied that is consistent with the DBFOM agreement.

Appendix A – Executive Summary of Preliminary Concepts Report

REGINA Infinite Horizons | City of Regina

Draft, May 31, 2012

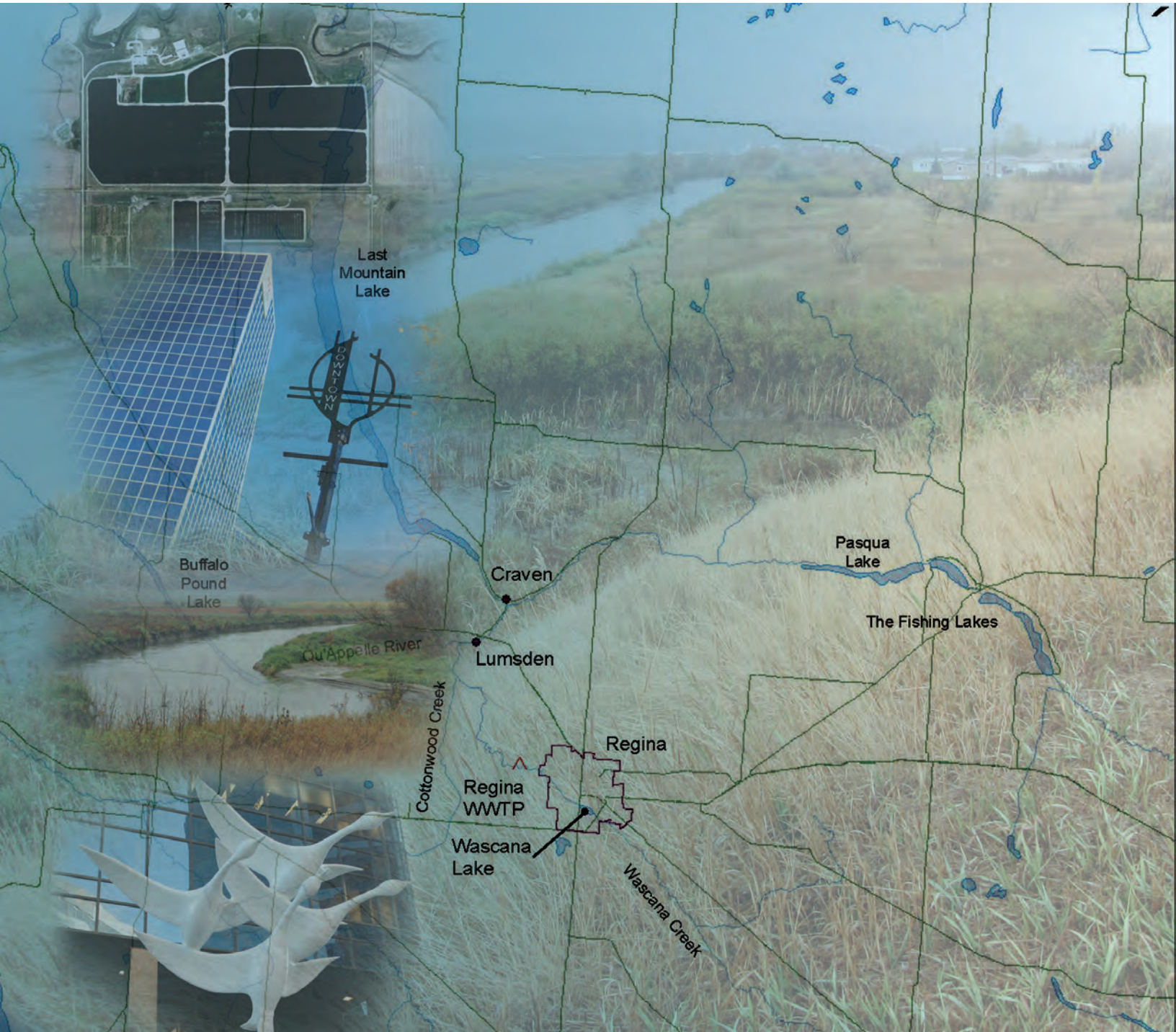
AECOM

executive summary

City of Regina

WASTEWATER TREATMENT PLANT UPGRADE

PRELIMINARY CONCEPTS REPORT



The City of Regina's Vision for the New Wastewater Treatment Plant

The City of Regina aspires to become Canada's best run municipality. A cornerstone of this is to provide services that enhance the quality of life for our community and our customers which include our citizens, our neighbours and the environment.

The City has a vision of an easily constructible and efficient wastewater treatment plant that uses sustainable principles through the overall project, where staff, designers and constructors work co-operatively to deliver the project safely, on time and on budget.

The Regina WWTP discharges treated effluent into Wascana Creek approximately 8km downstream of the City.

The City's Goals for the Wastewater Treatment Plant Upgrade

- Meet permit obligations
- Deliver the project on time and on budget
- Demonstrate innovation in municipal infrastructure
- Incorporate sustainability and value added principles such as reuse of water and resource recovery
- Raise awareness of this large investment and connect it to the City's environmental stewardship efforts
- Utilize procurement processes that connect the designer and the constructor
- Ensure the design is easily constructible and efficient
- Satisfy the City's rate payers and customers

The existing wastewater treatment system has served the City very well for over 50 years

Significant investment will be required to bring the existing plant up to current code standards and address condition deficiencies.

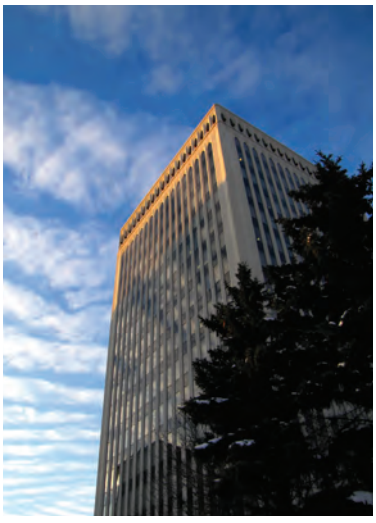
Code and Condition Upgrade Cost Summary							
Plant Area	Architectural	Process Mechanical	Structural	HVAC Mechanical	Electrical	Instrumentation & Controls	Area Total
Primary Treatment	$0	$1,890,000	$0	$6,450,000	$2,000,000	$200,000	$10,540,000
Digesters	$0	$900,000	$6,000	$1,250,000	$225,000	$200,000	$2,581,000
Sludge Dewatering	$0	$1,370,000	$0	$600,000	$160,000	$160,000	$2,290,000
Lagoons	$0	$1,769,000	$0	$150,000	$665,000	$5,000	$2,589,000
Tertiary Treatment	$0	$1,110,000	$6,000	$1,200,000	$540,000	$60,000	$2,961,000
UV Treatment	$0	$3,200,000	$0	$300,000	$0	$0	$3,500,000
Miscellaneous	$20,000	$320,000	$75,000	$50,000	$340,000	$90,000	$895,000
ROUNDED TOTALS:	**$20,000**	**$10.5 million**	**$87,000**	**$10 million**	**$3.9 million**	**$0.7 million**	**$25.4 million**
						+ 25% CONTINGENCY ($6.6 million):	**$32 million**

Even with these code and condition upgrades, the new effluent limits proposed by Saskatchewan Ministry of Environment will not be met.

The New Wastewater Treatment Plant Will...

- Meet the Provincial and Federal regulatory requirements
- Support the continued growth of Regina which is projected to reach 258,000 people by the year 2035
- Improve the quality of the treated water discharged to Wascana Creek
- Recover and reuse valuable resources generated where appropriate
- Capture opportunities to reduce the City's emissions of Greenhouse Gases

The Regina WWTP is a major contributor of nutrients to the Qu'Appelle River.



Current and Proposed Effluent Limits

The new wastewater treatment plant must meet the new effluent limits established by the Saskatchewan Ministry of Environment (MOE) and the Federal Government.

Parameter	Current Permit	Future Permit	Notes
Ammonia (mg/L N) (Summer/ Winter)	No Limit	4 / 10	(April 1 to November 30) (December 1 to March 30)
Total Nitrogen (mg/L) (Summer/ Winter)	No Limit	10 / 14	(June 1 to November 30) (December 1 to May 31)
Total Phosphorus (mg/L)	1	0.75	
E.Coli Bacteria (/100 mL) (Summer/ Winter)	100 (May 1 – Oct 31) 200 (Mar 15 – Apr 30) No Limit (Nov 1 – Mar 14)	100 / 200	(May 1 to Oct 31) (November 1 to April 30)
Total Suspended Solids (mg/L)	25	15	
Carbonaceous Biochemical Oxygen Demand (mg/L)	25	15	
pH	6 - 9	Not Specified	

By meeting the new effluent limits, the City will reduce its impact on the Qu'Appelle River.

Summary of Design Parameters

Design Year	2035
Projected Population Served	258,000
Per Capita Wastewater Contribution	355 Litres/person/day
Average Annual Flow Rate	92 MLD
Average Dry Weather Flow	86 MLD
Maximum Daily Flow	195 MLD
Peak Hourly Wet Weather Flow Rate	450 MLD
Average Annual Load to WWTP	
Chemical Oxygen Demand	37,455 kg/d
Biochemical Oxygen Demand	18,728 kg/d
Total Suspended Solids	22,105 kg/d
Total Kjeldhal Nitrogen	3,460 kg/d
Total Phosphorus	529 kg/d

Regina is continuing to prosper and is projected to reach a population of 258,000 by 2035. The new WWTP will be designed to meet the needs of the growing City.

The Decision Making Framework

There are many solutions that have potential to meet the City's requirements. A structured and transparent decision making process was used to identify and select the most beneficial treatment processes and approach to the upgrades.

Step 1	Step 2	Step 3	Step 4	Step 5
Collect information from a variety of sources to generate a long list of treatment and resource recovery opportunities	Evaluate the long list to generate a short list of treatment and resource recovery opportunities that have the highest potential to meet Regina's needs	Develop the concepts of the shortlisted alternatives and rank them using The Triple Bottom Line Methodology	Integrate the preferred processes into a whole system	Describe the features of the whole system and carry it forward into the Preliminary Design Phase

The Triple Bottom Line (TBL) Methodology

- TBL integrates three indexes of sustainability (economic viability, environmental protection, and social responsibility) into a structured framework that allows decisions to be made on complex issues where many criteria and variables have to be considered.
- The TBL methodology used in other jurisdictions was customized to reflect Regina's conditions and goals. This was done through a series of workshops including City staff from various departments such that the TBL model reflects the City's circumstances as closely as possible.
- A fourth index to reflect alignment with the City's managerial goals and strategies was included.
- A percentage was assigned to each index to reflect its importance relative to the other three indexes.

A decision making process that reflects Regina's goals and priorities was developed and applied to find the best overall approach to the upgrade of the WWTP.

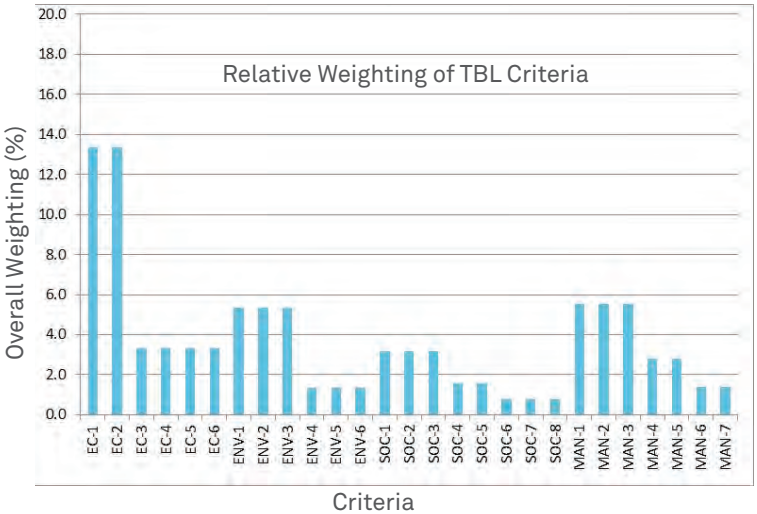
- Economic Viability was deemed to be the most important factor as fiscal responsibility to its rate payers and citizens is of significant importance to the City. The Economic index was consequently assigned the highest relative importance of 40%.
- Environmental Protection was also deemed to be of high importance to the City both from the perspective of meeting its regulatory obligations and because of its corporate responsibility and commitment in this area. It was recognized that only alternatives that will meet the requirements of the operating license issued by Saskatchewan Ministry of Environment are being considered, so this in itself places a high importance on environmental protection. So that this index does not have an inappropriately high influence on the evaluation, the Environmental index was assigned a value of 20%.
- Social Responsibility and Aligning with Managerial Goals and Strategy were deemed to be of similar importance. Aligning with Managerial Goals and Strategy was assigned a higher value of 25% to reflect the immediate impacts on staff safety, and reliability and operability of the new plant. Social Responsibility was assigned a value of 15%.

- For each index, a number of criteria were selected to better describe the attributes of the index. A percentage was assigned to each criterion to reflect its importance relative to the other criteria associated with that index.
- Each alternative was evaluated and scored against each index and its criteria.

TBL Indexes and Criteria

TBL Index	Criterion	Overall Weighting and Contribution to TBL Score
Economic (40 %)	EC-1 Capital Cost	13.3%
	EC-2 O&M Cost	13.3%
	EC-3 Costs for Future Expansions and/ or Upgrades to Meet More Stringent Regulatory Requirements	3.3%
	EC-4 Dependence on Commodities that are Subject to Market Variability	3.3%
	EC-5 Capital Costs Eligible for Potential External Funding	3.3%
	EC-6 Financial Risk	3.3%
Environmental (20 %)	ENV-1 Enhance Receiving Water	5.3%
	ENV-2 Sustainable Outcomes	5.3%
	ENV-3 Protect Global Climate	5.3%
	ENV-4 Effluent Reuse	1.3%
	ENV-5 Agricultural/Terrestrial Resources	1.3%
	ENV-6 Protect Air Quality	1.3%
Social (15 %)	SOC-1 Public Safety	3.2%
	SOC-2 Odour Emissions	3.2%
	SOC-3 Quality of Community Life	3.2%
	SOC-4 Public Acceptance	1.6%
	SOC-5 Regional Growth and Socio-Economic Benefits	1.6%
	SOC-6 Impacts During Construction	0.8%
	SOC-7 Impacts on Cultural Resources	0.8%
	SOC-8 Land Use	0.8%
Aligning with Managerial Goals and Strategy (25 %)	MAN-1 Staff Safety	5.6%
	MAN-2 Robustness of Treatment Processes	5.6%
	MAN-3 Operations Activities	5.6%
	MAN-4 Maintenance Activities	2.8%
	MAN-5 Innovation	2.8%
	MAN-6 Third Party Agreements and Partnership Management Efforts	1.4%
	MAN-7 Existing Core Business Practices	1.4%

Economic viability, environmental protection, social responsibility and alignment with the City's goals and strategies are the cornerstones of the decision making methodology.



An Extensive List of Processes was Generated to Capture all Potential Treatment and Resource Recovery Opportunities (Step 1)

The knowledge of AECOM staff of processes that are being applied in similar situations elsewhere, expressions of interest received from technology developers, external experts and a market sounding were used.

Liquid Stream (37 alternatives were reviewed)

- In-Sewer Bioaugmentation
- Chemical Treatment
- Lagoon Retrofit (10 Alternatives)
- Activated Sludge (7 Alternatives)
- Integrated Fixed Film Activated Sludge (2 Alternatives)
- Attached Growth (7 Alternatives)
- Hybrid (2 Alternatives)
- Membranes (2 Alternatives)
- Side Stream (5 Alternatives)

Biosolids (9 alternatives were reviewed)

Land Application
- Agriculture
- Landscaping
- Land Reclamation
- Silviculture

Landfilling
- Landfill Cover
- Landfill Disposal

Industrial
- Cement Manufacturing
- Fertilizer Manufacturing

Deep Well Injection

Wet Weather (15 alternatives were reviewed)

- Off-Line Storage (3 Alternatives)
- Full Treatment Capacity
- Blending with High Rate Side Treatment (11 Alternatives)

Water Reuse (9 alternatives were reviewed)

- Agriculture
- Silviculture
- Landscape Irrigation
- Industrial Reuse
- Groundwater Recharge
- Recreational/Environmental
- Non Potable Urban Reuse
- Potable Reuse (Indirect)
- Deep Well Injection into Deadwood Aquifer

Resource Recovery (11 alternatives were reviewed)

- Phosphorus Recovery from Sidestreams (4 Alternatives)
- Phosphorus Recovery from Sludge (5 Alternatives)
- Ammonia Recovery from Wastewater (2 Alternatives)

Green Energy (13 alternatives were reviewed)

Energy Recovery Opportunities
- Energy from Effluent
- Heat Recovery Ventilation
- Pre-Heating Raw Sludge with Hot Digested Sludge

Energy Production Opportunities
- Wind Turbine
- Combined Heat & Power 4 Alternatives)
- Co-Digestion
- Hydroenergy
- Solar Drying
- Sterling Engine
- Algae Biofield

Technologies that had the potential to provide benefits to Regina were considered.

Short Listing of Treatment and Resource Recovery Opportunities (Step 2)

The technologies in each group were reduced to an initial short list based on an assessment of their applicability in Regina. The short listed technologies must meet the following criteria:

- Proven in a similiar scale and similiar application as Regina
- Practical given the regulatory, environmental, and socio-economic framework in Regina
- Not cost prohibitive

The initial short list consisted of 17 liquid treatment technologies, 4 end uses for the biosolids, 3 water reuse opportunities, 5 wet weather treatment technologies, 7 green energy technologies, and 3 resource recovery opportunities.

To efficiently reduce the number of technologies and opportunities, a qualitative comparison of the economic and operability aspects of each option was conducted. This resulted in a reduced short list as follows:

Liquid Stream

Activated Sludge	Description
Option 1a - Conventional Activated Sludge with Biological Phosphorus Removal (BNR) [Base Case]	• Activated sludge in a BNR configuration to provide cBOD, TSS, ammonia, nitrogen and phosphorus reduction • Main components include bioreactors, secondary clarifiers, return activated sludge (RAS) pumping and fermenters (required for BNR) • Effluent filtration to reliably meet the low TSS, CBOD and phosphorus limits
Option 1b – Conventional Activated Sludge with Chemical Phosphorus Removal	• Similar to Option 1a except that chemicals are used for phosphorus removal • Fermenters are not required
Option 1c – Step Feed Activated Sludge with Biological Phosphorus Removal	• Similar to Option 1a except that primary effluent is fed to the bioreactors in a stepped fashion resulting in a reduction in bioreactor volume
Option 1d – Step Feed Activated Sludge with Chemical Phosphorus Removal	• Similar to Option 1c except that chemicals are used for phosphorus removal • Fermenters are not required
Option 1e – Integrated Fixed Film Activated Sludge (IFAS) with Chemical Phosphorus Removal	• A hybrid attached and suspended growth process using a conventional activated sludge process with synthetic media in the aeration tank resulting in a reduction in aeration tank volume • Chemicals are used for phosphorus removal • Fermenters are not required
Extended Aeration Activated Sludge	
Option 2 – Extended Aeration Activated Sludge in Lagoons with Chemical Phosphorus Removal	• Biolac system installed in the aerated lagoons for nitrification and some denitrification. Further denitrification provided by denitrifying filters • Secondary clarifiers, RAS pumping, effluent filtration and chemical dosing for phosphorus removal are required • Fermenters are not required
Sequencing Batch Reactors (SBR)	
Option 3 – Sequencing Batch Reactor (SBR) with Chemical Phosphorus Removal	• Activated sludge bioreactors arranged in a sequenced and batch configuration • Secondary clarifiers and RAS pumping are not required • Chemicals are used for phosphorus removal • Fermenters are not required
Moving Bed Biofilm Reactors (MBBR)	
Option 4 - Moving Bed Biofilm Reactor (MBBR) with Chemical Phosphorus Removal	• Biofilm grows on plastic carriers with a high internal surface area which are kept suspended in the bioreactor • Secondary clarifiers are required • Chemicals are used for phosphorus removal • Fermenters are not required

Biosolids

Industrial Reuse and Deep Well Injection do not meet the short listing criteria. Alternatives for the other two end uses, Land Application and Landfilling, were analyzed with the following options shortlisted:

Land Application

Option1a– Advanced Anaerobic Digestion and Liquid Application to Agriculture [Base Case]	• Thermophilic anaerobic digestion producing Class A biosloids • Digested biosloids stockpiled on site • Land application of the liquid
Option1b– Anaerobic Digestion and Liquid Application to Agriculture	• Similar to Option 1a except that mesophilic digestion is used • Produces Class B biosolds
Option 2 – Anaerobic Digestion and Cake Disposal to Agriculture	• Similar to Option 1b except that biosolids are dewatered prior to land application • Produces Class B biosolids

Landfill

Option 3 – Anaerobic Digestion and Cake Disposal to Stockpile	• Conventional anaerobic digestion and dewatering • Cake is stockpiled at the on-site landfill
Option 4 – Anaerobic Digestion and Disposal to Landfill as Cover	• Similar to Option 3 except that cake is hauled to the City's landfill and used as cover material
Option 5 – Composting and Disposal to Landfill as Cover	• Primary solids and undigested secondary solids are dewatered • Dewatered solids are composted with organic admixture • Compost is used as cover material at the city's landfill
Option 6 – Thermal Oxidation and Ash Disposal to Landfill	• Raw sludge is dewatered and thermally oxidized • Ash is disposed in the City's landfill

Wet Weather

All four options on the initial short list were carried forward.

Off-line Storage

Option 1 – Storage in Lagoons	• Flow in excess of maximum flow to secondary treatment (156 ML/d) will be diverted to the lagoon. • Stored flow will be returned to the head of the treatment plant once the wet weather event has subsided

Full Treatment

Option 2 – Treatment in Mainstream Process	• The capacity of the mainstream treatment process is increased to accommodate the wet weather flow

High Rate Side Treatment and Blending

Option 3a – Treatment in Existing Lagoons and Blending	• Flow in excess of maximum flow to secondary treatment (156 ML/d) will be diverted to the lagoon for treatment • Lagoon effluent is blended with secondary plant effluent • Combined flow is disinfected prior to discharge
Option 3b – Ballasted Flocculation and Blending	• Flow in excess of maximum flow to secondary treatment (156 ML/d) will be diverted around the secondary treatment process and treated using a high rate process • Combined flow is disinfected prior to discharge

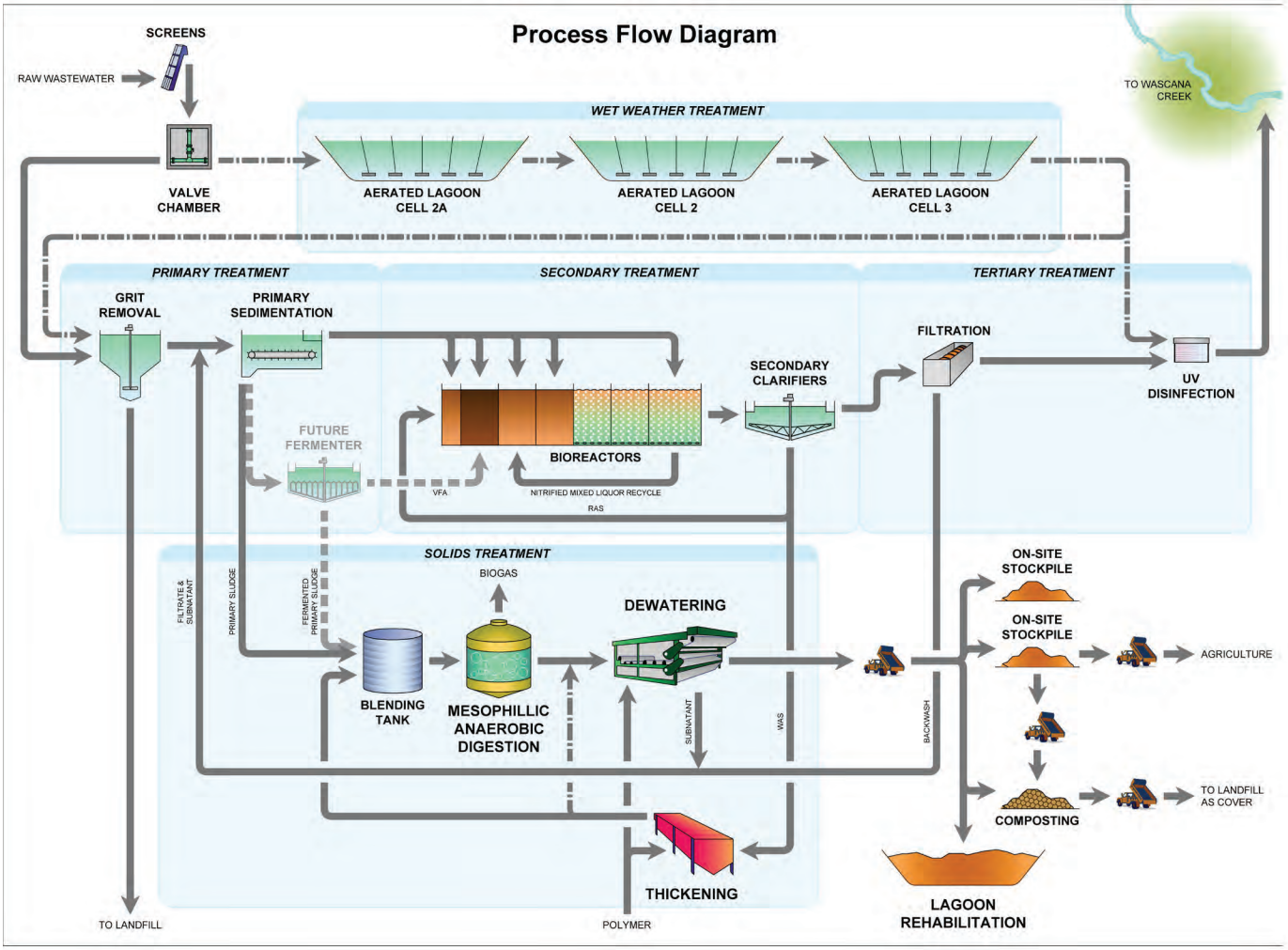
Water Reuse, Resource Recovery and Green Energy opportunities can be added onto any of the foregoing solutions and will be investigated further during the Preliminary Design Phase.

TBL Methodolgy Used to Produce a Recommended Approach (Step 3)

For the liquid stream, biosolids, and wet weather treatment, the short listed processes were evaluated using the TBL methodology. Workshops were held with City representatives to discuss each alternative in greater detail. With this greater understanding of the characteristics of each alternative, the scoring was reviewed and refined, producing the following preferred alternatives:

Liquid Treatment	Conventional Activated Sludge with Chemical Phosphorus Removal Provisions made to allow conversion to biological phosphorus removal in the future
Biosolids Treatment	Secondary sludge thickening, mesophilic anaerobic digestion, and dewatering Multiple disposal outlets including: • On-site disposal • Composting at the landfill • Use sludge to rehabilitate Lagoons 1S and 4 (requires approval from MOE) • Application on agricultural land (requires MOE approval)
Wet Weather Treatment	Off-line storage in the lagoons Stored flow returned to the head of the plant for treatment after the wet weather event subsides

The preferred alternatives were integrated into an overall treatment system to produce a Recommended Approach (Step 4)



The Recommended Approach to the Upgrade of the Regina WWTP (Step 5)

Wastewater Conveyance

Raw wastewater from Regina is collected at McCarthy Boulevard Pumping Station where it is screened using 6 mm bar screens and then pumped in twin forcemains to the WWTP. Upgrades at McCarthy Boulevard Pumping Station are ongoing and are not considered a part of the WWTP Upgrade Project.

Wastewater is also generated at the new Global Transportation Hub and pumped, unscreened, into the forcemains at the Valve Chamber.

Valve Chamber

The McCarthy Blvd PS discharges wastewater to the WWTP via a valve chamber which allows the wastewater to be diverted to the lagoons if deemed necessary. The chamber will be modified to allow the diversion to be automated and the flow split between the plant and lagoons to be controllable.

Grit Removal

The existing aerated grit tanks will be replaced with a modern grit removal system.

Primary Sedimentation

No additional primary clarifiers are required, as there is adequate capacity in the existing three to treat the design peak flow of 156 ML/d. The pumps which lift the primary effluent to the lagoons will be decommissioned, as they will no longer be needed. The present overflow structure (which diverts primary effluent to the creek if the pumps fail) will be modified to a gravity feed chamber to the new secondary treatment tanks.

Secondary Treatment

A conventional activated sludge system for BOD, TSS, ammonia, and nitrogen reduction will be constructed. Phosphorus will be removed using chemical precipitation similar to the City's present practice for phosphorus removal.

Tertiary Filtration

Secondary effluent will flow by gravity to a new filtration plant where 50 % of the average flow will be filtered with the other 50 % bypassing filtration and blended back with the filtered effluent. Disc filters are proposed.

Disinfection

The blended secondary and filtered secondary effluent will flow by gravity to a UV disinfection system. Either the existing UV system will be upgraded or a new UV disinfection facility will be constructed. Further assessment to finalize the approach will be carried out in the Preliminary Design Phase.

Biosolids Management

The primary and secondary sludge will be thickened, digested at 35°C without oxygen generating methane fuel and then dewatered. Several disposal outlets for the dewatered biosolids will be included to provide operational flexibility. The three primary outlets are 1) on-site stock-piling, 2) composting, and 3) lagoon rehabilitation. The on-site material can be applied to agricultural land or sent to composting. The composted material can be used for landfill cover.

Wet Weather Flow Treatment

When the flow rate to the secondary treatment process exceeds 156 ML/d, the raw wastewater will be diverted at the existing valve chamber to lagoon cells 2, 2A, and 3. The cells will be equipped with aerators to provide mixing and aeration. When the wet weather event subsides, the stored flow will be returned to the head end of the plant or to a point downstream for further treatment prior to discharge.

Estimated Capital Cost:

$ 192 million
Class C estimate (±20%)
Projected to year 2015 Q3

Estimated Operating & Maintenance Cost:

$ 7.5 million
Projected to year 2017

Code and Condition Upgrades:

$ 23 million
Class C estimate (±20%)
Projected to year 2015 Q2
Components that are incorporated into the WWTP Upgrade are not included

Total Project Cost:

$215 Million
Class C Estimate (±20%)
Projected to year 2015 Q3

The Next Steps

Preliminary Design:
Further analysis of the recommended approach will be conducted to finalize outstanding decisions. Further details will be developed on all aspects of the treatment processes, effluent reuse and energy recovery opportunities, and support infrastructure. This will allow City staff to provide further input into the design of the new facility at an early date. It will also allow the capital and operating costs estimates, and the implementation schedule to be refined.

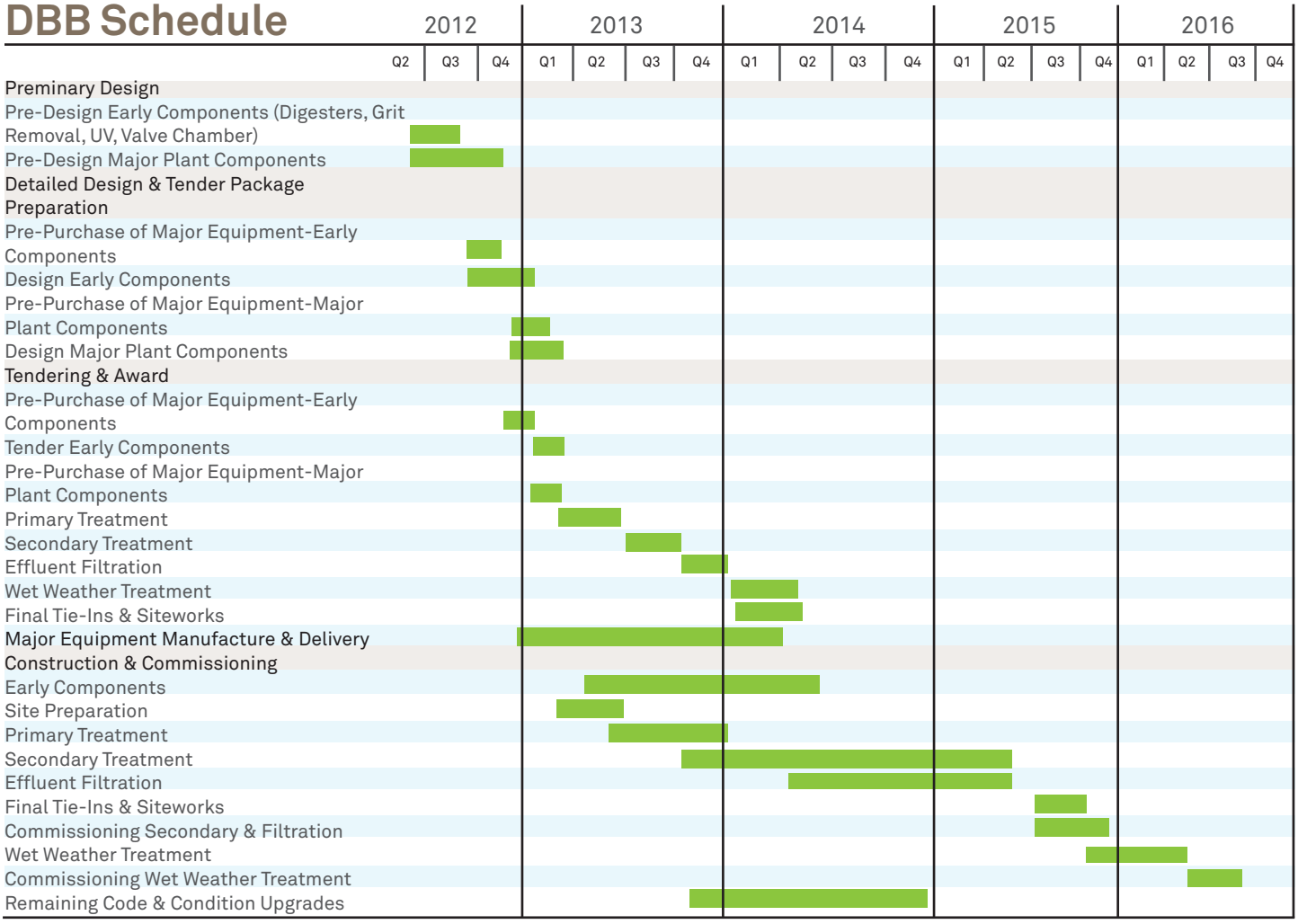
Elements of the recommended approach that need to commence early will be identified, for example where existing plant components are in urgent need of replacement or upgrade. Decisions will be made on whether to get an early start on the design and construction of these components.

Alternative Service Delivery:
The alternative methods for delivery of the project will be explored to identify to most advantageous approach for the City.

Detailed Design:
If the conventional Design-Bid-Build (DBB) project delivery method is to be employed, the detailed design will be completed to allow the construction work to be tendered.

Construction and Commissioning:
Construction will commence upon award of construction contracts and the completed facility will be brought into operation, commissioned and handed over to the City.

DBB Schedule



List of supporting Technical Memoranda produced during the Preliminary Concepts Plan:

- Collaborative Software Selection
- Flow & Load Projections and Wastewater Characterization
- Expert Advisor Terms of Reference
- Code and Condition Assessment and Priority Upgrade Requirements
- Desktop Unit Capacity Assessment
- Microconstituents
- Benchmarking Data Review
- Collection System Interaction
- Hydraulic Design Considerations
- Staffing Requirements and Operations & Maintenance Centre Needs Assessment
- Geotechnical Desk Study
- Green Energy Assessment
- Triple Bottom Line Decision Making Framework for the Regina WWTP
- Effluent Limits Assessment
- Digester Troubleshooting
- Technology Review
- Biosolids Technology Review
- Water Reuse Opportunities Review
- Wet Weather Treatment Technology Review
- Green Energy Technology Review
- Resource Recovery Technology Review

Appendix B – City of Regina Corporate Strategic Plan

IMAGINE
REGINA
2020

ACCELERATING EXCELLENCE

City of Regina Corporate Strategic Plan
2008 - 2012

Regina
CITY OF REGINA

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Message from the Mayor & City Council

My Council colleagues and I are extremely enthusiastic about the release of the five-year corporate strategic plan for the City of Regina, **Accelerating Excellence.**

To create a new Vision for Regina, City Council and senior managers worked side-by-side with the goal of developing a Vision that Council and City Administration could support, and that the community could embrace. Built on our new Vision, this strategic plan sets the course for attaining our goal of becoming the best run municipality in Canada.

Development of this strategic plan required innovative thinking. Bringing together City Council, City employees and our citizens in our strategic planning is critical to ensuring the most effective, collaborative use of the City's resources. Thanks to vision-based decision making of the Executive Leadership Team, along with the support of our employees, we're already seeing positive changes in how we provide service to our citizens.

Creating a strategic plan can be challenging... the rewarding part is the implementation. We are confident that this strategic plan will help us achieve our Vision for Regina – Canada's most vibrant, inclusive, attractive, sustainable community, where people live in harmony and thrive in opportunity.

First Row: His Worship Mayor Pat Fiacco

Second Row: Councillors Michael Fougere, Sharron Bryce, Jerry Flegel, Bill Gray

Third Row: Councillors Wade Murray, Jocelyn Hutchinson, Terry Hincks

Fourth Row: Councillors Mike O'Donnell, Louis Browne, Fred Clipsham

Message from the City Manager

Glen Davies

I am honoured to lead our corporation into the future and guide our progress to achieving our Vision and Mission. I am confident that with all employees working together, we will be successful. Regina is an exciting place to live and grow together.

Accelerating Excellence is the theme for our initial five-year corporate strategic plan. Our City has seen significant growth and change over the past few years and it is our duty as employees of the City of Regina to ensure we continue to provide quality services to our community while balancing fiscal responsibility.

We must quickly mobilize our employees on all fronts to be ready to demonstrate excellence and manage our City's growth. This means having the right people, skilled and equipped to do their jobs, as well as the right processes in place to manage our infrastructure and assets.

We want to keep pace with the demands and expectations of our community and Council. This strategic plan is about accelerating our potential, accelerating our abilities and capabilities and most importantly, accelerating our provision of excellent customer service.

We have already accomplished a lot. We have started to significantly re-organize our structure to be a high performance, customer-focused organization. We have a newly created Executive Leadership Team that is motivated and dedicated to our strategic plan.

This is our first strategic plan and we are committed to improving our future planning processes by enhancing the way we engage our community, Council and employees. In order to demonstrate our progress and be accountable, we will publicly report on our corporate performance every six months.

I congratulate my Executive Leadership Team and all employees on completing this initial plan. I look forward to achieving our Mission together – that of becoming the best run municipality in Canada.

"I am honoured to lead our corporation into the future and guide our progress to achieving our Vision and Mission. I am confident that with all employees working together, we will be successful. Regina is an exciting place to live and grow together."

Our Line of Sight

The diagram on this page represents the line of sight for our planning process. Each component of the process is explained below:

Line of Sight is the connection between the highest level of planning and the day-to-day activities of our employees.

Vision is an all-inclusive, forward thinking statement that describes our aspirations for the future. The Vision will guide the City in identifying its Strategic Priorities.

Mission defines our purpose.

Strategic Priorities set the overall focus of the strategic direction for the next five years.

Key Areas of Focus define specifically what we will work on.

Outcomes define what we will accomplish.

Divisional Business Plans are the next level of planning which will detail activities that support our strategic plan.

Values serve as a framework to guide the daily actions and decisions of our employees and articulate our standards.

Performance Management is a systematic approach to the measurement of our activities against targets, taking action on results and communicating our progress.

CITY OF REGINA STRATEGIC PLANNING FRAMEWORK

Our Strategic Plan

Strategic planning strengthens the relationship between our community, Council and our employees by engaging us all in:

- Vision-based decision making and priority setting;
- A planning process with a clear connection or "line of sight" between the highest level of planning and day-to-day activities; and
- Measuring our efforts against our stated objectives by providing a corporate report card.

Accelerating Excellence is the highest level of planning in our corporation and represents a roadmap for our entire organization. It takes direction from Council and communicates our Vision, Mission and Values.

It guides the Administration by identifying our Strategic Priorities, enabling our Divisions to develop and align their business plans. Combined, these elements form the "line of sight" for our community, Council and employees. The implementation of this framework will unite us in working together to achieve our desired Outcomes and ultimately realize our Vision for the City of Regina.

How it was developed

Our strategic plan was developed with the collaboration and co-operation of Council and employees in keeping with our Accountability Framework.

The strategic planning process included:

- City Council and senior managers working side-by-side to develop our Vision;
- Employees providing input through focus groups, departmental workshops and interviews; and
- The Executive Leadership Team planning together - environmental scanning, reviewing employee input, developing a Mission statement, confirming our Values, setting Strategic Priorities, and endorsing a Performance Management Program.

City of Regina Accountability Framework

Where we go from here

Now that we have the highest level of strategy in place, we will focus on:

- Implementing processes resulting in aligned business, work and project plans;
- Individual employee objective setting processes;
- Expanding our capabilities in performance measurement; and
- Enhancing Council and community engagement activities in planning.

Our Vision

Imagine Regina 2020

Canada's most…

Vibrant,

Inclusive,

Attractive,

Sustainable community…

where people live in Harmony

and Thrive in opportunity.

Our Mission

We aspire to be the best run municipality in Canada providing services that enhance our quality of life.

We serve our community, support the Vision of Council and live our Values.

Our Values

To fully achieve our Vision and Mission, all employees, at every level of the corporation, need to behave in an appropriate and consistent manner. Our Values provide the script for these behaviours. They communicate the essential qualities and elements we will demonstrate as we carry out our day-to-day activities. Our Values are non-negotiable and we expect they will shape the actions of all employees.

Our Values bring focus to our commitment to customer service and will guide us in becoming a contemporary workplace. They set the standards we will work within, articulate expectations for our community, Council and each other, and form a foundation for performance measurement and management.

How we will Live our Values

Our Values are intended to be detailed enough for employees to understand our expectations. They are not intended to provide specific examples of behaviour or to set targets for service delivery.

The details of how our Values are translated into our day-to-day activities will be articulated in the next level of planning – our business plans and Performance Management Program.

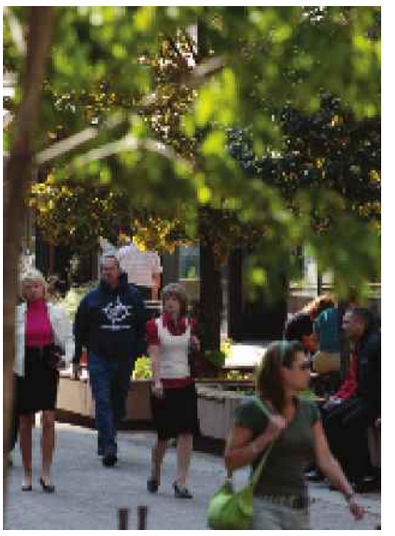
Our City team is Committed to the following Values

Performance Driven & Accountable

We all demonstrate leadership qualities. We instill a sense of mutual responsibility, open communication and teamwork while being accountable to each other, our community and Council. Our efforts are performance driven and outcome based.

Responsive & Respectful

We cultivate a professional environment by being responsive and respectful in our conduct and interactions. We focus on safety, diversity and mutual respect.



Innovative & Creative

We continuously improve by promoting innovative approaches to our work and how we serve our community and Council. We are creative, purposeful and take measured risks which results in new ways of doing business and being cost effective.

Focused on Excellence

We are results oriented, providing excellent, responsive and accessible service.

Our Strategic Priorities

We will focus on four Strategic Priorities over the next five years. Together, through our accomplishments in these areas, we will further our progress and strengthen our capacity to achieve our Vision and Mission. In embracing our future, we have recognized that our City is growing, our buildings are aging, demographics are changing and funding from other levels of government is limited. The expectations of our community are increasing and we must continue to employ high quality employees who can provide exceptional customer service.

Through our planning process, we have identified the need to focus on four critical dimensions - Growth, Assets, Organization and Customer. We need the right people to provide services within a strong, sustainable City that is prepared for growth and community development. We are balanced in our approach with four aligned and equally important priorities. Each year, our business plans will articulate how we will achieve these priorities by focusing our attention to the right areas at the right time.

The illustration below depicts the balanced framework we will use to measure performance and report on our four Strategic Priorities.

Strengthen City Infrastructure & Manage Assets

This Strategic Priority is related to strengthening our City infrastructure systems and managing other tangible and financial assets. It ensures that our City is strong and financially sustainable.

OUR KEY AREAS OF FOCUS

WE WILL COMPLETE

- The development and implementation of long term asset management strategies which will promote the utilization of best practices that ensure the sustainability of City assets and infrastructure, for example:
    - A Facilities Plan which will review all of our facilities with a view to revitalization
        - An implementation plan to address the recommendations in the Recreation Facilities Strategy (RFS 2020)
    - A long-term Technology Plan which includes a focus on supporting our workforce needs and ensuring the security of our systems
- A long term Financial Plan utilizing innovative, balanced financing strategies
    - Funding strategies for infrastructure renewal and long-term asset maintenance and replacement

OUR OUTCOMES

WE WILL ACHIEVE

A strong and financially sustainable City through:

- Effective financial management
- A responsive, diverse, well-managed open space system that includes parks, pathways, the urban forest and landscapes
- Reliable water, wastewater, storm and roadway infrastructure
- Revitalized facilities
- Effective fleet management
- Appropriate and efficient information technology tools in a secure environment

ALIGNS & ENABLES OUR VISION ASPIRATIONS
~ ATTRACTIVE ~ ~ SUSTAINABLE ~ ~ THRIVE ~

Ensure Organizational Capacity & Effectiveness

This Strategic Priority ensures we have the right people and processes in place, that we are as effective and efficient as possible, and that we are continuously improving.

OUR KEY AREAS OF FOCUS	
WE WILL COMPLETE	• The introduction of a full planning cycle, which includes the development of divisional business plans, detailed work plans and a corporate Performance Management Program • The development and implementation of a long-term People Practices Plan (Corporate Strategic Human Resources Management Plan) that will enable the City to become a contemporary workplace ◦ An organizational re-structuring that focuses on accountability, effectiveness and efficiency ◦ The implementation of our Workforce Diversity Program which includes initiatives that strengthen Aboriginal partnerships ◦ The development of employee participation initiatives that promote two-way communication, involvement in process improvement, and regular employee engagement surveys • Continued implementation of Core Services Review recommendations
OUR OUTCOMES	
WE WILL ACHIEVE	An effective and efficient organization that continuously improves through: • Improved business plans and models • Effective performance measurement and performance management • Skilled, knowledgeable and engaged employees, supervisors and managers • A representative workforce
ALIGNS & ENABLES OUR VISION ASPIRATIONS ~ INCLUSIVE ~ ~ HARMONY ~	

Manage Growth & Community Development

This Strategic Priority ensures we anticipate and prepare for our City's growth and are responsive to the needs of our community.

OUR KEY AREAS OF FOCUS

WE WILL COMPLETE

- A new Official Community Plan that responds to current circumstances and addresses future growth needs based on the four pillars of sustainability: environment, economic, culture and social
- A Master Transportation Plan that provides for the effective and efficient movement of people and goods, considers all modes of transportation, and accounts for intermodal opportunities
- A long-term Infrastructure Plan that ensures adequate funding is generated for growth infrastructure requirements
- Annual review of Servicing Agreement Policy
- Expansion of the wastewater treatment plant to meet new regulatory requirements and City growth
- Downtown and Neighbourhood Plans which encourage continued economic investment and provide strategic direction for future land use decisions and for investment of public funds towards enhancement of City streetscapes and infrastructure
- A comprehensive Community Development Plan that identifies priorities for the City's level of support to community organizations and level of responsibility and involvement in social programming
- Monitor the growth and development of existing and new residential areas to ensure the provision of fire and emergency services continue to meet the 6/10 response objective

OUR OUTCOMES

WE WILL ACHIEVE

A responsive approach to meeting the needs of our community through:

- A compact urban form and sufficient supply of land for future growth
- Increased pedestrian, bicycle and public transit use
- Optimization of existing infrastructure capacity
- Directed investment to enhance vibrancy of downtown
- Targeted community development activities within inner city neighbourhoods
- A consolidated approach to providing community investments
- A safe living and working environment for the community

ALIGNS & ENABLES OUR VISION ASPIRATIONS
~VIBRANT~ ~SUSTAINABLE~ ~THRIVE~

Achieve Operational Excellence

This Strategic Priority focuses on providing excellent customer service to our community.

OUR KEY AREAS OF FOCUS	
WE WILL COMPLETE	• The implementation of the City's Performance Management Program with established service level standards and metrics based on a combination of inputs, outputs and outcomes • The implementation of our Customer Service Strategy which will strengthen customer service delivery capabilities to our community ◦ A review of our customer contact processes with implementation of identified improvements • The development and implementation of a Public Engagement Framework • Operational activities such as: ◦ The implementation of our new Winter Road Maintenance Policy ◦ A Transit Service Review and an implementation plan to address its recommendations ◦ A review of our Paratransit delivery capabilities ◦ A review of our Street Sweeping Program ◦ The development of a Solid Waste Management Plan
OUR OUTCOMES	
WE WILL ACHIEVE	Excellence in customer service through: • Increased customer awareness and involvement • Increased customer satisfaction • Efficient, customer-focused processes

ALIGNS & ENABLES OUR VISION ASPIRATIONS
~ VIBRANT ~ ~ HARMONY ~

Our Progress Towards Success

To ensure our long term success, we will embed our Vision, Mission and Values into how we manage our services, resources and assets. To ensure they are at the forefront of day-to-day management decisions, we will develop a Performance Management Program that will establish benchmarks and service levels, report our progress and demonstrate we are operating in a fiscally responsible manner.

Performance Management Program

The Performance Management Program (PMP) will become our framework for measuring progress, success and overall achievement. It will enable us to monitor and manage our strategic and business plans, as well as document continuous improvement objectives. The PMP:

- Translates our Vision, Mission, Values and Strategic Priorities into concrete performance measures;
- Identifies and establishes best practice benchmarks for us to strive towards;
- Tracks performance over time, identifying trends, progress and opportunities for further improvement;
- Motivates and harmonizes our efforts; and
- Promotes the sharing of results through a common language, thus enabling organizational learning and high performance.

What will be Measured

The PMP will provide different levels of detail depending on the audience or user of the information. At the Corporate level, a full and balanced view of performance will be reported under Growth, Assets, Organization and Customer. For day-to-day management of our activities, a finer level of detail will be required.

Through our strategic planning process, we have inventoried over 500 existing metrics. We have organized and aligned some of these to the Outcomes included in the strategic plan. Our next steps include:

- Streamline metrics that should continue to be measured;
- Develop new metrics and outcome measures; and
- Establish baselines and targets for improvement.

Corporate Performance Goal

Our overarching corporate performance goal is stated in our Mission – that of being the best run municipality in Canada. To measure our progress, we will participate in the National Quality Institute's (NQI) Progressive Excellence Program. We will undergo assessments of our quality improvement effort and aim to achieve NQI's highest level of certification.

Our Organization

The Administration for the City of Regina operates through the Office of the City Manager and four Corporate Divisions. Together, we deliver services to the community and serve Council. Each of our unique Divisions play a vital role in our Administration. Our Divisional Mandates communicate what we do.

Office of the City Manager

Mandate

We are Council's link to the Administration. We provide executive direction, strategic guidance and governance support to the Corporation and its officials. We facilitate in the areas of government relations, strategic planning, communications, customer service and organizational effectiveness. We advise and support on matters of municipal governance, strategy and protocol, and ensure the City operates according to the rule of law.

Community & Protective Services

Mandate

We are dedicated to engaging and supporting the citizens of Regina. We contribute to building a safe, healthy and caring community by providing fire and protective services, parks and open space services, community, recreation and cultural programs and services and, public transportation services that respond to the community's needs and expectations.

Planning & Development

Mandate

We provide a long-term comprehensive approach to planning, engineering and development processes to ensure the efficient use of land and community infrastructure in creating a City that reflects Council's Vision and the goals of Regina residents. Specifically, the Division encompasses land use, neighbourhood, transportation and infrastructure planning, long-range capital planning, development review, building permits and inspection, and real estate services.

Public Works

Mandate

We ensure the City's municipal infrastructure systems are effectively preserved, funded and operated. We are dedicated to implementing best practices that advance safety, consistency, efficiency, reliability and customer service. Specifically, we preserve and operate municipal infrastructure involving roadways, traffic, water, drainage, waste water and solid waste to meet regulatory requirements and community needs.

Corporate Services

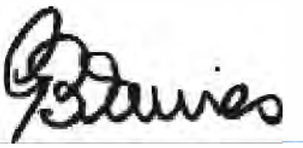
Mandate

We excel in providing services and support to our customers, both internal and external; enabling the organization to maximize its effectiveness and potential. Our Corporate Services team includes Financial Services, Information Technology Services, Human Resources, Fleet Services and Facilities and Energy Management.

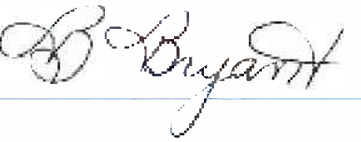
Our Commitment

As the City of Regina's Executive Leadership Team, we pledge our commitment.

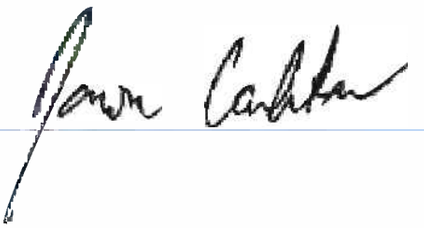
Glen Davies
City Manager



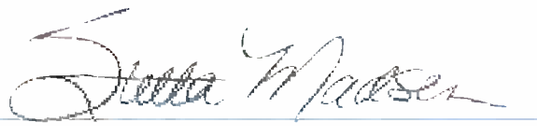
Bonny Bryant
General Manager
Community & Protective Services



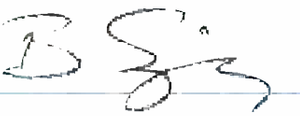
Jason Carlston
General Manager
Planning & Development



Stella Madsen
General Manager
Public Works



Brent Sjoberg
General Manager
Corporate Services



Regina
CITY OF REGINA

For further information about our strategic plan, please contact:

City Manager at 777-7314, or
Manager, Strategic Planning & Corporate Performance at 777-7887

IMAGINE REGINA 2020

ACCELERATING EXCELLENCE

Regina

CITY OF REGINA

Appendix C – Phase 2 Market Sounding Guide

Deloitte.

City of Regina WWTP Upgrade Project

Stage 2 Market Sounding Guide

CONFIDENTIAL

November 7, 2012

Table of contents

1 Introduction

1.1 Purpose

The City of Regina (the "City") is assessing the use of P3 delivery models for its upcoming wastewater treatment plant upgrade and expansion project (the "Project"). This Stage 2 market sounding exercise is intended to gauge the market interest and capacity to participate in DBOM or DBFOM models. A Stage 1 market sounding was conducted earlier in 2012 which examined a wider range of models.

1.2 Participation

The market sounding will be conducted by Deloitte and AECOM in confidence. Any input provided will not be attributed to specific companies. However, the City will be aware of the companies interviewed in this market sounding process. Report(s) to the City will contain findings based on market sounding input (but will not identify specific companies), and may be circulated in municipal, provincial, and federal government departments.

Whether or not a company participates in the market sounding, or is invited to participate or not, will have no bearing whatsoever on the eligibility of the company to participate in any future procurement of the Project.

1.3 Limitations

This document was prepared for the exclusive use of the City and distribution to market sounding participants, and is not intended for general circulation or publication, nor is it to be reproduced or used without written permission of Deloitte. It relies on certain information provided by third parties, none of which Deloitte has independently reviewed. No third party is entitled to rely, in any manner or for any purpose, on this report. Deloitte's services may include advice or recommendations, but all decisions in connection with the implementation of such advice and recommendations shall be the responsibility of, and be made by, the City.

The information provided regarding the Project is general in nature, subject to change, and is intended only to provide the basis for discussion with market sounding participants.

2 Project overview

2.1 Authority Overview

The City of Regina is located in the heart of Canada's prairie provinces, in the southern region of the province of Saskatchewan, approximately 180 kilometers north of the US border. Regina is the capital city of Saskatchewan, and is a civic and cultural hub within the Province; home to a major university, prominent research and development institutes, international airport and several sports and cultural groups.

The population of Regina is approximately 200,000, and is expected to increase significantly within the next 10 – 20 years. The economy of Regina is linked to the province's natural resources and agricultural industries, however, within the City, commercial offices and services provide the main source of employment.

The City owns and operates the existing WWTP.

The WWTP can be seen on Google Maps at: http://goo.gl/maps/Jkc8c

2.2 Project Overview

Wastewater treatment in Regina dates back to 1956 when the first lagoons were put into service. Shortly thereafter in 1958, new wastewater pumping, comminution, grit removal and chlorination processes were added. A fine bubble aeration system was introduced to the lagoons in 1965 and two deeper lagoons were constructed in 1975. The tertiary phosphorus clarification system was also put into service in 1975. The current preliminary and primary treatment systems, anaerobic digestion and dewatering processes were added in the early 1980s. The UV system was put into service in 1995 and one of the original aerated lagoons was converted to sludge storage and another lagoon was added in 1996.

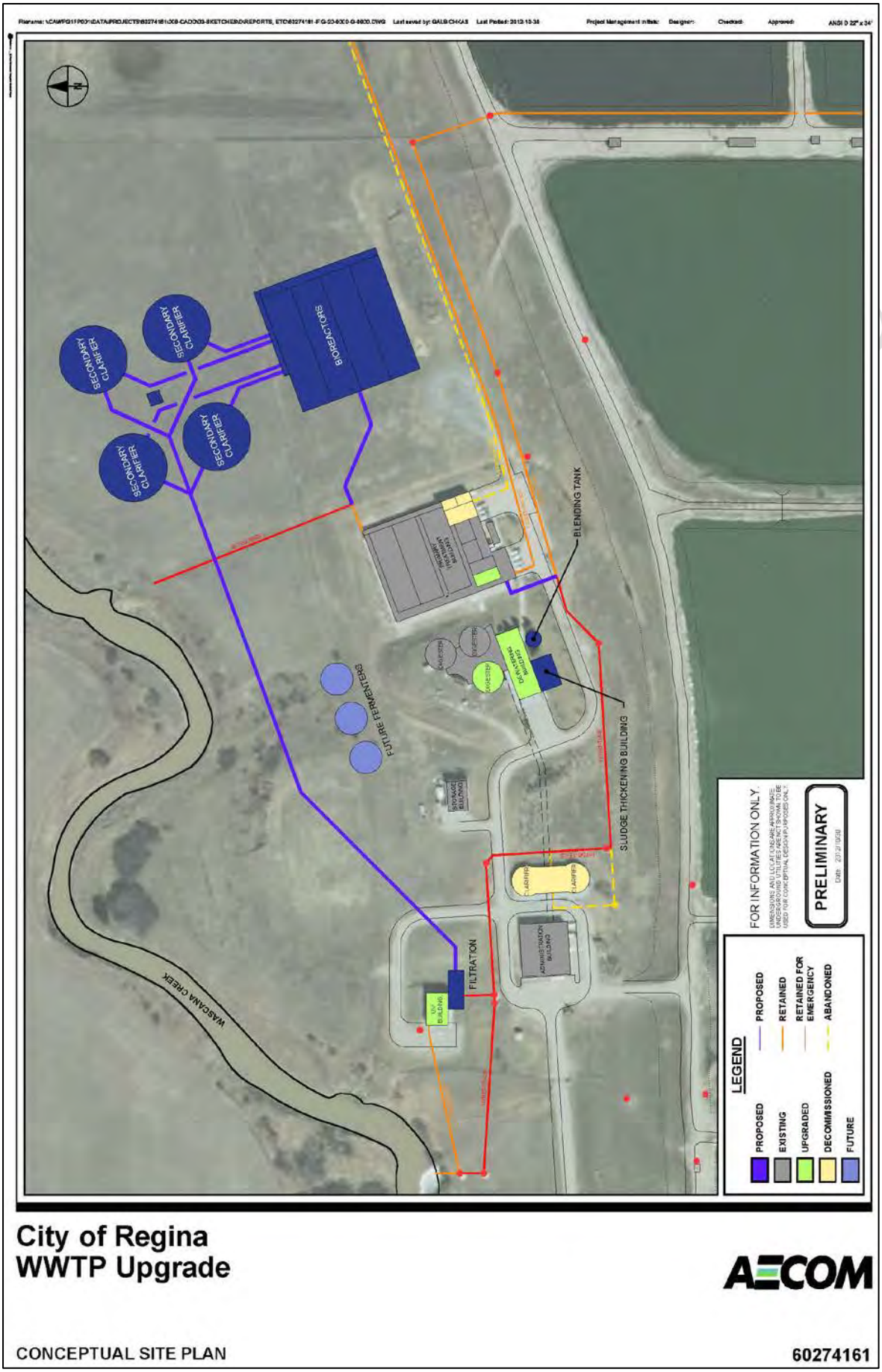
With continued and projected growth in the City and more stringent regulatory requirements, which are due to take effect at the end of 2016, the City of Regina is undertaking a comprehensive review of its wastewater treatment processes and is planning a major wastewater upgrade program. Between now and the year 2035, which is the planning horizon for the wastewater upgrade program, the population in Regina is expected to grow from approximately 200,000 to 258,000 and average day wastewater flows discharged to the WWTP from the McCarthy Boulevard Pump Station are projected to increase from 70 ML/d to 92 ML/d.

The upgraded WWTP will be required to nitrify on a year-round basis and remove both nitrogen and phosphorus prior to discharging treated effluent to Wascana Creek.

As currently envisaged, the upgrades to the WWTP will include improvements to the existing grit removal system, new secondary treatment facilities, including biological reactors and secondary clarifiers, sludge thickening, effluent filtration, UV disinfection upgrades, wet weather attenuation, odour control and improvements to the existing anaerobic digesters and biogas systems. Also, a significant amount of existing equipment at the WWTP will be replaced as it is nearing the end of its service life. A preliminary conceptual site plan is provided below.

After the upgrade, biosolids will be transferred to the City landfill to be composted, and/or continue to be stockpiled on-site.

It is currently being explored as to whether or not operation of the McCarthy Boulevard Pump Station should be included in the scope of a DBOM or DBFOM.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BLENDING TANK
FUTURE FERMENTERS
SLUDGE THICKENING BUILDING
FILTRATION
UV BUILDING
ADMINISTRATION BUILDING
WASCANA CREEK
LEGEND
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DECOMMISSIONED
FUTURE
PROPOSED
RETAINED
RETAINED FOR EMERGENCY
ABANDONED
FOR INFORMATION ONLY.
PRELIMINARY
City of Regina
WWTP Upgrade
AECOM
CONCEPTUAL SITE PLAN
60274161

2.3 Current Work and Schedule

The City is currently working on the following initiatives:

- Advancing WWTP preliminary design; and
- Assessing delivery models for the Project.

A decision on the delivery model is anticipated in early 2013. The objective is to have the upgrade and expansion complete and operational by the end of 2016.

AECOM has been retained as the City's design and construction engineer for the Project and for the purposes of this document the role is described as "owner's engineer".

2.4 Permits and Approvals

The current Permit to Operate Sewage Works (included in Appendix A) requires that contains the requirement that the new effluent criteria be met by December 31, 2016.

Saskatchewan Ministry of Environment (SMOE) has indicated that the project is not a "development" and therefore does not require an environmental assessment. The two key permits required for the project to proceed are the Permit to Construct Sewage Works and Permit to Operate Sewage Works – both issued by SMOE. A building permit will also be required from the Rural Municipality of Sherwood.

2.5 Delivery Models Under Assessment

The two delivery models which are the subject of this Stage 2 market sounding are Design-Build-Operate-Maintain (DBOM) and Design-Build-Finance-Operate-Maintain (DBFOM).

The preliminary high-level allocation of responsibility and risk for these models is summarized in the figure below.

Areas of Responsibility/Risk	DBOM	DBFOM
Ownership	City	City
Standard Setting	City	City
WWTP Capacity Determination and Expansion Risk	City	City
Oversight & Rate Setting	City	City
Design & Permitting	Contractor	Contractor
Construction	Contractor	Contractor
Operation	Contractor	Contractor
Energy & Chemical Efficiency	Contractor	Contractor
Energy & Chemical Price	City	City
Effluent Permit Compliance	Contractor	Contractor
Biosolids Quality Compliance	Contractor	Contractor
Change in Environmental Regulations	City	City
General Non-Discriminatory Change in Law	Contractor	Contractor
Routine Maintenance	Contractor	Contractor

Areas of Responsibility/Risk	DBOM	DBFOM
Major Maintenance (Renewal)	Shared[1]	Contractor
End of Term Asset Condition (Handback)	Contractor	Contractor
Latent Defects in Existing Assets	Shared	Shared
Construction Financing	Contractor	Contractor
Long Term Financing	City	Shared[2]
Changes in Base Rate Between Proposal Submission and Financial Close	n/a	City
Changes in Financing Spread Between Proposal Submission and Financial Close	n/a	Contractor
Inflation on Operating and Maintenance Costs	City	City

2.6 Preliminary Procurement Schedule

If the decision is made to proceed with the DBOM or DBFOM delivery model, the procurement process will begin in 2013. The dates are subject to revision, but your comment is sought on the time frames and durations shown below.

	Timing
RFQ Release & Response	2 months
RFQ Evaluation & Shortlist	1 month
RFP & Draft Project Agreement Release	
• Interim technical submission to be reviewed for compliance	4 months into RFP period
• Final technical submission	6.5 months into RFP period
• Financial offer submission	7 months into RFP period
Proposal Evaluation & Preferred Proponent Notification	2 weeks
Financial Close	Up to 60 days from Notification
Contractor Assumes WWTP Operations	At financial close
Design / Construction / Commissioning	Effluent criteria to be met by Dec 31 2016

2.7 Protection of City WWTP Operations Staff

The WWTP is currently operated and maintained by 25 to 30 City staff who are members of CUPE Local 21. The contractor will be required to honour the collective bargaining agreement and take on the staff at equivalent compensation and benefits.

2.8 City Council Procurement Approvals

[1] The intent is to fully transfer this risk, but there may need to be City involvement in major expenditure approvals
[2] It is anticipated that the contractor would provide financing for between 50% and 75% of the capital cost.

The City's P3 bylaw delegates authority to the City Manager or Deputy City Manager to commence a P3 procurement process and award the contract, subject to the preferred proponent's bid demonstrating "value for money". The bylaw may be found at: http://goo.gl/oD92K.

A borrowing bylaw is required to authorize any direct borrowing by the City that may be needed to support the project (for example, in a DBOM, or if the City makes a capital contribution in a DBFOM).

2.9 Funding

The City's water and sewer systems are operated as a self-funding utility, with costs recovered from user rates. The fiscal capacity for the Project stems from the City's authority to set rates and its policy to set rates such that they cover the full cost of service provision, including "pay-as-you-go" capital, financed capital, and operating costs. The *2012 Budget* was approved by Council on December 11, 2011. The *2012 – 2016 Utility Capital Program* includes $178 million in planned expenditures for the Project.

The utility is anticipated to have reserve funds of up to approximately $51 million available in full or in part for Project purposes. The project may also receive PPP Canada Fund support (the Project has been screened in to Round Four and a business case may be submitted to PPP Canada in application for support).

2.10 Affordability Cap / Ceiling

No affordability cap has been determined at this time. An affordability cap could be set as part of the RFP.

3 Discussion guide/questions

The following questions are intended to stimulate discussion and are not necessarily exhaustive. Please feel free to provide comments, ask questions, and introduce other topics of interest or concern with regard to the Project as described above.

3.1 Firm background

- Please describe your firm's typical or desired role in WWTP projects.
- Please describe your firm's general experience and capacity to work in Regina.

3.2 Risk Allocation

- Please comment on the overall anticipated risk allocation – is your firm willing to accept the transferred risks shown?
- Latent Defect Risk
  - Do you have any suggestions on allocation of latent defect risk, such as by: asset type, asset age, by time period (e.g. City takes risk for first X years, Contractor after X years)
  - What might the City do in advance of RFP to make transfer of latent defect risk more acceptable to proponents? For example, what field investigations/inspections would assist in assessing the condition of existing infrastructure assets?
- Approval Risk
  - Do you have any concerns with being allocated responsibility to obtain permits and approvals?
  - What might the City do during the RFP period to help mitigate any permitting risk that may exist?
- Treatment Process Selection Risk

- The City may consider limitations on acceptable wastewater treatment processes (especially for DBOM). To what extent would such restriction:
  - Limit value to the City, if at all
  - Limit your interest in the project, if at all

3.3 Securing Long Term Risk Transfer

- DBFOM: How much private financing (as a fraction of capital cost) would you suggest is sufficient to fully secure major maintenance and handback risk?
- DBOM: Do you have any suggestions for securing long term risk transfer in the absence of private financing?
- DBOM: How would your firm mitigate major maintenance / handback risk in a DBOM project structure?

3.4 Financing

- For DBFOM, what is the smallest dollar amount of private financing that would attract your interest in the project?
- Please comment on any key financing metrics you expect would be applicable to the this project, considering risk profile and municipal counterparty:
  - Cost of equity
  - Cost of debt
  - DSCR
  - Debt:equity ratio
  - Other
- Are there any market restrictions on debt terms (and corresponding operations terms) of 20, 25, or 30 years?
- Likely financing approach – bank, private placement, balance sheet?
- In current market conditions, how long can debt spreads be held from proposal submission to financial close?
- Would offering a spread reset mechanism be of significant benefit to the City?

3.5 City Labour Force

- Does the requirement to take on City staff affect your firm's interest in the project?
- Does your firm have experience implementing such a transition?
- What information about current staff should be provided in the RFP to prepare a firm and binding proposal?
- Does taking over O&M responsibility immediately upon financial close (DBFOM) allow enough preparation time? For DBOM, how much time is needed prior to taking over O&M?
- Any other comments or suggestions for orderly and effective transfer of employees?
- Do you expect any unique issues due to Saskatchewan labour legislation?

3.6 Term

- For a project of this nature, what is an appropriate operating term that will capture a significant level of major maintenance (aka rehabilitation, lifecycle, etc.) thus assuring the City of receiving an asset with significant remaining asset life after handback?

3.7 Schedule

- Please comment on the schedule presented above.
  - Is the RFP period long enough to prepare proposals?

- Will a fast notification of Preferred Proponent allow for transfer of debt spread risk over the period between Preferred Proponent notification and financial close (for DBFOM)? The envisioned approach is that the close date would be determined by the Proponent but must occur within 60 days of notification.

3.8 Municipal Risk

- Do have any concerns with a municipal counterparty for this project?
  - With regard to the procurement process
  - With regard to a long term contract
- What might the City to do to alleviate any such concerns?

3.9 General Interest

- Assuming a procurement commencing in 2013, what is your firm's level of interest in the Project?

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Appendix D – Qualitative Risk Assessment Memorandum

Deloitte.

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Memo

Date:	July 31, 2012
To:	Mr. Rob Court, P.Eng. Manager, Environmental Engineering City of Regina
c:	File 824603 – 1000014
Subject:	WWTP Upgrade Project Delivery Model Assessment Summary of Qualitative Risk Workshop

Introduction

On July 10, 2012, Deloitte and AECOM (the "Advisory Team") facilitated a quantitative risk workshop on the WWTP upgrade project (the "Project") to serve the following purposes:

- Identify key project risks that may distinguish the delivery models under consideration;
- Stimulate discussion of the relative merits of the delivery models by the City's project team;
- Assess the probability and impacts of the risks, qualitatively, for each delivery model; and
- Prepare the project team for a future quantitative risk assessment to be done as part of the Value for Money Assessment.

This memorandum briefly summarizes the workshop process and the findings. No overall conclusions about the delivery models are drawn at this point and the findings are somewhat limited in their applicability. The findings are key inputs into the Strategic Assessment of delivery model for the Project.

Workshop Attendees

The City was represented by attendees from engineering, utilities, finance, legal, and strategy units.

City of Regina

Byron Werry, Legal (first two hours)
Mark Yemen, Legal (two hours prior to lunch break)
Teresa Florizone, Finance (excluding two hours mid-day)
Dawn Martin, Strategy
Jerry Cheshuk, WWTP Manager
Rob Court, Environmental Engineering

Fabian Contreras, Strategy
Greg Markewich, Procurement
Greg Jelinski, Human Resources
Jayne Krueger, Legal
Stella Madsen, Water & Sewer (first six hours)
Derrick Bellows, Environmental Services

AECOM
Rick Bitcon
Simon Baker
Mario Iacobacci (by phone until lunch break)

Deloitte
Chris Baisley
Mark Harrison

Deloitte's role was to facilitate the workshop, coordinating and consolidating the input of workshop participants. Both Deloitte and AECOM provided information on delivery models and project characteristics to facilitate the discussion and assessment. The actual risk assessment was by City attendees (the panel) as facilitated by the advisory team. The risk assessment panel has the wide range of expertise and knowledge of City polices, procedures, resources, and interests to provide the expert opinions needed to assess risk for the Project.

Workshop Process

A presentation was made of the seven delivery models assessed in the workshop, with the aim of ensuring that all participants have a clear and consistent understanding of each model. For each risk in the register, the risk was discussed, the definition modified if necessary, and then the probability and impact of the risk was qualitatively assessed for each model. The assessment was done using an anonymous wireless voting system. The results of each assessment were immediately presented and discussed further and re-voted if it appeared that there was a significant disparity in opinion or misunderstanding of some feature of a delivery model.

The qualitative scales used for probability and impact assessment are discussed later and included in Appendix A (workshop presentation).

Models Assessed

The delivery models assessed were decided upon and agreed by the City prior to the workshop based on review of two previous related assessments (*WWTP Upgrade Project Summary of Delivery Model Workshop,* May 2 2012, Deloitte, and *Wastewater Treatment Plant Upgrade Accelerated Project Delivery Technical Memorandum,* May 2012, AECOM) in which potential delivery models were identified and comparatively evaluated. The seven models span the gamut from traditional design-bid-build to P3 as follows:

Table 1 - Delivery Models Under Consideration

1.	Traditional Design-Bid-Build (DBB) (multiple tenders)
2.	Construction Manager at Risk (CMAR)
3.	Alliance
4.	Progressive Design-Build (PDB)
5.	Fixed Price Design-Build (DB)
6.	Design-Build-Operate-Maintain (DBOM)
7.	Design-Build-Finance-Operate-Maintain (DBFOM)

Models 2 through 7 are all "alternative delivery" models with respect to traditional design-bid-build, while Models 6 and 7 fall into the P3 category as defined in the City's P3 Policy. The high-level allocation of responsibility and risk for these models is summarized in Figure 1. Detailed descriptions of these models may be found in the aforementioned memoranda.

Figure 1 - High Level Delivery Model Description

Areas of Responsibility/Risk	1 DBB	2 CMAR	3 Alliance	4 PDB	5 DB	6 DBOM	7 DBFOM
Ownership	City	City	City	City	City	City	City
Standard Setting	City	City	City	City	City	City	City
Oversight & Rate Setting	City	City	City	City	City	City	City
Design	City	City	Shared	Shared	Contractor	Contractor	Contractor
Construction	Shared	Shared	Shared	Shared	Contractor	Contractor	Contractor
Operation	City	City	City	City	City	Shared	Contractor
Maintenance / Renewal	City	City	City	City	City	Shared	Contractor
Long Term Financing	City	City	City	City	City	City	Shared
Funding (who pays?)	City	City	City	City	City	City	City

Note that the term "contractor" herein denotes the party or parties that the City transfers risk to under the different delivery models. The contractor may be a single party general contractor (as in DBB), or may be a consortium of firms (as in DBOM).

Risk Register

A register of project risks (approximately 50 risks) was assembled based on risk registers from past project assessments and modified to reflect Project and City-specific characteristics and issues. The definition of the risks evolved during the workshop through discussion. One additional risk was identified and added during the workshop. Several of the risks, upon discussion, were identified as not relevant to the project and/or to the distinguishing of delivery models as they were similar to other risks, or as very minor concerns, and as such were not assessed during the workshop. 27 risks were fully assessed by ascribing qualitative probabilities and impacts.

The risks in the register are not weighted against each other to reflect their relative importance, although since risks that were thought to be very minor were dismissed altogether, it may be concluded that all the of the 27 assessed risks do present the possibility of material impacts on the project. The risks will be weighted in the Value for Money Assessment which will follow the Strategic Assessment. If necessary

to assist in the Strategic Assessment, weightings can be developed and applied to further explore the differences between models[1].

Appendix B contains the risk register including the updated risk descriptions, the panel's assessment of impact and probability, and the resulting risk calculation (where risk = probability x impact). Figure 2 contains the rating scales used for the assessment.

Figure 2- Qualitative Probability and Impact Rating Scales

Score	PROBABILITY
1	• **Rare** - very remote chance of the risk occurring.
2	• **Unlikely** - Low likelihood of the risk occurring.
3	• **Possible** - Moderate likelihood of the risk occurring.
4	• **Probable** - High likelihood of the risk occurring.
5	• **Expected** - will occur.

Score	IMPACT
1	• **Negligible**
2	• **Low** – e.g. project mgmt costs
3	• **Medium** – e.g. delays, cost overruns
4	• **High** – e.g. significant delays or cost overruns, project restart or redesign
5	• **Extreme** - puts project objectives at risk of being achieved

Using this rating scale, the lowest possible risk score is 1 (probability of 1 x impact of 1) and the highest possible risk score is 25 (probability of 5 x impact of 5).

[1] In fact a simple weighting scheme was tested on the collected assessment data, rating risks from 1 to 3 based on an estimate of their relative importance to the City. The results were very similar to the unweighted results and so are not presented herein.

Overall High Level Results

The figure below provides a graphical overview of the risk assessment results using a red-yellow-green colour scale where red represents relatively high risk and green represents relatively low risk.

Figure 3 - Overall Risk Assessment Results[2]

Phase	Risk	1 - DBB	2 - CMAR	3 - ALLIANCE	4 - PDB	5 - DB	6 - DBOM	7 - DBFOM
Planning and Procurement	01	6	6	9	9	8	14	17
	03	9	9	9	9	9	9	9
	05	18	13	13	13	9	14	17
	06	6	6	6	6	10	10	12
	07	9	9	9	12	12	15	15
	09	5	5	5	5	5	8	8
Design	14	8	8	8	9	12	11	8
	15	12	10	8	9	9	8	8
	16	10	11	9	8	5	10	9
	17	13	13	13	11	8	8	7
Construction	20	10	8	7	7	7	7	7
	21	14	8	7	6	7	4	3
	22	10	9	9	5	6	4	3
	23	13	13	13	8	8	4	4
	24	10	10	10	10	10	10	10
	29	16	16	13	17	17	9	10
Operations & Maintenance	30	9	9	9	9	9	8	6
	31	16	16	16	16	16	6	6
	32	9	9	9	11	11	7	4
	33	11	11	11	11	11	11	11
	34	8	8	8	8	8	5	5
	36	9	9	9	9	9	6	5
	38	7	7	7	7	7	6	6
	39	5	5	5	5	5	6	6
	44	10	10	10	10	10	10	10
	46	17	17	17	17	17	9	5
	48	14	14	14	14	14	14	14
TOTAL		283	268	264	261	257	233	223

It can be seen that the highest preponderance of red is in the DBB, lowest in the DBFOM, and the total risk scores reflect an overall reduction in project risk moving from Model 1 through to Model 7. An interesting high-level observation is that the higher risks for DBOM and DBFOM occur in the early project stages (planning and procurement) while the other models have high risks occurring in the construction, operations, and maintenance stages, reflecting the trade-off of a P3 between greater up-front

[2] On this figure, the colour scale is applied across the entire matrix, i.e. each colour represents the same numeric risk rating across all of the delivery models

effort to mitigate planning and procurement risk in exchange for long term transfer of risk(s) from the City to the contractor.

Figure 5 summarizes the assessment result by project phase, with the green-to-red scale applied within each phase.

Figure 4 - Total Risk Scores Broken Down Into Project Phases

Project Phase	1 - DBB	2 - CMAR	3 - ALLIANCE	4 - PDB	5 - DB	6 - DBOM	7 - DBFOM
Planning & Procurement	54	49	52	54	52	71	78
Design	43	41	38	37	34	37	32
Cons	71	63	58	54	54	38	37
O&M	115	115	115	116	116	87	76
TOTAL	283	268	264	261	257	233	223

Again, the upfront risk of DBOM and DBFOM is illustrated relative to the other models, with these models presenting lower risks once the procurement is complete and the contract awarded. Models 2 through 5 present lower risk than DBB through the design and construction period. The risk during the operation period was assessed as nearly identical for Models 1 through 5, with the DBOM and DBFOM assessed as lower risk.

The total unweighted risk score is calculated for each delivery model. The risk score reflects the risk from a "project" perspective, and does not distinguish between a risk that is retained by the City versus transferred to contractors.

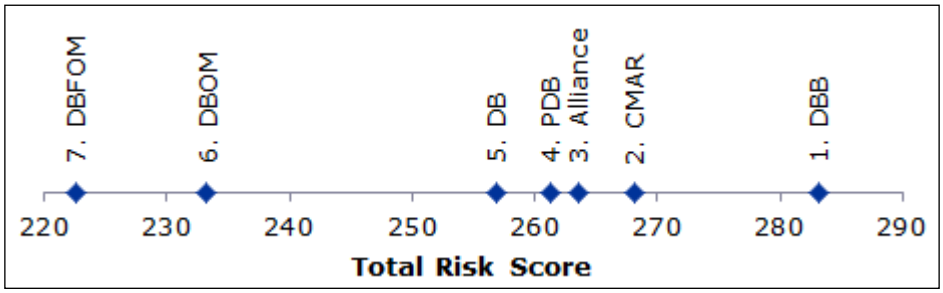
Table 2 - Results of Risk Assessment - Unweighted Total Risk Scores

Delivery Model	Risk Score
1. DBB	283
2. CMAR	268
3. Alliance	264
4. PDB	261
5. DB	257
6. DBOM	233
7. DBFOM	223

The higher the total risk score, the higher the overall project risk profile. Based on this, it may be interpreted that DBB presents the highest overall project risk, and DBFOM the lowest. Relative weighting of the risks could change this conclusion but based on previous experience we do not believe this is likely and some sensitivity conducted on these results (giving significantly more weight to risks that were assessed high for DBOM and DBFOM) suggests the same. Each model has a different risk profile and a different set of key risks that require mitigation if the model is implemented.

The discussion during the workshop and outcomes from the scoring exercise confirmed that the panel had a good understanding of the delivery models and the concept of risk transfer and risks currently held by the City (both "hard" and "soft" risks), with the results generally in line with what would be expected given the allocation of risk and responsibility as defined for each model. Plotting the total risk scores (as below in Figure 3) illustrates the clustering of Models 2 through 5, which reflects the relatively subtle differences between these models, as compared to the greater distinction between the remaining models.

Figure 5 - Results of Risk Assessment - Total Risk Scores

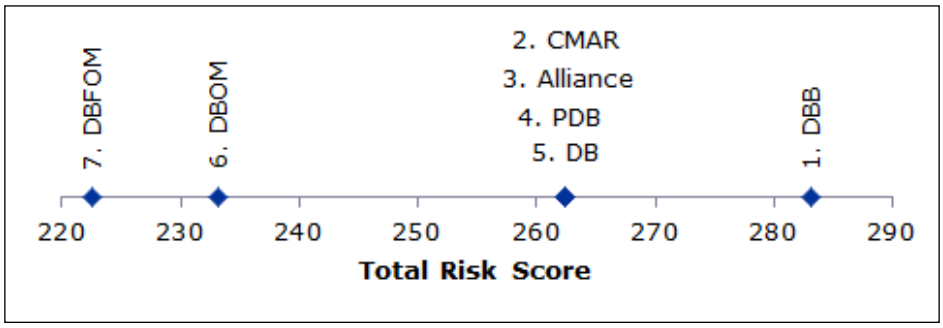


Based on the discussion in the workshop, we expected that DB and possibly PDB would be assessed as having higher risk than the Alliance and CMAR models (i.e. the reverse of the relative positioning shown above). Relative to the other models we believe that the panel consensus is that DB presents perhaps the highest risk in the operating and maintenance stage since there is the least input from the City into the design while at the same time the contractor faces no long term obligations.

It was expected going into the risk assessment, that the procedure may not have sufficient resolution to distinguish between Models 2 through 5, and this seems to be case[3]. However, there is sufficient resolution to distinguish Model 1, Models 2 through 5 as a group, Model 6, and Model 7 using the risk assessment results.

In other words, given the tight clustering of Models 2 through 5, we suggest not reading too much into the rank order of these models relative to each other than is suggested by the total risk scores. The figure below presents the ranking when this grouping is taken into consideration.

Figure 6 - Results of Risk Assessment - Total Risk Scores



[3] The clustering of these models was even tighter when weighted risks were used

Overall High Level Results – Illustration of Risk Allocation

The figure below is a repetition of Figure 2 with the risks that are transferred to a contractor deleted, leaving only the risks that are fully or partially retained by the City.

Figure 7 - Overall Risk Assessment Results (Retained & Shared Risk Only)

Phase	Risk	1 - DBB	2 - CMAR	3 - ALLIANCE	4 - PDB	5 - DB	6 - DBOM	7 - DBFOM
Planning and Procurement	01	6	6	9	9	8	14	17
	03	9	9	9	9	9	9	9
	05	18	13	13	13	9	14	17
	06	6	6	6	6	10	10	12
	07	9	9	9	12	12	15	15
	09	5	5	5	5	5	8	8
Design	14	8	8	8	9			
	15	12	10	8				
	16	10	11	9	8			
	17	13	13	13	11	8	8	7
Construction	20	10	8	7	7	7	7	7
	21	14	8	7				
	22	10	9	9				
	23	13	13	13	8	8	4	4
	24	10	10	10	10	10		
	29	16	16	13	17	17		
Operations & Maintenance	30	9	9	9	9	9		
	31	16	16	16	16	16		
	32	9	9	9	11	11		
	33	11	11	11	11	11	11	11
	34	8	8	8	8	8		
	36	9	9	9	9	9		
	38	7	7	7	7	7		
	39	5	5	5	5	5		
	44	10	10	10	10	10	10	10
	46	17	17	17	17	17		
	48	14	14	14	14	14	14	14

This figure is illustrative of the progression of risk transfer from Model 1 to Model 7 (and the corresponding transfer of responsibility). Whichever model is eventually implemented, the retained and shared risks above would need to be mitigated by the City. The transferred risks would be mitigated by the contractor. However, mitigation by the contractor is not free: contractors will include the cost of risk mitigation in their bid prices.

Risk by Risk Discussion

The following is a summary of the 27 assessed risks, including a summary of the workshop discussion as recorded by Deloitte, some additional comment from Deloitte, and some forward-looking considerations (actions, recommendations, etc.) related to the risk that were either discussed in the workshop or have been identified by the advisory team.

In addition, risks that were not assessed but had useful discussions which pointed to future considerations are included below.

Table 3 - Risk by Risk Discussion

Phase	No.	Name	Description	Key Workshop Discussion Points	Comment	Actions, Recommendations, Future Considerations
Planning and Procurement	01	Approval by Council	16(1)(a), 17(1)(d)			
	03	Market capacity				
	05	Resource capacity				

Phase	No.	Name	Description	Key Workshop Discussion Points	Comment	Actions, Recommendations, Future Considerations
			16(1)(a), 17(1)(d)			
	06	Financial markets				
	07	Unclear project documentation				

Phase	No.	Name	Description	Key Workshop Discussion Points	Comment	Actions, Recommendations, Future Considerations
			16(1)(a), 17(1)(d)			
	08	Environmental Assessment (EA) causes delay				
	09	Wastewater flow and quality projections				
Design	14	Wastewater treatment process selection				
	15	Facility design risk				
	16	Design exceeds requirements				

Phase	No.	Name	Description	Key Workshop Discussion Points	Comment	Actions, Recommendations, Future Considerations
			16(1)(a), 17(1)(d)			
	17	Scope changes during design - scope creep				
	19	MOE design approval				

Phase	No.	Name	Description	Key Workshop Discussion Points	Comment	Actions, Recommendations, Future Considerations
Construction	20	Delay by Owner	16(1)(a), 17(1)(d)			
	21	Delay				
	22	Construction cost				
	23	Scope changes during construction				
	24	Contractor default				

Phase	No.	Name	Description	Key Workshop Discussion Points	Comment	Actions, Recommendations, Future Considerations
	29	Construction / Operation Coordination	16(1)(a), 17(1)(d)			
Operations & Maintenance	30	Latent defects in new infrastructure				
	31	Staffing				
	32	Equipment failure				
	33	Change in regulation				
	34	Operating costs (other than power				

Phase	No.	Name	Description	Key Workshop Discussion Points	Comment	Actions, Recommendations, Future Considerations
		and chemicals)	16(1)(a), 17(1)(d)			
	36	Power and Chemical Productivity				
	38	Effluent quality				
	39	Sludge quality				
	44	Early expansion				
	46	Major maintenance/rehabilitation				

Phase	No.	Name	Description	Key Workshop Discussion Points	Comment	Actions, Recommendations, Future Considerations
			16(1)(a), 17(1)(d)			
	48	Unknown condition of existing assets (latent defects in existing assets)				

Appendix A – Workshop Handout

Deloitte.

WWTP Upgrade Delivery Model Assessment: Risk Workshop #1: Qualitative Risk Assessment

July 10, 2012
City of Regina

Delivery models to be assessed

1. Traditional Design-Bid-Build (DBB) (multiple tenders)
2. Construction Manager at Risk (CMAR)
3. Alliance
4. Progressive Design-Build (PDB)
5. Fixed Price Design Build (DB)
6. Design-build-operate-maintain (DBOM)
7. Design-build-finance-operate-maintain (DBFOM)

Follow-up discussion

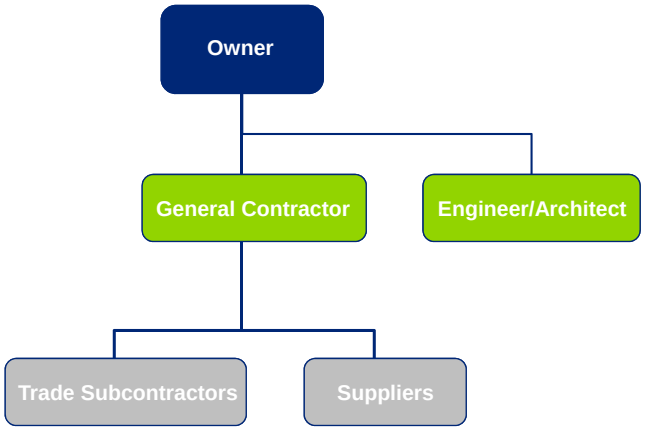
- Contract operations for Models 1 through 5

High level responsibility and risk allocation

Areas of Responsibility / Risk	1 DBB	2 CMAR	3 Alliance	4 PDB	5 DB	6 DBOM	7 DBFOM
Ownership	City	C ty	City	C ty	C ty	City	C ty
Standard Setting	City	C ty	City	C ty	C ty	City	C ty
Oversight & Rate Setting	City	C ty	City	C ty	C ty	City	C ty
Design	City	C ty	Shared	Shared	Contractor	Contractor	Contractor
Construction	Shared	Shared	Shared	Shared	Contractor	Contractor	Contractor
Operation	City	C ty	City	C ty	C ty	Contractor	Contractor
Maintenance / Renewal	City	C ty	City	C ty	C ty	Shared	Contractor
Long Term Financing	City	C ty	City	C ty	C ty	City	Shared
Funding (who pays?)	City	C ty	City	C ty	C ty	City	C ty

2

1. Traditional Design-Bid-Build (DBB) (multiple tenders)



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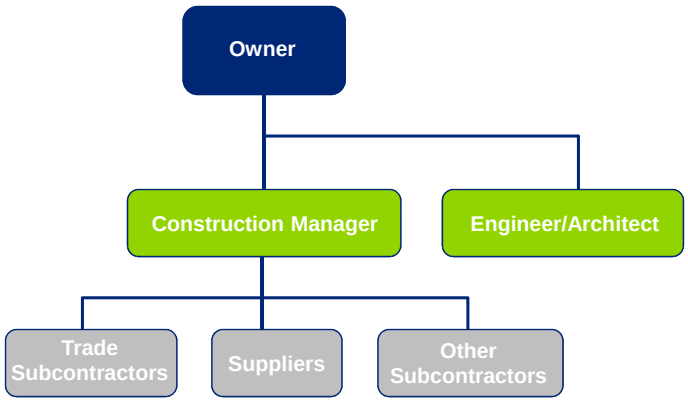
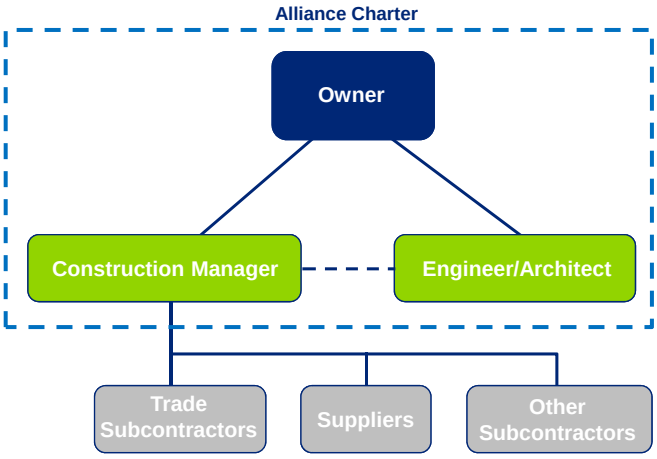
2. Construction Manager at Risk (CMAR)



4 DRAFT

3. Alliance



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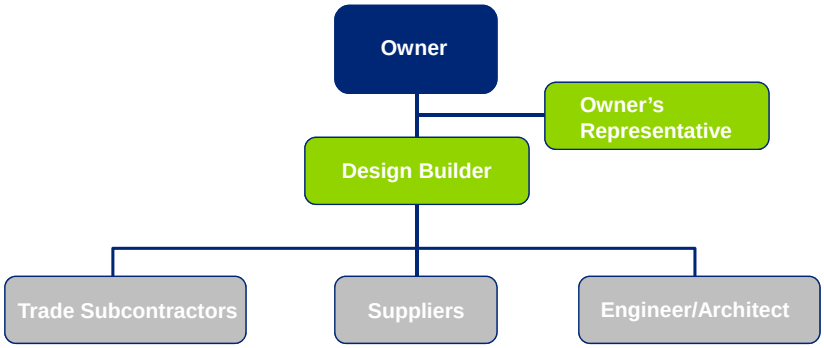
4. Progressive Design-Build (PDB)



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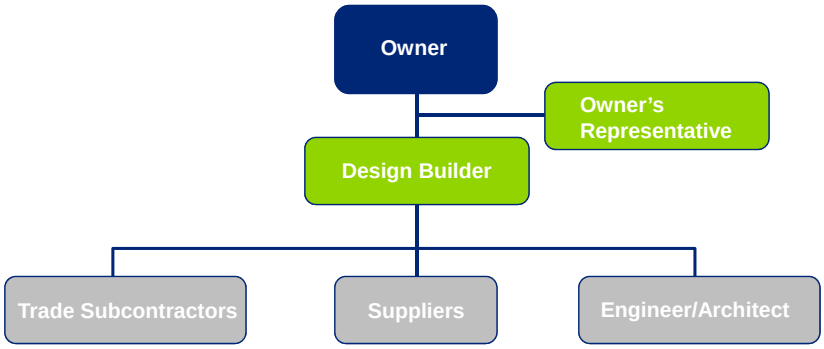
5. Fixed Price Design Build (DB)



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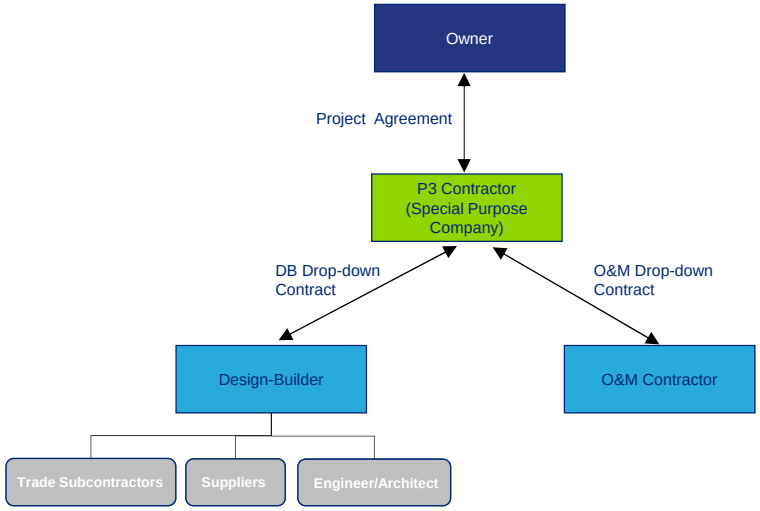
6. Design-build-operate-maintain (DBOM)



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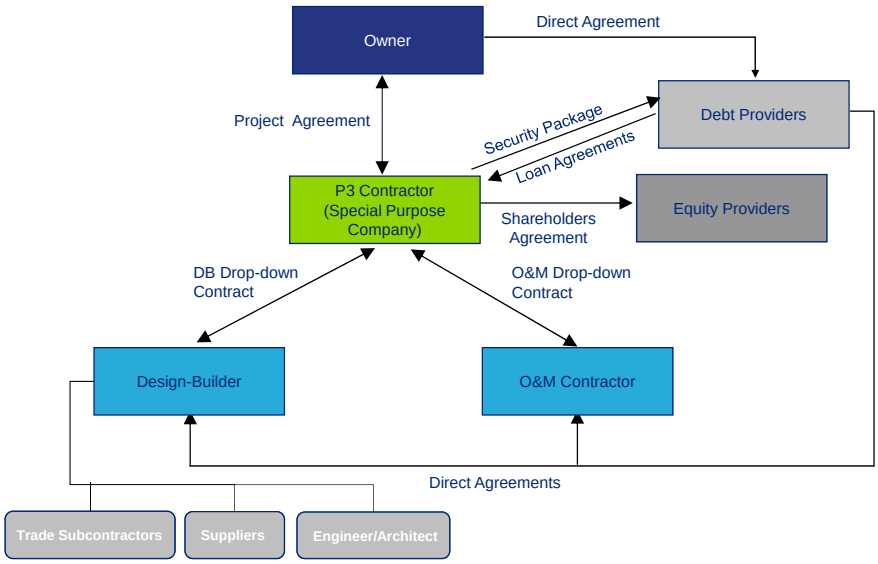
7. Design-build-finance-operate-maintain (DBFOM)



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Qualitative risk assessment

- Risk is the product of probability (of the risk event occurring) and the impact (effect of the risk event occurring)
- Each risk is considered for:
  - Probability; then
  - Impact

Score	PROBABILITY
1	• **Rare** - very remote chance of the risk occurring.
2	• **Unlikely** - Low likelihood of the risk occurring.
3	• **Possible** - Moderate likelihood of the risk occurring.
4	• **Probable** - High likelihood of the risk occurring.
5	• **Expected** - will occur.

Score	IMPACT
1	• **Negligible**
2	• **Low –** e.g. project mgmt costs
3	• **Medium –** e g. delays, cost overruns
4	• **High –** e.g. significant delays or cost overruns, project restart or redesign
5	• **Extreme** - puts project objectives at risk of being achieved

- The product of the two provides the risk assessment (i.e. a number from 1 to 25)

Appendix B – Risk Register

Regina WWTP Upgrade

No	Category	Name	Description	1 - DBB Allocation	1 - DBB Probability	1 - DBB Impact	2 - CMAR Allocation	2 - CMAR Probability	2 - CMAR Impact	3 - ALLIANCE Allocation	3 - ALLIANCE Probability	3 - ALLIANCE Impact	4 - PDB Allocation	4 - PDB Probability	4 - PDB Impact	5 - DB Allocation	5 - DB Probability	5 - DB Impact	6 - DBOM Allocation	6 - DBOM Probability	6 - DBOM Impact	7 - DBFOM Allocation	7 - DBFOM Probability	7 - DBFOM Impact
			16(1)(a), 17(1)(d)																					
01	Approvals During/Post Procurement	Approval by Council																						
03	Procurement	Market capacity																						
04	Procurement	Needs assessment - performance specification																						
05	Procurement	Resource capacity																						
06	Procurement	Financial markets																						
07	Procurement	Unclear project documentation																						
08	Procurement	EA causes delay																						
09	Information	Wastewater flow and quality projections																						
10	Information	Inffluent qual ty data																						
11	Information	Geotechnical information																						
12	Information	Archeological information																						
13	Information	Unknown contaminated site(s)																						
14	Design	Wastewater treatment process selection																						

Regina WWTP Upgrade				1 - DBB			2 - CMAR			3 - ALLIANCE			4 - PDB			5 - DB			6 - DBOM			7 - DBFOM		
No	Category	Name	Description	Allocation	Probability	Impact	Allocation	Probability	Impact	Allocation	Probability	Impact	Allocation	Probability	Impact	Allocation	Probability	Impact	Allocation	Probability	Impact	Allocation	Probability	Impact
			16(1)(a), 17(1)(d)																					
15	Design	Facility design risk																						
16	Design	Design exceeds requirements																						
17	Design	Scope changes during design - scope creep																						
18	Design	EA design constraints																						
19	Design	MOE Design Approval																						
20	Construction	Delay by Owner																						
21	Construction	Delay																						
22	Construction	Construction cost																						
23	Construction	Scope changes during construction																						
24	Construction	Contractor default																						
25	Construction	Construction qual ty																						
26	Construction	Resource availability																						
27	Construction	Minor Approvals																						

Regina WWTP Upgrade

No	Category	Name	Description	1 - DBB Allocation	1 - DBB Probability	1 - DBB Impact	2 - CMAR Allocation	2 - CMAR Probability	2 - CMAR Impact	3 - ALLIANCE Allocation	3 - ALLIANCE Probability	3 - ALLIANCE Impact	4 - PDB Allocation	4 - PDB Probability	4 - PDB Impact	5 - DB Allocation	5 - DB Probability	5 - DB Impact	6 - DBOM Allocation	6 - DBOM Probability	6 - DBOM Impact	7 - DBFOM Allocation	7 - DBFOM Probability	7 - DBFOM Impact
			16(1)(a), 17(1)(d)																					
28	Construction	Multiple GC coordinat on																						
29	Construction	Construction / Operation Coordiat on																						
30	Operation	Latent defects in new infrastructure																						
31	Operations	Staffing																						
32	Operation	Equipment failure																						
33	Operation	Change in regulation																						
34	Operation	Operating costs (other than power and chemicals)																						
35	Operation	Unit Price - Power and Chem cals																						
36	Operation	Power and Chemical Productivity																						
37	Operation	Influent quality																						
38	Operation	Effluent quality																						
39	Operations	Sludge quality																						
40	Operation	Overflow / bypass																						
41	Operation	Operat ons contractor failure																						

Regina WWTP Upgrade				1 - DBB			2 - CMAR			3 - ALLIANCE			4 - PDB			5 - DB			6 - DBOM			7 - DBFOM		
No	Category	Name	Description	Allocation	Probability	Impact	Allocation	Probability	Impact	Allocation	Probability	Impact	Allocation	Probability	Impact	Allocation	Probability	Impact	Allocation	Probability	Impact	Allocation	Probability	Impact
			16(1)(a), 17(1)(d)																					
42	Operation	Interface/Coordinat on risk																						
43	Operation	Financial markets																						
44	Operation	Early expansion																						
45	Maintenance	Minor/preventative maintenance																						
46	Maintenance	Major maintenance/rehabilitation																						
47	Maintenance	Unanticipated obsolescence																						
48	Maintenance	Unknown cond tion of existing assets (latent defects in existing assets)																						

Appendix E – Multiple Criteria Assessment Memorandum

Deloitte.

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www.deloitte.ca

Memo

Date:	September 17, 2012
To:	Mr. Rob Court, P.Eng. Manager, Environmental Engineering City of Regina
c:	File 824603 – 1000014
Subject:	WWTP Upgrade Project Delivery Model Assessment Multi-Criteria Analysis Process and Results

Introduction

As part of the Strategic Assessment, a Multi-Criteria Analysis (MCA) has been conducted. The MCA is a qualitative assessment of delivery models based on a number of weighted criteria that are scored relative to a base case. The base case delivery model is the Design-Bid-Build using multiple tenders. The MCA methodology used is the same as the "Triple Bottom Line (TBL)" methodology established for the assessment of wastewater treatment processes for the Project. This memorandum briefly documents the MCA analysis and results. It is the intent that the information presented herein be considered in the overall strategic assessment.

Assessment Criteria Categories

Assessment criteria were developed based on previous documentation, analysis, workshop sessions, and discussions with City staff. Twenty-one criteria have been organized into four criteria categories as follows.

- City Resource Capacity 25% of weighting
- Economic 40% of weighting
- Alignment with Managerial Goals and Strategy 25% of weighting
- Social 10% of weighting

The category weightings were approved by staff and to the extent that the categories are consistent with the treatment process TBL categories, the weightings are the same (i.e. Economic criteria are 40% of the weighting, and Alignment with Managerial Goals and Strategy are 25% of the weighting).

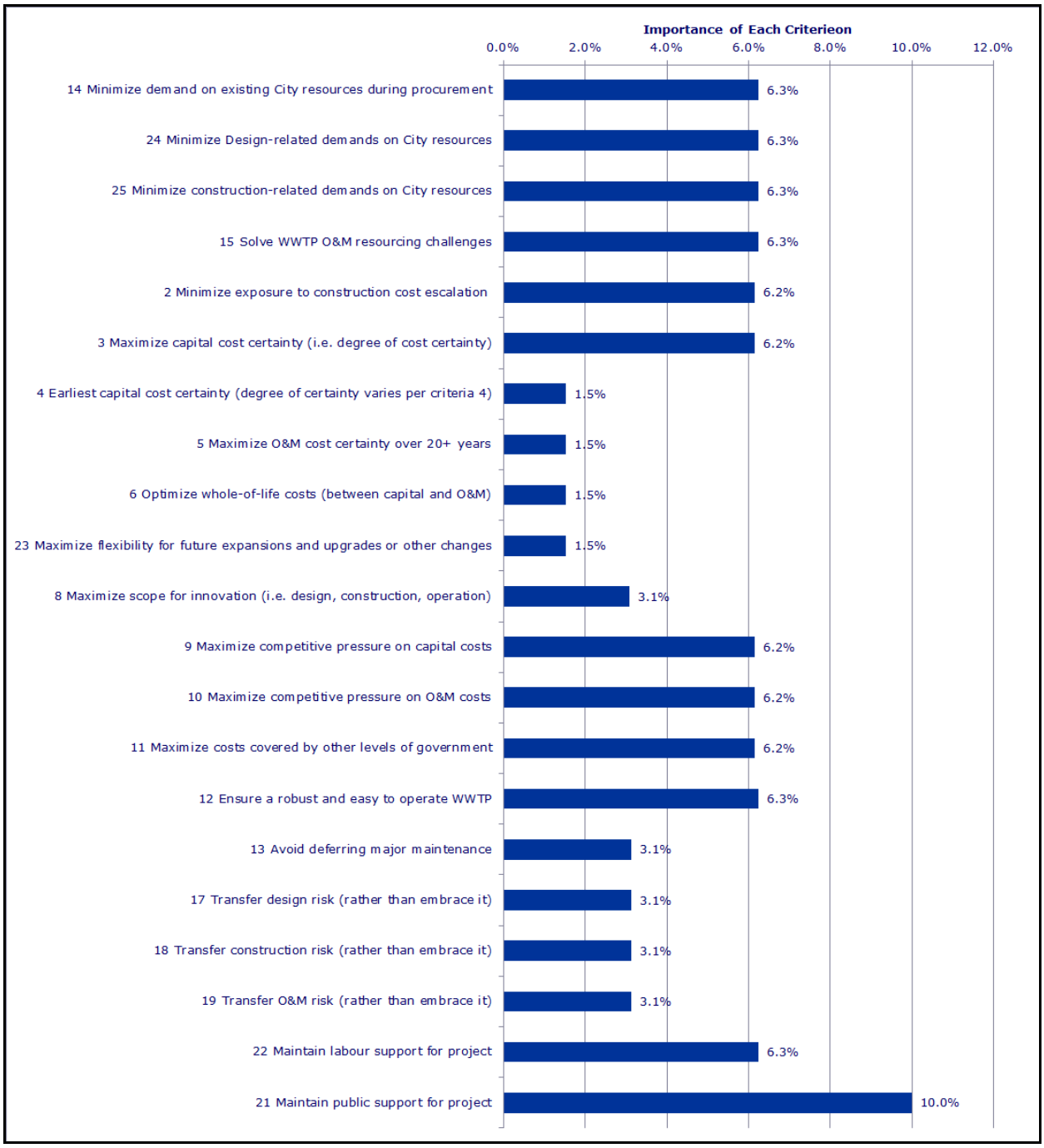
Assessment Criteria Weightings

The 21 criteria, organized into the four categories, are presented below. As with the TBL analysis, each criterion is assigned a relative weight within the category (Low, Medium, or High) which correspond to weightings within the category of 1, 2, or 4. The importance ratings shown were approved by City staff.

Category	No.[1]	Criterion	Criterion Relative Weight Within Category
City Resource Capacity	14	Minimize demand on existing City resources procurement	High
	24	Minimize design-related demands on City resources	High
	25	Minimize construction-related demands on City resources	High
	15	Solve WWTP O&M resourcing challenges	High
25.0%			
Economic	2	Minimize exposure to construction cost escalation	High
	3	Maximize capital cost certainty (i.e. degree of cost certainty)	High
	4	Earliest capital cost certainty (degree of certainty varies per criteria 4)	Low
	5	Maximize O&M cost certainty over 20+ years	Low
	6	Optimize whole-of-life costs (between capital and O&M)	Low
	23	Maximize flexibility for future expansions and upgrades or other changes	Low
	8	Maximize scope for innovation (i.e. design, construction, operation)	Med
	9	Maximize competitive pressure on capital costs	High
	10	Maximize competitive pressure on O&M costs	High
	11	Maximize costs covered by other levels of government	High
40.0%			
Alignment With Managerial Goals & Strategy	12	Ensure a robust and easy to operate WWTP	High
	13	Avoid deferring major maintenance	Med
	17	Transfer design risk (rather than embrace it)	Med
	18	Transfer construction risk (rather than embrace it)	Med
	19	Transfer O&M risk (rather than embrace it)	Med
	22	Maintain labour support for project	High
25.0%			
Social	21	Maintain public support for project	High
10.0%			

The category weightings and criterion weightings within the categories establish the relative contribution of each criterion to the overall MCA scoring, as shown in the chart below.

[1] The criterion numbers allow reference to previous versions of the matrix and therefore are not consecutive

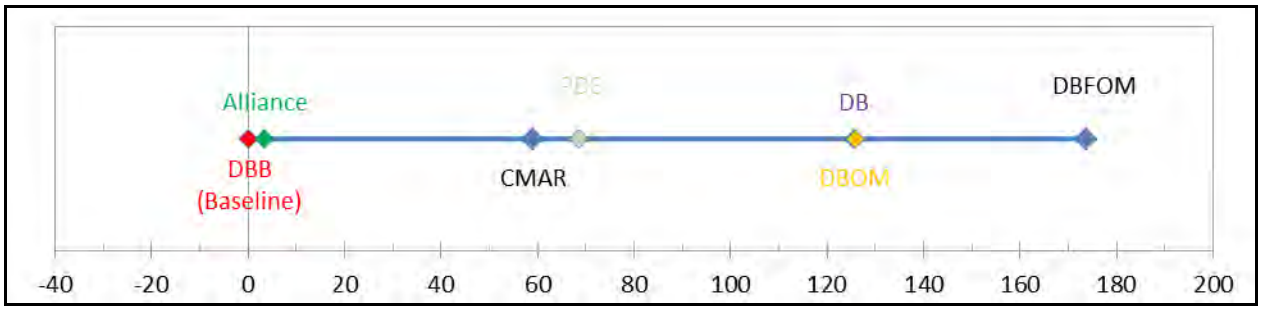


Criterion Scoring

Each criterion was scored against the base case by the Advisory Team (i.e. AECOM and Deloitte) in a workshop setting to arrive at consensus on the relative merits of each delivery model relative to the base case DBB. Consistent with the TBL, scores were assigned on a scale of +4 to -4 with positive scores being progressively better than the base case, and negative scores being progressively worse than the base case. A score of zero is assigned if the delivery model being assessed is the same as (i.e. no worse and no better) than the base case DBB. The resulting detailed scoring matrix is provided in Appendix A.

Overall Results

The methodology calculates an overall score for each delivery model relative to the base case DBB delivery model. Positive results indicate that a delivery model better meets the criteria than the base case, and negative results indicate that a delivery model is not as good as the base case at meeting the criteria. The numeric scores are relative only and have no absolute meaning. The results are presented graphically as follows:



These results indicate that all of the alternative models are believed to address the criteria better than DBB, with Alliance having a slight benefit and DBFOM having the greatest benefit. The general scoring outcome is that the more that a delivery model allows the transfer of project responsibility and risk to a contractor, the better it meets the City's criteria. There is some obvious clustering of models as well.

It is also possible to examine the relative scores within each of the four criteria categories. The graphical results are shown in Appendix B. The key finding are that in the Resource Capacity and Economic categories, the general order of the models does not change from the above (other than that the Alliance scores worse than DBB in the Economic category). In the Alignment with Managerial Goals and Objectives category, there is strong clustering of DBB/CMAR/DB followed by PDB/Alliance, with DBOM and DBFOM scoring progressively better. And, in the Social category, DBOM and DBFOM score negatively (due to potential public concern with contracted O&M) , while all other models are the same as DBB.

Sensitivity Analysis

The sensitivity to the overall results of different category weightings was tested, with graphical results provided in Appendix C. The general conclusion is that even with significant changes in the category weightings, the general order of the models does not change from the baseline shown above, other than that the Alliance scores slightly worse than DBB if the Economic category is given higher weighting.

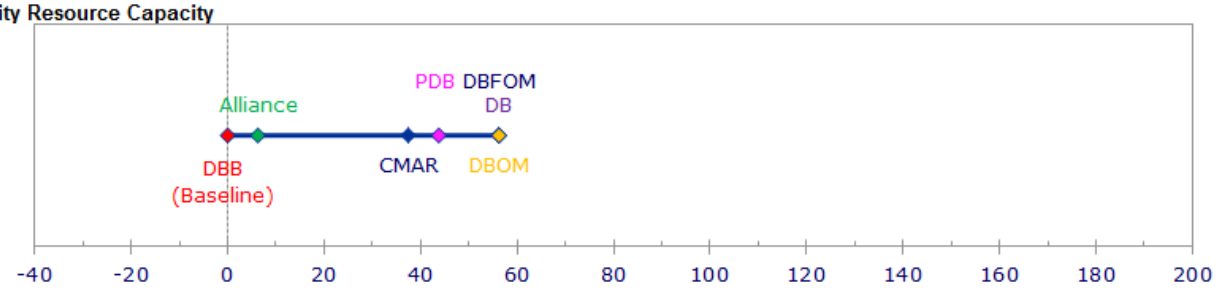
Appendix A – Scoring of Delivery Models

Cateogry		Criterion	Criterion Relative Weight Within Category	BASELINE Model 1 DBB	Model 2 CMAR	Model 3 Alliance	Model 4 PDB	Model 5 DB	Model 6 DBOM	Model 7 DBFOM
City Resource Capacity	14	Minimize demand on existing City resources during procurement	High	0	2	-2	2	3	-2	-3
	24	Minimize Design-related demands on City resources	High	0	1	1	2	3	4	4
	25	Minimize construction-related demands on City resources	High	0	3	2	3	3	4	4
	15	Solve WWTP O&M resourcing challenges	High	0	0	0	0	0	3	4
25.0%										
Economic	2	Minimize exposure to construction cost escalation	High	0	2	-2	1	2	-2	-2
	3	Maximize capital cost certainty (i.e. degree of cost certainty)	High	0	1	0	2	3	3	4
	4	Earliest capital cost certainty (degree of certainty varies per criteria 4)	Low	0	2	2	2	4	1	1
	5	Maximize O&M cost certainty over 20+ years	Low	0	0	0	0	-1	3	4
	6	Optimize whole-of-life costs (between capital and O&M)	Low	0	0	0	0	-2	2	4
	23	Maximize flexibility for future expansions and upgrades or other changes	Low	0	0	0	0	0	-2	-4
	8	Maximize scope for innovation (i.e. design, construction, operation)	Med	0	1	1	2	3	4	4
	9	Maximize competitive pressure on capital costs	High	0	-1	-1	-2	4	3	3
	10	Maximize competitive pressure on O&M costs	High	0	0	0	0	0	3	4
	11	Maximize costs covered by other levels of government	High	0	0	0	0	0	1	4
40.0%										
Alignment wwith Managerial Goals and Strategy	12	Ensure a robust and easy to operate WWTP	High	0	0	0	0	-2	1	2
	13	Avoid deferring major maintenance	Med	0	0	0	0	0	2	4
	17	Transfer design risk (rather than embrace it)	Med	0	0	1	2	3	4	4
	18	Transfer construction risk (rather than embrace it)	Med	0	1	2	2	3	4	4
	19	Transfer O&M risk (rather than embrace it)	Med	0	0	0	-1	-1	3	4
	22	Maintain labour support for project	High	0	0	0	0	0	-4	-4
25.0%										
Social	21	Maintain public support for project	High	0	0	0	0	0	-2	-2
10.0%										

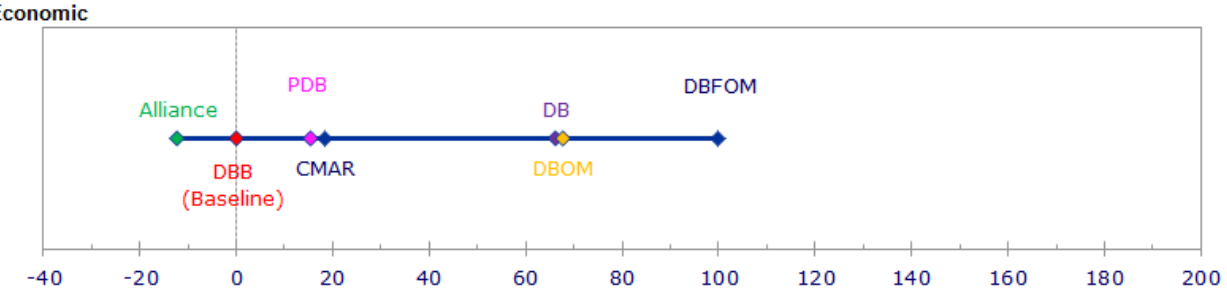
Cateogry		Criterion	Scoring comments
City Resource Capacity	14	Minimize demand on existing City resources during procurement	2 and 4 alleivate some effort due to ther party involvement. 5 is fastest and requires fewest decisoins. 3,6,7 require more time to procure the contractor/alliance partner
	24	Minimize Design-related demands on City resources	self explanatory
	25	Minimize construction-related demands on City resources	self explanatory
	15	Solve WWTP O&M resourcing challenges	3 and 4 transfer O&M responsibility completely, but 4 has better security to ensure that contractor doesn't abandon contract
25.0%			
Economic	2	Minimize exposure to construction cost escalation	3,6,7 expected to delay entry into construction market. PDB similar to CMAR except requires entire project to be designed so not quite as fast to market. 3,6,7 are latest
	3	Maximize capital cost certainty (i.e. degree of cost certainty)	2 and 4 eventually get a fixed price. 1 and 3 price not known till done. 5 6 7 have fixed price. With 5 and 6, some risk that there's post-DB capital costs to rectify deficiences. With 7, fixed price is highly guaranteed.
	4	Earliest capital cost certainty (degree of certainty varies per criteria 4)	1,6,7 expected to be quite similar in terms of overal timeframe, but 1 doesn't have certainty until construction complete so 6,7 are better. 2,3,4 can get to certainty earlier than 1 6 7 (although the degree of certainty is not as good as 5 6 7 which is reflected in the criteria above)
	5	Maximize O&M cost certainty over 20+ years	1 to 4 no certainty but owner input to design and operations. 5 has minimal owner design input so least certain, but assumption is that DB will be somewhat prescriptive to provide City projection in this regard.. 6 7 cost is known upfront, but 7 much better security on price than 6
	6	Optimize whole-of-life costs (between capital and O&M)	Capital at risk in 7 thought to force true optimization of capital and operating. Similar objectives in 6 but reduced pressure since no capital at risk. 5 forces attention on reducing captial, perhaps to sub-optimal level.
	23	Maximize flexibility for future expansions and upgrades or other changes	1 2 3 4 5 City has unferttered control. 6 and 7 have to deal with incumbent contractor. More complex in 7 since have to deal with lenders, not just contractor.
	8	Maximize scope for innovation (i.e. design, construction, operation)	2 3 4 have additional party at table to add to innovation potential. 5 adds competition on capital. 6 adds competition for O&M, so does 7 but view that financiers may introduce conservatism and limit innovation as compared to 6.
	9	Maximize competitive pressure on capital costs	1 has tender competition on construction packages. 2 3 will have some amount of self-delivered construction, non-competative. 4 amounts to a sole-source DB so less competative than 1 2 3. 5 has competition on integrated design & construction with focus on lowest cost. 6 7 have competion on integrated design & construction but tempered by concern with long term O&M, including conservatism of financiers in Model 7
	10	Maximize competitive pressure on O&M costs	Only 6 7 have competition on O&M costs. Believe that financiers in Model 7 will force greater conservatism in pricing relative to 6.
	11	Maximize costs covered by other levels of government	some chance that PPP Canada will cover some DBOM costs. DBFOM nearly certain to get funding.
40.0%			
Alignment wwith Managerial Goals and Strategy	12	Ensure a robust and easy to operate WWTP	1 2 3 4 same due to same party influencing design (City). In 5, the DB contractor has no vested interest in long term robustness, but limited impact based on assumption that DB will be somewhat prescribed to protect City against this Contractual obligation to operate for a fixed cost forces more discipline in 6 and 7.
	13	Avoid deferring major maintenance	1 2 3 4 5 the same. 6 City is only partially locked in, will consult with contractor on major maintenance. 7 is fully locked in.
	17	Transfer design risk (rather than embrace it)	3 transfers a bit of risk due to pain-shares risk compared to 1 and 2. 4 doesn't completely transfer risk due to consulative process with DB contractor. 5 6 7 transfer fully but 5 is worse as contractor is not around for the long run.
	18	Transfer construction risk (rather than embrace it)	1 transfers some risk to constructor. 2 transfers some additional risk to CM. 3 by definition has City sharing this risk. 4 has some transfer, 5 6 7 full transfer but in 5 contractor is not around for the long term to rectify problems discovered later
	19	Transfer O&M risk (rather than embrace it)	7 fully transfers, 6 has lesser security so not quite as good (easier for contractor to walk away). 4 and 5 may introduce some additional retained risk since contractor is not around for the long term
	22	Maintain labour support for project	contracting of O&M will likely cause labour opposition
25.0%			
10	21	Maintain public support for project	1 2 3 4 5 public will have no particular interest in delivery model. There may be concern about 6 and 7 triggered by likely labour opposition
10.0%	14		

Appendix B – Baseline Analysis, Scoring Within Categories

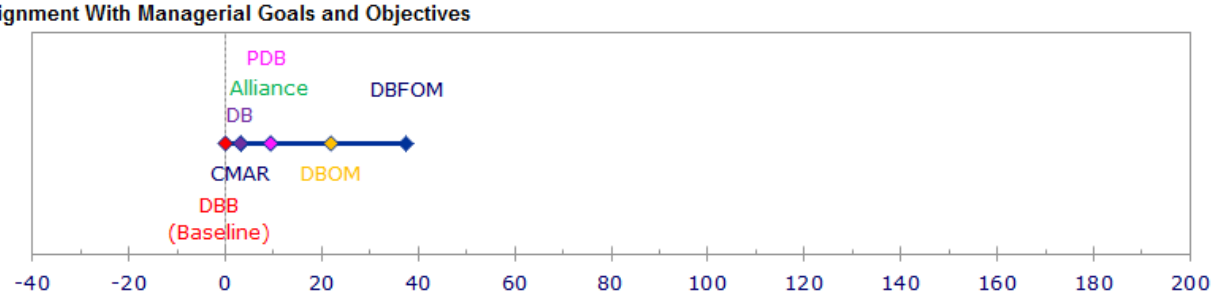
City Resource Capacity



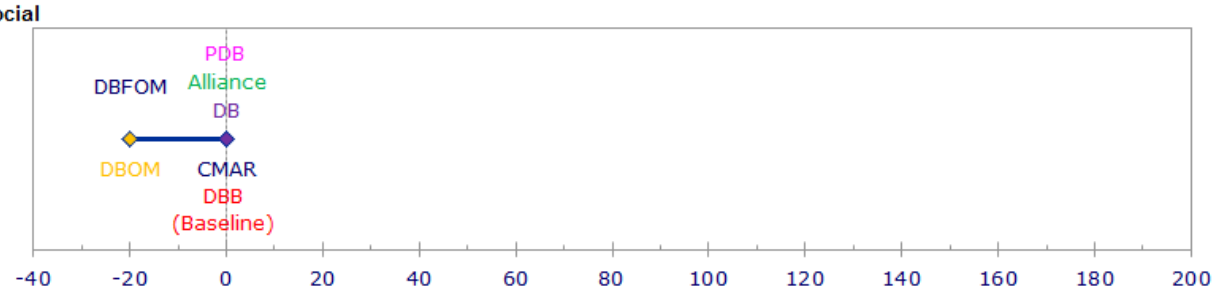
Economic



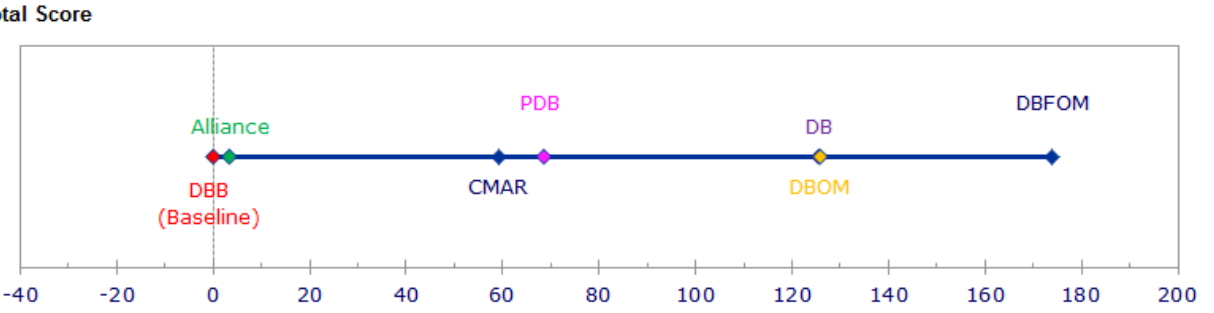
Alignment With Managerial Goals and Objectives



Social



Total Score

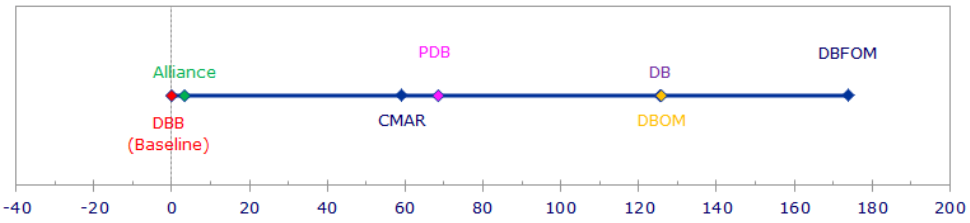


Appendix C – Sensitivity Analysis, Changes in Category Weightings

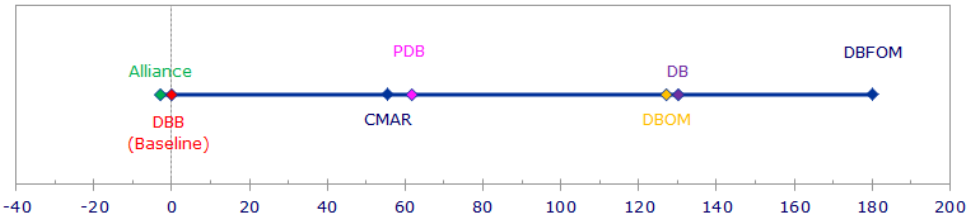
Major Category Weightings Sensitivity

	Capacity	Economic	Alignmen	Social	TOTAL	
Baseline	25%	40%	25%	10%	100%	
Var 1	20%	50%	20%	10%	100%	*give more weight to financial factors*
Var 2	37.50%	37.50%	20%	5%	100%	*give more weight to capacity and financial factors*
Var 3	20.00%	70.00%	5%	5%	100%	*Financial is major concern*
Var 4	70.00%	20.00%	5%	5%	100%	*Capacity is major concern*

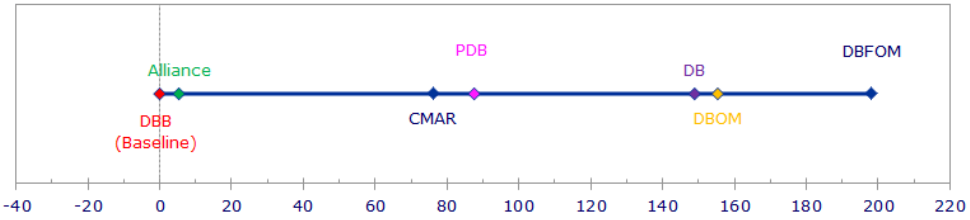
Baseline



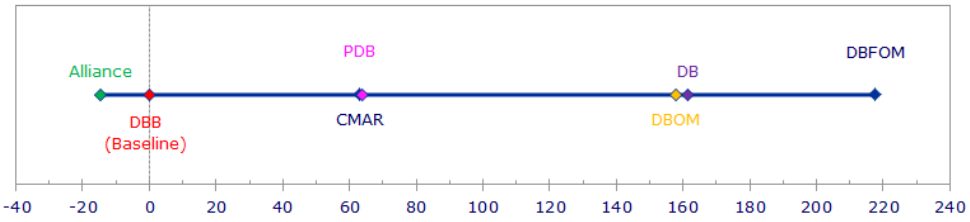
Var 1 give more weight to financial factors



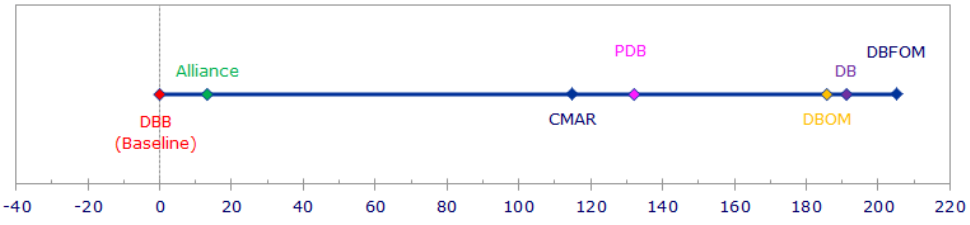
Var 2 give more weight to capacity and financial factors



Var 3 Financial is major concern



Var 4 Capacity is major concern



Appendix F – DBFOM Contract Term Memorandum

Deloitte.

Deloitte & Touche LLP
2800 - 1055 Dunsmuir Street
4 Bentall Centre
P.O. Box 49279
Vancouver BC V7X 1P4
Canada

Tel: 604-640-3357
Fax: 604-899-7008
www.deloitte.ca

Memo

Date:	December 14, 2012
To:	Mr. Rob Court, P.Eng. Manager, Environmental Engineering City of Regina
c:	File 824603 – 1000014
Subject:	WWTP Upgrade Project Recommended DBFOM Contract (or "Concession") Term

Introduction

The typical post-construction operating term of a financed P3 project (e.g. DBFOM) in Canada is 30 years, resulting in total contract lengths varying from 32 to 34 years, taking into account the design/construction period as well as operations. A term of 20 to 30 years has generally been assumed in development of the DBFOM delivery model in all analysis to date. All financial analysis to date has assumed a 30-year operating term post-construction completion as a "default".

This memo outlines the considerations in selecting a contract term of between 20 and 30 years and recommends a contract term.

Preliminary Schedule

The preliminary high-level procurement schedule for a DBFOM is as follows:

Period		Key Milestones	Estimated Date
Procurement		Selection of Preferred Proponent	December 2013
		Financial Close	February 2014
Design & Construction		Commence Design & Construction	March 2014
	Interim Operating	Take-over of Existing Plant Operations	April 2014
		Construction Completion	December 2016
Long-Term Operating		Commencement of Capital Payments & O&M Payments	January 2017
		Last Month of Service	TBD

Considerations in Selecting Contract Term

The table below sets out the key considerations in selecting the term for the Regina WWTP project if implemented as a DBFOM.

Consideration	Discussion	Conclusion
Legislative restrictions	Division 2 of the Cities Act states: *A council may grant a right to a person to provide a public utility service in all or part of the city for not more than 30 years.* The City Solicitor advises that the 30 year period for measurement against this restriction would start at the commencement of the Interim Operating Period (see above).	Total of Interim Operating and Long-Term Operating periods may not exceed 30 years. This is a governing criteria.
City financing policy	We are not aware of any City policy that dictates the term of long term debt incurred for infrastructure financing.	Not a governing criteria.
O&M market preferences or limitations	Based on market sounding feedback, any term between 20 and 30 years is attractive to the market. Longer or shorter terms are also possible.	Not a governing criteria.
Private finance preferences or limitations	Any term between 20 and 35 years is attractive.	Not a governing criteria.
The lifecycle of major replacement subcomponents of the Project, to ensure that at least one refresh of each is included within the term and thereby ensure that there is transfer of significant "lifecycle" cost risk in the P3 delivery models.	Based on its concept plan for the WWTP, AECOM advises that significant lifecycle reinvestment is likely required at year 25 of the Long Term Operating period, so a Long Term Operating period longer than 25 years is appropriate. While actual bid designs will be different, there's no reason to expect a significantly different lifecycle investment timing profile.	The Long-Term Operating period should be maximized within the constraint of the legislative restriction. This is a governing criteria for achieving long term value in a P3.
The operating term necessary to ensure that full accountability for the performance of the treatment process is transferred to the P3 contractor.	While the suitability of the process would likely be known quite early, its long term performance can only be proven by the passing of time. All terms under consideration are sufficiently long.	Not a governing criteria .
The potential ability to avoid an expansion of treatment capacity within the term.	There is insufficient information to determine when, if ever, the WWTP will need to be expanded. Expectations are that new development will need to be handled by a new, separate, WWTP, and so this consideration is a minor one.	Not a governing criteria.
Affordability – Impact on Rates	Matching the term of the financing to the life of the asset is beneficial, which favours longer terms. This also leads to lower annual costs and lower utility rates.	Not a governing criteria.
Value for Money	Shorter terms reduce the total financing costs over the project term, and are sometimes required to achieve Value for Money. Preliminary value-for-money assessment shows positive VFM at a 30-year term, so there is no need to shorten the term in pursuit of VFM.	Not a governing criteria.

Recommendation

Given the above, the recommended concession term is 30 years from the time that the contractor takes over interim operations of the WWTP, which is governed by the legislative restriction. This amounts to a total contract length of 30 years plus two months (362 months), the two months being an allowance after financial close to allow the contractor to organize and assume employment of the City workforce (during which time it is not providing a "public utility" service.

<table>
<tr><th colspan="2">Period</th><th>Key Milestones</th><th>Estimated Date</th><th>Duration</th><th></th></tr>
<tr><td colspan="2" rowspan="2">Procurement</td><td>Selection of Preferred Proponent</td><td>December 2013</td><td rowspan="2">2 months</td><td rowspan="6">Total of 30 years providing a "public utility" service</td></tr>
<tr><td>Financial Close</td><td>February 2014</td></tr>
<tr><td colspan="2">Design & Construction</td><td>Design & Construction</td><td>March 2014</td><td>34 months</td></tr>
<tr><td rowspan="2">Interim Operating</td><td>Take-over of Existing Plant Operations</td><td>April 2014</td><td rowspan="2">32 months (2.7 years)</td></tr>
<tr><td>Construction Completion</td><td>December 2016</td></tr>
<tr><td colspan="2" rowspan="2">Long-Term Operating</td><td>Commencement of Capital Payments & O&M Payments</td><td>January 2017</td><td rowspan="2">328 months (27.3 years)</td></tr>
<tr><td>Last Month of Service</td><td>May 2044</td></tr>
</table>

It may be possible for the contractor to assume management of the WWTP immediately after financial close under a management contract using City staff while still employed by the City, eliminating the two month allowance. The benefits of this have not been fully explored. In addition, a legal opinion as to whether the City or the contractor is providing the "public utility" service in such a case is needed.

Appendix G – Quantitative Risk Assessment

Risk Quantification Workshop Attendees

The City was represented by attendees from engineering, utilities, finance, legal, and strategy units.

City of Regina

Byron Werry, Legal
Teresa Florizone, Finance
Dawn Martin, Strategy
Jerry Cheshuk, WWTP Manager
Rob Court, Environmental Engineering
Fabian Contreras, Strategy
Greg Markewich, Procurement
Greg Jelinski, Human Resources
Jayne Krueger, Legal
Pat Wilson, Water & Sewer
Derrick Bellows, Environmental Services

AECOM
Rick Bitcon
Simon Baker

Deloitte
Chris Baisley
Mark Harrison

Risk Quantification – Workshop Consensus

Model 1 – DBB

Regina WWTP Upgrade (NPV, $thousands).

							1 - DBB		Traditional Design-Bid-Build			
No.	Category	Name	Description	Notes from Qual Workshop	Notes from Prelim Quant Workshop	Cost Base	Allocation	Probability	Prelim Impact Narrative	Validated Impact Narrative	Impact Calculation	Calculation of Risk Cost	Allocation of Risk Cost	
								16(1)(a), 17(1)(d)						
03	Procurement	Market capacity	16(1)(a), 17(1)(d)											
05	Procurement	Resource capacity												
06	Procurement	Financial markets												
07	Procurement	Unclear project documentation												
09	Information	Wastewater flow and quality projections												
14	Design	Wastewater treatment process selection												
15	Design	Facility design risk												
16	Design	Design exceeds requirements												
17	Design	Scope changes during design - scope creep												
20	Construction	Delay by Owner												
21	Construction	Delay												

Regina WWTP Upgrade (NPV, $thousands).

No.	Category	Name	Description	Notes from Qual Workshop	Notes from Prelim Quant Workshop	Cost Base	1 - DBB Traditional Design-Bid-Build Allocation	Probability
								16(1)(a), 17(1)(d)
			16(1)(a), 17(1)(d)					
22	Construction	Construction cost						
23	Construction	Scope changes during construction						
24	Construction	Contractor default						
29	Construction	Construction / Operation Coordiation						
30	Operation	Latent defects in new infrastructure						
31	Operations	Staffing						
32	Operation	Equipment failure						
33	Operation	Change in regulation						
34	Operation	Operating costs (other than power and chemicals)						
36	Operation	Power and Chemical Productivity						
38	Operation	Effluent quality						
39	Operations	Sludge quality						

Regina WWTP Upgrade (NPV, $thousands).

							1 - DBB					
							Traditional Design-Bid-Build					
No.	Category	Name	Description	Notes from Qual Workshop	Notes from Prelim Quant Workshop	Cost Base	Allocation	Probability	Prelim Impact Narrative	Validated Impact Narrative	Impact Calculation	Calculation of Risk Cost	Allocation of Risk Cost
			16(1)(a), 17(1)(d)						16(1)(a), 17(1)(d)				
44	Operation	Early expansion											
46	Maintenance	Major maintenance/rehabilitation											
48	Maintenance	Unknown condition of existing assets (latent defects in existing assets)											

Model 7 – DBFOM

Regina WWTP Upgrade (NPV, $thousands).

No.	Category	Name	Description	Notes from Qual Workshop	Notes from Prelim Quant Workshop	Cost Base	7 - DBFOM						
							Allocation	Probability	Design/Build/Finance/Operate/Maintan				
									Prelim Impact Narrative	Validated Impact Narrative	Impact Calculation	Calculation of Risk Cost	Allocation of Risk Cost
									16(1)(a), 17(1)(d)				
03	Procurement	Market capacity	16(1)(a), 17(1)(d)										
05	Procurement	Resource capacity											
06	Procurement	Financial markets											
07	Procurement	Unclear project documentation											
09	Information	Wastewater flow and quality projections											
14	Design	Wastewater treatment process selection											
15	Design	Facility design risk											
16	Design	Design exceeds requirements											
17	Design	Scope changes during design - scope creep											
20	Construction	Delay by Owner											
21	Construction	Delay											

Regina WWTP Upgrade (NPV, $thousands).

No.	Category	Name	Description	Notes from Qual Workshop	Notes from Prelim Quant Workshop	Cost Base	7 - DBFOM Allocation	Probability	Design/Build/Finance/Operate/Maintan: Prelim Impact Narrative	Validated Impact Narrative	Impact Calculation	Calculation of Risk Cost	Allocation of Risk Cost
			16(1)(a), 17(1)(d)					16(1)(a), 17(1)(d)					
22	Construction	Construction cost											
23	Construction	Scope changes during construction											
24	Construction	Contractor default											
29	Construction	Construction / Operation Coordiation											
30	Operation	Latent defects in new infrastructure											
31	Operations	Staffing											
32	Operation	Equipment failure											
33	Operation	Change in regulation											
34	Operation	Operating costs (other than power and chemicals)											
36	Operation	Power and Chemical Productivity											
38	Operation	Effluent quality											
39	Operations	Sludge quality											

Regina WWTP Upgrade (NPV, $thousands).

No.	Category	Name	Description	Notes from Qual Workshop	Notes from Prelim Quant Workshop	Cost Base	7 - DBFOM Allocation	Probability	Design/Build/Finance/Operate/Maintan Prelim Impact Narrative	Validated Impact Narrative	Impact Calculation	Calculation of Risk Cost	Allocation of Risk Cost
			16(1)(a), 17(1)(d)						16(1)(a), 17(1)(d)				
44	Operation	Early expansion											
46	Maintenance	Major maintenance/rehabilitation											
48	Maintenance	Unknown condition of existing assets (latent defects in existing assets)											

			1 - DBB		7 - DBFOM			
			Allocation	Est. Cost	Allocatior	Est. Cost	Best Case	Comments
05	Procurement	Resource capacity	16(1)(a), 17(1)(d)					
15	Design	Facility design risk						
46	Maintenance	Major maintenance/rehabilitation						
31	Operations	Staffing						
20	Construction	Delay by Owner						
48	Maintenance	Unknown condition of existing assets (latent defects in existing assets)						
29	Construction	Construction / Operation Coordiation						
44	Operation	Early expansion						
23	Construction	Scope changes during construction						
21	Construction	Delay						
32	Operation	Equipment failure						
14	Design	Wastewater treatment process selection						

			1 - DBB		7 - DBFOM			
			Allocation	Est. Cost	Allocation	Est. Cost	Best Case	Comments
16	Design	Design exceeds requirements	16(1)(a), 17(1)(d)					
22	Construction	Construction cost						
24	Construction	Contractor default						
07	Procurement	Unclear project documentation						
09	Information	Wastewater flow and quality projections						
34	Operation	Operating costs (other than power and chemicals)						
30	Operation	Latent defects in new infrastructure						
17	Design	Scope changes during design - scope creep						
39	Operations	Sludge quality						
03	Procurement	Market capacity						
06	Procurement	Financial markets						
33	Operation	Change in regulation						
36	Operation	Power and Chemical Productivity						
38	Operation	Effluent quality						

Appendix H – City of Regina P3 Policy

ABSTRACT

BYLAW NO. 2012-22

THE REGINA ADMINISTRATION AMENDMENT BYLAW, 2012

PURPOSE:	The purpose of this bylaw is to provide the framework for City Council's consideration of a public private partnership delivery model for public purpose infrastructure or services projects. Further, the Bylaw sets out the procurement process that is required to be followed for projects that use a public private partnership delivery model.
ABSTRACT:	This Bylaw provides the framework for consideration of public private partnership delivery models as well as setting out the procurement process that is required to be followed.
STATUTORY AUTHORITY:	Section 8 and 154 of *The Cities Act*.
MINISTER'S APPROVAL:	N/A
PUBLIC HEARING:	N/A
PUBLIC NOTICE:	Public notice was provided in the March 17, 2012 edition of the Leader Post, the City's website and the City's Public Notice Board (because of the changes to the City's purchasing policy).
REFERENCE:	Report EX12-9 from the March 21, 2012 Executive Committee Meeting
AMENDS/REPEALS:	Amends Bylaw 2003-69
CLASSIFICATION:	Administrative
INITIATING DIVISION:	Corporate Services Division
INITIATING DEPARTMENT:	Financial Services Department

BYLAW NO. 2012-22

THE REGINA ADMINISTRATION AMENDMENT BYLAW, 2012

THE COUNCIL OF THE CITY OF REGINA ENACTS AS FOLLOWS:

1 Bylaw No. 2003-69, being *The Regina Administration Bylaw* is amended in the manner set forth in this Bylaw.

2 In Schedule "D", the following Part is added after section 65:

"Part VI – Public Private Partnerships

Definitions

66. In this Part:

(a) **"delivery model assessment"** means an assessment that is applied to determine if a public purpose infrastructure or services project is suitable for a public private partnership delivery model and includes one or more of the following types of assessments:

(i) a screening assessment;

(ii) a strategic assessment;

(iii) a value for money assessment.

(b) **"fairness advisor"** means a person who is independent from the City who is appointed to oversee the procurement process to ensure that it is fair and transparent;

(c) **"net present value"** means the value determined by adding the present value of expected future cash flows and the cost of initial investment;

(d) **"private entity"** means any non-government organization from which the City may procure infrastructure or services;

(e) **"proponent"** means a private entity or group of private entities who are selected as proponents by the City as a result of the request for qualifications stage and then are allowed to submit proposals to the City at the request for proposals stage of the procurement process;

Approved as to form this 21st day of March, 2012.

City Solicitor

(f) **"public private partnership"** means a long term contractual arrangement between the City and a private entity or a group of private entities that have formed a consortium for the provision of public purpose infrastructure or services in which:

(i) the City seeks to transfer risks that it would normally assume based on the private sector participants' ability to better manage those risks; and

(ii) the private sector participants are involved in not only the initial design and construction phase but their role extends beyond the initial capital construction of the project to include one or more of the following under a single long term contract:

(A) the financing of the infrastructure or services;

(B) the maintenance of the infrastructure or services;

(C) the operation of the infrastructure or services;

(g) **"public sector comparator"** is an estimated assessment of the life cycle cost of the traditional procurement of a public purpose infrastructure or services project (including design, construction, financing, maintenance and operations) including the cost of quantified risks;

(h) **"respondent"** means a private entity or group of private entities that provide a submission to the City at the request for qualifications stage of the procurement process;

(i) **"screening assessment"** means a high level comparison of the public purpose infrastructure or services project against specified criteria to determine potential suitability for a public private partnership delivery model;

(j) **"shadow bid"** is an estimated assessment of the life cycle cost of the public private partnership delivery of a public purpose infrastructure or services project (including design, construction, financing, maintenance and operations) including the cost of quantified risk;

(k) **"strategic assessment"** means a more detailed examination than the screening assessment and includes an examination of the risks, costs, market of service providers, and objectives and constraints to identify, at a strategic level, if a project is suitable for a public private partnership delivery model;

(l) **"traditional procurement"** means the form of procurement for infrastructure projects where the City treats the design, construction, financing, maintenance and operation stages of a project as separate components and the City may or may not involve the services of a private sector participant at each stage;

(m) **"value for money assessment"** is an assessment that compares the difference in risk-adjusted cost to the City between traditional procurement and a public private partnership procurement using the present value technique and will usually take into account the following:

(i) estimation of the public sector comparator;

(ii) estimation of the shadow bid; and

(iii) comparison of the public sector comparator to the shadow bid to determine the value for money, if any, offered by the public private partnership.

Policies and Procedures

67. Subject to this bylaw, the Deputy City Manager of Corporate Services is authorized to establish policies and procedures with respect to the following:

(a) the detailed considerations associated with the principles set out in section 68;

(b) the detailed criteria and requirements of the screening, strategic and value for money assessments to be applied to determine the suitability of a public private partnership delivery model;

(c) the detailed steps of the public private partnership procurement process; and

(d) the public private partnership contract management process.

Consideration of a public private partnership

68. The following guiding principles will be considered by the City when evaluating the suitability of a public private partnership delivery model for the provision of a public purpose infrastructure or services project:

(a) the public private partnership delivery model is aligned with the City's priorities and strategies serving the community considering:

(i) community and user needs; and

(ii) the City's capital and operating budgets;

(b) the public interest can be protected considering:

(i) potential impacts on public control, service objectives, quality and affordability, public access, health and safety, user rights, security, privacy and public input; and

(ii) appropriate mechanisms and provisions for monitoring needs over time, dispute settlement and contract termination;

(c) project risks can be diligently identified and effectively shared and managed;

(d) value and affordability can be demonstrated through:

(i) an assessment that shows that the public private partnership delivery model provides better value over the project life cycle than a traditional procurement model considering risk transfer, transaction costs and opportunities for innovation, economic growth and community issues; and

(ii) an assessment that shows that the City has the financial capacity to fund the project over the long term;

(e) the private sector can be appropriately engaged and strong private sector interest and participation can be promoted through transparent, effective and timely project assessment, authorizations and procurement processes and procedures;

(f) there are mechanisms to ensure compliance with labour legislation and that public sector employees will be treated fairly under a public private partnership delivery model; and

(g) appropriate governance and accountabilities are established.

Council approval of delivery model assessment

69. Where a public purpose infrastructure or services project has been identified by the City Manager or a Deputy City Manager for a potential public private partnership, the City Manager or Deputy City Manager shall submit a report to Council for approval of the following decisions:

(a) the decision to carry out a delivery model assessment process and which one or more of the following assessments will be undertaken:

(i) a screening assessment;

(ii) a strategic assessment;

(iii) a value for money assessment;

(b) the authority to expend City resources and funding to carry out the delivery model assessment; and

(c) the delegation of authority to the City Manager or a Deputy City Manager to undertake the delivery model assessment process and the assessments required in clause (a),

Council approval of decision to proceed with public private partnership

70.(1) Where a delivery model assessment has been undertaken with respect to a public purpose infrastructure or services project and, based on this, the City Manager or a Deputy City Manager recommends proceeding with a public private partnership delivery model, the City Manager or Deputy City Manager shall submit a report to Council for approval of the following decisions:

(a) the decision to proceed with a public private partnership delivery model for the project;

(b) the scope of the public purpose infrastructure or services project;

(c) the amount of capital funding and operating funding required to proceed with the project;

(d) the delegation of authority to the City Manager or a Deputy City Manager to:

(i) proceed with the procurement for the public purpose infrastructure or services project, including determining the details as to the procurement process; and

(ii) subject to subsections (2) and (3), negotiate and award the project agreement to the preferred proponent based on the procurement process outlined in this Part.

(2) If, during the procurement process, the project scope needs to change significantly or the approved capital funding is required to be increased, the City Manager or a Deputy City Manager shall obtain Council approval of these changes before awarding the contract to the preferred proponent.

(3) If, during the procurement process, the City determines through a value for money assessment that the public private partnership delivery model does not provide a better value over the project life cycle than traditional procurement, the City Manager or a Deputy City Manager shall submit a report to Council for approval that includes the following:

(a) an explanation as to how the public private partnership delivery model does not provide a better value over the project life cycle than traditional procurement and the differences in value between the two models;

(b) a recommendation and rationale as to whether Council should award the contract to the preferred proponent despite the fact that the use of the public private partnership delivery model does not provide better value over the project life cycle than traditional procurement;

(c) where the recommendation is not to award the contract to the preferred proponent because the public private partnership delivery model does not provide better value, a recommendation and rationale as to an alternate method for procurement or a recommendation and rationale as to whether to abandon the project.

Competitive procurement process required

71.(1) Every public purpose infrastructure or services project to be developed as a public private partnership shall be subject to a fair, open and transparent public tendering process as outlined in this Part.

(2) In order to ensure that the procurement process is fair, open and transparent, the City Manager or a Deputy City Manager shall appoint a fairness advisor to oversee the process.

(3) The City Manager or a Deputy City Manager is authorized to determine the fairness advisor's scope of services, detailed role and responsibilities and may procure these services through the appropriate procurement method set out in this Schedule.

(4) Notwithstanding subsection (3), the fairness advisor shall provide final reports on the request for qualifications process and request for proposals process to the City Manager and the City Manager is required to submit a report to Council that outlines the fairness advisor's findings.

Stages required for procurement

72. Where a public private partnership delivery model has been approved for a public purpose infrastructure or services project in accordance with section 70, the procurement process shall include the following stages:

(a) a request for qualifications stage;

(b) a request for proposals stage; and

(c) a closing stage.

Request for qualifications stage

73.(1) At the request for qualifications stage, the City shall prepare a request for qualifications document that sets out:

(i) the scope of the public purpose infrastructure or services project;

(ii) the public private partnership structure as determined through the delivery model assessment; and

(iii) the pre-established evaluation criteria that will be used to evaluate the respondents.

(2) The request for qualifications stage shall be used to solicit submissions from respondents to demonstrate their technical and financial capability and capacity to provide the project requirements.

(3) The pre-established evaluation criteria shall be used to evaluate the respondents and only the respondents that are selected as proponents through the request for qualifications stage are eligible to participate in the request for proposals stage.

(4) The City may limit the number of respondents that are selected as proponents and are eligible to participate at the request for proposals stage.

(5) Notwithstanding that the City has initiated a request for qualifications stage, the City is not obligated to proceed with the request for proposals stage.

Request for proposals stage

74.(1) At the request for proposals stage, the City shall prepare the request for proposals documents and a draft project agreement for submission to the proponents.

(2) During the request for proposals stage the City may do any of the following:

(a) provide documentation to the proponents in addition to the request for proposal documents and draft project agreement;

(b) hold meetings with the proponents to discuss:

(i) technical project issues; or

(ii) the draft project agreement;

(c) update the request for proposals documentation, the value for money assessment and draft project agreement as necessary; and

(d) receive and evaluate proponent submissions.

(3) The City shall use a multi-staged request for proposals submission process which requires the proponents to submit:

(a) a technical proposal that may be evaluated:

(i) on a pass or fail basis in reference to the project specifications; or

(ii) on the basis of pre-established evaluation criteria; and

(b) a financial proposal based on a net present value total purchase price.

(4) Subject to subsection (6), where the selection criteria are based on the lowest financial proposal, the proponent that has passed or scored the highest on the evaluation of the technical submission and has presented the lowest net present value in its financial offer shall be selected as the preferred proponent.

(5) Subject to subsection (6), where the selection criteria are not based on the lowest financial proposal, the preferred proponent shall be selected based on the evaluation criteria as set out in the request for qualifications and request for proposals documents.

(6) The City shall assess the preferred proponent's submission against the value for money assessment, where a value for money assessment has been completed, and where the preferred proponent's submission does not provide a better value over the project life cycle than traditional procurement, the City Manager or Deputy City Manager may not award the project agreement to the preferred proponent until Council approval has been obtained pursuant to subsection 70(3).

(7) Notwithstanding that the City has initiated a request for proposals stage, the City is not obligated to proceed with awarding the project agreement.

Closing stage

75. Where the City wishes to award the project agreement to the preferred proponent, the City and the preferred proponent shall finalize and enter into the project agreement.

Borrowing

76. Where the City is required to borrow money for the purposes of financing the public purpose infrastructure or services project under the project agreement, the City Manager or a Deputy City Manager shall obtain City Council approval of the borrowing through a borrowing bylaw.

Honorarium

77. The City Manager or a Deputy City Manager is authorized to:

(a) determine the amount of any honorarium; and

(b) pay an honorarium to the unsuccessful proponents who submit a compliant final submission.

Unsolicited proposals

78.(1) The City may consider an unsolicited proposal to use a public private partnership for a public purpose infrastructure or services project if the proposal meets the criteria set out in this Part and City Council approval is obtained in accordance with sections 69 and 70.

(2) The City is not required to follow the procurement process set out in this Part if:

(a) the City has taken measures to determine if there is more than one proponent interested in the public purpose infrastructure or services project; and

(b) based on the measures taken in clause (a), there is only one proponent that would make a submission.

(3) Where there is only one proponent, the City may negotiate with the proponent and assess the proponent using the public sector comparator and the shadow bid as its value for money assessment as well as the proponent's technical and financial capability and capacity to assume the roles and responsibilities required to carry out the work.

(4) Where there is more than one proponent interested in the public purpose infrastructure or services project, the City shall follow the procurement process set out in this Part.

(5) The City shall not pay an honorarium to an unsuccessful proponent where there is only one proponent interested in the public purpose infrastructure or services project."

3 This Bylaw comes into force on the day of passage.

READ A FIRST TIME THIS 26th DAY OF March 2012.

READ A SECOND TIME THIS 26th DAY OF March 2012.

READ A THIRD TIME AND PASSED THIS 26th DAY OF March 2012.

Mayor

City Clerk (SEAL)

CERTIFIED A TRUE COPY

City Clerk

Appendix I – Biographies of Project Team Members

- City staff
- Legal advisor (Torys)
- Owners Engineer (AECOM)

City Staff

Biography for WWTP Upgrade

Dorian Wandzura, P. Eng.
Deputy City Manager & COO
City Operations Division, City of Regina

28(1) Personal

Biography for WWTP Upgrade

Derrick Bellows, P.Eng., FEC, ICD.D
Director, Special Projects Secretariat, City of Regina

28(1) Personal

Biography for WWTP Upgrade

Rob Court, P.Eng., P.G.D. Commerce
Manager, Environmental Engineering, City of Regina

28(1) Personal

Biography for WWTP Upgrade

Fabian Contreras, M.B.A.
Strategy and Performance Consultant

28(1) Personal

Biography for WWTP Upgrade

Jerry T. Cheshuk, REP, AScT
Manager – Wastewater Treatment
City of Regina

28(1) Personal

Biography for WWTP Upgrade

Jayne Krueger, B.A., LL.B
Barrister and Solicitor

28(1) Personal

Biography for WWTP Upgrade

Pat Wilson, M.A., C.M.A.
Manager, Utility Billing, City of Regina

28(1) Personal

Biography for WWTP Upgrade

Deb McEwen, ABC
Manager, Communications, City of Regina

28(1) Personal

Legal Advisor

TORYS LLP

Mark W.S. Bain
Partner

Direct: 416.865.7349
Email: mbain@torys.com

Mark is consistently recognized as one of Canada's leading infrastructure and project finance lawyers.

Practice

Mark Bain is consistently recognized as one of Canada's leading infrastructure and project finance lawyers. He has acted on over 50 major public-private partnership (PPP) and alternative financing and procurement (AFP) transactions.

Mark has acted on a broad range of PPP, AFP and other infrastructure transactions in the healthcare, power, telecom, education, justice, gaming, water and wastewater, pipelines, public records and urban redevelopment fields. He has represented all of the principal parties to such transactions, including sponsors, equity investors, lenders, arrangers and underwriters, contractors, service providers and public authorities.

Recent mandates include Windsor Essex Parkway (for the successful proponent), Niagara Health System (for the public authorities) and Women's College Hospital (for the successful proponent).

Mark is the head of Torys' Public-Private Partnerships practice, and co-head of the firm's Infrastructure and Energy practice.

Recognitions

Chambers & Partners' *Chambers Global: World's Leading Lawyers for Business, The Client's Guide,* 2006–2012—Leading lawyer in projects: PPP and infrastructure, and banking and finance

Lexpert/American Lawyer's *Guide to the Leading 500 Lawyers in Canada,* 2008-2013—Leading practitioner in project finance

Lexpert/Thomson Reuter's *Canadian Legal Lexpert Directory,* 2011-2012—Most frequently recommended as a leading lawyer in project finance

Legal Media Group/Euromoney's *IFLR1000 Guide to the World's Leading Financial Law Firms,* 2008, 2010 and 2011—Leading Canadian lawyer in project finance

Law Business Research's *Who's Who Legal: Canada,* 2010-2012—Leading lawyer in project finance and public procurement

Law Business Research's *Who's Who Legal: The International Who's Who of Business Lawyers,* 2009-2012—Leading public procurement lawyer

Law Business Research's *Who's Who Legal: The International Who's Who of Project Finance Lawyers,* 2010—Leading project finance lawyer

Legal Media Group's *Guide to the World's Leading Project Finance Lawyers,* 2008—Leading lawyer in Project Finance

Project Finance Magazine Market Survey, 2007—Recognized internationally as the best individual lawyer in the PFI/PPP sector

Lexpert/Thomson Canada's *Lexpert Guide to the 100 Most Creative Lawyers in Canada,* 2006—rated one of the 40 corporate lawyers to watch

Transactions

Mark has represented

Infrastructure/PPP

- Azurix in the acquisition of the Hamilton-Wentworth water and wastewater system PPP project
- Balfour Beatty
  - as a shortlisted proponent for the Quinte Consolidated Courthouse AFP project
  - as a shortlisted proponent for the St. Thomas Consolidated Courthouse AFP project
- Bilfinger Berger Project Investments
  - as the successful proponent for the C$455 million Women's College Hospital AFP project
  - as a shortlisted proponent for the Alberta Schools Alternative Procurement II PPP project
  - as a shortlisted proponent for the Forensic Sciences and Coroner's Complex AFP project
  - as a shortlisted proponent for the Southwest Detention Centre project
- BPO Properties as shortlisted proponent for the C$400 million Calgary Law Courts PPP project
- Brookfield LePage Johnson Controls as the facilities management service provider and consortium member of Access Health Vancouver, in the PPP transaction for the Gordon and Leslie Diamond Health Care Centre in Vancouver
- City of Barrie for the Barrie P3 Transit project
- City of Calgary as a shortlisted proponent for the National Portrait Gallery PPP project
- City of Regina for the proposed Regina stadium project
- Dalkia Canada as a member of a shortlisted proponent for the Bridgepoint Health AFP project
- FESSA (EllisDon Inc./Empresa Constructora Sigro S.A./Fengate Capital Management Ltd.) as a prequalified bidder for the Antofagasta Hospital concession project in Antofagasta, Chile
- Forum Equity Partners
  - as the preferred proponent for the SRO Renewal Initiative PPP project in Vancouver, British Columbia
  - as a shortlisted proponent for the Driver Examination Services project in Ontario
  - as a shortlisted proponent for the Ontario Provincial Police Modernization AFP project
  - as a shortlisted proponent for the Thunder Bay Consolidated Courthouse project
- Government of Northwest Territories for the proposed Mackenzie Valley Fibre Link project
- Infrastructure Ontario

  - and Niagara Health System in the C$759 million AFP transaction for a new acute care hospital and cancer centre in St. Catharines, Ontario
  - and the Ministry of Community and Social Services in the C$93 million AFP transaction involving the construction and financing of the new Roy McMurtry Youth Centre in Brampton, Ontario
  - and the joint executive committee of North Bay General Hospital and Northeast Mental Health Center in the C$551 million AFP transaction for the North Bay Regional Health Centre, a new co-located acute care hospital and specialized mental health centre in North Bay, Ontario
  - and Bluewater Health in the C$214 million AFP expansion and redevelopment of Bluewater Health's Norman Site
- Laing O'Rourke as a member of a shortlisted proponent for the PanAm Athletes' Village AFP project
- Ontario Realty Corporation in the C$45 million PPP transaction for the new Archives of Ontario facility at York University
- Parry Sound Health Centre in the PPP analysis for the future hospital project
- Pearson Express Consortium (Laing O'Rourke/Flatiron) as a shortlisted proponent for the Pearson Air Rail Link AFP project
- Telus Corporation as a shortlisted proponent for the Alberta First Responder Cellular Communication System project
- The Healthcare Infrastructure Company of Canada
  - as the selected private partner in the C$180 million PPP transaction for the new Royal Ottawa Mental Health Centre in Ottawa
  - as the selected private partner in the C$550 million PPP transaction for the new Brampton Civic Hospital in Brampton, Ontario
  - as a shortlisted proponent in the PPP transaction for the new Abbotsford Regional Hospital and Cancer Centre in Abbotsford, British Columbia
- Town of Bancroft in its proposed C$100 million Building Bancroft PPP project
- Waterfront Toronto in the development and redevelopment of approximately 300 hectares of parks and public spaces along Toronto's waterfront
- West Champlain Healthy Community Corporation in the DBFO transaction for the Ottawa Valley Health Centre
- Windsor Essex Mobility Group (ACS/Acciona/Fluor) as the successful proponent for the C$1.4 billion Windsor Essex Parkway AFP project

Project Finance

- ACE Aviation Holdings (Air Canada) in its post-CCAA US$680 million secured term loan credit led by GECC Capital Markets Group
- Corpfinance International in its C$36 million project financing for the Stoney Nakoda First Nations casino in Alberta
- Falls Management Company in a C$700 million offering of senior secured floating rate notes to finance the development of the Niagara Casino project
- Lenders to Community Health Consortium (Lend Lease/Acciona/Aecon/Dalkia) as a shortlisted proponent for the Halton Health Sciences AFP project
- Lenders to Elite Tunnel Group (Macquarie) as a shortlisted proponent for the Billy Bishop Toronto City Airport Pedestrian Tunnel PPP project

- Lenders to Future Health Consortium (Bilfinger Berger/SNC Lavalin) as a shortlisted proponent for the Humber River Regional Hospital AFP project
- Lenders to Plenary Group as a shortlisted proponent for the Waterloo Consolidated Courthouse AFP project
- Lenders to Rideau Transit Group (ACS/SNC Lavalin/EllisDon) as a shortlisted proponent for the Ottawa LRT project
- Lenders to SNC Lavalin as a shortlisted proponent for the Humber College Learning Resources Common AFP project
- Lenders to SNC Lavalin as a shortlisted proponent for the Sheppard Maintenance and Storage Facility AFP project
- Ontario Hospital Association in a capital swap program for up to C$1 billion in Health Services Restructuring Commission project funding
- RBC Capital Markets as underwriters' counsel of the short-term and long-term bonds issued by Plenary Properties LTAP LP, the successful proponent in the $1.1 billion P3 transaction to design, build, finance and maintain the new headquarters for a Canadian federal agency

Professional Involvement

Before joining Torys, Mark was a partner at another major Toronto firm, where he led its public infrastructure projects practice group.

Mark teaches advanced business law at the University of Windsor, and is a special lecturer for the Schulich real estate and infrastructure MBA program.

Directorships

28(1) Personal

Selected Publications and Presentations

Infrastructure Transactions - Projects offer an expanding role for capital markets
Torys' Capital Markets 2012 Mid-Year Report
June 2012

Public-Private Partnerships in Canada
Guest lecturer, Schulich School of Business, York University
September 28, 2011

2010 Canadian Deals in Review
Presenter, Canadian Projects & Money 2011, Toronto
June 15, 2011

Examining Municipal Projects on the Go To Refine Your Infrastructure Plans
Presenter, Canadian Institute's Municipal Infrastructure Financing & Development, Toronto
June 15–16, 2011

What You Need to Know – A Primer
Speaker, OBA Institute 2011 Public Sector Lawyers Program, Toronto
February 3, 2011

Seizing Opportunities in Emerging Markets
Moderator, 18th Annual CCPPP National Conference on Public-Private Partnerships, Toronto
November 23, 2010

Public Private Partnerships in Hospitals
Presenter, International Health Seminar Brazil – Canada
October 20, 2010

Public-Private Partnerships in Canada
Speaker, 10th Annual National Public Private Partnerships Summit, Melbourne, Australia
June 17, 2010

Expert Panel: Will Canadian PPPs Escape the Liquidity Crisis?
Panelist, *PPPBulletin*, vol. 14, issue 1
February 2, 2009

The Expanding and Maturing Canadian PPP Market
Author, PEI Media and Campbell Lutyens' *Investing in Infrastructure, a Guide to Infrastructure Investing by the World's Leading Infrastructure Deal-Makers*
January 28, 2009

Public-Private Partnerships: The Expanding and Maturing Canadian Market
Author, *Privatisation & Public Private Partnership Review*
May 1, 2008

Major Capital Projects
Co-author, *Lexpert/ALM Guide to the Leading 500 Lawyers in Canada*
January 1, 2008

Public Private Partnerships: Growing Momentum in the Canadian Market
Author, Euromoney Yearbooks' *Privatisation & Public Private Partnership Review 2007/08*
May 1, 2007

Major Capital Projects
Co-author, Lexpert/ALM's *Guide to the Leading 500 Lawyers in Canada*
March 13, 2007

Public-Private Partnerships and Alternative Finance and Procurement Programs
Co-author, *Lexpert Guide to the 100 Most Creative Lawyers in Canada*
April 20, 2006

Putting Partnership First
Co-author, *Managing Partner Magazine*
November 25, 2005

Selected Media Highlights

November 28, 2012: Mark Bain is re-elected to the board of directors of the Canadian Council for Public-Private Partnerships

April 2, 2012: Mark Bain comments on the extended timelines involved in working on public-private partnership projects in *Lexpert*

June 29, 2010: Torys congratulates Infrastructure Ontario at the opening of Bluewater Health's new hospital addition

June 21, 2010: Torys congratulates Infrastructure Ontario's involvement in North Bay Regional Health Centre

March 5, 2010: Niagara Health System project financing wins North American Social Infrastructure Deal of the Year

December 7, 2009: Torys congratulates the winners of CCPPP's national innovation and excellence awards

Bar Admissions

Ontario, 1989

Education

LLM, 2000
Osgoode Hall Law School

LLB, 1987
University of Western Ontario

BA (Honours), 1984
University of Toronto

Milosz A. Zemanek
Associate

Direct: 416.865.8108
Email: mzemanek@torys.com

Milosz is a member of the Corporate and Capital Markets Practice.

Practice

Milosz Zemanek's practice focuses on corporate law.

Milosz is fluent in Polish.

Transactions

Milosz has recently been involved in representing

- Balfour Beatty as a shortlisted proponent of
  - the Quinte Consolidated Courthouse project
  - the St. Thomas Courts project
- International Power Canada in the 2010 development, C$117 million financing and construction of the 48.6 MW Pointe-Aux-Roches wind project
- Bilfinger Berger as the sole equity lead and a member of the consortium bidding for the new DBFM procurement of the South West Detention Centre
- RBC Capital Markets as the lender to a consortium led by Plenary Properties, the preferred proponent, as part of the DBFM transaction for the new headquarters for a Canadian federal agency
- Alinda Infrastructure Fund on its C$1.1 billion syndicated credit facilities that financed the acquisition of UE Waterheater Income fund
- ReichmannHauer Capital Partners in the financing of various acquisitions
- Fortress Investment Group on its C$320 million syndicated secured credit facilities for Newport Partners Income Fund
- TD Capital Mezzanine Partners in several mezzanine loan transactions
- Brookfield Power Wind in its C$300M project financing of a wind turbine facility
- Resolve Business Outsourcing Income Fund in its C$225 million initial public offering and related debt financing

- PBB Global Logistics Income Fund in its arrangement of C$75 million credit facilities
- Great Lakes Hydro Income Fund in its C$225 million cross-border private placement bond financing
- OccuLogix in its US$101 million initial public offering in Canada and the United States
- Alliance Atlantis Communications in its C$625 million syndicated credit facilities with a syndicate of Canadian and U.S. lenders

Professional Involvement

Before joining Torys, Milosz was an investment banking associate at a Toronto independent dealer. Milosz also worked for a number of multinational oil, retail, telecommunications and health care companies in the finance and information systems areas.

Bar Admissions

New York, 2005
Ontario, 2004

Education

LLB (With Distinction), 2003
University of Western Ontario

MBA, 2003
Richard Ivey School of Business, University of Western Ontario

BA (Honours), 1997
University of Waterloo

TORYS LLP

Renée Matthews
Associate

Direct: 403.776.3720
Email: rmatthews@torys.com

Renée is a member of the Corporate and Capital Markets Practice.

Practice

Renée Matthews' practice focuses on energy, environmental and corporate law, with emphasis on the commercial and regulatory aspects of power projects and oil and gas transactions.

Transactions

Renée has recently been involved in representing

28(1) Personal

Professional Involvement

28(1) Personal

Selected Media Highlights

July 27, 2011: Torys announces the release of Torys' Capital Markets 2011 Mid-Year Report

Community Involvement

While at UBC, Renée was actively involved in student government, serving as an executive member of the MBA Society and the MBA Humanitarian Council, which raised money for Vancouver charities.

Bar Admissions

Alberta, 2011
Ontario, 2010

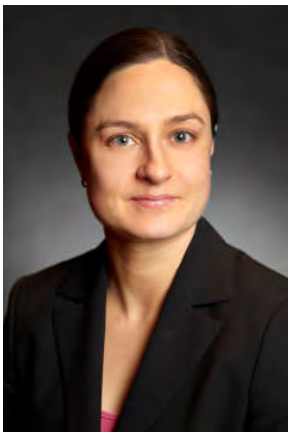
Education

JD/MBA (Joint Degree), 2009
University of British Columbia

BComm (With Distinction), 2003
University of Alberta

TORYS LLP

TORYS LLP



Tara A. Mackay
Partner

Direct: 416.865.7528
Email: tmackay@torys.com

Tara is a member of the Infrastructure and Energy Practice.

Practice

Tara Mackay's practice focuses on corporate and commercial transactions, with a particular emphasis on major capital projects, including public-private partnerships (PPP) and alternative financing and procurement (AFP) projects. Tara represents public authorities, private developers, construction contractors, service providers and lenders in all aspects of the implementation of large-scale infrastructure and other projects.

Recognitions

Chambers & Partners' *Chambers Global: The World's Leading Lawyers for Business, the Client's Guide 2011*—Up and coming in PPP and infrastructure

Best Lawyers in Canada, 2012-2013—Leading lawyer in project finance law

Legal Media Group/Euromoney's *IFLR1000: The Guide to the World's Leading Financial Law Firms*, 2013—Leading Canadian lawyer in project finance

Transactions

Tara has recently been involved in representing

- FESSA (EllisDon Inc. / Empresa Constructora Sigro S.A. / Fengate Capital Management Ltd.) as a prequalified bidder for the Antofagasta Hospital Concession Project in Antofagasta, Chile
- Habitat Housing Initiative (Brookfield Financial / Forum Equity Partners) as a shortlisted proponent for the SRO Renewal Initiative PPP Project in Vancouver, British Columbia
- Infrastructure Ontario and Niagara Health System as the public authorities in the $759 million AFP transaction to design, build, finance and maintain a new acute care hospital and cancer centre in St. Catharines, Ontario
- Inmet Mining Corporation in connection with its $6.18 billion Mina de Cobre Panama Project
- Laing O'Rourke as construction contractor to Village Infrastructure Partners, a shortlisted proponent for the Toronto 2015 Pan/Parapan American Athletes' Village AFP Project

- Lenders to Elite Tunnel Group, a shortlisted proponent for the Billy Bishop Toronto City Airport Pedestrian Tunnel PPP Project
- Lenders to InfraNetComm, a shortlisted proponent for the Maritime Radio Communications Systems PPP Project
- Ontario Power Generation in connection with its proposed New Nuclear Project
- Windsor Essex Mobility Group (ACS Infrastructure Canada / Acciona Concessions Canada / Fluor Canada Limited) as the successful proponent in the $1.4 billion AFP transaction to design, build, finance and maintain a new 11 kilometre parkway near Windsor, Ontario
- Women's College Partnership (Bilfinger Berger Project Investments) as the successful proponent in the $460 million AFP transaction to design, build, finance and maintain the redevelopment of the Women's College Hospital in Toronto, Ontario

Selected Publications and Presentations

4th Structuring and Negotiating Public-Private Partnerships
Presenter, Toronto
May 16, 2012

3rd Structuring and Negotiating Public-Private Partnerships
Presenter, Toronto
May 11, 2011

2nd Structuring and Negotiating Public-Private Partnerships
Presenter, Toronto
May 27, 2010

Structuring and Negotiating Public-Private Partnerships
Presenter, Toronto
May 28, 2009

Public-Private Partnerships and Alternative Finance and Procurement Programs
Co-author, Lexpert's *Guide to the 100 Most Creative Lawyers in Canada*
April 20, 2006

Putting Partnership First
Co-author, *Managing Partner Magazine*
November 25, 2005

Selected Media Highlights

April 20, 2011: Torys announces our new partners

June 21, 2010: Torys congratulates Infrastructure Ontario's involvement in North Bay Regional Health Centre

March 5, 2010: Niagara Health System project financing wins North American Social Infrastructure Deal of the Year

Bar Admissions

Ontario, 2002

Education

LLB, 2000
Osgoode Hall Law School

TORYS LLP

Christie Kneteman
Associate

Direct: 416.865.8182
Email: ckneteman@torys.com

Christie is a member of the Corporate and Capital Markets Practice.

Practice

Christie Kneteman's practice focuses on corporate law.

Christie is fluent in French.

Transactions

Christie has recently been involved in representing

- RBC Dominion Securities and BMO Capital Markets in SkyLink Aviation's C$110 million high-yield debt offering
- CI Investments in its $300 million debenture offering
- Brookfield Renewable Power in the financing of its 165 MW Comber wind energy project
- Recurrent Energy in its solar module supply agreement with Celestica for 19 solar power plants with 180 MW total energy capacity

Professional Involvement

28(1) Personal

In 2009 and 2010, Christie represented the Canadian Bar Association at the 15th and 16th Conferences of the Parties to the United Nations Framework Convention on Climate Change. She also worked with the organization Islands First to assist Pacific Small Island Developing States in the negotiations.

Christie serves on the Executive Board of the Climate Change Lawyers Network 28(1)

Selected Publications and Presentations

Revitalizing Environmental Class Actions: Québécois Lessons for English Canada
Canadian Class Action Review, Vol. 6(2)
December 2010

Building an Effective Emissions Trading System: Key Considerations and Canada's Role
Journal of Environmental Law and Practice, Vol. 20(2)
May 2010

The Twin Failures of the CDM: Recommendations for the 'Copenhagen Protocol'
Law and Development Review, Vol. 2(1)
December 2009

Streamlining Environmental Assessments and Related Regulatory Processes for New Nuclear Projects in Canada
Co-authored with Michael Fortier. Presented at the International Nuclear Law Association's Nuclear Inter Jura Congress, Toronto
October 5-9, 2009

Tied Food Aid: Export Subsidy in the Guise of Charity
Third World Quarterly, Vol. 30(6)
September 2009

Bar Admissions

Ontario, 2011

Education

JD (Honours), 2010
University of Toronto, Faculty of Law

BA (Honours), International Relations, 2007
Mount Allison University

TORYS LLP

Harold Huber
Partner

Direct: 403.776.3769
Email: hhuber@torys.com

Harold is a member of the Corporate & Capital Markets and Infrastructure & Energy Practices.

Practice

Harold Huber practises corporate law, advising on reorganizations, privatizations, financings, M&A, joint ventures and partnerships. His experience includes expertise in the structuring, development, permitting, financing, construction and operation of oil, gas, pipeline and power projects. He also advises on greenfield energy development projects, including coal, wind and gas-fired generation projects. He has played a lead role in the acquisition and development of numerous large energy projects.

Harold has extensive experience in the renewable power sector, in particular having advised on the acquisition and development of projects having a value exceeding C$1 billion in recent years.

Harold also has a strong background in regulatory law, and has appeared before the National Energy Board, the Alberta Energy and Utilities Board, the Canada Nova Scotia Offshore Petroleum Board and the Canadian Nuclear Safety Commission.

Recognitions

Canadian Legal Lexpert Directory, 2012—Repeatedly recommended practitioner in energy (oil and gas)

Best Lawyers in Canada, 2012-2013—Leading lawyer in energy regulatory

Canadian Legal Lexpert Directory, 2011—Consistently recommended practitioner in energy (oil and gas); repeatedly recommended in energy (electricity)

Guide to the Leading 500 Lawyers in Canada

Guide to the World's Leading Energy/Natural Resources—Leading lawyer in energy and natural resources

Transactions

Harold recently represented

- numerous wind power project developers in the negotiation of turbine supply agreements, operation and maintenance agreements, power purchase agreements and EPC contracts for projects in Ontario, Alberta and British Columbia

- a sulphur-based fertilizing manufacturer in connection with the formation of a joint venture to construct and operate a fertilizer production plant
- several biofuel production facilities in connection with the development, financing, construction and operation of such facilities
- various clients in the acquisition and development of wind and solar energy projects valued in excess of $1 billion
- a renewable energy company in its reverse takeover transaction with a capital pool company listed on the TSX
- various clients in connection with some of the largest ground and rooftop-mounted solar projects in the world
- foreign clients in the acquisition of a 875 MW natural gas-fuelled combined-cycle generation station
- a large district energy company in the negotiation of long-term service agreements and the development of infrastructure projects
- a heavy oil upgrading company in the preparation of a long-term bitumen processing agreement

Professional Involvement

Harold has been a speaker at conferences and seminars sponsored by the Canadian Bar Association and the Canadian Petroleum Law Foundation.

Before joining Torys, Harold was a partner at another major Canadian law firm.

Bar Admissions

Ontario, 2004
Alberta, 1995
Saskatchewan, 1982

Education

LLB, 1981
University of Saskatchewan

BAdmin, 1980
University of Regina

TORYS LLP

Daniel A. Ford
Partner

Direct: 416.865.7372
Email: dford@torys.com

Dan is a member of the Infrastructure and Energy Practice.

Practice

Dan Ford's practice focuses on public infrastructure projects, project finance and financial services matters. He has experience representing sponsors, lenders, governmental authorities, borrowers and developers on a broad range of public infrastructure financing and development transactions, including public-private partnerships (PPP) and alternative financing and procurement (AFP). In addition, Dan has acted in a number of commercial construction and project development transactions.

Dan has extensive commercial lending experience, acting for both lenders and borrowers in large and medium structured finance transactions, syndicated/club loans, bond and note financings, and asset based lending structures. He has also acted on the solicitor side of a number of high-profile insolvency and restructuring matters.

Dan has been involved in representing shareholders, partners, owners and managers in a number of corporate and partnership formation transactions and in the structuring, negotiation and preparation of asset and share purchase and sale agreements, joint venture agreements, servicing agreements, and leasing and licensing agreements.

Recognitions

Chambers & Partners' *Chambers Global: World's Leading Lawyers for Business, The Client's Guide,* 2008-2012—Leading lawyer in banking and finance

Best Lawyers in Canada, 2012-2013—Leading lawyer in banking and finance

Lexpert/Thomson Reuters' *Canadian Legal Lexpert Directory,* 2011-2012—Repeatedly recommended practitioner in project finance

Law Business Research's *Who's Who Legal: Canada,* 2012—Leading lawyer in project finance

Legal Media Group/Euromoney's *IFLR1000 Guide to the World's Leading Financial Law Firms,* 2007—Leading lawyer in banking law

Transactions

Dan has recently represented

- The Toronto-Dominion Bank
  - as lead arranger and agent on behalf of a syndicate of lenders in the successful bid by PCL Constructors Canada concerning the C$142 million Kingston General Hospital redevelopment project
  - as lead arranger and agent on behalf of a syndicate of lenders in the $113 million redevelopment of the Ottawa Hospital General Campus and Queensway-Carleton General Campus, which comprise the Ottawa Regional Cancer Centre, involving PCL Constructors Canada as the successful bidder
  - in its project financing of five assisted living facilities in Ontario by Sunrise Assisted Living
  - in its project financing of Phases I and II of the Waterclub condominium project in Toronto
- Infrastructure Ontario
  - and Bluewater Health in the C$214 million expansion and redevelopment of Bluewater Health's Norman Site
  - and the Ministry of Community and Social Services in the C$93 million AFP transaction involving the construction and financing of the new Roy McMurtry Youth Centre in Brampton, Ontario
  - and Niagara Health System (NHS) in its C$759 million AFP transaction for the design, construction, financing and maintenance of NHS's new health care complex and Walker Family Cancer Centre
- Plenary Group (Canada)
  - as counsel to a syndicate of Lenders in connection with the bid by Plenary Justice in respect of the Waterloo Region Consolidated Courthouse AFP Project
  - retained as counsel to a syndicate of Lenders in connection with a bid by Plenary in respect of the P3 project to design, build, finance and maintain a new headquarters for a Canadian federal agency
- Bilfinger Berger Project Investments
  - retained as sponsor counsel in connection with a bid by BBPI in respect of the Forensic Services and Coroner's Complex AFP Project
  - retained as sponsor counsel in connection with a bid by BBPI in respect of the Alberta Schools Alternative Procurement II Project
  - retained as sponsor/consortium counsel in connection with a bid by BBPI in respect of the Women's College Hospital AFP Project
- Forum Equity Partners
  - retained as sponsor counsel in connection with a bid by Forum in respect of the Ontario Provincial Police Modernization AFP Project
  - retained as sponsor counsel in connection with a bid by Forum in respect of the Thunder Bay Consolidated Courthouse AFP Project
- Windsor Essex Mobility Group
  - retained as sponsor counsel in connection with a bid by the Windsor Essex Mobility Group in respect of the Windsor Essex Parkway AFP Project
- Clear Channel Outdoor Company Canadian in its bid for Toronto's C$428 million consolidated street furniture PPP program
- Brookfield LePage Johnson Controls as the facilities management service provider and consortium member of Access Health Vancouver, in its PPP transaction for the Gordon and Leslie Diamond Health Care Centre in Vancouver

- Healthcare Infrastructure Company of Canada as the selected private partner in its PPP transactions for the new
  - C$132 million Royal Ottawa Mental Health Centre in Ottawa
  - C$550 million Brampton Civic Hospital in Brampton, Ontario
- Persona Communications

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  - in C$595 million of first and second lien credit facilities and an incremental project development credit facility with JP Morgan, TD Bank and a syndicate of lenders
- Terrawinds Resources
  - in a C$247 million turbine supply and project development credit facility for its proposed 171 MW wind energy project located in Riviere-du-Loup, Quebec
  - in its C$26 million turbine supply loan agreement to fund CRCE Phase development
- senior bondholders of Stelco, the largest group of affected creditors, in a C$3 billion restructuring of Stelco under the CCAA and the issuance of new senior floating rate notes thereunder
- Clear Channel Outdoor Company Canada

28(1)

- HBK Master Fund LP in its equity investment and the acquisition of new senior unsecured notes in the restructuring of Ainsworth Lumber
- Telus in its 2007 C$2 billion term and revolving credit facility with a select syndicate of 18 financial institutions
- Wachovia Capital Finance Corporation (Canada)
  - in its participation in a US$950 million senior secured credit facility concerning Four Seasons Hotels
  - in its participation in a C$500 million credit facility concerning Sears Canada
  - in the establishment of numerous asset-based lending credit facilities, including those provided to SMTC, Canadian Freightways, Sodisco-Howden Group, CanWel Building Materials, Mad Catz Interactive, Nexinnovations, Geac Computer, Delco-Remy International, Saan Stores, HIP Interactive and Cott
- Brascan Financial in its acquisition of existing indebtedness, and in the restructuring and sale of certain assets of Queensway Financial Holdings
- Cognos in the establishment of a US$200 million term revolving credit facilities
- Scotiabank in its project financing of two assisted living facilities in Ontario by Sunrise Assisted Living
- Natsource LLC and Tamarisk Acquisition in the establishment by Fortis Bank of a Euro-denominated standby letter of credit facility in support of the acquisition and participation by Tamarisk in the World Bank's US$1.02 billion Umbrella Carbon Credit Program

28(1)

- McKenna Gale Capital in the mezzanine financing provided to Oncap LP to finance the acquisition of BAE Systems

- Wachovia Bank in its US$870 million financing of Movie Gallery and its Canadian subsidiary, Movie Gallery Canada

Professional Involvement

Before joining Torys, Dan was a partner at another major Toronto firm.

Selected Media Highlights

June 29, 2010: Torys congratulates Infrastructure Ontario at the opening of Bluewater Health's new hospital addition

June 21, 2010: Torys congratulates Infrastructure Ontario's involvement in North Bay Regional Health Centre

December 7, 2009: Torys congratulates the winners of CCPPP's national innovation and excellence awards

Bar Admissions

Ontario, 1989

Education

LLB, 1987
University of Ottawa

TORYS LLP

Tyson Dyck
Associate

Direct: 416.865.8136
Email: tdyck@torys.com

Tyson is a member of the Environmental, Health and Safety Practice Group.

Practice

Tyson Dyck practises as a full-time member of the firm's Environmental, Health and Safety and Climate Change and Emissions Trading Groups. He has been recognized in Chambers & Partner's global rankings as an Associate to Watch to environmental law. The firm's environmental, health safety group has also been consistently rated as one of Canada's leading and most frequently recommended practices, including by Practical Law Company and the Canadian Legal Lexpert Directory.

Tyson provides advice to a broad range of public and private sector clients, including public and private companies, financial institutions and Crown corporations. In this practice, Tyson has worked extensively on the development, permitting and financing of wind, solar, hydro, natural gas and nuclear generation projects across Canada. He also provides advice to clients in many other sectors, including mining, pulp and paper, water treatment, communications, iron and steel, chemicals and manufacturing.

As part of his transactions practice, Tyson assists buyers, sellers, lenders and investors through all the environmental aspects of a transaction. In a typical year, the group is involved to varying degrees in more than 100 commercial transactions.

Tyson's regulatory practice involves technical and strategic advice on the full range of issues in the environmental, health and safety field, including federal and provincial environmental assessments; contaminated site development; regulatory and administrative orders, investigations and prosecutions; and regulatory compliance matters.28(1)

Tyson also has extensive expertise on climate change policy and regulation. He has advised clients on the domestic and international regulation of greenhouse gas emissions; the development and financing of emissions offset projects,28(1)

Recognitions

Chambers & Partners' *Chambers Global: The World's Leading Lawyers for Business 2011* and *2012*—Associate to watch in environment

Transactions

Tyson has recently been involved in representing

Energy-Related Transactions

- China Longyuan Power Group Corporation Limited in its acquisition, development and construction of the 99 MW Dufferin Wind Farm (formerly the Farm Owned Power (Melancthon) Wind Project)
- First Reserve
  - in its acquisition from SunEdison of a 50% interest in the 13th Sideroad solar energy project
  - in its acquisition from SunEdison of a 50% interest in the Ryerse solar energy project

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- NextEra Canada on various aspects of its Conestogo, Jericho, Adelaide, Bornish and Summerhaven wind energy projects
- Greenfield Energy Centre LP in the C$650 million financing of its 1,005 MW CCGT power project near Sarnia, Ontario
- C$942 million financing of Sithe-Goreway's 840 MW cogeneration project
- Renewable Energy Generation Limited in the sale of AIM PowerGen Corporation to International Power for a purchase price of US$173 million
- Starwood SSM_2 Canada Inc. in its development of a 30 MW solar project in Sault Ste. Marie, Ontario

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- Royal Bank of Canada and Scotiabank as the co-lead lenders in GreenField Ethanol's C$405 million senior secured credit facilities

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- Birch Hill Equity Partners in its investment in the BIOX biodiesel operation
- Financial Guaranty Insurance Company in connection with a C$500 million wrapped bond deal for the project financing of hydro projects in British Columbia

Other Corporate Transactions

- Sherritt International in its C$1.6 billion acquisition of Dynatec Corporation
- Hidalco Industries in the US$6 billion acquisition of Novelis

- K+S Aktiengesellschaft in the US$1.576 billion purchase of Morton International Inc. from Rohm and Haas, which in turn is owned by Dow Chemical
- The Thomson Corporation in the sale of Thomson Learning higher education assets for US$7.75 billion
- The Carlyle Group in its US$1.475 billion acquisition of Goodyear Tire & Rubber Company's Engineered Products Division

Regulatory Proceedings

- Great Lakes Power Transmission, an Ontario-based electricity transmitter, on its 2011-2012 transmission rates application to the Ontario Energy Board
- Plateau Wind Inc. in its road use application to the Ontario Energy Board
- Brookfield Renewable Power and related entities in filing a notice of proposed transaction under section 80 of the *Ontario Energy Board Act*
- Starwood SSM_2 Canada Inc., Pointe-Aux-Roches Wind Inc. and others in their generation license applications

Other Matters

- the National Round Table on the Environment and the Economy (Government of Canada), on regulatory and legal issues relating to adaptation to climate change including, in particular, as they apply to mining companies and tailings ponds in northern Canada
- Brewers Retail doing business as The Beer Store, in its five-year agreement with the Province of Ontario, as represented by the Minister of Public Infrastructure Renewal, to implement a new deposit return program for wine and spirit containers in Ontario
- Canada Post regarding the federal Commission of Inquiry into the Sponsorship Program and Advertising Activities (Gomery Commission)

Professional Involvement

During his articles, Tyson was seconded to the legal department of Ontario Power Generation.

Selected Publications and Presentations

Enforcing Environmental Integrity: Emissions Auditing and the Extended Arm of the Clean Development Mechanism
Columbia Journal of Environmental Law, vol. 36, no. 2
2011

Water Infrastructure and the Law
CBA 2011 Annual National Environment, Energy and Resource Law Summit, Banff, Alberta
April 7-9, 2011

"Federal Climate Change Law and Policy" in The Law of Climate Change in Canada
D. Mahony, ed. (Aurora, ON: Canada Law Book)
2010

"Ontario Climate Change Law and Policy" in The Law of Climate Change in Canada
D. Mahony, ed. (Aurora, ON: Canada Law Book)
2010

Missing Linkages? Canada, Cap-and-Trade and the International Climate Architecture
Canadian International Lawyer, vol. 8 no. 1
2009

Cross-Border Litigation Gains Traction in U.S. and Canadian Courts
Environmental Claims Journal, vol. 20, no. 181
2008

Standing on the Shoulders of Rio: Greening Mediations Under the Canadian Environmental Assessment Act
Journal of Environmental Law and Practice, vol. 13, no. 335
2004

Auditing Offset Projects: Next Steps for North America
Point Carbon, Carbon Market North America, vol. 5, issue 32
August 13, 2010

A Northern Warm Front: Canadian Climate Change Regulation Moves Forward
Co-author, *The Canadian Legal Lexpert Directory, 13th edition and 2009/2010 Corporate Counsel Directory*
September 2009

Ontario's Drive to Go Green
Point Carbon, Carbon Market North America, vol. 4, issue 14
April 10, 2009

Climate Change Disclosure Heats Up
Corporate Governance Quarterly
Spring 2009

Liberals Propose National Carbon Tax
BNA International Inc.'s *Environmental Taxes: A Global Perspective*
July 2008

Cross-Border Environmental Litigation
2008 Lexpert Guide to the Leading US/Canada Cross-border Corporate Lawyers in Canada
May 2008

Ontario's Proposed Spill Prevention and Contingency Plans Regulation
Co-author, *Environmental Policy and Law*
January 2007

Clearing the Air: How Regulating Large Final Emitters Could Lower Greenhouse Gas Emissions
HazMat Magazine
February/March 2006

Selected Media Highlights

June 13, 2012: Harmonization of Quebec's and California's proposed cap-and-trade regulations is moving forward, says Tyson Dyck in *Environmental Finance*

July 12, 2011: *The Law of Climate Change in Canada* is awarded the Walter Owen Book Prize

December 2, 2010: When will we follow U.S. on climate change? asks Tyson Dyck in *Toronto Star*

November 9, 2010: Tyson Dyck and Adam Freedman debate whether Canada should implement a carbon tax in *The Mark*

May 9, 2010: The federal and provincial governments could tackle climate change using a new model of cooperative regulation, says Tyson Dyck in *Toronto Star*

May 1, 2010: The challenge for international emissions trading is to create incentives that align auditors with environmental integrity, says Tyson Dyck in *Harper's*

February 11, 2010: The world must build a bottom-up response to climate change, says Tyson Dyck in *TheMark.com*

December 13, 2009: Canadian government reluctant to take meaningful action on climate change until the United States does so, says Tyson Dyck in *Toronto Star*

Memberships

Environmental Law and International Law Sections, Ontario Bar Association
National Environmental, Energy and Resources Law Section, Canadian Bar Association

Bar Admissions

Ontario, 2004

Education

JSM (Fulbright Fellow), 2010
Stanford Law School

LLB (Dean's List), 2003
Dalhousie University

BA (With Great Distinction), 2000
University of Saskatchewan

Owner’s Engineer

Resume's for the AECOM team

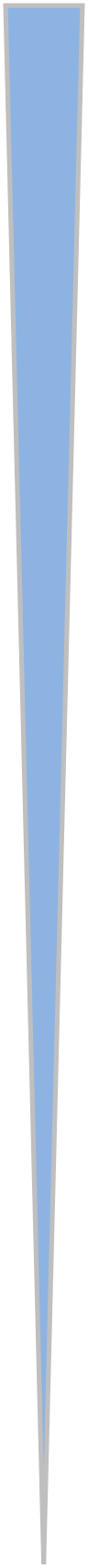
Simon Baker, P.Eng.

Rick Bitcon, P.Eng.

Ian Dickinson, P.Eng.

Mario Iacobacci, Ph.D.

Doug Taniguchi, P.Eng.



AECOM

Simon C.H. Baker, P. Eng.
Senior Wastewater Engineer

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Richard D. Bitcon, P. Eng.
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Ian Dickinson, P.Eng.
Program Director
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Mario Iacobacci, PhD
Director, Economics

Professional History **Summary**

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Douglas J. Taniguchi, P. Eng.
Project Director
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Appendix J – Communications Strategy

Cringan George

City of Regina Wastewater Treatment Plant Communication Strategy

CONFIDENTIAL

January 15, 2013

Submitted by:

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Appendix 2 – Phase one deployment

- Wastewater Treatment Plant Upgrades Project Update
- Briefing Note – Council WWTP – December 12, 2012
- Issue Note – WWTP – December 17, 2012
- Website copy (Phase one update)
- Resultant News Coverage
- Research Report

Appendix 3 – Phase two deployment

- DRAFT Speaking notes and Q&As (provided as separate attachment)
- P3 Canada Guide – consultant commentary
- DRAFT print advertisement
- DRAFT online ad
- DRAFT web site copy

Appendix 4 – Phase three deployment

- DRAFT print advertisement
- DRAFT web advertisement

Overview

Background

The current Wastewater Treatment Plant was a superior facility when it was built, which put Regina ahead of the curve regarding wastewater treatment standards, and those standards changed little for many years. So while upgrades have been made as necessary, there has been no pressing need to overhaul or replace the plant until recently. All the following points can be made regarding why the project is being undertaken, prioritization is to be determined through the development process:

- Regina must replace its existing plant due to new legislation (Federal and Provincial) regarding wastewater treatment standards.
- Regina's wastewater treatment plant is nearing the end of its lifespan and must be replaced.
- Regina must meet the needs of a growing population now and for the future, and part of that means replacing its wastewater treatment plant.

Regardless of the lead point, it will be enhanced by asserting that our new plant will be at the forefront of sophistication in terms of efficiency and its ability to meet progressive new environmental standards.

Communication challenge

How one's wastewater is managed is not an appealing subject that has power to engage most people in discussion. In fact, given the complexity of the project from engineering, logistical and management perspectives – few people are even somewhat qualified to have an opinion.

Of course, the high price tag of the project will certainly earn the attention of media, fiscal responsibility critics and thus, the public.

As well, we know from similar cases in other Canadian centres, special interest groups will undoubtedly oppose any recommendation to outsource aspects of the project to the private sector, should that be the course of action determined upon. These special interest groups will very likely enter the fray soon after the plan to outsource building and operation of the plant is made public.

Specific special interest groups have a well established program of P3 (public private partnership) opposition which has resulted in halting four similar projects in other Canadian centres, most prominently, the Water Treatment Plant in Abbotsford, BC. However, the Canadian market now has about 180 P3 projects on the books with more than 20 being specifically water or wastewater treatment plants that included outsourcing design, build, operations and maintenance. Ultimately there are more P3 success stories than failures, but we cannot underestimate the significance of the opposition's power to persuade and that they may see Saskatchewan as Canada's last union stronghold that they wish to maintain.

Should Council approve pursuing the P3 option, Communications must be prepared to support its decision. We are also obligated to provide residents with the information they need to draw their own conclusions and that means ensuring the City's voice is heard.

Key potential obstacles include:

- well established and well organized program of opposition to P3 projects that targets emotional, not intellectual, sensibilities
- the fact that unionized City workers will be directly affected by any decision to outsource plant operation and it could be argued that other City employees such as those in management and trades will be affected by any decision to outsource plan construction
- the high cost of the project
- continuing increases in utility bills
- recent criticism of other high cost City projects including the stadium
- recent criticism of apparent lack of transparency on the part of the City regarding project development
- the complexity of the project and the way it was evaluated (value for money assessment) makes communicating key messages with simplicity a challenge.

Key mitigation points include:

- the City will retain ownership of the plant;
- pursuing a P3 course of action would qualify the project for 25% funding for capital costs to offset the investment
- building the plant is not disputable: it simply must be done;
- all wastewater treatment plant employees will be offered the employment under the same terms as their existing collective agreement with the new plant operator;
- no matter the opposition, it is extremely unlikely the issue will be subject to a referendum/plebiscite;
- this is not about drinking water, which residents are more likely to be passionate about than wastewater;
- this summer's unpleasant sewer odour issues underscore the need for a new plant;
- residents will not be impacted by changes in service or inconvenienced in any way so are much less likely to become engaged in the issue;
- the improved efficiency and environmental impact of the new plant that adheres with new standards

Essentially, as much as possible, our communication strategy seeks to assure our residents that the City has done its duty in exploring available options and is pursuing the best possible one in the best interest of all Reginans. We propose employing an integrated earned and paid media communication approach that projects transparency and confidence, keeps people focused on the big picture, and appeals to the down to earth, pragmatic sensibility of Reginans.

1. Introduction

1.1 Background and objectives

The City of Regina (CoR) is planning a significant investment in its Wastewater Treatment Plant (WWTP) to meet new environmental regulatory requirements, replace components that are reaching the end of their viable lifecycle, and make required capital investments to ensure the plant can reliably meet the service needs of the City of Regina and its residents now and for the future.

Primary objectives

- Build awareness and understanding of the need for investment in the Wastewater Treatment Plant
- Grow trust in the City of Regina's leadership
- Keep stakeholders informed throughout the process
- Promote the benefits of the recommended option
- Mitigate oppositional forces to the proposed plan.

CoR Communications must inform residents why a WWTP upgrade is needed in the near term and its associated costs; assure them the City of Regina has done its due diligence in determining the solution that stands to most benefit city residents; keep stakeholders apprised of decisions and actions that will impact their lives; and disarm false or misleading arguments from oppositional forces who may try to influence public opinion and steer the conversation.

Secondary objectives

Secondary objectives include thoroughly informing City Councillors about the proposed plan and addressing any issues and questions they may have about the options presented. Additionally, the strategy will outline how to effectively communicate with suppliers and current plant employees.

1.2 Strategy Summary

At its core, this campaign is purely a public information campaign that fulfills the City's obligation to keep its residents informed – just as it would with any major project or to communicate changes in services. The strategy is to inform the public through public relations activities and to support those initiatives with advertising messages in carefully selected media to ensure the City's voice is heard and its unadulterated messages reach the public.

To support the approach of countering the tactics typically undertaken by the opposition, MCG recommends against any splashy, high profile advertising media such as out of home or television ads, despite the fact that opposing forces are likely to employ this approach. A responsible and reasonable response to any opposition is the most potent way to diffuse it.

This communications strategy provides direction for the dissemination of relevant information regarding the WWTP to grow stakeholder support for the project and facilitate the successful implementation of the plant. The strategy includes:

Phases, audiences, communication tenets and delivery channels

A plan that identifies a phased approach for opinion polling to establish and track awareness and attitudes, approaches for reaching key stakeholders, relevant messages for each group, and preliminary recommendations for the communication channels through which they will be delivered.

Multi-phase public roll out strategy

Recommendations for taking the public temperature and tracking attitude shifts to assist in determining the City's level of response. Recommendations for rolling out the communication strategy to the public as the project progresses, including public relations tactics to earn positive and useful news media coverage and dispel myths and opposition.

Internal roll out strategy

Recommendations for rolling out the communication strategy internally and with project partners.

Integrated issues management strategy

An issues management strategy intended to prepare communicators to address potential issues of contention organized in escalating levels of issues and response.

Paid advertising plan

A media plan outlining recommended paid advertising vehicles aligned with with issues escalation levels.

Communications monitoring and measurement

Suggested methodology for evaluating the communications environment and success of the communications initiatives.

Appendix 1: preliminary project schedule

Appendix 2: Phase one deployment

Appendix 3: Phase two deployment

Appendix 4: Phase three deployment

NOTE: this is a living document that is intended to be updated as new information is available and as phases are deployed.

2. Phases, audiences, communication tenets and delivery channels

In this section we outline a plan that identifies a phased approach for reaching key stakeholders, relevant messages for each group, and preliminary recommendations for the communication channels through which they will be delivered.

2.1 Overview of Communication Phases

Our strategy is based on a phased messaging approach coinciding with each stage of the WWTP business plan as it works its way from presentation to Council through to project completion.

Phase one – Updating Council and Residents (before recommendations made public)

In this preliminary phase before the business plan becomes a matter of public record and is voted on by City Council, we will conduct an initial benchmarking opinion poll, correct and clarify assumptions (get the actual cost out), assure residents of the process to date, and support the need for investment in the WWTP.

Timing: December 12, 2012 (Complete as of this draft: see Appendix 2 – Phase one deployment)

Phase two – Due Diligence Assertion (options before Council)

Establish the need and value of the project in the minds of stakeholders, and clearly convey that the options and recommendation before Council represent thorough and critical thinking by qualified and credible experts. Once the communication has been delivered to the public, and discourse has commenced, conduct a follow up opinion poll, as well as track commentary and tone of coverage, to assist in determining the true attitude of the public regarding the two options. Before council has made its decision we cannot present arguments for or against either of the options presented, we can only provide information and direct people to it.

Timing: from the day the procurement report is tabled publicly at Executive Council to the day it is approved

Phase three – Case for Support (Council decision)

Having established the need and value of the project in the minds of stakeholders, clearly convey how the decision of Council represents the most favourable option for the City of Regina and its residents. Proactively disarm arguments raised by oppositional forces as needed. The opinion poll, media and commentary tracking will assist in establishing the tone and level of response required.

Timing: from the day the procurement approach is approved until March 31, 2013

Phase four – Response and Maintenance (approval and funding announcements)

Provide proactive public relations support to celebrate project milestones and successes including any funding announcements and selection of project partners, and be prepared to manage any issues as they arise in a timely manner.

Timing: April 2013 – Early 2017 (official opening of fully updated plant)

2.2 Audiences

As a publicly-funded infrastructure project, the Wastewater Treatment Plant upgrade involves a wide array of stakeholders, each with its own set of priorities, interests, and communications needs. An understanding of each group's motivations help us anticipate what information will be relevant to each group.

Residents

Residents constitute the primary audience for the communication strategy. Their interest in the Wastewater Treatment Plant upgrades are dependent on the extent to which the issues affect each of them on a personal level. The issues that have the potential to resonate with various members within this group are varied, and include:

- **As taxpayers,** they are concerned about whether their tax dollars are being invested in a responsible and transparent manner to address the most pressing infrastructure issues facing the City of Regina in a way that most benefits its residents. They want to feel informed about, and have a sense of control over, how their money is being spent.
- **As residents (and utility customers)**, they are wary of change and its impact on their day-to-day lives and for generations to come. This is particularly true with the prospect of a private industry managing services previously overseen by the public sector, particularly one that involves a resource as elemental as water. They need a guarantee that service will not be compromised and that public assets will be protected today and in the future, without exception.
- **As environmentally conscious citizens**, they are protective of the wellbeing and health of their green spaces and waterways. They need to be assured that environmental impacts of the project have been analyzed, a commitment to environmental stewardship and independent oversight is in place, and all measures are being taken to protect the integrity of their immediate ecosystem as well as those downstream.
- **As workers,** they are sympathetic to the cause of any employees whose employment security is undermined, particularly if they too are unionized. They need to be assured fair measures have been taken to protect the interests of existing WWTP employees.

Downstream stakeholders

- Those who live and have businesses downstream will see themselves as directly affected by decisions regarding the Wastewater Treatment Plant. They need to be assured that their interests are being taken into consideration – particularly that the plant is being designed to reduce any potential adverse downstream affects. They need to be consulted as part of the process – they need to feel their concerns have been considered as part of the plan.

First Nations

- Similar to downstream stakeholders, First Nations need to be assured that their interests are being taken into consideration – particularly that the plant is being designed to reduce any potential adverse downstream affects and is being built to higher environmental standards. They need to be consulted as part of the process – they need to feel their concerns have been considered as part of the plan.

City of Regina

- **Councillors** are motivated to act in the best interest of their constituents – this is particularly true for those newly appointed to council who have not yet had an opportunity to build equity in their role among their constituents. They need to have access to all information necessary to support and approve the project including existing policies for managing projects of this nature. They also need to be kept up to date on the project as it rolls out and equipped with responses to foreseeable questions and oppositions in order to project a sense of leadership in their role as an official representative of the City of Regina. Council must also be prepared for the real possibility of opposition – the stadium discussion is a recent example of a particularly polarizing issue. Council must also be prepared for the tactics taken by special interest groups, and be made aware that their vocal opposition is likely not reflective of the perception of population as a whole, which will be determined through public surveys.
- **City staff** are primarily driven to serve the City of Regina while protecting their role within the municipal government. They are on the front lines of public scrutiny, and must be empowered to project a unified and informed front to residents. City of Regina communications staff, call centre employees, and other representatives who may be approached by the media or the public must be aware of communications policies and how to direct inquiries or issues to project authorities approved to speak on behalf of the City of Regina regarding the WWTP.

WWTP employees

- Wastewater Treatment Plant employees are anxious at the prospect of the privitization of plant management and its implications on their employment and benefits. They need to be assured the City of Regina is committed to protecting employees' interests regardless of the recommended project approach. They need to be kept informed as events unfold so as to quell any unfounded or inaccurate concerns that might arise.

Media

- Representatives of media outlets are inspired to report stories that will attract or address public interest. Always facing tight deadlines, they appreciate any efforts that facilitate their ability to submit a story that will make the news. They need to know where to go to access official information to inform their stories, be updated when newsworthy events arise, and be provided with opportunities to capture visuals and soundbites to enliven their reports.

Proponents and contractors

- Current and prospective private and public sector project partners want to do business with the City of Regina. They need to be informed about the project to clearly understand it and their role in it. They must know how to direct inquiries or issues to project authorities approved to speak on behalf of the City of Regina regarding the WWTP.

Opponents

- Special interest groups will be seeking opportunities to accuse the City of selling out, of not doing its due diligence, of being mercenary with regard to its treatment of employees, of being short-sighted, of employing flawed assessment models (VFM), of being a pawn of federal government policy, etc. Communication must anticipate the mode of attack and proactively present counter-arguments in a purely pragmatic, logical fashion that will offset the emotional approach the opposition is likely to adopt.

2.3 Communications tenets

In this section, we will articulate the overarching project positioning, message themes, and personality attributed to the City of Regina's wastewater treatment plant upgrade communications strategy.

Project position

As part of its continued commitment to revitalizing Regina, the City of Regina is investing in environmentally-sustainable, fiscally accountable, state-of-the-art infrastructure to ensure our wastewater is treated responsibly today and for future generations.

Vision

The City of Regina aspires to become Canada's best run municipality. Our central vision for the wastewater treatment plant upgrade is to build, operate and manage a state-of-the-art facility for the City of Regina through an innovative process that will lead the way for similar projects throughout Canada.

Mission

The mission of the communications strategy is to facilitate the dissemination of relevant information regarding the wastewater treatment plant to ensure stakeholder support for the project and facilitate the successful implementation of the plant.

Message pillars

Leadership

Communications must position the City of Regina as the controlling authority on the project – the only party with enough information to make decisions; the only party taking all interests into account. We must convey that the City of Regina is addressing a pressing infrastructure need, and that the recommended approach – to be implemented through responsible procurement – represents a sound investment in the future.

Trust

Communications must convey a sense of transparency and stewardship regarding the project at all times. All information should be fact-based, and should support how the recommended approach will ultimately result in the best value to the City of Regina and its 200,000 residents. Communications must also support the City of Regina's commitment to environmental stewardship.

Innovation

Communications should extol the virtues of the project and position it as another step in the continued revitalization of the city. Communications should celebrate key features of the state-of-the-art facility and position the proposed approach as a model for the rest of Canada.

Personality

Pragmatic, confident, reassuring, knowledgable, respectful, proud.

2.4 Potential Delivery channels

Public relations activities will be key to earning the news media coverage essential to delivering relevant information to target audiences. We will support public relations with cost-effective, carefully selected paid advertising and fulfilment communication to ensure our messages are conveyed in a clear and succinct manner. Issues management guidelines will prepare communicators to address foreseeable points of contention, and establish measures to respond to issues as they arise.

The following are listed in order of importance (in the agency's opinion) to the success of the communications strategy and project rollout, and some would only be employed if the issue escalates either organically or through the engagement of organized opposition.

News coverage

Earning news coverage through public relations activities (and through standard business practices such as public reports to council) will be key to creating awareness of official messages from the City of Regina regarding the wastewater treatment plant.

Regina.ca

In phases, all official public information regarding the wastewater treatment plan project will reside on Regina.ca, accessed through a prominent link on the City's landing page. Communications tenets will be featured upfront, backed by in-depth informational messaging and robust content addressing every anticipated informational need.

Utility bill insert

A medium directly targeting homeowners/municipal taxpayers that provides an opportunity to highlight key messages and how the project stands to impact residents, including any rate increases and details on where the money will go. Note that timing of this potential medium must be carefully considered, and may not be recommended should it be associated with announcements of rate increases.

Social media

With over 20,000 likes, the City of Regina's Facebook presence presents a unique opportunity to have a two-way conversation with residents to address their specific questions and concerns about the project. Facebook and Twitter allow communicators to disseminate their messages almost instantly to audiences who have self-identified as being interested in receiving correspondence from the City of Regina from time to time. Responses to questions can link directly to answers articulated on Regina.ca.

Online ads on news sites

An advertising medium for communicating tenets clearly and succinctly, and linking motivated audiences to relevant information contained on Regina.cal. Web ads also provide a means to convey key messages within news items highlighting the concerns of opposing groups. Online ads have the added bonus of being more immediate than print, due to shorter lead times.

Small and large print ads

Print serves as an advertising medium for communicating tenets clearly and succinctly. It also provides a means to convey key messages within the same publication likely to feature news items highlighting the concerns of opposing groups. Small print ads would be employed in early stages to inform, and, if necessary as the issue becomes the subject of public discussion, larger print ads would be placed to counter opposition.

Large newspaper insert/direct mail piece

A vehicle for presenting the City's position in depth, should it be required. Much of the information contained online would be adapted for a newspaper style print piece – to be inserted into local newspapers and/or distributed to households via direct mail.

Radio

A medium of immediacy that balances positioning and timing information and allows us to maintain flexibility to address emerging issues and promote residents getting the whole story at Regina.ca.

Public Information Sessions

The City of Regina has expressed interest in hosting public forums to discuss the Wastewater Treatment Plant project. While, in theory, this approach supports the transparency the City needs to project, and is in line with how other major projects have been presented to the public, MCG feels public discussion is unlikely to assist the City in earning support for the project.

Despite the fact that the project is the City's biggest infrastructure investment ever and it will be state-of-the-art and environmentally sound, the issue is not likely to capture the imagination of residents and fuel the activity of potential supporters. More likely, the project's high cost, recent criticism of the City regarding other high cost projects, potential attendance by well organized opposition and the 'vocal minority' will fuel negativity towards the project. Also, public discussion implies that the public may directly impact whether or not the project takes place and how – which is not the case.

However, should the City feel it necessary to pursue a public forum approach, it must be carefully managed and presented as Public Information Sessions (not discussion forums) with limited opportunity for discussion. A public platform must not be provided for special interest groups to voice opposition.

3. Multi-phase public roll-out strategy

In this section we will outline recommendations for rolling out the communication plan to stakeholder groups throughout the lifespan of the project.

3.1 Phase one – Updating Council and Residents

Timing

December 12, 2012

Goal

Reaffirm the need and net benefits of the WWTP investment, and prepare the public for the anticipated cost of the project – $224.3 Million.

Strategy and associated proof points

Leverage existing concerns about the plant to frame the need for the project.

- **Odour:** The public's most pressing concern about the wastewater treatment plant is the off-putting odour that recently began emitting from the facility. Leverage the issue as an opportunity to highlight the pressing need to invest in the infrastructure. Assure residents of the City of Regina's leadership by informing them long-term equipment upgrades have already begun. Current efforts are focused on preventing the odour from reoccurring.
    - Current upgrades to address the odour issue estimated at $7 million
    - Expected to be complete by Spring 2013
    - Include details of what is specifically being done/installed
- **Environmental responsibility:** Educate the public that we need to modernize our ageing plant to meet new Environment Canada and Provincial regulatory legislation and to better protect our environment. Emphasize that we must act now to avoid further escalation of costs.
    - The regulations affect one in four wastewater systems in Canada, at a cost of more than $10 billion.
    - New standards developed by Federal and Provincial governments ensures that the new plant will comply to stringent effluent quality discharge standards and will provide measurable benefit to the environment and mitigate risk to people and business downstream from the plant
    - Support from an environmental group/authority might be sought and secured and promoted in this phase

- **End of lifecycle:** Encapsulate all points under the umbrella theme that the plant has reached the end of its lifecycle. Emphasize that investments are needed to modernize the plant to ensure it can reliably accommodate the increased demands of our growing city for generations.
    - Needs for improvement, in addition to the performance compromises and environmental impact previously discussed

Educate residents about the actual anticipated cost of the project.

- **Future steps:** Inform residents and workers that the City of Regina has hired independent expert consultants to actively investigate solutions for upgrading the plant that offer the greatest benefit to the City of Regina and its residents. The consultants will soon table the recommendation to City Council, which will vote on it early in 2013.
    - Consultants are Deloitte and AECOM – include credentials and how the City came to engage their services.
- **Estimated price:** Correct assumptions by apprising the public that the anticipated total project cost will be. Emphasize that this is what is required to develop a state-of-the-art, environmentally-responsible facility that will reliably serve the City of Regina for generations.
    - If available, be ready to address where the commonly accepted $150 million price tag came from, and how the new estimate is a more accurate representation of costs.
    - Price reflects a 50/50 retrofit, which accommodates the need for the plant to remain operational through the entire upgrade process.

Key Messages

At this early stage there will be no mention of the potential of public private partnership approach, only that the City has determined the projected costs and is currently doing its due diligence in determining the best way to get this project done and will be making its recommendations to Council early in the new year, providing options for their consideration.

Primary message

The City of Regina must invest an estimated $224.3 million to upgrade its wastewater treatment plant. The state-of-the-art facility will satisfy progressive environmental regulations and ensure the city's infrastructure can reliably meet the essential day-to-day needs of its residents for generations.

Secondary messaging

- We are seeking the best value for our investment, our environment, and our future.
- This will be among City of Regina's most significant capital investment projects to date and as such, extensive due diligence is being done to determine the most effective approach.
- We have assembled industry leaders and renowned experts to find the best solutions for the City of Regina and its residents.
- As Canada's only land-locked major city with no adjacent lake or river, the City of Regina must continue to embrace innovation in how it treats and disposes of the 30 Olympic swimming pools of wastewater generated by its local businesses and residents every day.

- The wastewater treatment plant upgrade will enhance environmental conditions in the downstream receiving waters of Wascana Creek and the Qu'Appelle River system. This may result in improved aesthetic conditions as a result of reduced algae levels, and improved fish habitat.

Communication Tactics

Our approach tone: Releasing this information is our typical, transparent practice. Nothing less, nothing more.

Report to council

Reaffirm the WWTP project will be, as anticipated, moving forward following an assessment, and why the project will benefit Reginans. **Estimated price**: announce the anticipated cost of the project. List **future steps**:

- Awaiting report from independent consultants
- To be tabled to City Council
- Voted on early 2013

Apply secondary messaging:

- We are seeking the best value for our investment, our environment, and our future.
- This will be among the City of Regina's most significant ever capital investment projects to date.
- We have assembled industry leaders and renowned experts to find the best solutions for the City of Regina and its residents.
- As Canada's only land-locked major city with no adjacent lake or river, the City of Regina must continue to embrace innovation in how it treats and disposes of the 30 Olympic swimming pools of wastewater generated by its local businesses and residents every day.

Prepare Q&A guidelines for spokesperson(s)

Prepare designated spokesperson to respond to media that may follow up on news release.

Mild social media push

Just as the City would with any media release, support information dissemination through social media as well, linking to the media release and/or Regina.ca.

Invite former critics to review aspects of the plan to get outside support

For discussion: Dr. Peter Levitt with the University of Regina was proposed as a credible water system and environmental expert and has been vocal in his criticism of how wastewater is managed in Regina, but WWTP program leaders cautioned against this choice. However, the idea of gaining the endorsement of an outside expert is still sound. Suggest privately reviewing the recommendations about the new plant (the system not the funding and management model) with this independent expert to, hopefully, gain an endorsement for the project. Ideally, the City would be able to quote the expert in PR material, deliver his or her comments at press events and encourage the media to seek interviews. (This tactic would be employed in Phase 2 and 3 when more is known about the project details, but action to engage an expert should take place in Phase 1.)

Regina.ca Phase 1

Update the relevant section on Regina.ca to contain the content and key messages outlined in Phase 1 strategy and in the report to council; to be updated once Phase 2 and Phase 3 are initiated, accessed through a prominent link on the City's landing page.

Establish an awareness and attitudinal benchmark through opinion polling

Once media coverage has taken place, poll the public regarding awareness of the issue, to get a sense of attitudes towards the City's investment in the Wastewater Treatment Plant, trust in the City's decision making regarding it and determine the information the public will be most interested in receiving.

NOTE: as of publication of this Draft, Phase one has has taken place. See Appendix 2 – Phase one deployment for related material.

3.2 Phase two – Due diligence assertion

Timing

From the day the procurement report is tabled publicly at Executive Committee to the day it is approved.

Goal

Further establish the need and value of the project in the minds of stakeholders, and clearly convey that the recommendation before Council represent thorough and critical thinking by qualified and credible experts.

Strategy

Present relevant features of the recommended approach being considered by council

- Openly share key details about options considered and recommendation currently being reviewed by council including the fact that the recommended option is a P3 delivery model
- Assure the public that the City's independent consultants weighed an extensive array of factors in recommending the options that represent the best value to the City of Regina and its residents, including, but not limited to:
    - requirement to build a new plant to meet progressive new standards and ensure the high level of technical expertise required to manage the new plant
    - cost (including construction and operation)
    - funding models
    - opportunities to mitigate risk to the City of Regina and its residents
- Publicly owned: Ensure there is no doubt that no matter what course of action, the City of Regina will retain ownership of the plant and the natural resources coming in and out of the plant.
    - The City of Regina also retains exclusive control over setting service rates, and is empowered to hold suppliers responsible to meet financial and environmental standards.
    - The P3 arrangement, if selected, would be exclusively for the design, build, finance, operation and maintenance of the plant by industry experts over a fixed period of time. Transferring ownership of the plant and the resources it manages do not form part of the agreement with the supplier.
- New standards developed by Federal and Provincial governments ensures that the new plant will comply to stringent effluent quality discharge standards no matter whether the plant is publicly or privately operated.

Key Messages

Extensive research and exploration by City of Regina experts and credible independent consultants has determined the best options and recommended approach to building our new Wastewater Treatment Plant for our City and its 200,000 residents.

Primary message

We are confident the options before council represent the the best value to the City of Regina and its residents.

Secondary messaging

- The state-of-the-art facility will satisfy progressive environmental regulations and ensure the city's infrastructure can reliably meet the essential day-to-day needs of its residents for generations.

Public Relations Tactics

Our approach tone: Releasing this information reflects our typical, transparent practice. Nothing less, nothing more. However, the thoroughness of our assessment represents a new approach to infrastructure development that reflects the City's commitment to innovation and to delivering best value for Reginans.

Key messages to be applied to deliverables below:

1. Extensive research and exploration by City of Regina experts and credible independent consultants has determined the best options and recommended approach to building our new Wastewater Treatment Plant for our City and its 200,000 residents.
2. Emphasize that no matter the selected option, WWTP will be publicly owned:
    - The City of Regina will retain ownership of the plant and the natural resources coming in and out of the plant.
    - The City of Regina also retains exclusive control over setting service rates
    - Empowered to hold suppliers responsible to meet financial and environmental standards.
3. Emphasize that the plant must be built – Council is assessing the best model through which to build it
    - The state-of-the-art facility will satisfy progressive environmental regulations and ensure the city's infrastructure can reliably meet the essential day-to-day needs of its residents for generations.
4. Note that no matter the delivery model determined upon, outside expertise will be required
    - The new building and operating standards the new plant will be subject to is highly sophisticated. For example, wastewater volume that currently take 30 days to treat will now be processed in one day leaving little room for error and requires a level of expertise not currently available at the City. So regardless of what procurement path the City takes, it will require outside expertise.
5. New standards developed by Federal and Provincial governments ensures that the new plant will comply to stringent effluent quality discharge standards no matter whether the plant is publicly or privately operated.

Press kit

- News release and fact sheet provided to media (no press event until decision is made)

Prepare Q&A guidelines for spokesperson(s)

- From the City of Regina, and an expert (ideally, should one be secured)

Social media

Prepare banked messages based on key messages and announcements to meet public onslaught and address all queries before escalation, confusion and misunderstanding occurs or perpetuates. Direct all complex queries to the appropriate URL on the City's website.

Public information mechanisms

Post all program-related news releases and backgrounders on the City's website for social media and public fulfilment purposes.

Marketing and communication Tactics

Paid media

Refer to *6. Paid Advertising Plan*

Regina.ca Phase 2

All official public information regarding the wastewater treatment plan project will reside on a dedicated section of the City of Regina's website. Communications tenets will be featured upfront, backed by in-depth informational messaging and robust content addressing every anticipated informational need. Information to be organized in Q&A format.

Public Information Sessions

Should the City of Regina determine that this is necessary, public information sessions would take place in this phase, concurrent with (or as early as possible during) the initial roll out of the public relations and paid media tactics so organized opposition has less time to prepare.

Issues Management

Track shifts in awareness and attitude through media monitoring, casual monitoring of public commentary on online news media stories and opinion polling

Employ media and social media monitoring to assess tone of media coverage and resultant public commentary and social media commentary. These mechanisms will help us track awareness and attitudinal shift, and track media sources for any counter arguments.

One week after options are public, information campaign has been launched, public information sessions (if determined upon) and media coverage have taken place, poll the public using the same survey as phase one to track and note any shifts, positive or negative, to assist in determining level of follow up response required.

Prepare tiered message response system, and launch as necessary

Note that in this discussion phase, tone of response must be entirely informational and not promotional in nature since no decision regarding the delivery model has been made.

Refer to *5. Issues Management*

NOTE: as of publication of this Draft, Phase two material is in development. See Appendix 3 – Phase two deployment for related draft material.

3.3 Phase three – Case for Support

Timing

From the day the procurement report is approved until March 31, 2013

Goal

Support Council's decision by clearly demonstrating how it represents the most favourable option for the City of Regina and its residents.

Strategy

Control the discussion about the recommendation by being the first to address it.

- **The recommendation represents the best option for the City of Regina and its residents:** Assure the public that the City's independent consultants weighed a number of factors in recommending the plan that represents the best value to the City of Regina and its residents, including:
    - cost (including construction and operation)
    - available funding
    - opportunities to mitigate risk to the City of Regina and its residents
    - ability to leverage industry-leading expertise while protecting the interests of current plant workers.
- We must begin the project now to avoid escalating costs and to ensure funding options remain available.

Should P3 be the delivery approach determined upon:

- **P3 Canada grant:** inform residents that by pursuing an innovative Public Private Partnership for the wastewater treatment plant upgrade, the City of Regina gains access to up to $50 million in funding from P3 Canada to help defray the cost of construction.
    - The Government of Canada is very likely to support the delivery model council has approved.
    - The up to $50 million in funding is only available through a P3 arrangement.
- **The benefits of P3:** Should P3 be the approved option, clearly relay the net benefits of pursuing a P3 project model in terms that resonate with residents.
    - Strong value for investment, including price and schedule certainty
    - Considers the full cost across the entire life-cycle of the project
    - Mitigates risk to the City of Regina, such as protecting taxpayers from cost overruns
    - Ensures that the technical expertise required to ensure the plant is operated at the required standards is in place
    - Gives the city recourse to ensure the plant meets environmental and fiscal benchmarks
    - Built-in commitment to maintenance
    - Contribution from the Federal Government
    - A P3 process will put three world-leading wastewater experts into a competition to design the most effective solutions for Regina

- **Publicly owned:** Ensure there is no doubt that no matter what course of action, the City of Regina will retain ownership of the plant and the natural resources coming in and out of the plant. The City of Regina also retains exclusive control over setting service rates, and is empowered to hold suppliers responsible to meet financial and environmental standards.
    - The P3 arrangement, if selected, would be exclusively for the design, build, finance, operation and maintenance of the plant by industry experts over a fixed period of time. Transferring ownership of the plant and the resources it manages do not form part of the agreement with the supplier.
- **Standards are Federally and Provincially set and regulated**: new standards developed by Federal and Provincial governments ensures that the new plant will comply to stringent effluent quality discharge standards no matter whether the plant is publicly or privately operated.

Key Messages

Extensive research and exploration has determined the best approach for our City and its 200,000 residents and Council has approved.

Primary message

The recommended approach is the best solution for the City of Regina and its residents because it represents best value while ensuring the city retains ownership of the plant and our natural resources.

Secondary messaging

- This project will serve as a model for innovative capital infrastructure investment
- Celebrate improvements that will result from the plant upgrade

Public Relations Tactics

Our approach tone: Releasing this information is our typical, transparent practice. Nothing less, nothing more. However, the delivery model represents a new approach to infrastructure development that reflects the City's commitment to innovation.

Key messages to be applied to deliverables below:

1. Extensive research and exploration has determined the best approach for our City and its 200,000 residents. The City's independent consultants weighed a number of factors in recommending the plan that represents the best value to the City of Regina and its residents.
2. The state-of-the-art facility will satisfy progressive environmental regulations and ensure the city's infrastructure can reliably meet the essential day-to-day needs of its residents for generations.
3. The new building and operating standards the new plant will be subject to is highly sophisticated. For example, wastewater volume that currently take 30 days to treat will now be processed in one day leaving little room for error and requires a level of expertise not currently available at the City – outside expertise is required.

Should P3 be the selected delivery model:

4. It has been determined that a P3 Canada grant is in our best interests
    - First, what a P3 Canada grant is, in plain speak.
5. Pursuing an innovative Public Private Partnership for the wastewater treatment plant upgrade is in the best interests of the City of Regina because it protects taxpayers from capital risk during construction and maintenance through the entire life-cycle of the project while ensuring the city retains ownership of the plant and our natural resources, and qualifies the City for $50 Million in grants that will offset the costs:
    - Throughout Canada municipalities have successfully employed P3 models for infrastructure development as innovative ways of securing capital and mitigating risk to cities and their residents. Regina has determined that this model works for this project and our City.
6. Emphasize the WWTP will be publicly owned:
    - The City of Regina will retain ownership of the plant and the natural resources coming in and out of the plant.
    - The City of Regina also retains exclusive control over setting service rates
    - Empowered to hold suppliers responsible to meet financial and environmental standards.
7. Additional details of the program:
    - Gains us access to up to **$50 million** in funding to help defray the cost of construction.
    - The up to $50 million in funding is only available through a P3 arrangement.
    - The Government of Canada fully supports the recommendation before council.
    - Project must begin as soon as possible now to meet the 2016 project deadline required to secure the funding.
8. The benefits of P3 to residents and the City:
    - Strong value for investment, including price and schedule certainty
    - Considers the full cost across the entire life-cycle of the project
    - Mitigates risk to the City of Regina, such as protecting taxpayers from cost overruns
    - Gives the city recourses to ensure the plant meets environmental and fiscal benchmarks
    - Built-in commitment to maintenance
    - Contribution from the Federal Government
    - Garners interest from industry-leading experts and suppliers.

Media technical briefing and tour

- Speaking program to follow tour
- An on-site tour of the existing facility to review its current state, how and why upgrades are necessary, and where they need to be implemented.

Press kit

- News release (points 1 through 5 above) and fact sheet (1 through 6)
- Factual and mildly celebratory P3 boilerplate needed for this and Phase 3 news releases.

Prepare Q&A guidelines for spokesperson(s)

- From the City of Regina, an expert (if secured) and a P3 representative from the Government of Canada (1 through 6)

Social media

Prepare banked messages based on key messages and announcements to meet public onslaught and address all queries before escalation, confusion and misunderstanding occurs or perpetuates. Direct all complex queries to the appropriate URL on the City's website. (1 through 6)

Public information mechanisms

Post all program-related news releases and backgrounders on the City's website for social media and public fulfilment purposes. (1 through 6)

Marketing and communication Tactics

Paid media

Refer to *6. Paid Advertising Plan*

Regina.ca Phase 3

All official public information regarding the wastewater treatment plan project will reside on a dedicated section of the City of Regina's website. Communications tenets will be featured upfront, backed by in-depth informational messaging and robust content addressing every anticipated informational need. Information to be organized in Q&A format.

Issues Management

Track shifts in awareness and attitude through media monitoring, casual monitoring of public commentary on online news media stories

Employ media and social media monitoring to assess tone of media coverage and resultant public commentary and social media commentary. These mechanisms will help us track awareness and attitudinal shift, and track media sources for any counter arguments.

Prepare tiered message response system, and launch as necessary

Refer to *5. Issues Management*

See Appendix 4 – for DRAFT Phase three deployment example

3.3 Phase Four – Response and Maintenance

Timing

April 2013 – Early 2017 (official opening of fully updated plant)

Goal

Be prepared to manage any issues or opposition that may arise in a timely manner, make major announcements such as the P3 grant award and selection of contractors, celebrate project milestones and successes as they occur.

Strategy

Frame the priorities of oppositional forces in order to disarm their arguments

- **The City of Regina must do what is best for residents as a whole:** Disarm the arguments from interest groups as being narrowly focused and/or factually inaccurate. Calmly emphasize that while the City of Regina understands how opponents may come to the conclusions they have, the City of Regina must consider and act in the best interest of all 200,000 residents today and in the future. The recommended approach represents the best option and value for our investment.
    - Prepare simple, fact-based counter arguments based on the concerns that may be raised by union representatives, environmental stakeholders, opponents of public-private partnerships, and other interest groups.
    - Do not give unneeded traction to arguments that wouldn't otherwise garner attention.

Provide newsworthy updates on matters of interest to the public

- **Project progress, key milestones, and successes:** employ previously completed opinion polling and media monitoring to determine the subjects and issues of highest interest among target audiences. Celebrate newsworthy proceedings and incidents that will resonate with residents, taxpayers, environmentally conscious citizens and workers in a positive way.
    - Factual proof points celebrating project successes.
    - Ensure all information addresses a matter of public interest, and not merely those of City stakeholders.

Key Messages

Primary message

The City of Regina is committed to implementing innovative infrastructure solutions that stand to benefit the City of Regina as a whole and all 200,000 of its residents.

Public Relations Tactics

Earned media opportunities

Announcements to be developed and issued only in keeping with the City's established patterns of issuing milestone and other announcements. If news releases have historically been the pattern, then news releases shall be the stage three mode of communication.

Tone approach: business-as-usual, transparent, mildly celebratory.

- News releases to always frame messaging in terms of the City's commitment to act in the best interest of all its 200,000 residents.
- All news releases to be posted on the City's website
- News releases to be shared in social media and embedded URLs to drive people back to the City's website for fulfillment purposes
- Established P3 boilerplate from Phase 2 to be used in all Phase 3 messaging and media/web documents.
- Visuals: Any renderings and/or multimedia to be mentioned in news release as available to media and posted on the City's website.

Issues Management

Reference tiered message response system, and launch as necessary (please refer to *5. Issues Management*).

4. Internal Rollout

Recommendations for rolling out the communication to city councillors, city staff, wastewater treatment plant employees, and potential partners and suppliers.

4.1 For Council and Senior Management

Inform Councillors about P3 and its potential role in this project

The complex and technical nature of the project will be further compounded by the potentially contentious P3 project structure and the recent turnover in seats among city council. A succinct brief that informs councillors about P3s and their potential value to the City of Regina, including key points and past successes, will be highly valuable in aligning the message of all the supporters of the project. A refresh of "P3 101" should be held with Council, including sharing the City's established guidelines for considering this model and assuring them that the guidelines have been adhered to.

Keep them in the loop and prepared to be responsive

Press kit materials, particularly key project information and anticipated (and continually updated) Q&As should be provided in advance to Council and Senior Management to prepare them for direct questions from staff, constituents and opposing forces.

4.2 For City Staff

Make it clear that employees are the City's and the project's key ambassadors, and as such, will be kept in the loop

Communication must engage staff with a sense of their own importance in the project's success. Emphasize that employees are among the first to receive official updates because they are key to its success as employees and residents (ambassadors). Clearly ask employees to defend the value of this important infrastructure project through whatever means they have available.

Give employees the tools they need to be ambassadors or direct a query

The information contained in the media kit would provide employees with all the information they need, but consider a piece (a simple 8.5 x 11" document) specifically for employees that they can refer to should friends and family ask them about the project. This piece could even be titled "Should someone ask..." and contain the most likely questions residents will have about the project.

When approached with formal information requests by project opponents or the media, employees should be clear about how to direct them to official communications sources, be it a spokesperson or information resource such as the website.

4.3 For Wastewater Treatment Plant Employees

Provide employees with information first

Employees appreciate being the first in the know and not being surprised by any news from the outside. Make the information that is about to be released to the media and the public available to employees first, and ensure they know they are the first to receive it. This information provides them with the tools they need to become informed and feel more valued and empowered.

Having said that, make it clear that this information is not to be publicized until after a set time, and explain how and when information will be revealed to media and the public where applicable.

Identify who will be the City's spokesperson in handling all media requests and comments, and emphasize that employees are not authorized to speak to media and should they be contacted they are to direct the caller to that spokesperson.

4.4 For Partners and Suppliers

Keep them in the loop

For the most part, communications guidelines for suppliers bidding on work for the City of Regina should be clearly outlined in the bid solicitation documents provided to them. Those whose efforts prove successful will become partners of the City of Regina. They will appreciate finding out news and information directly from approved City of Regina communicators before it is made public and broadcast by the news or put online. Efficient 2-way communication stands to promote a healthy and transparent partnership.

Give them the tools they need to direct queries to appropriate representatives

Identify who will be the City's spokesperson in handling all media requests and comments, and emphasize that partners wishing to do business with the City are not authorized to speak to media and should they be contacted they are to direct the caller to that spokesperson. Indicate that, where appropriate, simple inquiries can also be referred to the Q&A portion of the website.

5. Issues Management

This section outlines a tiered message and communications tactic response system to respond to pressing issues from oppositional forces as they arise.

5.1 Anticipated issues and associated messaging

NOTE: See Appendix 3 – Phase two deployment for draft key messages and Q&A.

5.2 Likely key points of contention

Organized opposition will likely attempt to distill the argument to four key concerns, presented to the public as simplistically as possible:

- Cost
- Service
- Accountability
- Privatization to non-local proponents

1. COST

We've already addressed that utility costs have increased because of the need for the upgrade, not because of P3 and are suggesting they won't increase at a rate greater than they already have. As well, though aspects of the project do cost more – we will pay a premium for the risk assumed by the contractor – the final cost to Regina is the lowest of the options considered.

2. SERVICE

The wastewater treatment plant itself is not a customer service oriented entity. The wastewater treatment plant will be owned by the City; utility rates will be set by the City; residents will continue to deal with the City and will notice no difference in service whatsoever.

3. ACCOUNTABILITY

Accountability is built in due to stringent effluent standards set at provincial and federal levels, and will be built into contracts the city will develop as part of the process. As well, due to the incorporation of finance into the procurement model, the contractor has greater incentive to meet its obligations and the City has more leverage to ensure they do.

4. PRIVATIZATION

Our approach celebrates the fact that international calibre contractors will be attracted to the project, and makes it clear that local proposals will be considered in an effort to simply hire the best. There is already some concern about the City's capability to manage large projects, and our communication makes clear that the expertise required does not exist at the City. Further, the asset will remain wholly owned by the City.

5.3 Opposition tactical approach

Given that Saskatchewan is likely to be viewed by oppositional special interest as one of the the last union strongholds in Canada, opposition is highly likely.

The tactical approach they employ is likely to be emotional in nature. Phrases like "Our City is for for sale,""the City of Regina is selling off our infrastructure," "taxpayer dollars are going to line private pockets" etc. are likely to be employed in a simplistic argument.

The core of their argument is that the privatization results in higher costs and service cuts for vital public services and they will cite specific examples of this from other jurisdictions – credible or not.

In terms of process, the opposition is most critical of the veracity of the value for money assessment model, claiming it is inaccurate and misleading.

Fight fire with water

A pragmatic, logical approach to communication is recommended, both to counter the emotional approach likely to be employed by the opposition, and to appeal to the practical nature of Reginans.

Referring to the opposition as a "special interest group" positions them as only representing a small proportion of Reginans, while the City has a responsibility to pursue whatever option promises to deliver the best value to all 200,000 Reginans.

Countering "for sale" messaging with "the facts" including the fact that the City will retain ownership of the asset will diffuse the emotional impact of hyperbolic rhetoric.

Assuring the public that the City remains responsible for services and rate setting counters arguments about higher costs and service cuts in a logical fashion. Establishing that Regina and this project are unique and can't be compared to other cities will appeal to the independent spirit of Reginans.

Sharing detail on the depth of due diligence performed to arrive at the recommendation, and the credibility of the consultants will assist in countering any doubts cast on the fidelity of the process.

5.4 Proactive and flexible message management

Pre planned paid media, well timed communication release and well prepared issues management and public relations approaches ensure we proactively anticipate natural and manufactured resistance to this new idea of a public-private-partnership. This ensures the City's voice is heard no matter what the opposition chooses to do. We must also build flexibility into our plan, with anticipated response levels and associated mechanisms to ensure we are prepared to respond to specific modes of attack, as they occur.

Anticipated response levels and associated mechanisms

Level one: Anticipated push back

The lowest level of alert, anticipated push back includes all issues for which we have already prepared a prepackaged response, as well as trivial new contentions that are unlikely to rally public opposition.

Deployment strategy:

- Address emerging themes and misconceptions as quickly as possible by:
    - updating online information to prioritize information, if necessary
    - ensuring spokespeople are prepared to respond if approached by media
    - utilizing social media to address issues and push constituents to Regina.ca.

Level two: Organized external opposition makes noise

The mid alert level, organized external opposition makes noise, may be sounded when an established interest group begins publicly demonstrating their opposition through the news media, or a particular issue gains significant-enough traction among residents that it needs to be addressed.

Deployment strategy:

- Escalate frequency of online ads, refined if necessary to address specific issues raised
- Engage audiences online through social media and push constituents to Regina.ca
- Additional smaller print ads, refined if necessary to address specific issues raised
- Issue press release addressing key issues of public concern, if deemed necessary
- Update online information to prioritize information to align with specific issues, if deemed necessary.

Level three: Organized external opposition launches a public campaign; and/or wastewater treatment plant employees enter public discussion with criticism

The highest alert level, organized opposition results when a formal campaign is launched and public interest and perceptions of the project are in play.

Deployment strategy:

- Press event (or press release if an event is deemed unnecessary)
- Escalate frequency of online ads
- Place larger print ads
- Run radio ads
- Produce and distribute large insert/direct mail piece.

6. Paid Advertising Plan

Our approach is to support the public relations initiatives with advertising messages in carefully selected media to ensure the City's voice is heard and its unadulterated messages reach the public.

To support the approach of making the issue a non-issue, MCG recommends against any splashy, high profile advertising media such as out of home or television ads, despite the fact that the organized opposition is likely to employ this approach. A responsible and reasonable response to any opposition is more likely to diffuse it.

Summary

PHASE 1

Official brief to council and website only, no paid advertising.

PHASE 2

Online ads on news sites

Ads connecting viewers to Regina.ca for more information.

Small print ads

Small print ads directing readers to Regina.ca for more information.

PHASE 3

Direct marketing piece

An information piece announcing the recommended direction for the development of the Wastewater Treatment Plant and what it means for residents, assuring them there will be no interruptions in service and their day to day lives will be unaffected.

Online ads on news sites

Ads connecting viewers to Regina.ca for more information.

Small print ads

Small print ads directing readers to Regina.ca for more information.

PHASE 4

In the event of Level 2 response (likely)

Online ads on news sites

Additional online ads connecting viewers to Regina.ca for more information.

Small print ads

Additional small print ads directing readers to Regina.ca for more information.

In the event of Level 3 response (less likely)

Large print ads

Large print ads counteracting opposition by presenting the City's position.

Large insert/Direct mail piece

An information piece counteracting opposition by presenting the City's position.

Online ads on news sites

Additional online ads connecting viewers to Regina.ca for more information.

Radio

Ads counteracting opposition by presenting the City's position and pushing to Regina.ca

Media plans to be developed as part of phased tactics as strategy is approved.

7. Communications Measurement

GOAL: Track shifts in awareness and attitude through opinion polling, news media and social media tracking

Employ media and social media monitoring to assess the tone of media coverage and the resultant public commentary and social media commentary. These mechanisms will help track awareness and attitudinal shift, and track media sources for any counter arguments.

Awareness and opinion polling

Establish an awareness and attitudinal benchmark through opinion polling in phase 1

Once media coverage has taken place, poll the public regarding awareness of the issue to get a sense of attitudes towards the City's investment in the Wastewater Treatment Plant, trust in the City's decision making regarding it, and determine the information the public will be most interested in receiving, etc.

Determine shifts in awareness and attitude through opinion polling in phase 2

One week after marketing tactics have been employed, public information sessions (if determined upon) and media coverage have taken place, poll the public using the same survey as phase one to track and note any shifts, positive or negative, to assist in determining level of follow up response required.

Responsiblity: MCG to manage activities of research supplier

Website hits

Track visits to relevant pages (wastewater treatment information) at Regina.ca before pre-launch to determine a benchmark. Track visits at key information release points beginning on the pre-launch day through maintenance phase; compare to benchmark to assess increases in awareness and interest.

If possible, monitor what subject matters are being accessed on the site to gather insight into primary public interests and concerns.

Data collection and reporting responsibility: City of Regina

Call generation

Estimate the number of wastewater related calls received by City of Regina prior to pre-launch and track number of wastewater related call upon pre-launch and assess as Positive, Negative, or Neutral.

Data collection and reporting responsibility: City of Regina

Media monitoring

Monitor media coverage and correlate public relations and marketing activities where attributable.

Reporting responsibility: MCG

Social media monitoring

Monitor comment feedback on media coverage and relevant twitter topics and analyze to identify any emerging themes and issues so they may be addressed.

Data collection and reporting responsibility: City of Regina

Reporting responsibility: City of Regina and MCG

Councillor check-ins

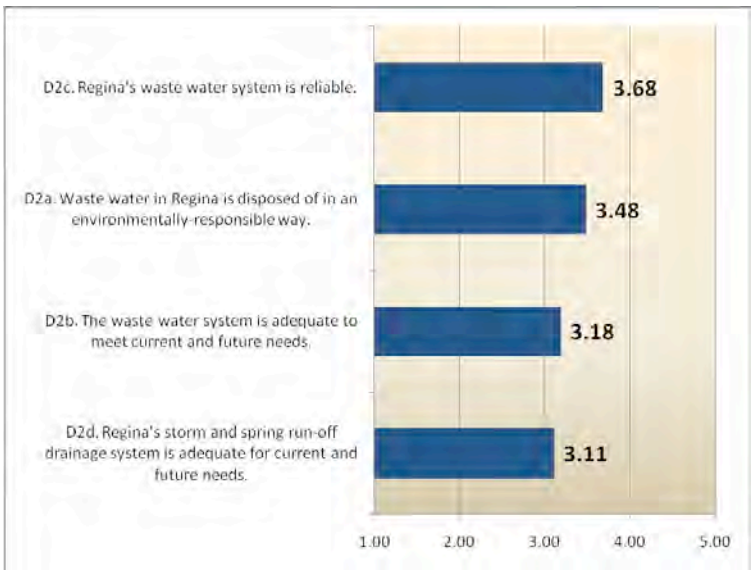
Periodically check-in with councillors to determine the level of interest and line of questions being submitted by councillors' constituents.

Initiation and reporting responsibility: City of Regina

Annual survey

Comparing the results of the last citizen survey, with regards to wastewater treatment, and noting any shifts in perception. Since overall resident satisfaction about wastewater is fairly high, to signal increased issue awareness, we'd be looking for those satisfaction levels to decrease in the next survey.

Q: Now think about waste water disposal in Regina – the sewage system. On the same 1-5 scale, pick a number to indicate how strongly you agree with these statements:



Appendix 1: preliminary project schedule

Preliminary project schedule

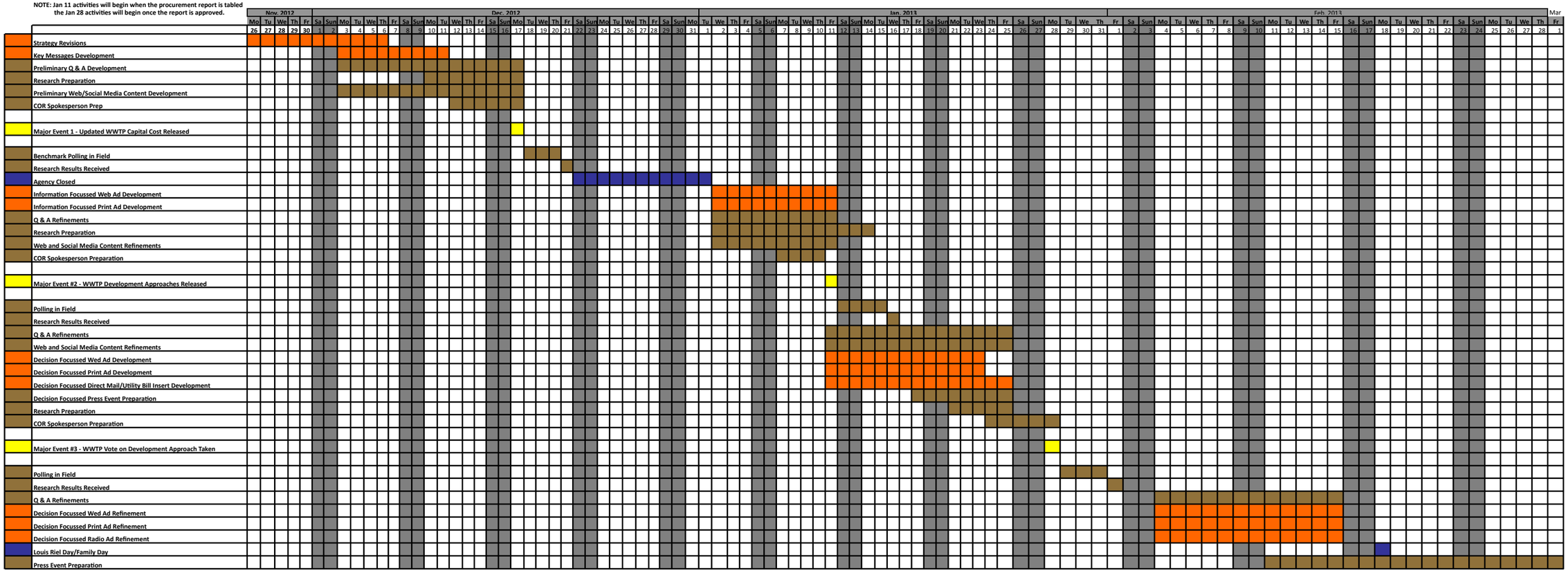
Cringan George

PROJECT SCHEDULE (Draft)

CLIENT: City of Regina

PROJECT: Waste Water Treatment Plant - Outlook

NOTE: Jan 11 activities will begin when the procurement report is tabled the Jan 28 activities will begin once the report is approved.



MCG Task
COR Task
Joint Task
Major Events
Holidays - MCG Holiday Recess - Louis Riel Day/Family Day

The timelines provided are based on project parameters defined at the time the schedule was created, and with the assumption that both parties can meet the stated deadlines. Should the scope of the work change or milestones be moved by either party, dates will be modified as required to fulfill our commitments to quality and budget. New schedules will be provided once this information becomes available.

Appendix 2 – Phase one deployment

Summary

The following reflects the material associated with the Communication Strategy tactics recommended as part of Phase one - Updating Council and Residents and includes:

1. Wastewater Treatment Plant Upgrades Project Update
2. Briefing Note – Council WWTP – December 12, 2012
3. Issue Note – WWTP – December 17, 2012
4. Website copy (Phase one update)
5. Resultant News Coverage
6. Research Report

Appendix 2.1 – Phase one deployment:
Wastewater Treatment Plant Upgrades Project Update

December 11, 2012

To: Members,

Re: Wastewater Treatment Plant Upgrades Project Update

RECOMMENDATION

1. That this report be submitted to City Council on December 17, 2012 for information.

CONCLUSION

The City Administration has been engaging with external consultants to meet upgrade requirements for the City's Wastewater Treatment Plant (WWTP). The upgrades are required to do the following: replace equipment that has reached the end of its lifecycle; ensure the plant has sufficient capacity to respond to increased population and economic growth demands; and to meet new Provincial effluent standards. This is an extremely complex project and one of the largest ever undertaken by the City of Regina

Conceptural and pre-design for the WWTP upgrade has been completed with the project reaching the 20 percent design level. Based on the pre-design analysis, the Administration is estimating that the capital cost upgrades will be in the range of $177 million +/- 15% in 2012 dollars. Inflating to the mid-point of construction results in an estimate of $207 million +/- 15% in Q3 2015.

In 2012, the provincial Ministry of Environment issued the City a new WWTP Permit to Operate. The permit requires that the City meet new effluent standards in 2016. The current plant will not be able to meet these future provincial requirements, and therefore the majority of the upgrades must be completed be the end of 2016.

BACKGROUND

Wastewater treatment is a vital service for the protection of human health and the environment. After treatment, liquid effluent is discharged downstream of the City into Wascana Creek and the Qu'Appelle River system. Through treatment, wastewater is disinfected to remove pathogens and reduce nitrogen and phosphorous. Without wastewater disinfection, downstream pathogen levels would impact public safety for water use. Nitrogen and phosphorus removal protects the environment by mitigating the impact of nutrients that cause algae growth, and reducing toxicity to fish habitat.

For the past several years, the City has been planning a for the WWTP upgrade. Utility rates have been increased by 9% per year beginning in 2008 in anticipation of the significant investment in the WWTP. This was reflected in the 3-year utility rate cycles from 2008 to 2010, and 2011 to 2013.

In 2009, Administration initiated the selection of consulting services for the WWTP upgrade project and in early 2011 the City engaged AECOM. In the last year, the WWTP upgrade project has made significant progress with the completion of a number of background reports, a preliminary concept plan and the pre-design phase, which brings the WWTP to the 20 percent design level.

This report provides City Council with an update on the need for the upgrade and project progress.

DISCUSSION

Need for the WWTP Upgrade

For the past several years, the City has been planning a significant investment in the WWTP to replace deteriorated assets, meet future growth and to meet new Provincial effluent standards.

- The assets at the WWTP have deteriorated to the point where it is difficult for the City to meet all of our operating objectives. A majority of the assets at the WWTP were constructed prior to 1980. Although basic maintenance has occurred, equipment deterioration has resulted in the requirement for significant replacement. It would cost approximately $30 million to restore the plant to original condition without addressing other operating objectives.

- The WWTP is near capacity, treating approximately 70 million litres per day of wastewater. The future design parameters will allow for an average flow of 92 million litres per day, which will allow for increased growth in Regina. The WWTP upgrade is planned for flow demands of a population of 258,000 in the year 2035, which is a growth rate of approximately 3,000 people per year.

- The Province and the City have met to discuss future effluent standards and the timeline to address these changes. Effluent standards have evolved from protecting human health from disease to include protection of watersheds. The new Provincial requirements are driven to enhance protection of the environment. These new standards will further reduce the level of dissolved nutrients that can cause algae growth and impact fish species health. A new treatment process is required to meet the new standards. The Province established the new standards in June 2012 and is requiring the City to address these effluent changes by the end of 2016.

All of these needs are required and can only be met through the WWTP upgrade. The City's goals for the

WWTP upgrade project are to meet these needs on schedule and addresses the long term financial stability of the facility.

Project Progress

A significant amount of analysis on the WWTP upgrade has been completed throughout 2011 and 2012. The work includes 21 technical reports, a Preliminary Concepts Plan Report, and a Pre-Design Report. A short-list of liquid treatment, biosolids management and wet weather technologies and processes were analyzed through a triple bottom line approach. The criteria for the analysis took into consideration the financial, environmental, social and operational requirements of the City. The assessment process narrowed down the Administration's recommended processing option to a non-proprietary biological nutrient removal process used by most major cities in Canada.

The concept includes:

Existing	Upgrade by
Primary plant (separates solids and liquid)	Reuse with retrofit
Biosolids management systems (digesters and dewatering to break down organic solids)	Reuse with retrofit
Secondary treatment lagoons (removes micro organisms and organic material from the liquid stream)	Replace with a new biological nutrient removal process. Reuse with retrofit some lagoons for wet weather/peak flow management
Existing tertiary clarifiers (phosphorous removal)	
	Add new filtration for lower phosphorus requirements
Disinfection (ultraviolet light that deactivates pathogens)	Replace with new

Table 1

There is approximately $50 to $60 million worth of value in some of the existing infrastructure at the WWTP. The upgrade plan includes the reuse of this infrastructure to maximize its use and reduce the overall capital cost of the project. The cost savings from infrastructure reuse is taken into account in the updated estimate.

The last update given to Council on cost estimates this year was $153 million +/- 20 including a cost escalator of 8% each year after 2012. The escalator is meant to reflect the increased costs for materials and labour due to a booming local construction market. Construction is scheduled to begin in 2014 and is expected to be at the mid-point of completion in 2015. If we carry those costs forward to 2015 when construction is at a significant level of completion, the estimated cost is $200 million.

Since that last update, the Administration has been working with AECOM to do further design analysis and ascertain more detailed estimates. The work has led to a revised construction estimate of $207

million in 2015. The increased estimate is attributable to the following factors:

- A more detailed level of design and more project specific cost information;
- Risk items identified during Predesign such as sludge removal from lagoons and odour control, which might be mitigated on further investigation.

	Initial Estimate	Revised Estimate
Confidence level	+/- 20%	+/- 15%
2012 Estimated Cost	$153 million	$167 million
Escalation Factor	8%	6%
2015 Estimated Cost	$200 million	$207 million
Cost Estimate Range	$160M-240M	176M-238M

Table 2

Estimates are based on current market conditions. Local market conditions may further increase cost at the time of construction. Determining the cost of a project of this complexity can only be priced by the market through a competitive procurement process. The current estimate uses 20% level design, industry price inquiries, and market conditions. A 20% level design is only accurate for budget estimating and will require significant further work for market pricing. Uncertainties in the project create risk to prospective bidders which will translate into financial risk premiums. How these risks are managed and who retains the responsibility will be key in the pricing and affordability of the WWTP upgrade.

In June 2012, Administration was authorized to review procurement options for delivering the WWTP upgrade project. Analysis continues on a recommended procurement approach, with options including traditional methods and those that would include alternative service delivery. Administration will report to City Council in early 2013 with a recommendation on a procurement approach.

RECOMMENDATION IMPLICATIONS

Financial Implications

The City has anticipated the WWTP upgrades for a number of years and its cost has been reflected in the utility rate model and utility rates. The upgrades to the WWTP will require the City to undertake significant debt. The debt for the Water and Sewer Utility could be as high as $150 million..

The long term financial sustainability of the WWTP, through a financial model and procurement option will be addressed through forthcoming decisions of City Council. Debt from the WWTP and other programs will need to be strategically managed over the next few years.

Environmental Implications

The WWTP upgrade will enhance environmental conditions in the downstream receiving waters of Wascana Creek and the Qu'Appelle River system. This may result in improved aesthetic conditions as a result of reduced algae levels, and improved fish habitat.

Strategic Implications

Upgrades to the WWTP will ensure that the City continues to meet its wastewater treatment permit to operate. In addition, an upgraded WWTP is an important piece of the City's infrastructure portfolio to ensure that future capacity demands, due to economic and population growth, can be met.

Substantial debt will be required in order to finance the project. The allocation of City debt to this project will constrain the City's ability to borrow for other major capital projects based on current borrowing limits and where existing debt is currently committed. As a result, the City's debt will need to be closely and strategically managed in the coming years.

Other Implications

None with respect to this report.

Accessibility Implications

None with respect to this report.

COMMUNICATIONS

A communications plan has been developed to provide information on the WWTP upgrade.

DELEGATED AUTHORITY

Disposition of this report is within the authority of the Executive Committee.

Respectfully submitted,

Respectfully submitted,

Rob Court, Manager
Environmental Engineering

RC/jg

WasteWaterCommStrategy(D3).pages

Appendix 2.2 – Phase one deployment:
Briefing Note – Council WWTP – December 12, 2012

City of Regina | REGINA
Infinite Horizons

Briefing Note
Wastewater Treatment Plant Upgrade

Contact: Dorian Wandzura, DCM Operations, 777-7211

December 7, 2012

ISSUES

16(1)(a)

KEY MESSAGES

16(1)(a)

BACKGROUND

16(1)(a)

16(1)(a)

COURSE OF ACTION

16(1)(a)

QUESTIONS AND ANSWERS

16(1)(a)

16(1)(a)

Appendix 2.3 – Phase one deployment: Issue Note – WWTP – December 17, 2012

ISSUE NOTE
WWTP Construction costs

ISSUE:

16(1)(a)

KEY MESSAGES:

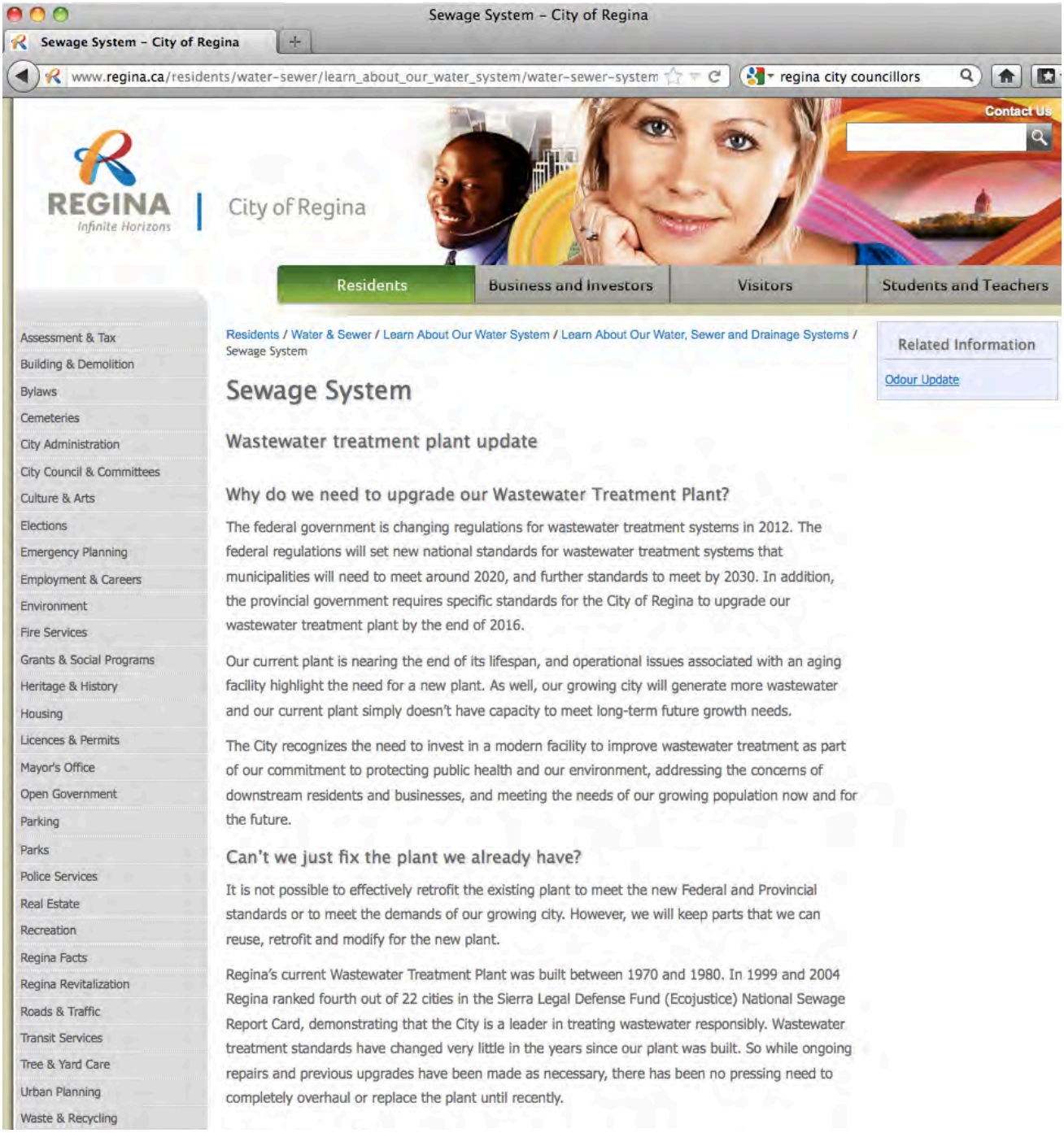
16(1)(a)

BACKGROUND:

16(1)(a)

16(1)(a)

Appendix 2.4 – Phase one deployment: Website copy (Phase one update)



Waste & Recycling

Water & Sewer

Winter & SnowFighters

What's the cost?

A previous update provided to Council on cost estimates was $153 million +/- 20 per cent including a cost escalator for inflation each year after 2012. (The cost escalator is meant to reflect the increased costs for materials and labour due to our booming local construction market.) Based on a more comprehensive assessment conducted though a pre-design analysis, the Administration has provided a new report to Council estimating that the capital cost upgrades will be in the range of $167 million +/- 15 per cent in 2012 dollars. The estimated cost, based on construction starting in 2014 and completing in 2016, is $207 million +/- 15 per cent.

Neither the federal or provincial governments have dedicated funding to help mitigate these costs, which will affect one in four wastewater systems in Canada at a total national cost to municipalities of more than $10 billion. As it stands, the City of Regina will be solely responsible for funding the development of the new plant.

At what stage is the project now?

In 2011 and 2012 significant analysis and planning work for the wastewater treatment plant upgrade was completed. The work includes technical reports, a Concept Design Report, and a Pre-Design Report.

The City of Regina has engaged two highly experienced external consultants; AECOM Group Inc. (a world leader in infrastructure development) to conduct the pre-design analysis in order to project costs as accurately as possible and determine development requirements; and Deloitte & Touche LLP (one of Canada's leading professional services firms) to analyze the relative advantages of potential delivery models and recommend the approach that offers the best value to the City of Regina and its residents. The reports of these firms will be presented to City Council in early 2013.

As we have more information, we will make it available to the public.

When does construction begin and when will the plant be completed?

Extensive planning and securing of resources must take place in 2013 before we can break ground. Construction will occur between 2014 and spring 2017 with a bulk of the work being done in 2015 and 2016.

How will this affect residents and our downstream neighbours?

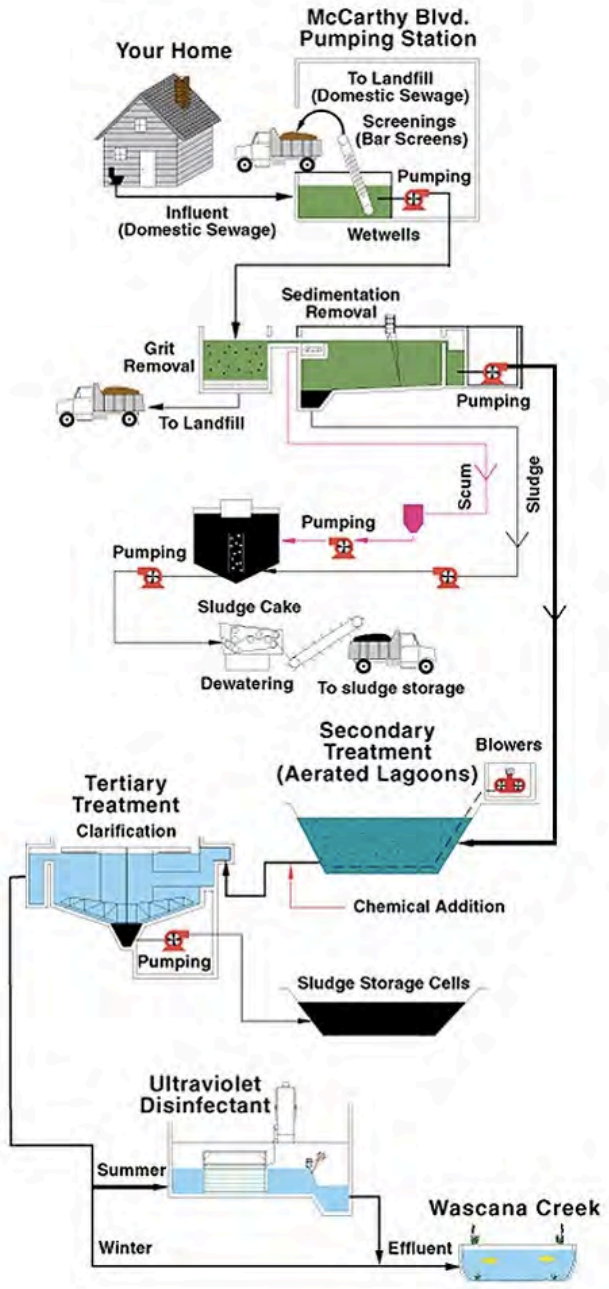
Regina residents will experience no changes or interruption in service during construction of and transition to the new plant.

The upgrade will continue to maintain public health protection and enhance environmental conditions in the downstream receiving waters of Wascana Creek and the Qu'Appelle River system. This may result in improved aesthetic conditions as a result of reduced algae levels, and improved fish habitat.

How the wastewater system works

Wastewater flows through the City of Regina's sewage system to the Wastewater Treatment Plant, located just west of Regina. If laid out in a straight line, Regina's 725 kilometres of sewer lines would reach almost to Calgary.

The City of Regina's Wastewater Treatment Plant treats about 70 million litres of sewage from bathtubs, toilets, sinks and washing machines each day and follows the path shown in the graphic below:



Appendix 2.5 – Phase one deployment: Resultant News Coverage

Saskatchewan News

Report clarifies cost for new wastewater treatment plant

With inflation price could go from $150 million to $207 million

Change text size:

Reported by Patrick Book
First Posted: Dec 18, 2012 8:24am | Last Updated: Dec 18, 2012 8:52am

An expensive jump in cost for a new waste water treatment plant isn't slowing down Regina's city council.

Council signed off on a report at Monday's meeting which clarified that the cost of the plant is expected to be higher than they first thought. With inflation,the price tag on the new plant could go from $150 million to $207 million or more, according to city staff.

The city decided to build a new plant in 2008 because of new requirements for water treatment dictated by the federal government.

Deputy city manager Dorian Wandzura says the planning work was put off for some time in the hopes the federal Conservative government would provide money for it.

"One of the realities about federal funding for these sorts of infrastructure projects is that to qualify you can't have started already so part of the work in 2008 and 2009 was working with the FCM around lobbying for additional federal funding," he explained.

The federal government has yet to come up with money even though their regulatory changes made the expensive upgrade necessary.

Other cities aren't in quite the same position. Saskatoon and Moose Jaw carried out expensive upgrades in the 90s and 2000s to get them up to grade.

Wandzura says there are three elements we need to do a better job with.

"The most important things to us are the requirements around phosphorus discharge for algae growth downstream and nitrogen discharge which has acute toxicity for fish species," Wandzura explained.

The city clarifies that about $125 to $135 million will need to be borrowed to build the plant. But that could change in the future.

Edited by CJME's Adriana Christianson

Reginan questions sewage treatment plant costs

BY VANESSA BROWN, LEADER-POST DECEMBER 18, 2012

A Regina resident is concerned that the growing costs of overhauling the city's sewage treatment plant will affect the city's debt load.

According to a project update report forwarded to city council Monday, upgrading the waste water treatment plant is expected to cost $207 million in 2015 dollars - up from an earlier projection of $200 million after inflation.

Speaking before council Monday, Chad Novak, who unsuccessfully ran for mayor in October's election, questioned the city's ability to handle the $120 million to $130 million worth of utility debt needed to pay for the project.

"An obvious concern is what if the inflation goes even higher, and the debt required is higher than our current debt ceiling?" Novak said. "Assuming we still need to spend the $207 million-plus on the (waste water treatment plant), which of our capital projects are going to take priority?"

Senior city staff have also warned council of the "substantial" debt required to complete the upgrades, which are needed by 2016 to meet stricter provincial environmental standards around treating waste water.

"The allocation of city debt to this project will constrain the city's ability to borrow for other major capital projects based on current borrowing limits and where existing debt is currently committed," the report said. "As a result, the city's debt will need to be closely and strategically managed in the coming years."

Speaking to reporters following Monday's meeting, Mayor Michael Fougere said council is heeding that call. He added residents' higher utility rates, which have been increasing by nine per cent over the past four years, will help offset the utility debt.

"There will be debt, no question about that, but we've also asked for more debt from the (provincial) municipal board, and we're well within our range," Fougere said.

"So, not too concerned right now about that.

"Our view is to watch that, be always mindful of the debt load that we do have. But this is a must have for our city, and there's no issue with respect to financing that whatsoever. It won't be a problem."

Construction is to begin in 2014 and is expected to be mostly finished by late 2016.

Coun. Mike O'Donnell indicated Monday that the Federation of Canadian Municipalities is to ask Ottawa for financial support upgrading sewage treatment plants as part of negotiations for a renewed infrastructure funding agreement.

The city's waste water treatment plant permit, issued earlier this year by the provincial Ministry of Environment, is contingent on overhauling the facility west of Regina. City staff indicate the new provincial standards will better protect downstream fish habitat from toxic pathogens and nitrogen. The upgrades are to also reduce algae in the Wascana Creek and Qu'Appelle River system.

According to the staff report, the overhaul will also meet the demands of a growing population.

"An upgraded (waste water treatment plant) is an important piece of the city's infrastructure portfolio to ensure that future capacity demands can be met, due to economic and population growth," the report said.

The new plant is to be built to handle a Regina population of 258,000. That figure is based on about 3,000 new residents per year up to the year 2035. The upgraded facility is to be able to treat 22 million more litres of waste water per day.

vbrown@leaderpost.com

CTV Regina
Published Friday, Dec. 14, 2012 9:37AM CST

A new report shows the estimated cost of planned upgrades to Regina's wastewater treatment plant has risen by more than $50 million.

The report to the city's executive committee says the upgrades are now estimated to cost $207 million, plus or minus 15 per cent.

The City of Regina says the initial estimate of $153 million has gone up due to inflation in construction costs.

City council will consider options early in the new year.

Construction is slated to begin in 2014 and is expected to wrap up in 2016.

Regina mayor defends $238M sewage plant upgrade

Plant originally pegged at $153M with some leeway, plus or minus

CBC News Posted: Dec 17, 2012 10:41 AM CST | Last Updated: Dec 17, 2012 10:06 PM CST 29

The mayor of Regina is defending the latest estimate attached to a major waste-water treatment facility planned for the city.

Questions arose after it was learned costs for the sewage treatment plant upgrade could hit $238 million, tens of millions more than was originally expected.

But Regina's mayor, Michael Fougere, said the first estimate had to be adjusted for inflation and other cost factors.

"As we move forward, the costs are more clear," Fougere said. "The report we have before us is really an update of where we're at with the project and what those costs could be."

Construction on the upgraded system is set to begin in 2014 with a target finish date of the end of 2016, in order to comply with new provincial waste-water standards.

"We have until December 31st of 2016 to meet provincial guidelines and we must do it," Fougere said. "It has to be done."

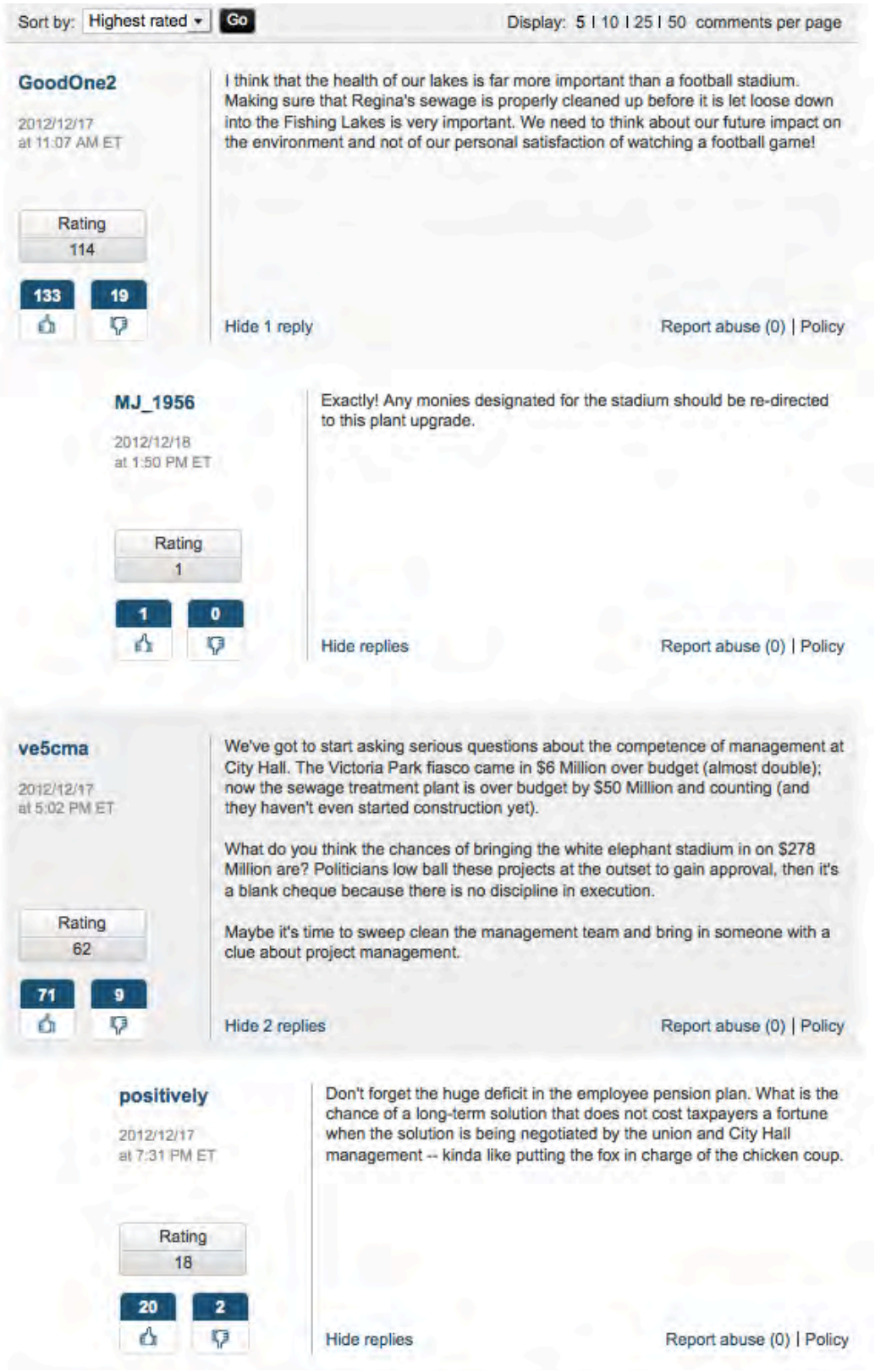
A previous projection, from several years ago, pegged costs at $153 million plus or minus 20 per cent.

The latest estimate puts the number at $207 million, plus or minus 15 per cent, based on construction starting in 2014 and completing in 2016.

At the high end, that would put total costs at $238 million.

The city is paying for it by borrowing about $150 million but also through the 9 per cent annual increases to water and sewer bills that have been underway since 2008.

CBC Regina news piece public commentary regarding previous article



Sort by: Highest rated Go Display: 5 | 10 | 25 | 50 comments per page

GoodOne2

2012/12/17
at 11:07 AM ET

I think that the health of our lakes is far more important than a football stadium. Making sure that Regina's sewage is properly cleaned up before it is let loose down into the Fishing Lakes is very important. We need to think about our future impact on the environment and not of our personal satisfaction of watching a football game!

Rating
114

133 19

Hide 1 reply Report abuse (0) | Policy

MJ_1956

2012/12/18
at 1:50 PM ET

Exactly! Any monies designated for the stadium should be re-directed to this plant upgrade.

Rating
1

1 0

Hide replies Report abuse (0) | Policy

ve5cma

2012/12/17
at 5:02 PM ET

We've got to start asking serious questions about the competence of management at City Hall. The Victoria Park fiasco came in $6 Million over budget (almost double); now the sewage treatment plant is over budget by $50 Million and counting (and they haven't even started construction yet).

What do you think the chances of bringing the white elephant stadium in on $278 Million are? Politicians low ball these projects at the outset to gain approval, then it's a blank cheque because there is no discipline in execution.

Maybe it's time to sweep clean the management team and bring in someone with a clue about project management.

Rating
62

71 9

Hide 2 replies Report abuse (0) | Policy

positively

2012/12/17
at 7:31 PM ET

Don't forget the huge deficit in the employee pension plan. What is the chance of a long-term solution that does not cost taxpayers a fortune when the solution is being negotiated by the union and City Hall management -- kinda like putting the fox in charge of the chicken coup.

Rating
18

20 2

Hide replies Report abuse (0) | Policy

Erik T

2012/12/17
at 1:39 PM ET

Rating
33

43 10

Tell me one major construction project that isn't 30% more expensive than it would have been several years ago. This is the same reason that they pushed through the new stadium, because they could barely afford it now. In several years when it will become a necessity, it will be at least 30% more expensive than it is now, which they likely wouldn't have been able to afford.

Hide 2 replies

Report abuse (0) | Policy

NWRokk

2012/12/17
at 10:04 PM ET

Rating
5

11 6

We don't need or want a new stadium now or then. The current stadium was just upgraded at the cost of many millions.

Hide replies

Report abuse (0) | Policy

ReginaMan

2012/12/18
at 11:20 AM ET

Rating
0

3 3

Speak for yourself. I want a new stadium, as does most everyone I know. Also I would say the complete lack of support shown by the citizens of Regina to the anti stadium (everything?) crowd further shows that the majority of us either do want it, or are so indifferent to it they couldn't even be bothered to sign the petition to have it reviewed by council.

Hide replies

Report abuse (0) | Policy

jensg1

2012/12/17
at 10:21 PM ET

Rating
25

35 10

What many Regina residents need are wage increases which actually cover ongoing increases in the cost of living in this city. Unless new sources of revenue can be found we are going to be taxed to death - and don't forget that those annual 9 % increases to water and sewer rates are nothing but back door taxation. The past excuse employers have used about how they can pay lower wages around here just doesn't fly any longer - this has become a very expensive city in which to live, and it offers far less than Calgary or Edmonton. It is ridiculous.

Show 2 replies

Report abuse (0) | Policy

NWRokk

2012/12/17
at 10:02 PM ET

Rating
6

22 16

Inflation has been low for years ... 1-3% a year... so I don't buy it being a factors in the upgrade costing 55% more than estimated just a few years ago. Inflation would add no more than 10% to the cost. Fougere is lying again. How much of the excess is going into his and Fiacco's pockets?

Hide 2 replies

Report abuse (0) | Policy

King Bob

2012/12/18
at 9:32 AM ET

Rating
4

5 1

Overall inflation has been low but not in the construction industry.

Hide replies

Report abuse (0) | Policy

MJ_1956

2012/12/18
at 1:40 PM ET

Rating
0

0 0

Fougere is not lying - just backing up the construction industry. He is past president of the Saskatchewan Construction Association and well aware of the fact that construction costs have absolutely exploded around here within a few short years. It is not unreasonable that the actual cost of this project would be significantly higher than the estimates.

Hide replies

Report abuse (0) | Policy

Girty2011

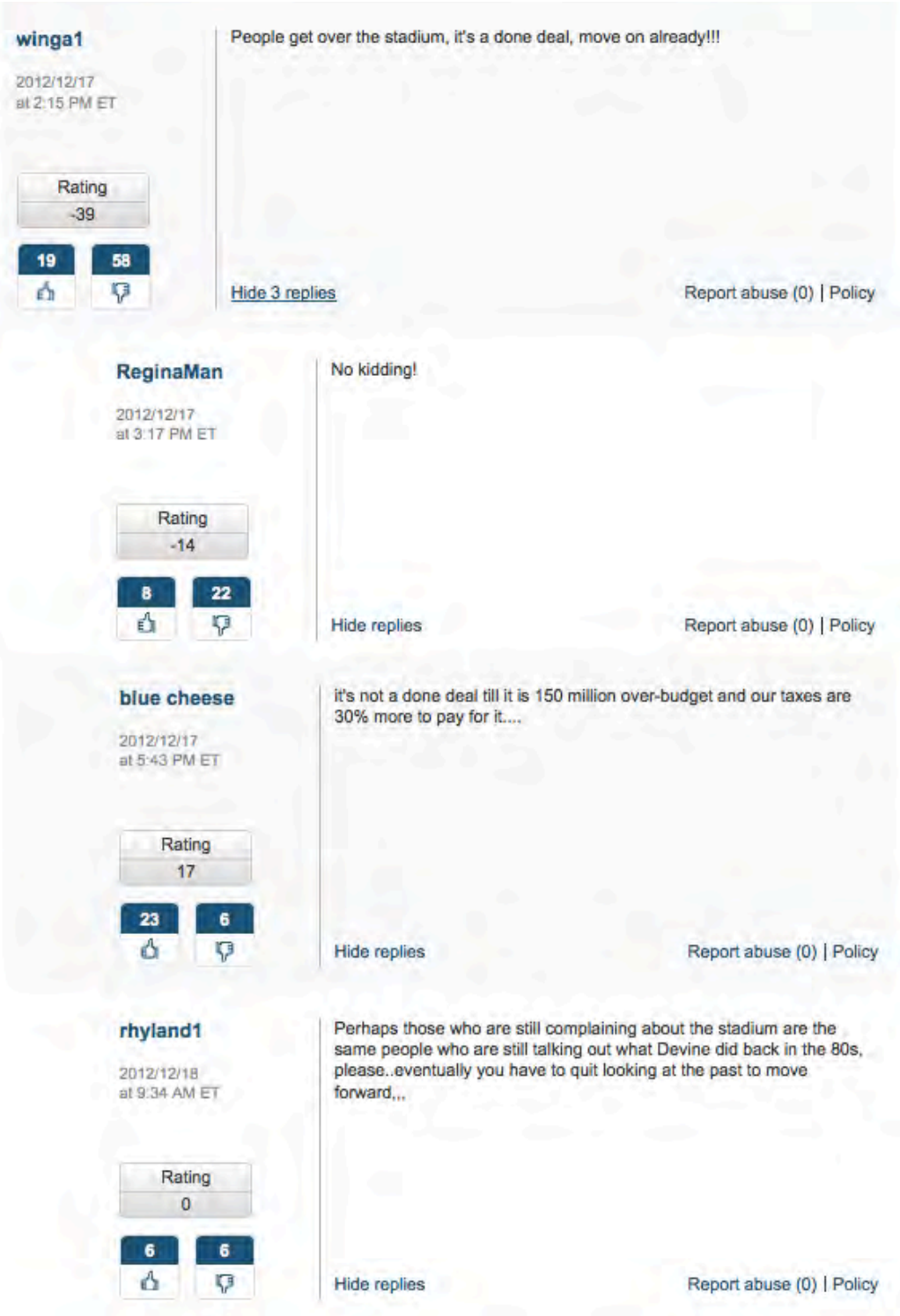
2012/12/17
at 11:02 AM ET

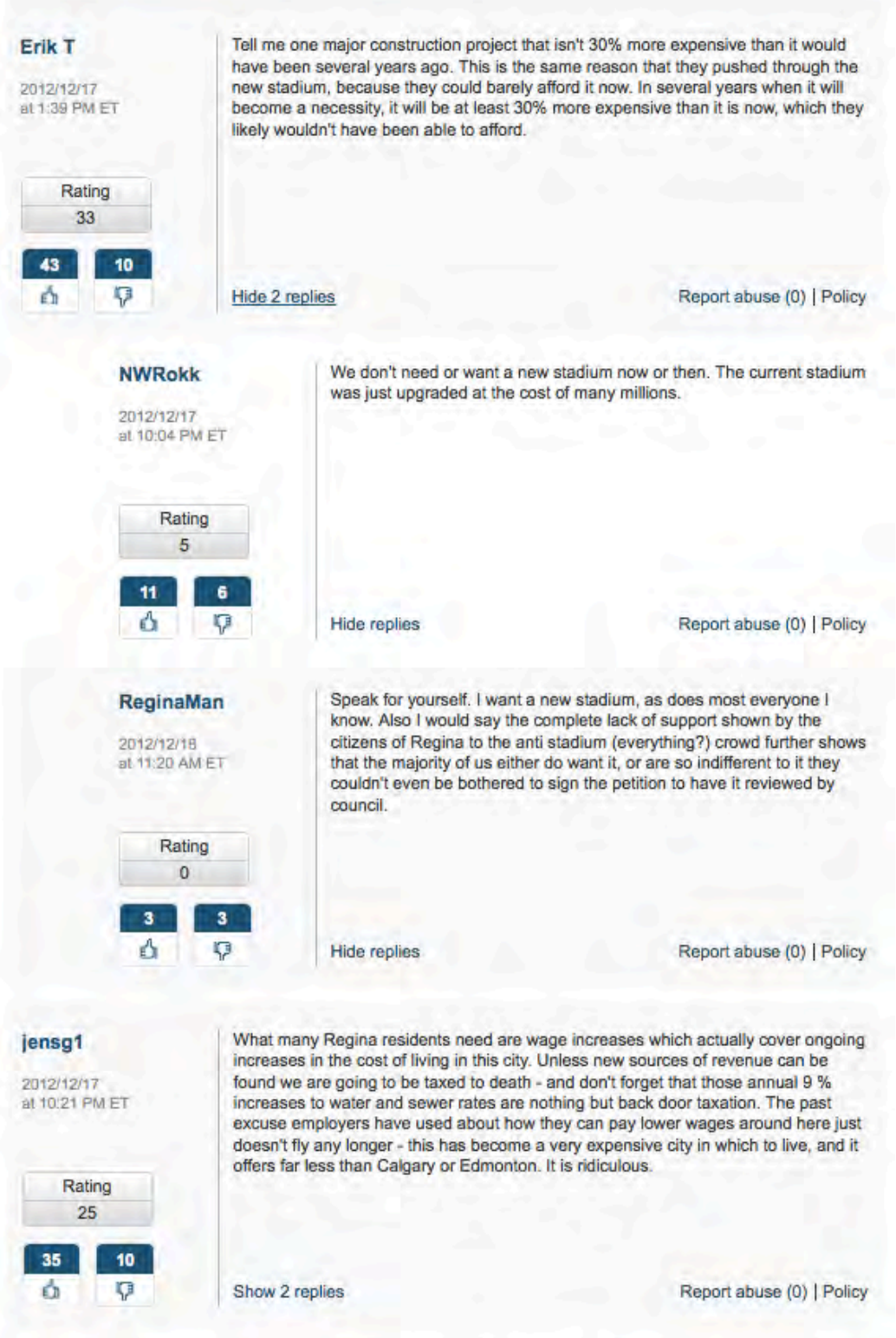
Rating
-21

22 43

Not to worry - the spin off from the stadium will pay for it.

Report abuse (0) | Policy


winga1
2012/12/17
at 2:15 PM ET
Rating
-39
19
58
People get over the stadium, it's a done deal, move on already!!!
Hide 3 replies
Report abuse (0) | Policy
ReginaMan
2012/12/17
at 3:17 PM ET
Rating
-14
8
22
No kidding!
Hide replies
Report abuse (0) | Policy
blue cheese
2012/12/17
at 5:43 PM ET
Rating
17
23
6
it's not a done deal till it is 150 million over-budget and our taxes are 30% more to pay for it....
Hide replies
Report abuse (0) | Policy
rhyland1
2012/12/18
at 9:34 AM ET
Rating
0
6
6
Perhaps those who are still complaining about the stadium are the same people who are still talking out what Devine did back in the 80s, please..eventually you have to quit looking at the past to move forward,,,
Hide replies
Report abuse (0) | Policy



Erik T

2012/12/17
at 1:39 PM ET

Rating
33

43 10

Tell me one major construction project that isn't 30% more expensive than it would have been several years ago. This is the same reason that they pushed through the new stadium, because they could barely afford it now. In several years when it will become a necessity, it will be at least 30% more expensive than it is now, which they likely wouldn't have been able to afford.

Hide 2 replies

Report abuse (0) | Policy

NWRokk

2012/12/17
at 10:04 PM ET

Rating
5

11 6

We don't need or want a new stadium now or then. The current stadium was just upgraded at the cost of many millions.

Hide replies

Report abuse (0) | Policy

ReginaMan

2012/12/18
at 11:20 AM ET

Rating
0

3 3

Speak for yourself. I want a new stadium, as does most everyone I know. Also I would say the complete lack of support shown by the citizens of Regina to the anti stadium (everything?) crowd further shows that the majority of us either do want it, or are so indifferent to it they couldn't even be bothered to sign the petition to have it reviewed by council.

Hide replies

Report abuse (0) | Policy

jensg1

2012/12/17
at 10:21 PM ET

Rating
25

35 10

What many Regina residents need are wage increases which actually cover ongoing increases in the cost of living in this city. Unless new sources of revenue can be found we are going to be taxed to death - and don't forget that those annual 9 % increases to water and sewer rates are nothing but back door taxation. The past excuse employers have used about how they can pay lower wages around here just doesn't fly any longer - this has become a very expensive city in which to live, and it offers far less than Calgary or Edmonton. It is ridiculous.

Show 2 replies

Report abuse (0) | Policy

NWRokk

2012/12/17
at 10:02 PM ET

Rating
6

22 16

Inflation has been low for years ... 1-3% a year... so I don't buy it being a factors in the upgrade costing 55% more than estimated just a few years ago. Inflation would add no more than 10% to the cost. Fougere is lying again. How much of the excess is going into his and Fiacco's pockets?

Hide 2 replies

Report abuse (0) | Policy

King Bob

2012/12/18
at 9:32 AM ET

Rating
4

5 1

Overall inflation has been low but not in the construction industry.

Hide replies

Report abuse (0) | Policy

MJ_1956

2012/12/18
at 1:40 PM ET

Rating
0

0 0

Fougere is not lying - just backing up the construction industry. He is past president of the Saskatchewan Construction Association and well aware of the fact that construction costs have absolutely exploded around here within a few short years. It is not unreasonable that the actual cost of this project would be significantly higher than the estimates.

Hide replies

Report abuse (0) | Policy

Girty2011

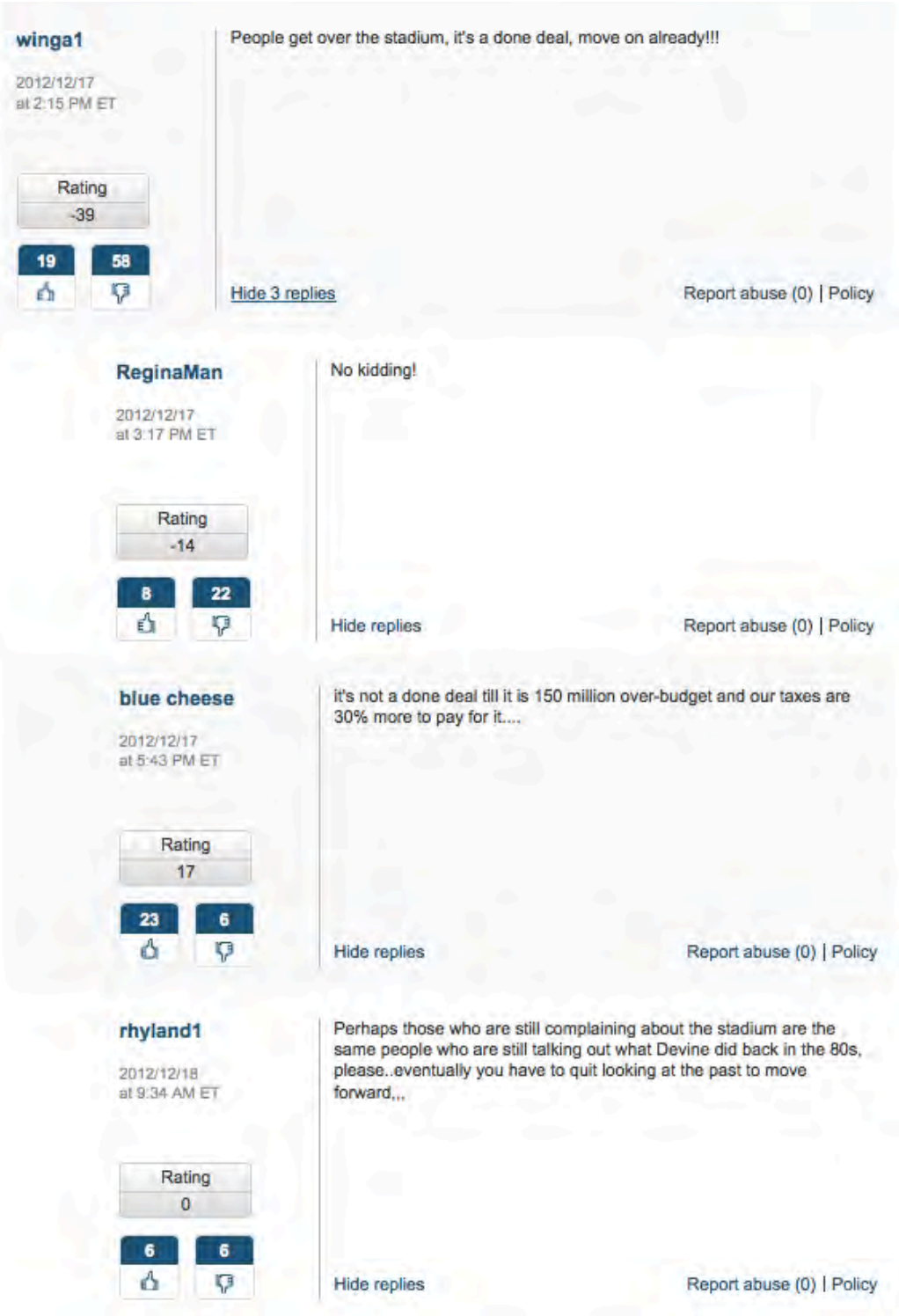
2012/12/17
at 11:02 AM ET

Rating
-21

22 43

Not to worry - the spin off from the stadium will pay for it.

Report abuse (0) | Policy



winga1

2012/12/17
at 2:15 PM ET

Rating
-39

19 58

People get over the stadium, it's a done deal, move on already!!!

Hide 3 replies

Report abuse (0) | Policy

ReginaMan

2012/12/17
at 3:17 PM ET

Rating
-14

8 22

No kidding!

Hide replies

Report abuse (0) | Policy

blue cheese

2012/12/17
at 5:43 PM ET

Rating
17

23 6

it's not a done deal till it is 150 million over-budget and our taxes are 30% more to pay for it....

Hide replies

Report abuse (0) | Policy

rhyland1

2012/12/18
at 9:34 AM ET

Rating
0

6 6

Perhaps those who are still complaining about the stadium are the same people who are still talking out what Devine did back in the 80s, please..eventually you have to quit looking at the past to move forward,,,

Hide replies

Report abuse (0) | Policy

Appendix 2.5 – Phase one deployment: Research Report

City of Regina | REGINA Infinite Horizons

Wastewater Treatment Survey

Base Report

January 2013

Praxis Analytics

Introduction

This document reports the details of a survey of residents of the City of Regina, conducted by Praxis Analytics in December 2012.

Interviews were conducted with a sample of Regina residents contacted by telephone using randomly-selected numbers, or by email through Praxis Analytics online panel.

Methodology

Fieldwork was done December 17-21, 2012. Interviews were completed with 508 individuals. Results were weighted for age.

This was a non-probability sample survey (a function of including online panel members in the sample), and thus is not subject to margins of error projections as a probability sample would be. However, a probability sample of this size in the City of Regina would yield a general margin of error of plus or minus 4.34% at the 95% confidence level. It is increasingly common to use non-probability samples and our experience does not suggest that projections from panel respondents are materially different in practical impact so long as the sample's demographic make-up is consistent with the population. The difference is important to note nevertheless because data reported in this document is addressed in terms of the probability of difference, and therefore this caution should be kept in mind.

Interpreting Results

In many cases data in this survey was captured on a symmetrical, five-point response scale. This type of scale permits:

- Determining the extent of positive or negative response by comparing the percentage of responses on either side of the 3 midpoint.

- Identifying whether the response pattern is polarized, and whether strongly held opinions at either end of the scale occur more frequently than expected.

- A single measure for each question using the mean (average) of all responses from 1 to 5. The mean response level indicates whether the overall response pattern is positive or negative, and to make simple comparisons between questions.

Mean response levels indicate the strength of response to an individual question.
Strongly-held opinions are represented by either a 1 on the negative side or by a 5 on the positive side of the scale. The midpoint of the scale is 3 so, when responses are averaged, an average or neutral response would be 3.00. Mean response levels above 3.00 suggest a positive overall response while those below 3.00 suggest a negative overall response. Mean response levels of, say, 2.50 or 3.50 can be considered substantially negative or positive opinions. Mean response levels can be considered exceptionally low or high if they approach values of, say, 2.00 or 4.00, respectively.

Highlights

- **Wide awareness of the wastewater plant project**: Almost three quarters (73.6%) of respondents report having heard information about the wastewater treatment plant upgrade.
    - Awareness of the wastewater upgrade lags that of the Regina Revitalization Initiative (96.3%) but approaches the level for City Square Plaza (78.9%) despite the relative newness of the wastewater project.
    - Respondents who are homeowners, with higher incomes, over age 35, live in the North West and South East, and are male are more likely to have heard information about the wastewater treatment plant upgrade.

- **Majority perception of the project is positive:** 63% report their first reaction on hearing of the wastewater project as positive, versus only 7.6% reporting an initial negativity (the remainder, 29.5%, were neutral). The average response level is strong at 3.74, driven by the 7:1 ratio of Very Positive responses to Very Negative.
    - Negativity is driven by concern for cost and tax implications: Among the 7.6% reporting initial negativity, by far the largest group (68.1%) indicated their reservations arise from the expense and its impact on fees or taxes. Cost and tax is a
    - Other reasons for negative attitudes are odour or sewage problems (17%) or a view that the City has provided too little information (15%).

- **Cost-effectiveness trumps exceeding new federal/provincial standards:** By a ratio of 3:2, respondents give priority to meeting requirements cost-effectively. A strong majority (62%) feels the upgraded wastewater plant should meet the new standards as effectively as possible, but with an eye on cost. A sizeable minority (38%), however, feels the new standards should be exceeded despite additional cost.
    - Renters, the youngest respondents (under 35), and those in South West or Central Regina are more likely to be among those interested in the wastewater treatment plant exceeding the new standards.
    - Environmental impact is a key consideration among respondents. The two top-rated factors among five tested are limiting adverse effect on people downstream (4.54 average response on the 1-5 scale), and making sure treatment limits environmental impact (4.41). An environment-related factor, minimizing sewage smell, also rated very strongly at 4.29.
        - University graduates generally show higher average ratings for importance than others.

- **New revenue opportunities and civic job guarantees are also important:** Both factors ranked behind environmental considerations, but still showed strongly positive ratings. Between the two, earning revenue for supplying waste water to other uses led at 3.75. Guaranteeing the jobs of City employees currently working in wastewater treatment came last but still very positive at 3.64.
    - University graduates give a strong (3.55) but lower rating than others (3.85 for technical, and 4.11 for Gr. 12) to the importance of earning revenue from the commercial supply of

processed wastewater; importance ratings rise with age, from 3.42 among those under 35 to 4.09 for respondents over 55.

- Job guarantees decline in importance as education and income rise. Renters deem guarantees much more important (4.44) than homeowners (3.52), as do females (3.88) over males (3.38).

Comparing relative importance of five factors			
Issue	*Average rating*	*Positves (total 4+5 ratings)*	*Negatives (total 1+2 ratings)*
Limit impact on people downstream	**4.54**	**91%**	**3%**
Limit enviro impact	**4.41**	**88%**	**4%**
Minimize smell	**4.29**	**84%**	**4%**
Earn secondary revenue	**3.75**	**60%**	**11%**
Guarantee existing jobs	**3.64**	**58%**	**19%**
Positive/negative percentages are rounded, neutral not shown			

❖ **Opinion is blurred on options for operating the new plant:** Asked to rate three options for running the wastewater plant, results show no statistically significant difference in overall opinion (mean response levels) between the City using existing staff (3.56) and the City hiring another company (3.51). Both ratings are well into positive range, and the 5-point difference between them is not meaningful.

- The numbers of respondents agreeing (either strongly or at the 4 level) with each of the three options is different but not dramatically so. It ranges from a low of 49% positive for "it's not all that important how the City operates the plant", to a high of 58.2% for "hire another company."
- While the option showing the largest absolute number of positives is "hire another company" at 58.2%, the difference is arithmetic and not statistically different from "use existing staff" at 52.5% positive.
- The difference in average responses is driven by the negatives. They rise from 16.1% opposing "use existing staff", to 23.8% opposing "hire another company", to 31.1% opposing "it's not all that important."
- Renters are much more likely to feel the City should use existing staff than homeowners (4.22 vs 3.46), and support for "use existing staff" falls rapidly as income rises (4.26 among those in households with under $40,000 annual income, to 3.18 in households with incomes over $120,000. Females register at 3.75, males at 3.34.
- Support for "hire another company" shows some polarity. Respondents with $40,000 or less in household income and respondents from households with income over $120,000 show comparable average ratings of 3.78 and 3.71 respectively. Respondents in the $40-80,000 and $80-120,000 segments gave importance ratings considerably lower, at 3.43 and 3.27 respectively.

- Support for “it’s not all that important” rises steadily with household income, is higher among those over 55 (3.50) than among the other age segments (3.12 and 3.24), and peaks in the Northwest (3.47) and Southeast (3.46).

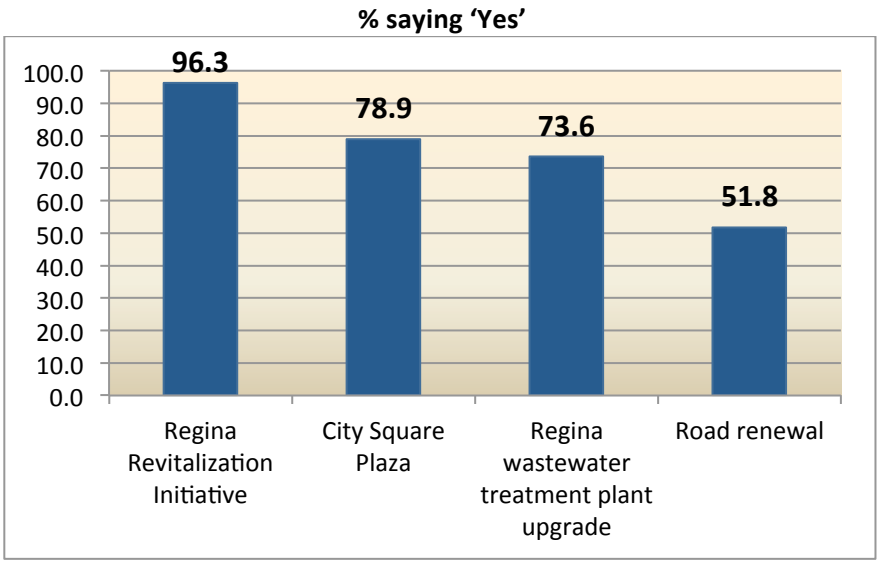
Comparing opinion on how to operate the plant			
Option	*Average rating*	*Positves (total 4+5 ratings)*	*Negatives (total 1+2 ratings)*
Use existing staff	**3.56**	**52.5%**	**16.1%**
Hire another company	**3.51**	**58.2%**	**23.8%**
It's not important	**3.28**	**49.0%**	**31.1%**

- Other queries indicate that cost-effectiveness is a dominant consideration. It is the major driver of initial negativity to the project, and the choice of the majority as the factor to use in appraising the objectives the plant should seek to achieve. It is possible to conclude that the results at this query (B3) could turn on which option would prove most cost-effective.

Survey Findings

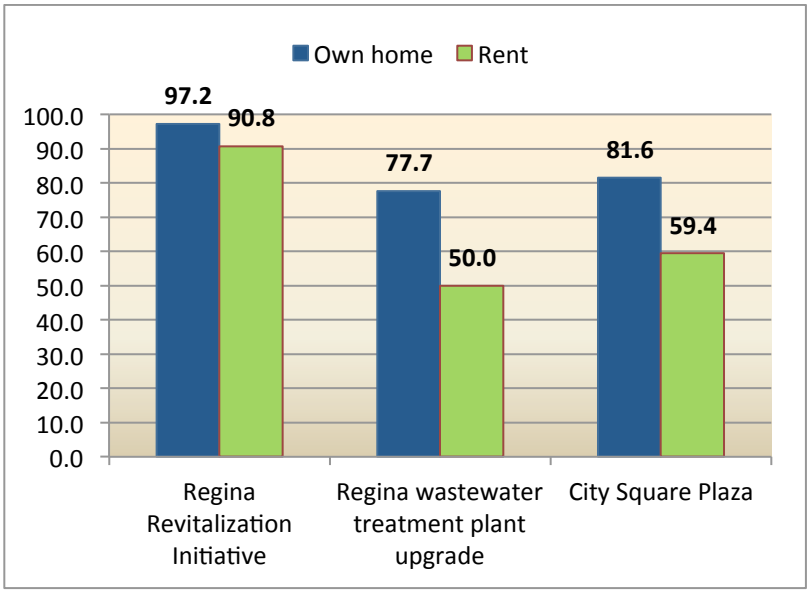
SECTION A: AWARENESS & SOURCE

A1. Have you seen, read or heard anything lately about any of the following projects in Regina?

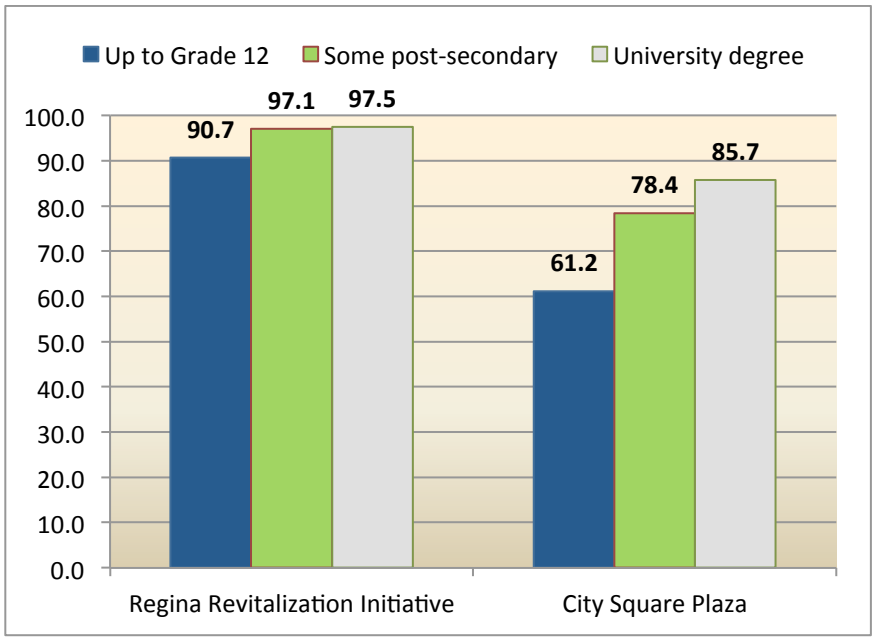


Statistically Significant

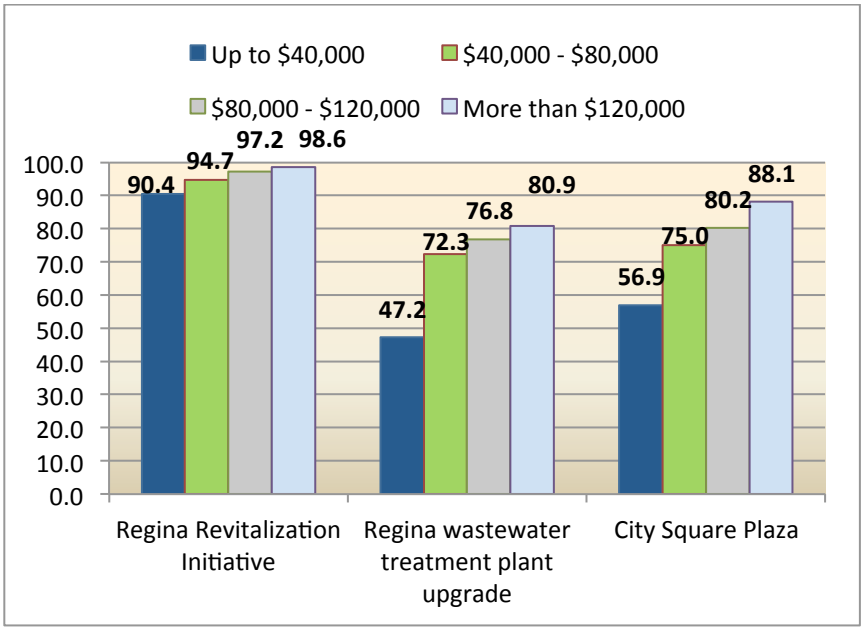
Home Ownership



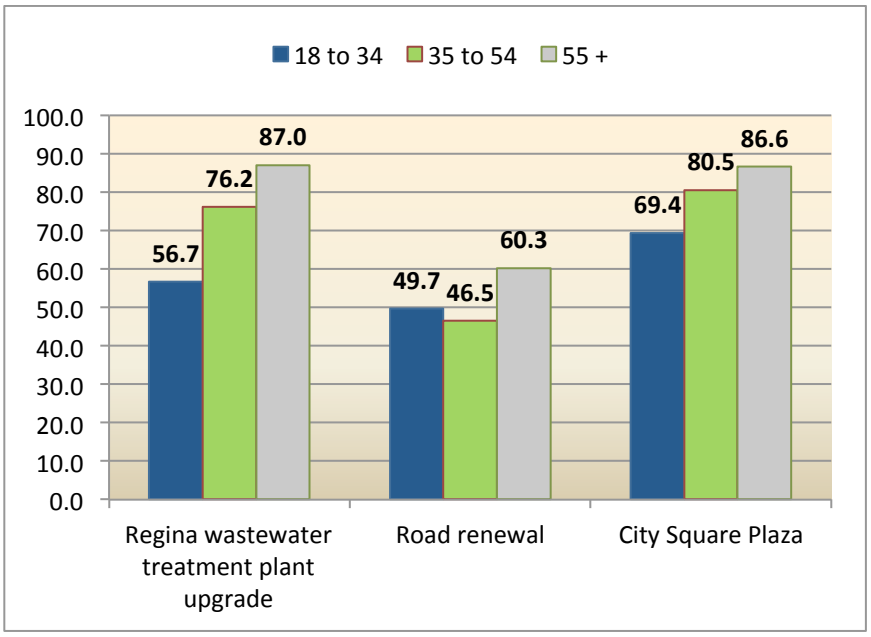
Education Level



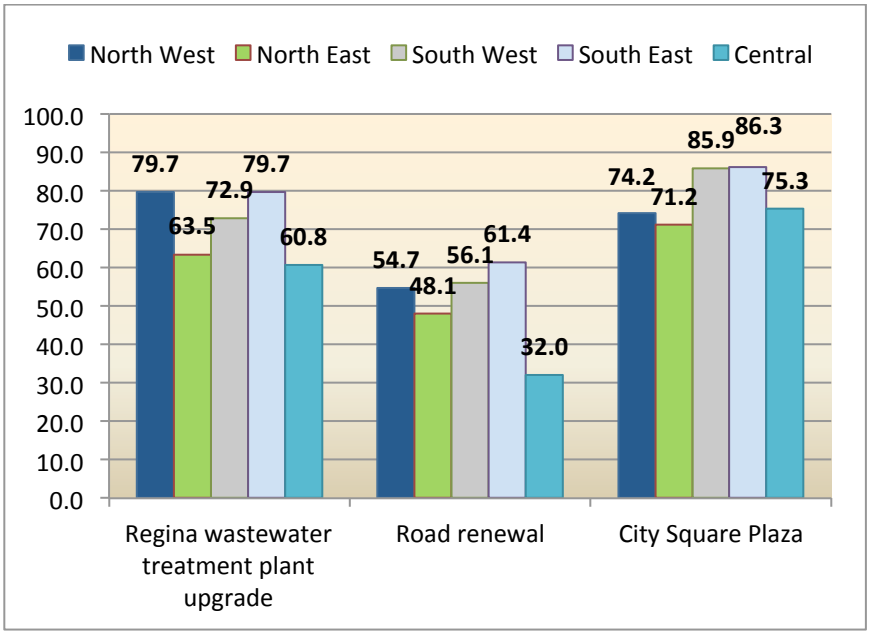
Income Level



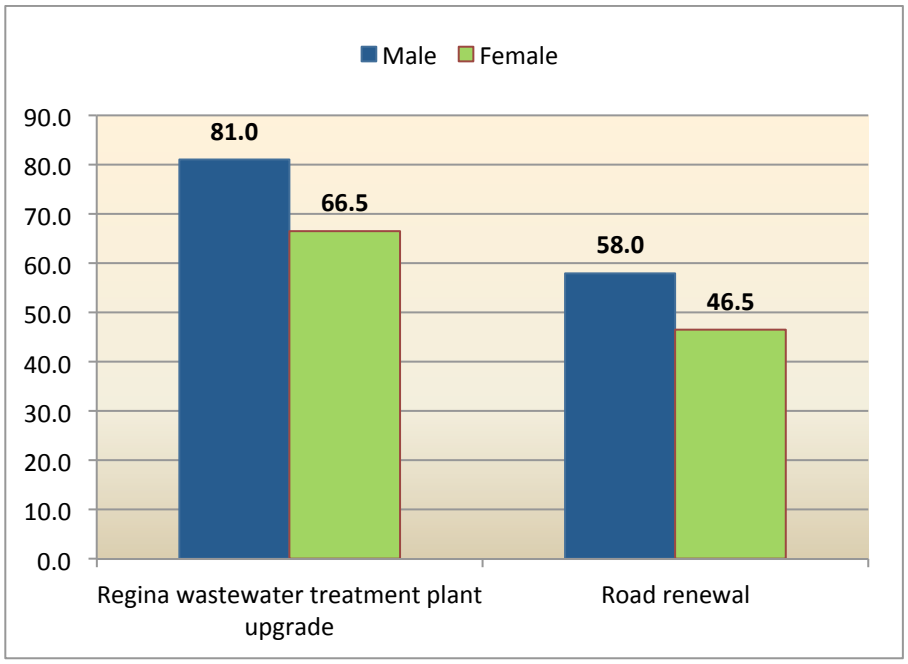
Age



Residence Location

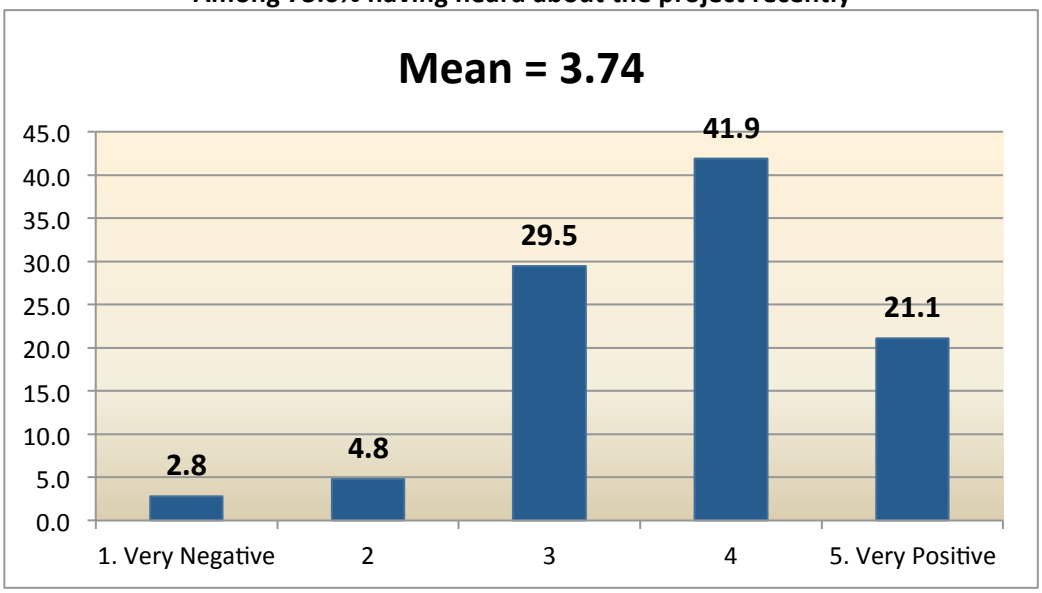


Gender


Male
Female
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
81.0
66.5
58.0
46.5
Regina wastewater treatment plant upgrade
Road renewal

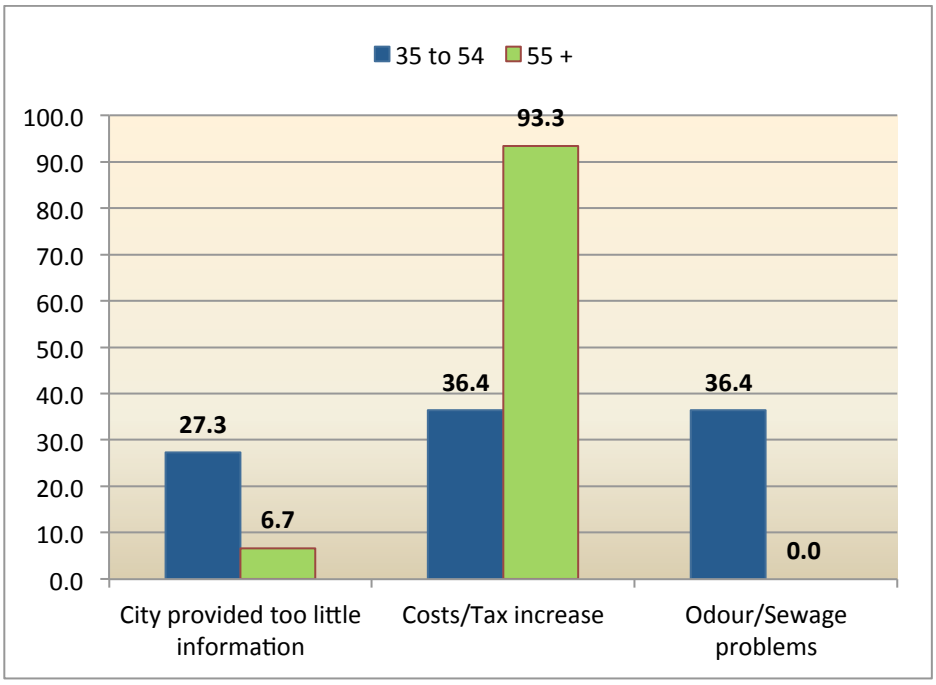
A2. Was your first reaction to the information you got about the wastewater treatment plant project more negative or more positive? Pick a number on the 1-5 scale, from 1 for Very Negative, up to 5 for Very Positive.

Among 73.6% having heard about the project recently



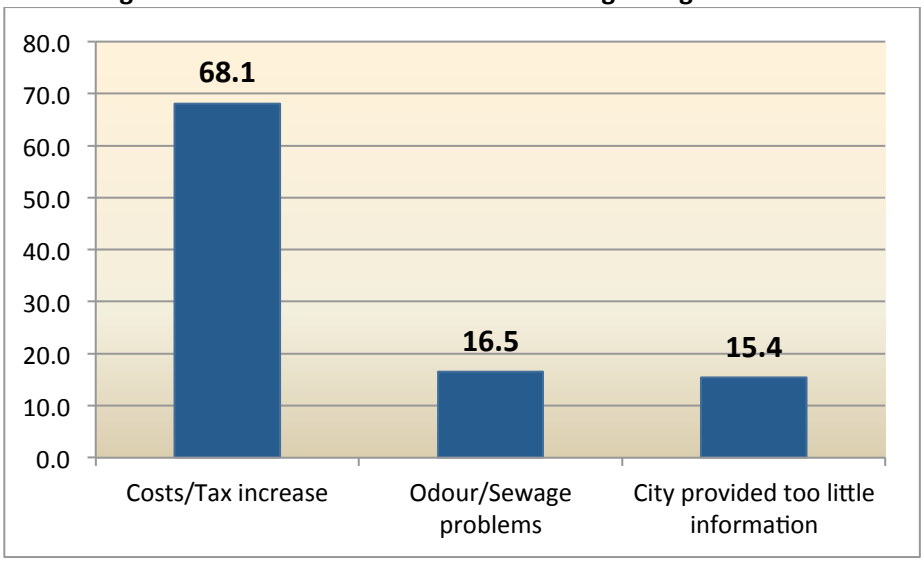
Statistically Significant

Age



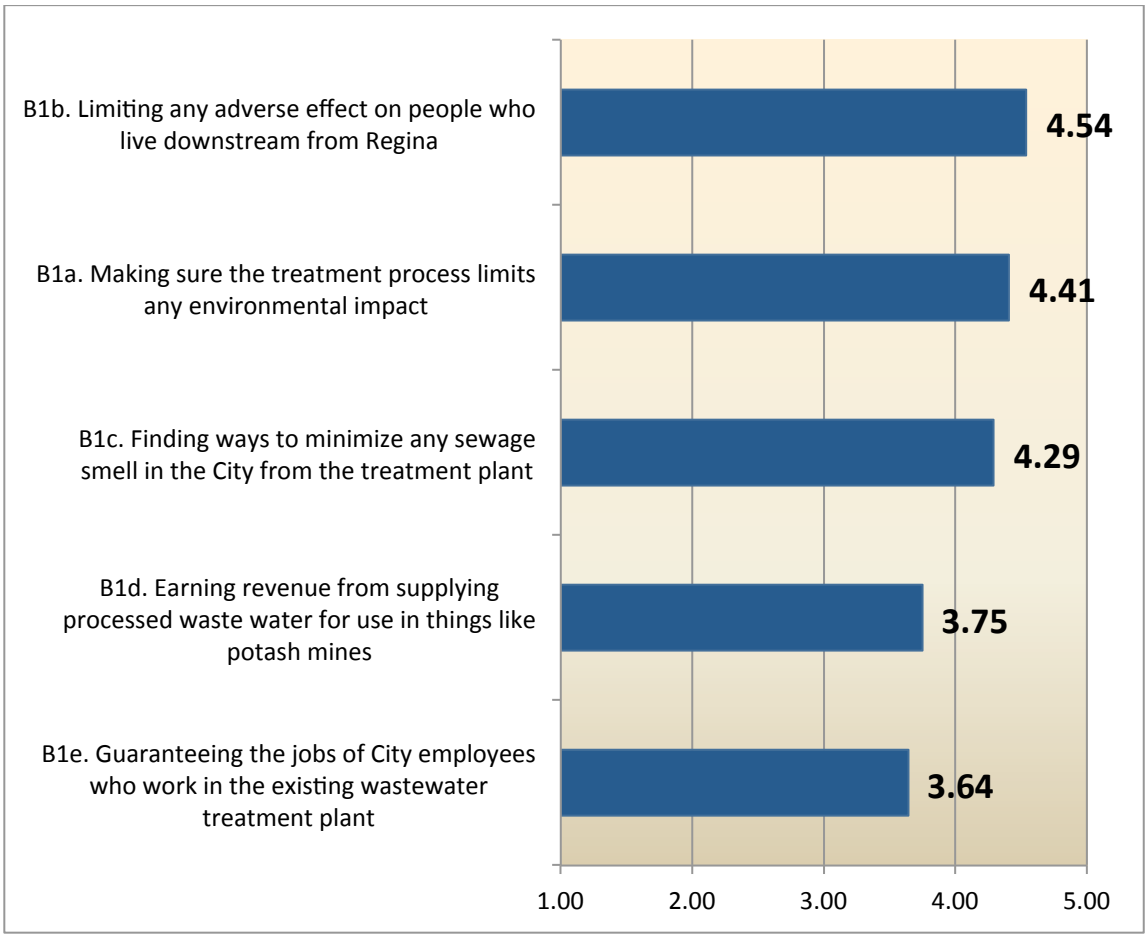
A2a. What is the main reason you felt negative about the information?

Among those with negative attitudes towards information regarding wastewater treatment project

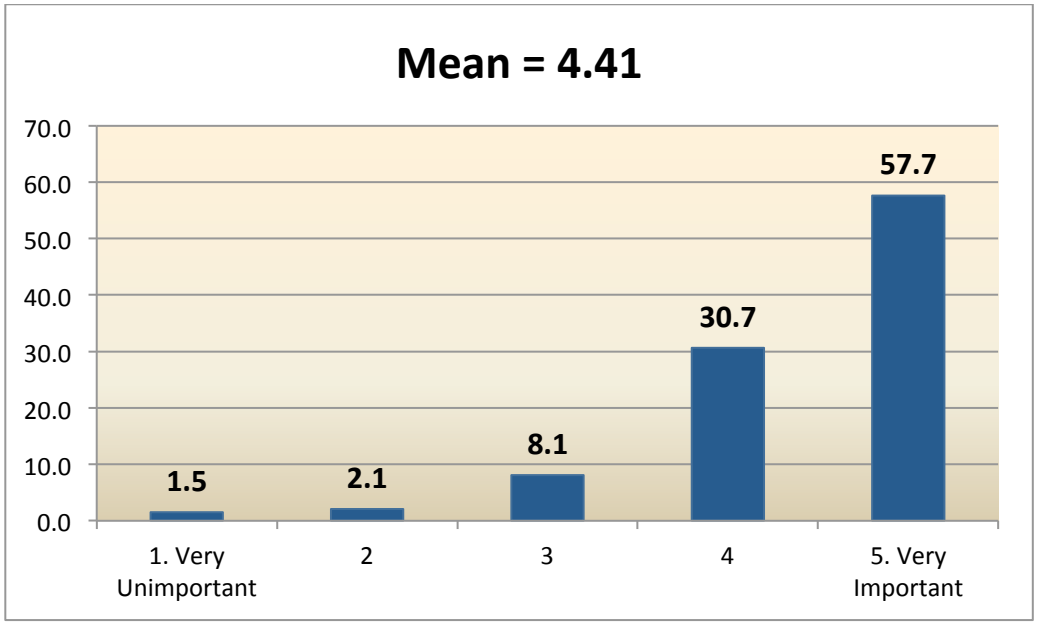


SECTION B: PERCEPTIONS & ATTITUDES

B1. Please tell me how strongly you feel about the following issues involving waste water? Pick a number on the 1-5 scale, from 1 for Very Unimportant, up to 5 for Very Important.

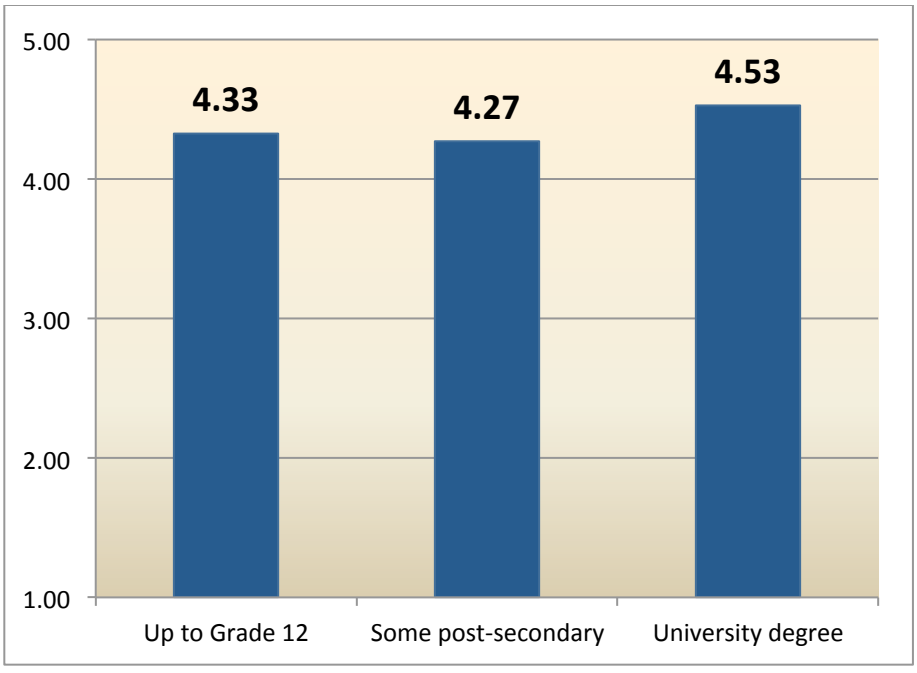


B1a. Making sure the treatment process limits any environmental impact

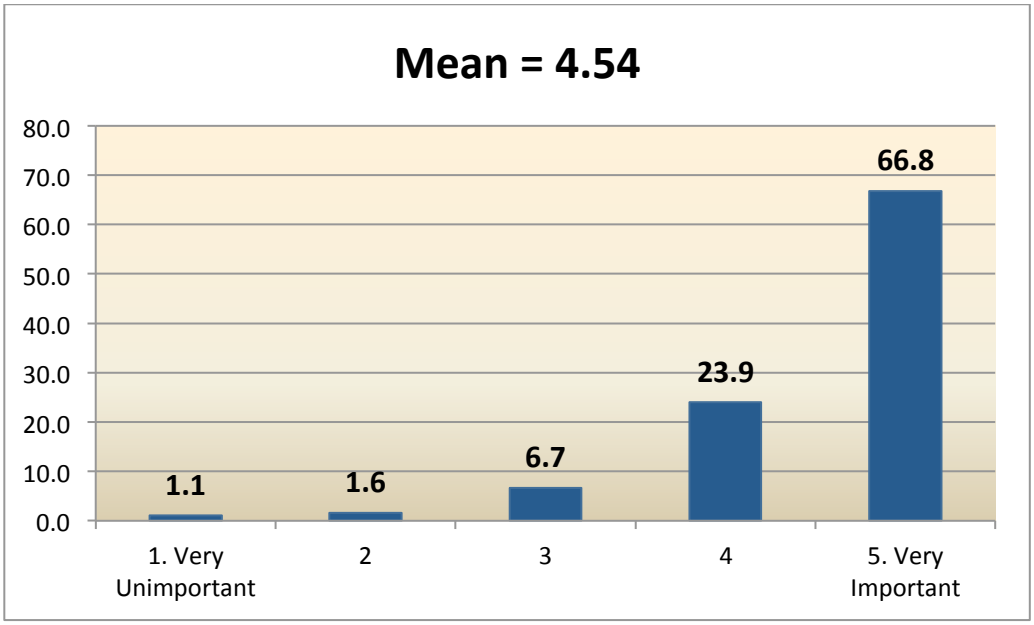


Statistically Significant

Education Level

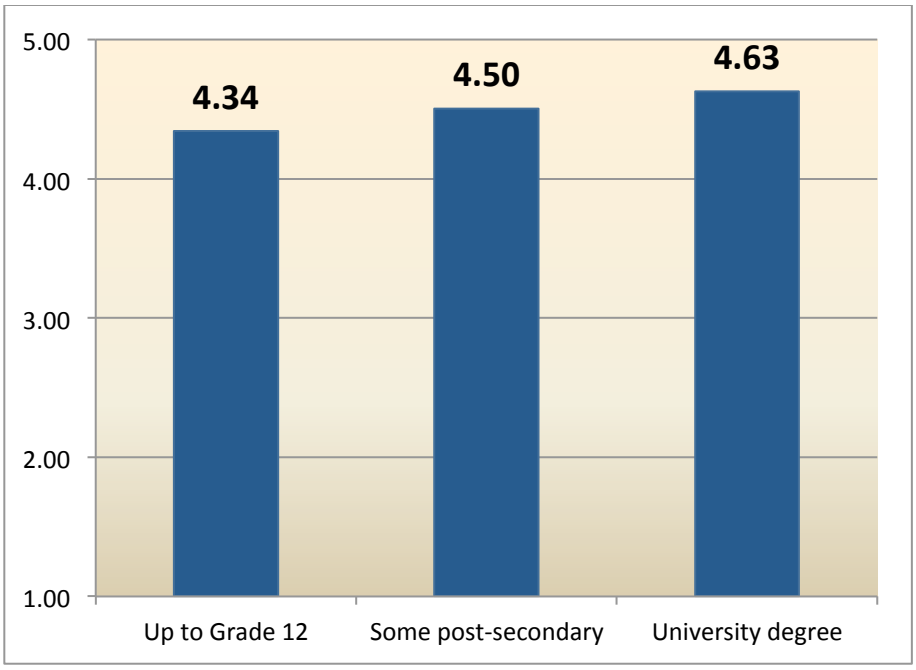


B1b. Limiting any adverse effect on people who live downstream from Regina

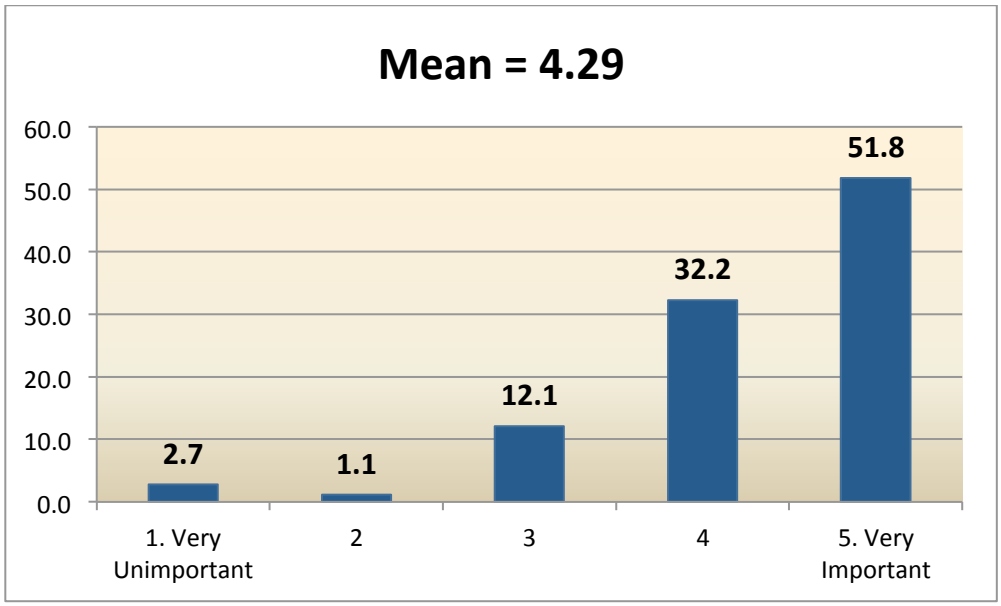


Statistically Significant

Education Level

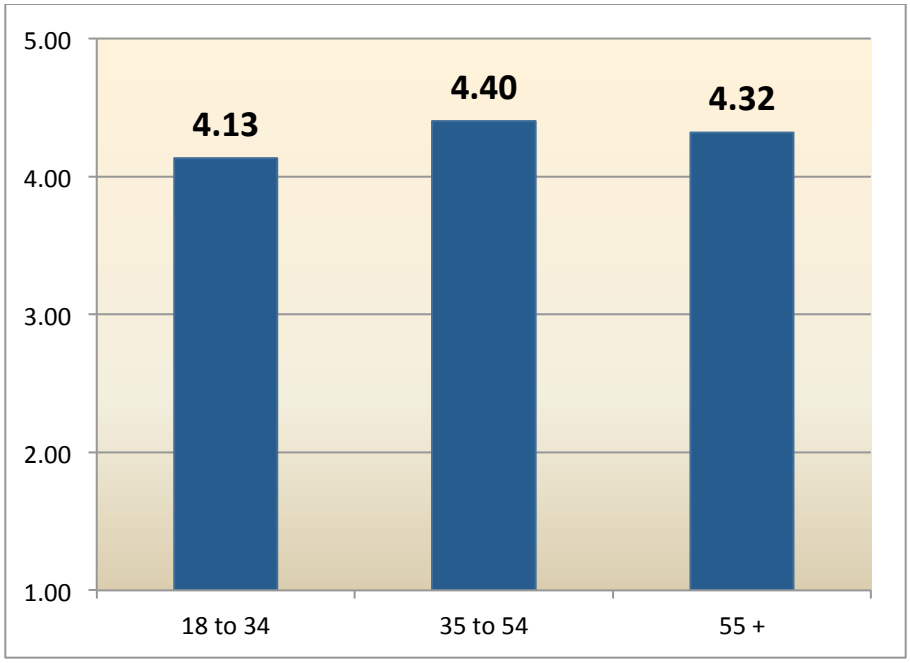


B1c. Finding ways to minimize any sewage smell in the City from the treatment plant

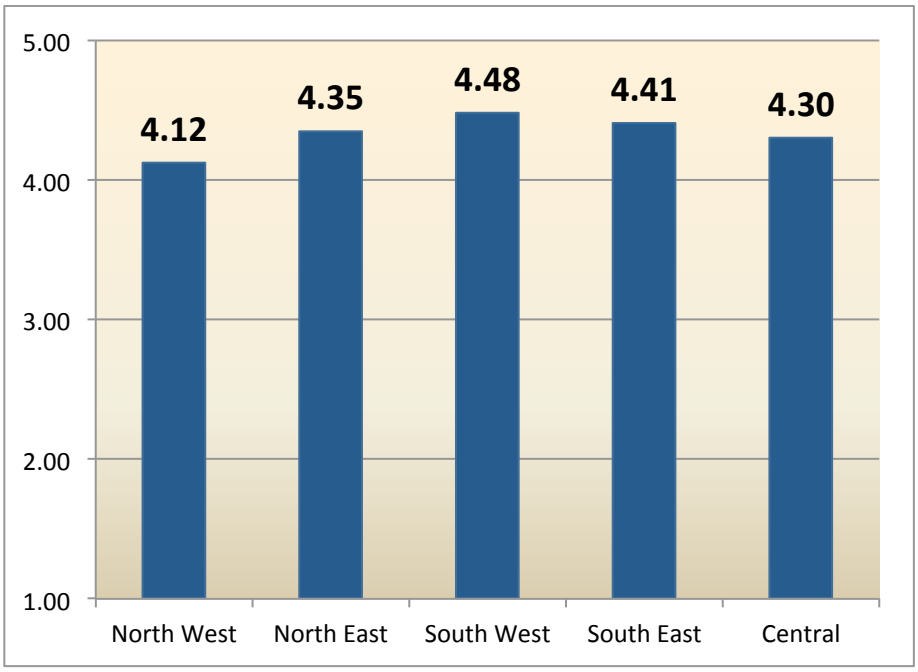


Statistically Significant

Age



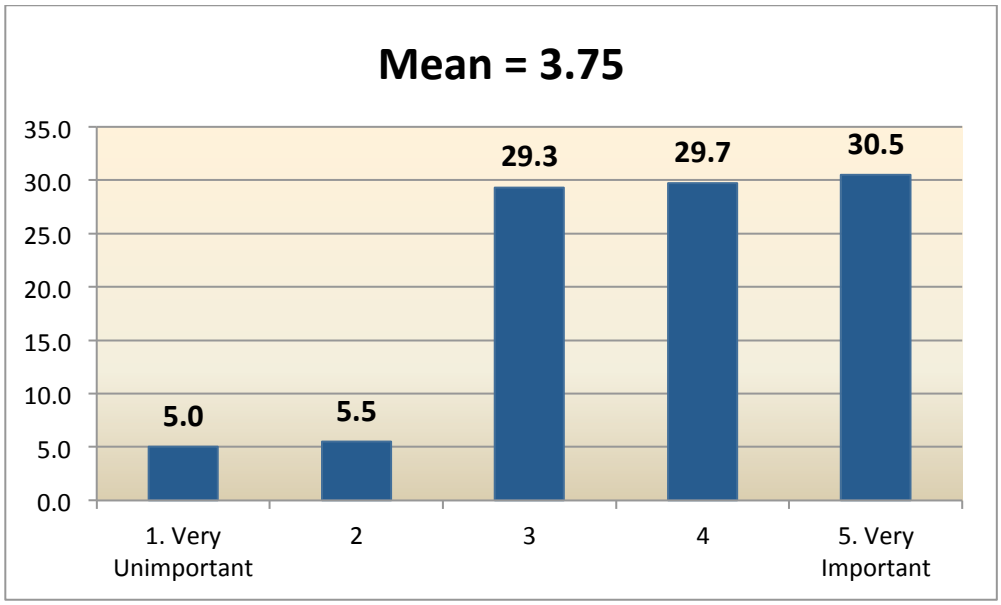
Residence Location



Gender

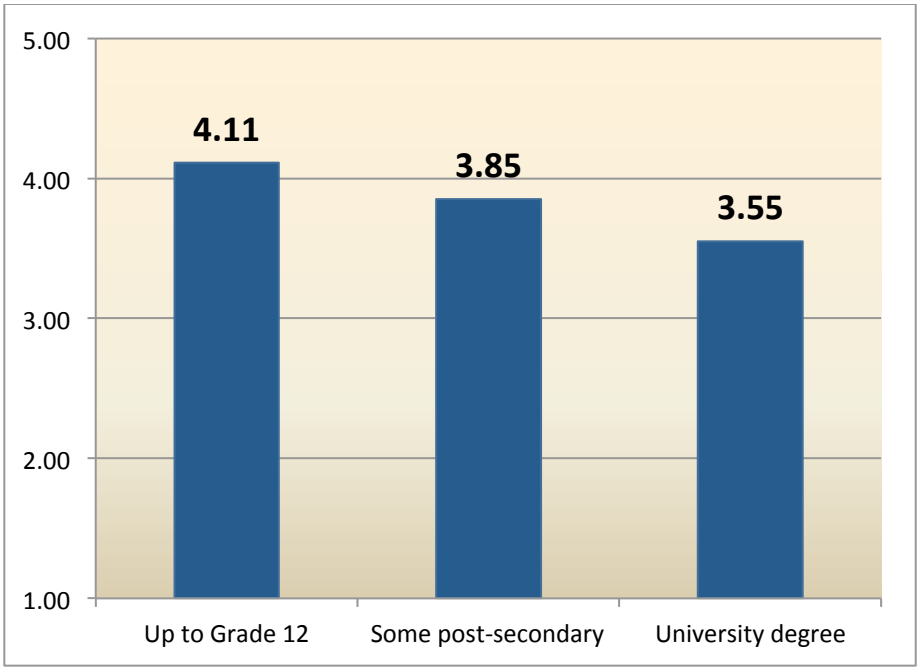
Females (4.37) give a higher importance rating than males (4.21).

B1d. Earning revenue from supplying processed waste water for use in things like potash mines

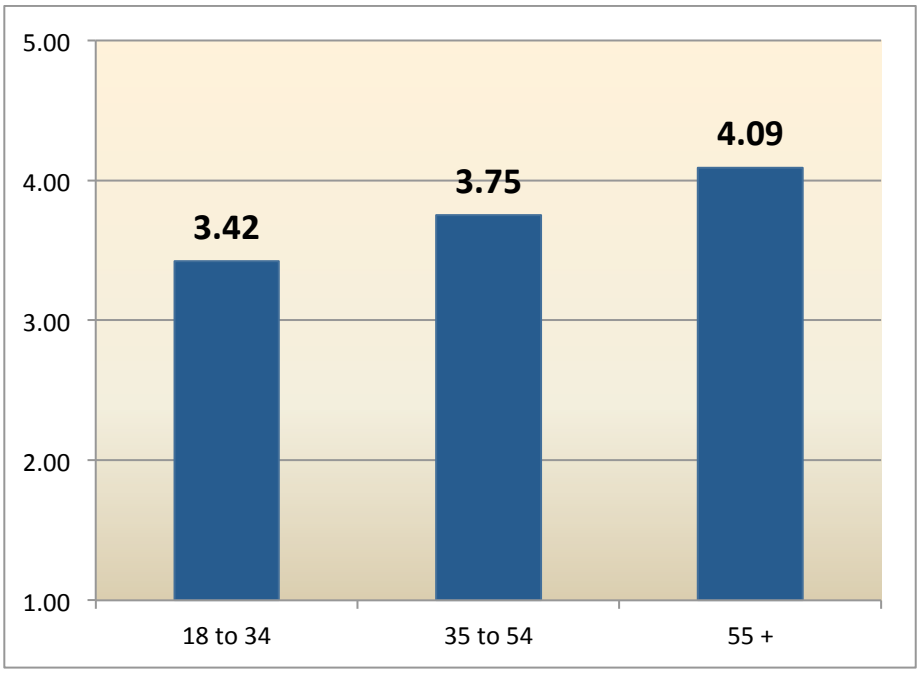


Statistically Significant

Education Level



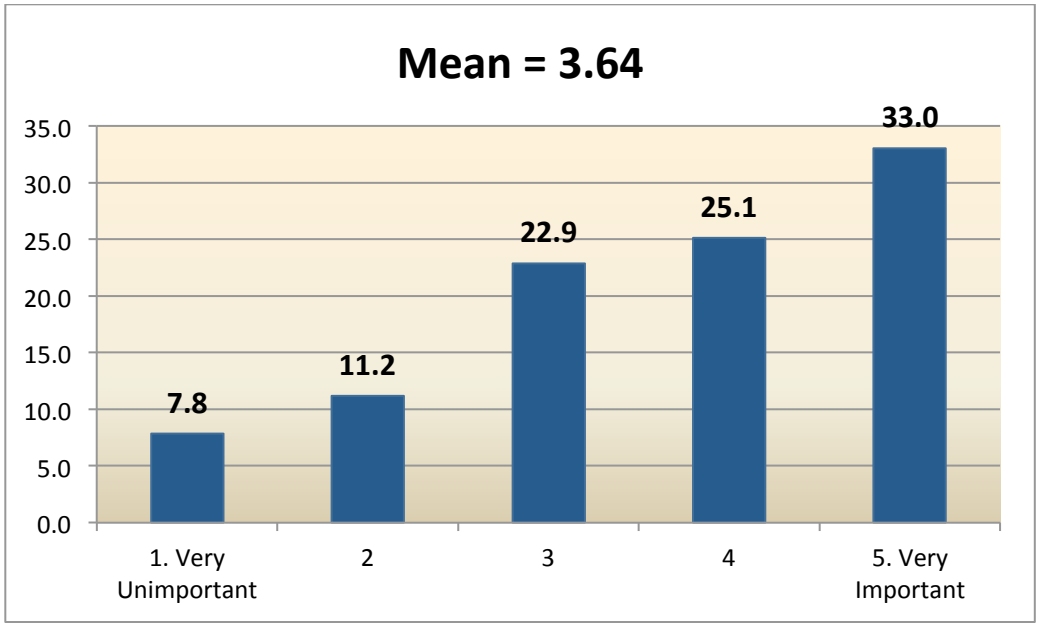
Age



Gender

Males (3.99) give a higher importance rating than females (3.53).

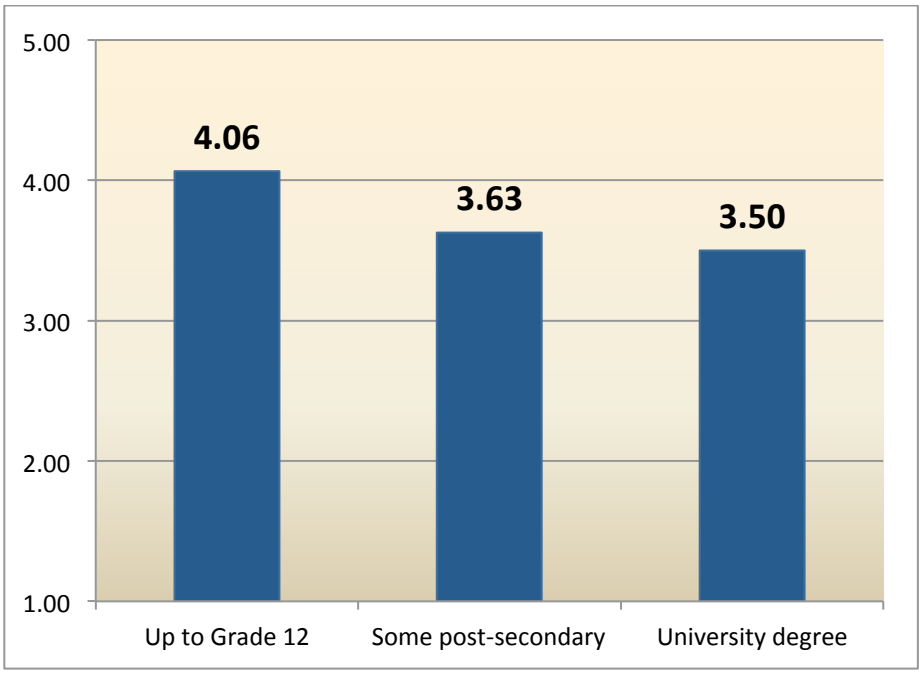
B1e. Guaranteeing the jobs of City employees who work in the existing wastewater treatment plant



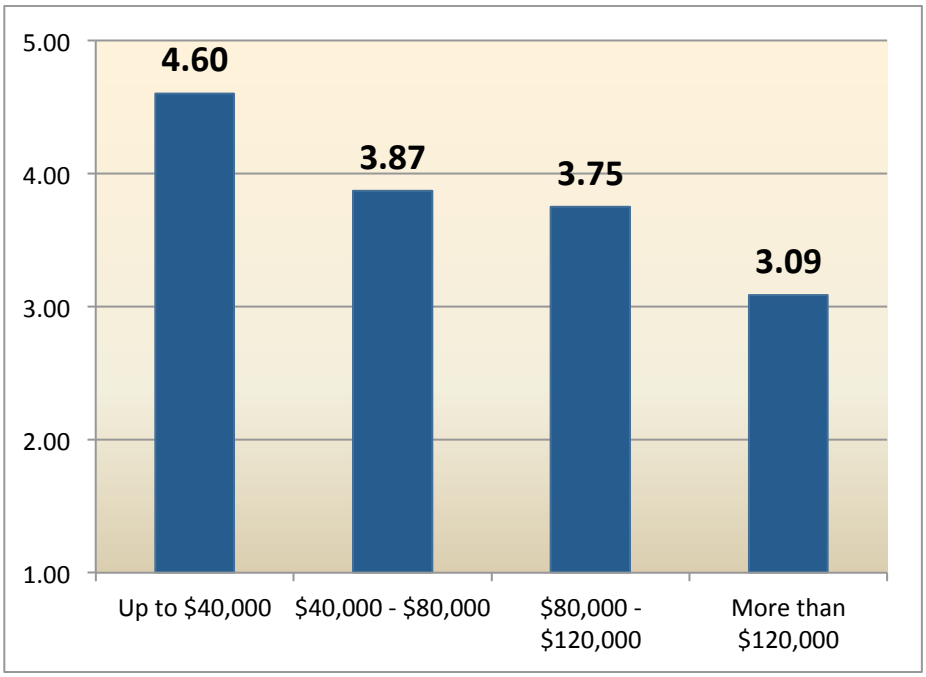
Statistically Significant

Home Ownership
Those who rent (4.44) give a higher importance rating than those who own their homes (3.52).

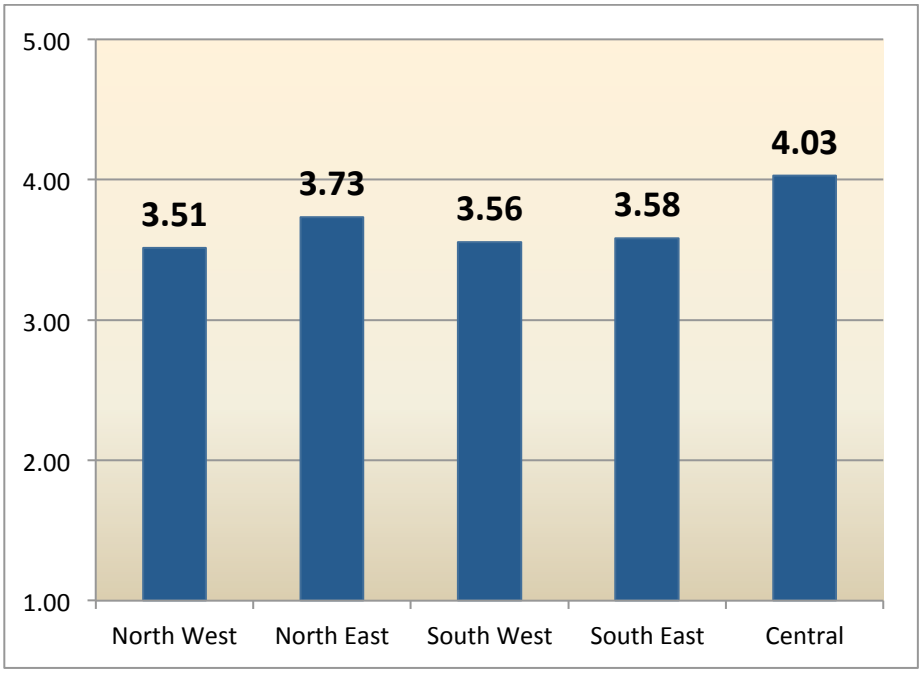
Education Level



Income Level



Residence Location

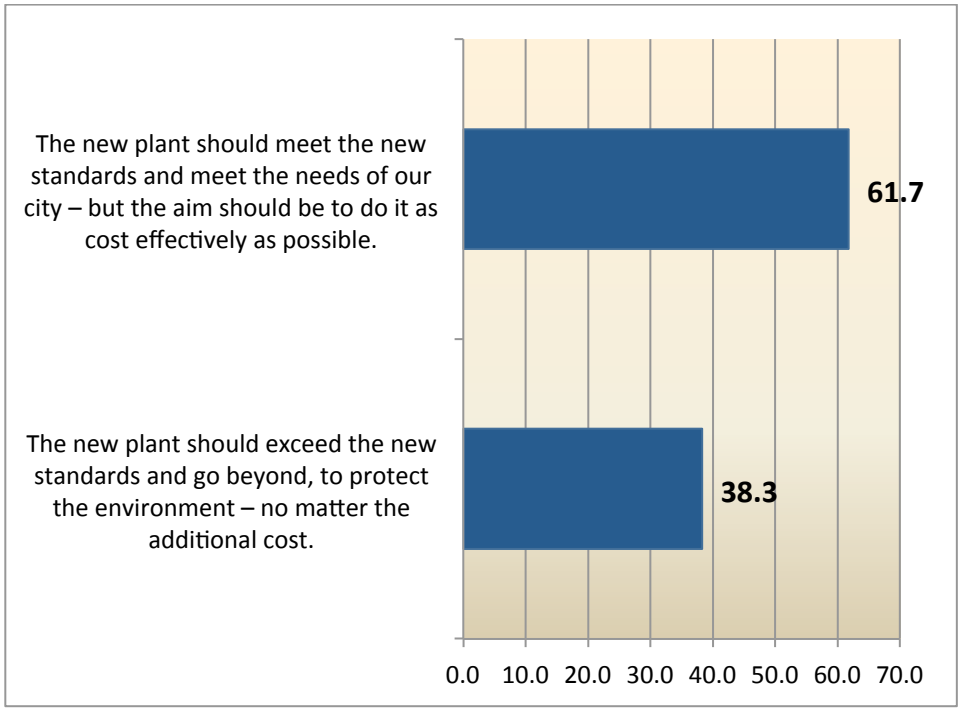


Gender

Females (3.88) give a higher importance rating than males (3.38).

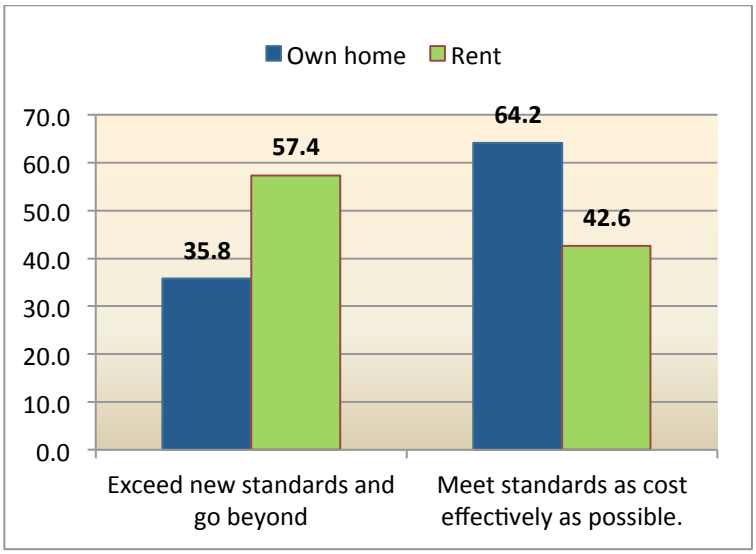
The federal and provincial governments have changed the standards for wastewater treatment. Regina's existing plant is old and won't have enough capacity to meet our future needs. For these reasons, the City of Regina must replace the present plant.

B2. So, thinking about the new plant we need to build, which of these two statements comes closest to how you feel about the project:

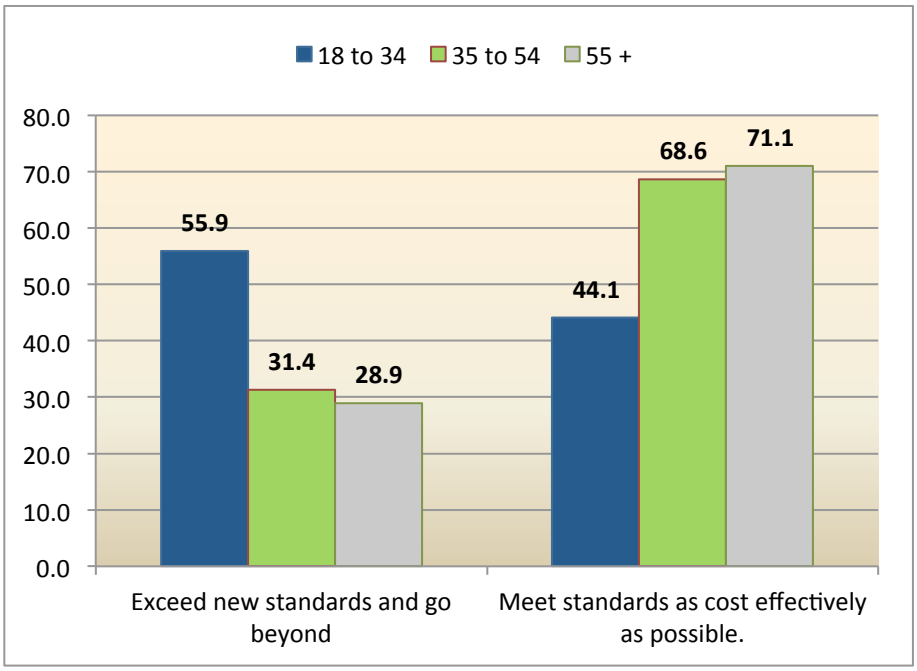


Statistically Significant

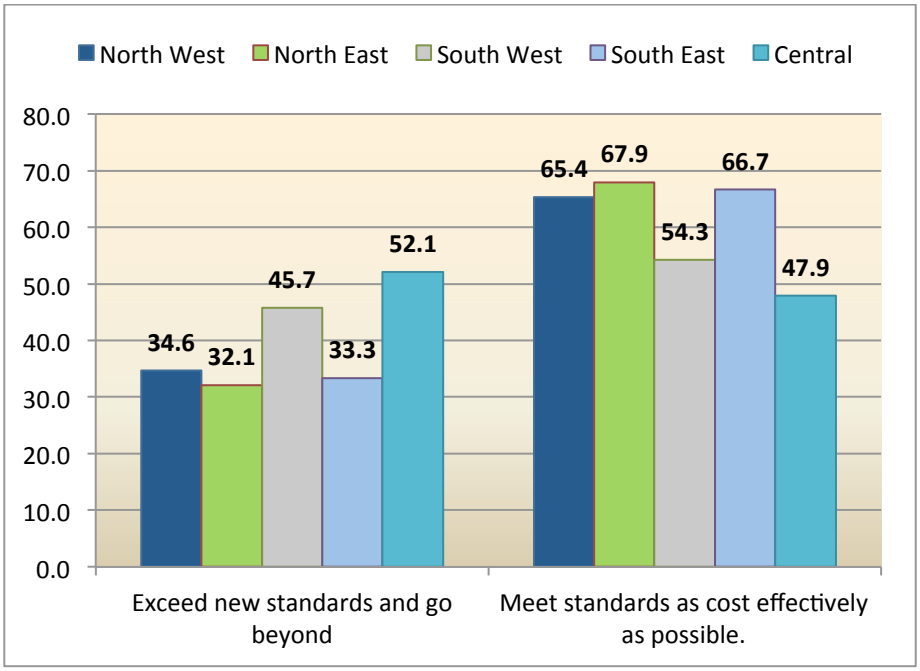
Home Ownership



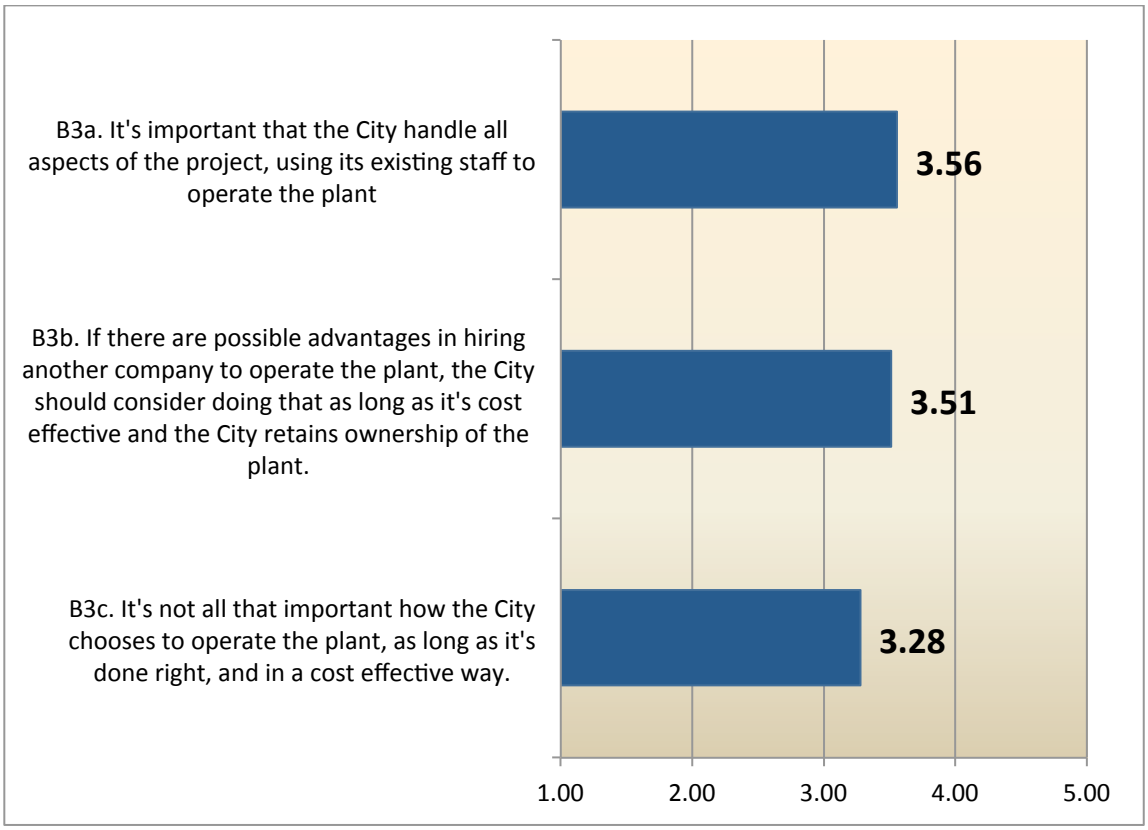
Age



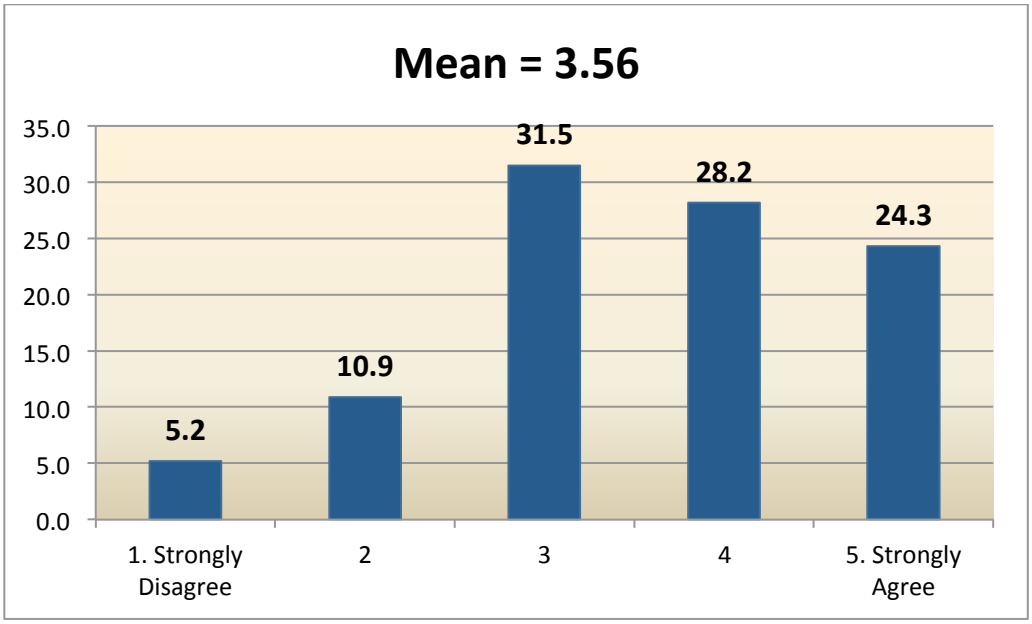
Residence Location



B3. Please tell me how strongly you agree or disagree with the following statements about how the City operates the new treatment plant. Pick a number on the 1 to 5 scale, from 1 for Strongly Disagree, up to 5 for Strongly Agree.



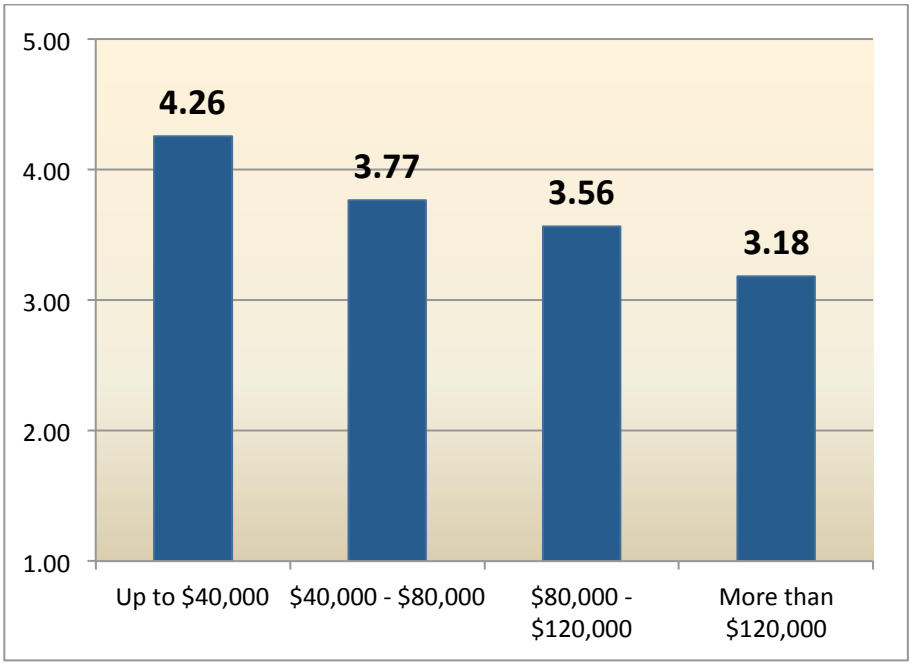
B3a. It's important that the City handle all aspects of the project, using its existing staff to operate the plant



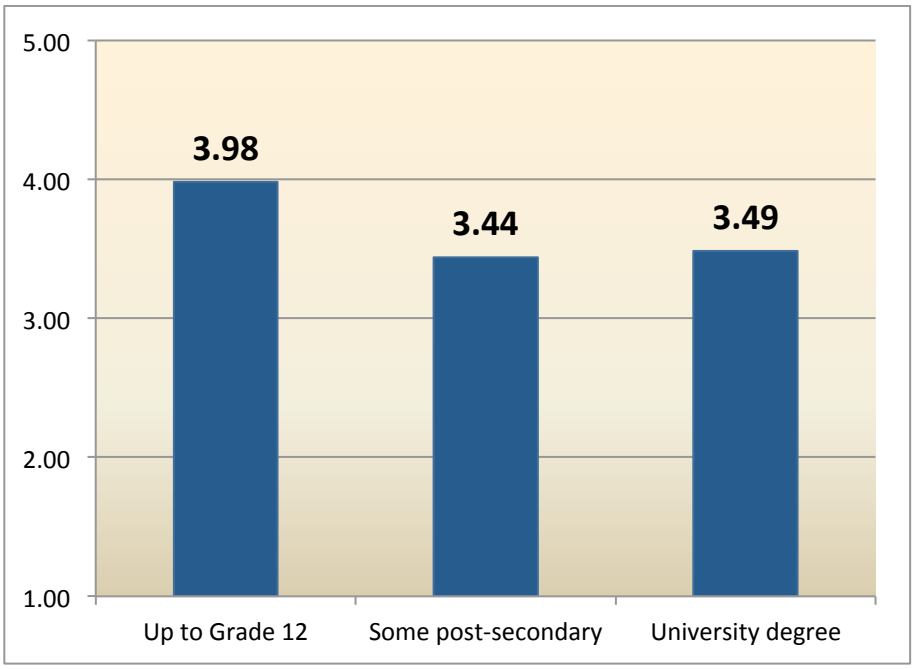
Statistically Significant

Home Ownership
Those who rent (4.22) are more likely to agree than those who own their homes (3.46).

Income Level



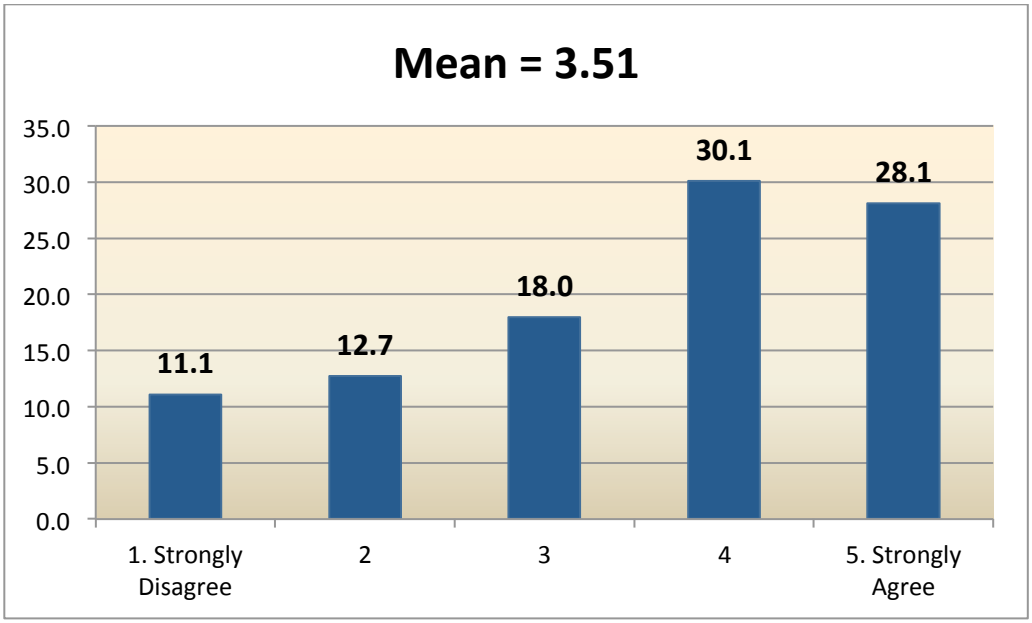
Education Level



Gender

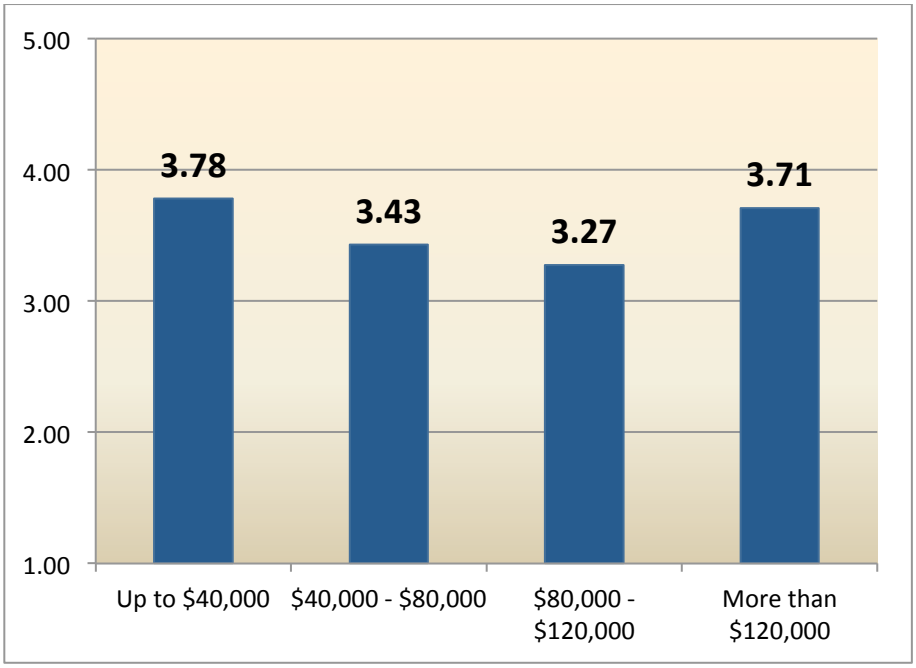
Females (3.75) are more likely to agree than males (3.34).

B3b. If there are possible advantages in hiring another company to operate the plant, the City should consider doing that as long as it's cost effective and the City retains ownership of the plant.

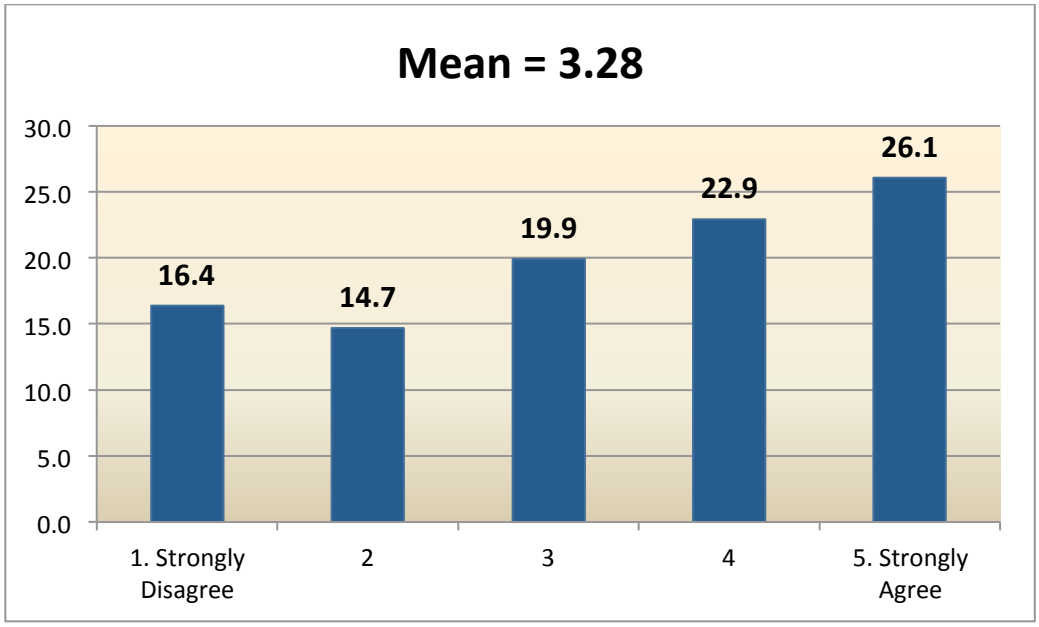


Statistically Significant

Income Level

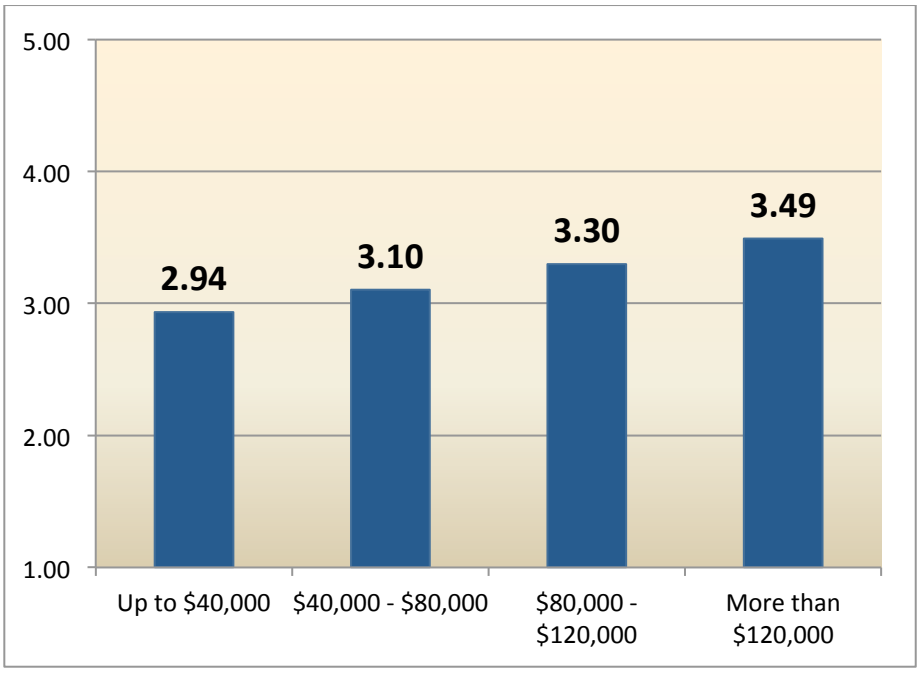


B3c. It's not all that important how the City chooses to operate the plant, as long as it's done right, and in a cost effective way.

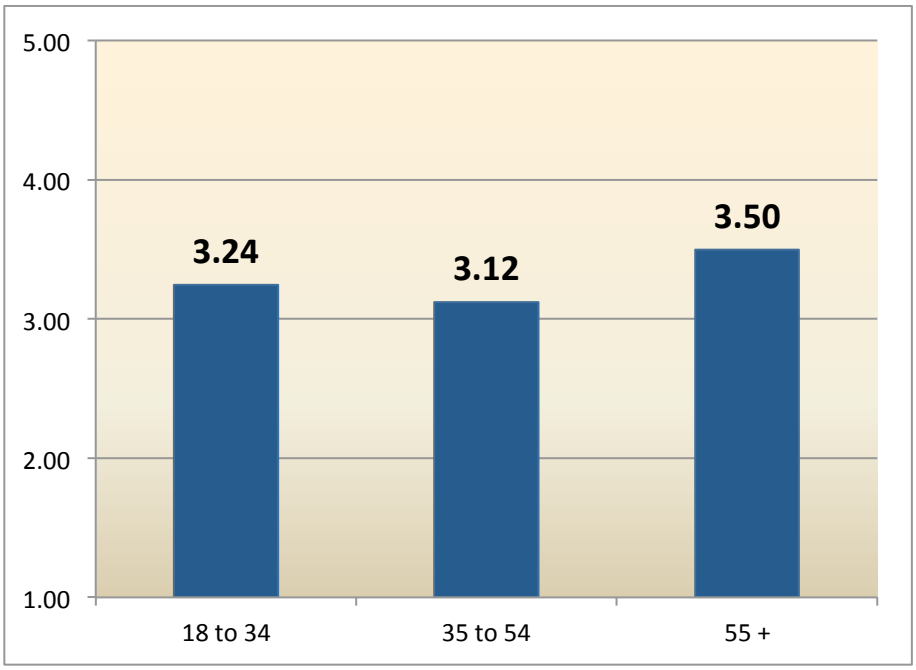


Statistically Significant

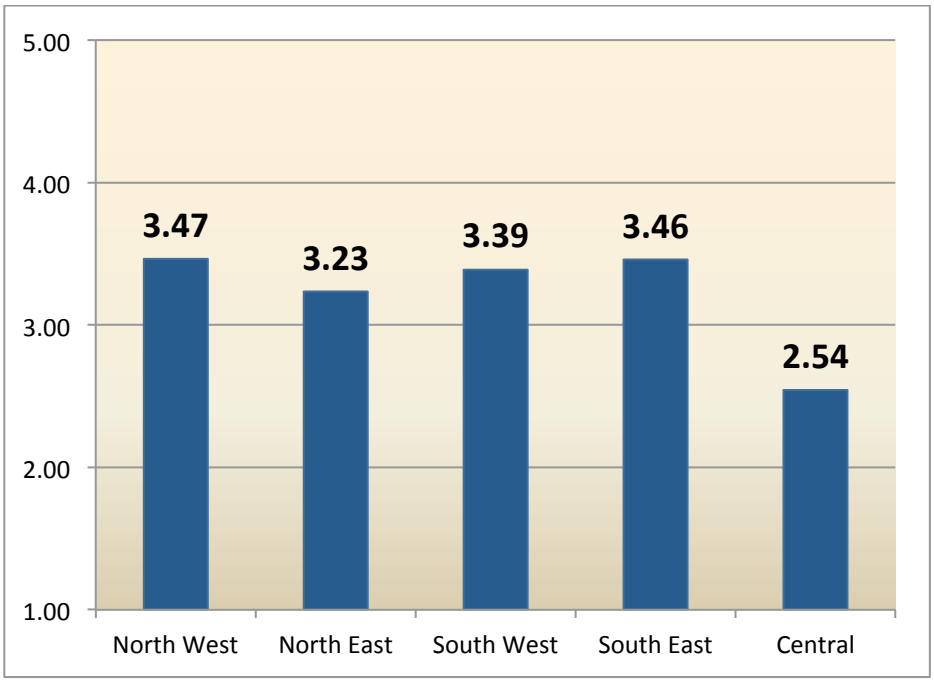
Income Level



Age



Residence Location



Appendix 3 – Phase two deployment

Summary

The following reflects some of the draft material associated with the Communication Strategy tactics recommended as part of Phase two - Due Diligence Assertion and includes:

1. P3 Canada Guide – consultant commentary
2. DRAFT print advertisement
3. DRAFT online ad
4. DRAFT web site copy

DRAFT Speaking notes and Q&A's (provided as separate attachment)

Appendix 3.1 – Phase two deployment
P3 Canada Guide – Consultant commentary

Asking the right questions:
A guide to municipalities considering P3s

DOCUMENT'S QUESTION AND RESPONSE	COMMENTS
INTRODUCTION	
1. How big is the infrastructure deficit?	
A 2007 study conducted for the Federation of Canadian Municipalities estimated the backlog in maintaining and upgrading existing infrastructure to be $123 billion, broken down as follows: • $31 billion water and wastewater; • $21.7 billion transportation infrastructure (sidewalks, roads, bridges); • $22.8 billion transit systems; • $40.2 billion cultural, social, community and recreational infrastructure; and • $7.7 billion waste management The growing need for investment in existing municipal infrastructure – and development of new infrastructure – coincides with an historic decline in federal infrastructure funding. The consensus is that the infrastructure deficit continues to grow. The issue is how best to finance, build, operate and maintain municipal infrastructure.	*There have been many attempts to measure the "infrastructure deficit". A more recent effort is the 2012 FCM Canadian Infrastructure Report Card: Volume 1: 2012 Municipal Roads and Water Systems. There is little doubt that the need for infrastructure investment and reinvestment is Canada is very significant.* *P3s contractually embed proper asset management into projects and require that maintenance not be deferred. So P3s can play a small part in eliminating the infrastructure deficit over time.* *P3s also embed consideration of the long duration "life-cycle" costs of infrastructure projects (i.e. not just initial construction costs, but operation, maintenance, rehabilitation, and risk costs) into municipal decision-making. The shift from short term to long term thinking will help optimize infrastructure investment and reduce the infrastructure deficit, in time.*
2. What role do municipalities play in building and maintaining in infrastructure?	
Municipalities generally finance, own, operate and maintain infrastructure assets. When building new infrastructure, municipalities either use in-house expertise or hire outside consultants to design the facility. The project is then put out to competitive tender to be built by the private sector to the fixed design specifications. The municipality (or a firm hired by the municipality) monitors the private contractor's construction progress. On completion, the asset is handed over to the municipality. Infrastructure construction is financed either out of accumulated municipal reserve funds established for that purpose, out of operating revenue or, more usually, by issuing long-term debt.	*This is generally true. However, on a project-specific basis, municipalities have looked at alternative procurement methods that involve assigning greater responsibility and risk to the private sector. The reasons why are highly specific to each project, and can include:* • *Long term cost certainty and predictability;* • *Need for new/different resources to manage more complex/emerging technologies (such as in treatment plants)* • *Desire to protect taxpayers from project risks* *It is important to examine each project separately and asses its own unique challenges and opportunities and the municipality's resources and constraints to select an appropriate project delivery model, be it traditional, P3, or other alternative model.*

3. What role does the private sector play in infrastructure provision?	
The private sector already plays an important role in delivering municipal infrastructure. It may handle design work and construction monitoring if the municipality does not have in-house capacity. It handles all construction, as the public sector in Canada does not build infrastructure. The private sector bears prime responsibility, therefore, for projects being constructed on budget and on time. In addition, private institutions such as pension funds, insurance firms and finance companies lend money to municipalities through municipal finance authorities or through the purchase of municipal bonds at relatively low interest rates.	*Agree, however the private sector operates, maintains, and manages publically owned infrastructure in some cases.* *In most other delivery models particularly those used by local government, the ultimate responsibility for schedule and budget remains with the owner.*
4. What are P3s?	
P3s are multi-year, often multi-decade, contracts in which a corporation or Consortium of corporations assumes responsibility for activities previously undertaken by the public sector. These responsibilities include direct financing of infrastructure, as well as management, operation, maintenance and/or owner- ship of facilities. P3 models have varying degrees of private involvement (see Appendix One for an overview of the most common P3 models). At one level, the private sector may operate or maintain public sector infrastructure, delivering services within the municipality's prior budget and retaining a portion of any savings. At the other extreme, the private company may design, build, finance, own, operate and maintain the facility. In between, the private partner undertakes some combination of these tasks. In some cases, assets are sold to the private sector and then leased back over the life of the contract. In P3s involving private financing, the private company contributes a certain proportion of equity – usually about 10 per cent – and the rest is loaned by **banks and other financial institutions, which are often part of the consortium**. The municipality makes regular payments to the private company to cover financing, operating and maintenance costs, as well as private sector profits. Contracts range in length from 20 to 40 years (Ontario's Highway 407 is an extreme 99 year contract), though service contracts can be shorter. The attraction for the corporation or consortium is that private delivery of municipal infrastructure and services can be extremely profitable. The return on private equity can be as high as 15 to 20 per cent, and in some cases higher. Long-term high rates of return at a low risk guaranteed by the public sector are very attractive for private sector investors in the current economic climate.	*There is a contemporary approach to P3s, as has been adopted by British Columbia, Ontario, Alberta and several other provinces over the past 10 years which have established common practices for P3 projects – "Canadian P3". P3 is not a broad term that encompasses all types of contracts between government and the private sector – it is a fairly specific form of procurement with common approaches.* *P3s often have the private sector undertaking activities that were previously undertaken by the public sector. But more often, P3s are for new projects that do not have an incumbent party undertaking any of the activities.* *Agree that the private sector may provide a service for less than the municipality's prior budget. However, Canadian P3s are typically fixed price and are always awarded under competition, meaning that any savings compared to prior year's budget are more than likely to be significantly retained by the municipality.* *In Canadian P3, the infrastructure is virtually without exception always publically owned. And, the sale of assets is simply not at all common in Canadian P3 – in fact, asset sales and structures with private ownership are not considered P3s, but forms of privatization.* *The return on long term private equity cited of 15% to 20% is higher than market norms, however the salient point is that the "risk-reward" rule applies: private equity capital is at risk throughout the term of a P3 and it is only guaranteed if the private sector fulfills all of its contractual performance obligations.* *It is also important to note that amount of equity invested in a P3 is typically only about 10% of the total amount of private financing, the remaining 90% is at considerably lower rates of return (the most recently closed P3 in Canada on September 12 2012 and had a 30-*

	year debt rate of 4.246%). The City's 30-year cost of borrowing as of October is approximately 3.8%) *Both the equity and debt returns are subject to competitive pressures during the procurement process. The greater the competition, the lower the returns. This is why it is crucial to ensure that the procurement process is fully competitive.* *The Value for Money assessment takes the additional cost of private financing of a P3 into account.*
5. Are P3s a form of privatization?	
Infrastructure built as a P3 may also be owned by the private sector. This is the case in build-own-operate-transfer (BOOT) P3s, such as Winnipeg's Charleswood Bridge. However in most P3s, the public sector retains ownership, and takes over responsibility for operations at the end of the contract. The most common form of P3 in Canada is the design-build-finance-operate model (DBFO). While owner- ship is public, there is an unprecedented degree of private involvement in and control of public services and assets. It is for these reasons that some view P3s as a form of 'privatization by stealth.' Often, the corporation or consortium in a P3 will seek to expand its influence to other aspects of municipal infrastructure or services. For example, Vivendi subsidiary US Filter, the corporation operating Moncton, New Brunswick's P3 water treatment plant, made an unsolicited bid to handle the city's water distribution system. The city rejected the bid based on independent analysis — commissioned in response to great public outcry — which recommended the city finance and manage the system upgrades itself.	*"Privatization" usually implies that asset ownership is transferred from the public sector to the private sector, which Canadian P3s do not do. BOOT models are not a part of contemporary Canadian P3.* *Municipalities receive unsolicited proposals frequently. The example cited demonstrates municipal discipline in evaluating such proposals.* *It is a fundamental tenet of contemporary Canadian P3 that the selection of contractor must be done under competitive pressure.*
6. Who is promoting P3s?	
The main promoter is the Canadian Council for Public-Private Partnerships (CCPPP). The members of this pro-P3 lobby group come from the various segments of the private sector that benefit from P3s, and from governments using them. The federal crown corporation PPP Canada assesses, promotes and funds P3s, and is specifically targeting municipalities. Some provinces, including British Columbia, Ontario, Alberta and Quebec, have agencies or dedicated resources in provincial ministries to promote P3s. P3s are most aggressively promoted by large multinational P3 corporations, financial investors, and the legal and accounting firms that profit most from them. Others, such as the construction industry, architects and engineers, have voiced concern and opposition to P3s for reasons discussed below.	*It is correctly noted that CCPPP membership includes not just private sector companies, but provincial, federal, and municipal governments.* *Saskatchewan recently create SaskBuilds and transfered $150 million into a new SaskBuilds Fund to drive innovation in infrastructure financing, design and delivery, including public-private partnerships.* *Many construction and design firms participate in both P3 and conventional procurements.*

7. How are P3s being promoted?	
P3s have been promoted for various reasons over the years. They became popular two decades ago because public sector accounting practices allowed governments to undertake infrastructure investments without the capital cost appearing on their books. But auditors have since tightened up their accounting rules. More recently, a variety of claims have been made to promote P3s. Proponents claim P3s help municipalities access private funding that would not otherwise be available, closing the infrastructure gap and allowing Municipalities to spend scarce resources on other activities. Proponents also claim P3s build infrastructure more cheaply and on time, bring more efficient operation of infrastructure and provision of services, improve maintenance, and bring innovation and improved design – all motivated by the private sector pursuing profit in a competitive and budget-constrained environment. All these claims are highly debatable, as this guide will show.	*"Off balance sheet" treatment is not a motivation for Canadian P3s. The examples cited are correctly identified as old.* *P3s are not a source of funding, the only source of funding is the taxpayer/ratepayer (and sometimes senior government, which of course is also funded by taxpayers).* *The on-time construction record of Canadian P3s is very strong (and there are cases where construction is completed months early). Improved maintenance is nearly a certainty with P3s since funding for maintenance must contractually be paid by the municipality and the private sector is heavily penalized for poor maintenance – but this is due to the municipalities' upfront decision to fund the maintenance.*
8. How common are P3s in Canada?	
Between 1985 and 2011, 200 P3s were planned or implemented in Canada (137 finalized), costing US$71.6 billion.2 This amounted to only a very small percentage of public investment during that period.3 While the pace of P3s has picked up in the last 10 years, the vast majority of new infrastructure, between 80 and 90 per cent of all projects, was still provided in the conventional manner by the public sector.4 However, there is a push to expand the use of P3s in several sectors, including municipal infrastructure and services.	*Considering the total number of infrastructure projects in Canada, P3s are not common and only used in certain circumstances.* *The most common assets procured with P3 models in recent years are hospitals, schools and highway projects, and most are for provincially-owned infrastructure.*
FINANCE, COSTS AND REVENUES	
9. Do P3s increase the availability of capital finance for municipalities?	
The short answer is no. All private-sector financing for P3s must be repaid. P3 leases or operating payments are effectively debt payments, so municipalities are simply switching one form of debt for another. Larry Blain, now chair of Partner- ships BC, the provincial P3 agency, told the publication Bond Buyer, "'Clearly all the money is coming from the government'... 'It's debt of the province, whether you borrow it as bonds or contract over a 35-year period.'"5 As Pierre Hamel wrote in a 2007 report commissioned by the Federation of Canadian Municipalities, "P3s are not a cure-all or miracle treatment for all situations. They do not offer municipalities a magic solution to the real problem of financing infrastructure, the primary and often only real challenge facing local governments PPP Canada does contribute up to 25 per cent of capital costs for some eligible, usually large, projects. But the $1.2 billion P3 Canada Fund comes from federal money that could be available for infrastructure spending without the necessity of P3s.	*P3s are not a source of funding, the only source of funding is the taxpayer/ratepayer (and sometimes senior government, which of course is also funded by taxpayers).*

10. Do P3s raise money more cheaply than municipalities?	
Private P3 financing almost always has a higher interest rate and is usually paid back over a longer term than direct municipal borrowing. Moncton's water treatment plant has lease terms that are the equivalent of a 10 per cent yearly interest rate, while Moncton could have borrowed directly at 5.85 per cent. Privately financing the plant's $23 million capital cost means Moncton is paying an extra $14.4 million in debt costs over the 20-year contract (or $8.4 million in 1999 terms, when the deal was struck) – money that could have been saved if the city had financed the plant itself at a much lower interest rate.	*The private financing on P3 project will have a higher financing cost than debt financing issued by a City. However, there are long-term warranty and performance benefits associated with the P3 contractor having its capital at risk for the duration of the project term.* *The cost:benefit relationship is analyzed in the "Value for Money" (VfM) analysis. The cost of financing is only one of the cost components to be considered on a major infrastructure project – the value for money assessment attempts to include all costs so that traditional and P3 models can be compared on an apples-to-apples basis.* *In Canada the P3 model often includes a combination of public and private financing, which ensures that any private financing premium is minimized to the extent possible while also ensuring that the contractor has sufficient capital at risk to provide a substantive long term warranty on the assets and services being provided. A rule of thumb under current market conditions is that 50:50 split of public and private finance can achieve this balance, although this must be assessed on a project-specific basis.*
11. Do P3s increase or reduce long-term financial flexibility?	
P3s significantly reduce the long-term financial flexibility of municipalities, for several reasons they tie up municipal funding for more years, on average, than publicly- financed projects; • they cost more financially; • they guarantee maintenance funding for specific projects only; • they commit infrastructure to specific tasks for long periods, even though demand may change; and • they prevent municipalities from refinancing debt, because the debt is held by the private sector. In the case of the Charleswood Bridge, the City of Winnipeg is still paying 11.05 per cent in yearly interest to the private sector, while its own costs of borrowing have fallen to well under six per cent	*The decision to tie up funding for a longer period in a P3 is made by the municipality, and is required to achieve the long term warranty benefits of private financing. It is more equitable to taxpayers to spread debt over a longer period for long-lived assets. Shorter P3 terms could be used if a municipality so desired.* *The rate of return on contractor-provided P3 financing will be higher than municipal debt financing.* *A guarantee of maintenance funding on some specific assets may be better than the alternative: no guarantee of maintenance funding on all assets, which often leads to deferral of maintenance.* *Projects for which demand is unpredictable or expected to change significantly are not good P3 candidates (i.e. such projects should not generally be done as P3s).* *It is not uncommon for P3 contracts to require that if the private debt is refinanced that the municipality share in the gains. Under current conditions with historically low base interest rates and low private financing "spreads", there is not likely to be any upside from refinancing debt (i.e. rates can't get much lower).*

12. How do p3s impact a municipality's balance sheet and debt rating?	
Municipalities can be drawn to P3s by the prospect of getting infrastructure financing and debt off their books. Early P3s attempted to keep debt payments off public balance sheets and protect public sector credit ratings by replacing public infrastructure borrowing with annual lease payments that repaid private sector borrowing out of public operating budgets (so-called operating leases). The Charleswood Bridge and the Confederation Bridge between Prince Edward Island and New Brunswick were designed to be 'off-book.' However in both cases auditors later required them to be accounted for as debt because, under accounting rules, payments to the private consortia were deemed to be capital leases. Some P3s have been able to keep debt obligations off the books through various financial manoeuvres, but recent tightening up of accounting rules under the International Financial Reporting System will make it even more difficult to avoid putting the implied debt of P3s on the books of municipalities. In addition, the related movement to accrual accounting by municipalities since 2009 allows municipalities to spread the costs of capital assets over many years, in much the same way as P3 operating leases. Previously, under cash accounting, the full value of an asset had to be shown in the year of purchase. This change eradicates any accounting advantage of P3s. Regardless of how they are treated by accountants, all P3 payments properly belong on the books of municipalities. All P3 contracts, including operating leases, are a form of debt. They are a contractual agreement to pay set amounts of money at set times into the future and are treated as debt by bond rating agencies.	*Canadian P3 financing obligations are "on the books".*
13. If the P3 involves a sale/leaseback, at what cost?	
To overcome short-term budget difficulties, governments are sometimes tempted to sell buildings and other assets to the private sector and lease them back. Cash received from the sale may be used to reduce debt or finance new infrastructure. However, the rent paid to lease the buildings must include the higher interest costs of private borrowing. Adding up these lease payments in present-day dollars shows that the government is paying much more than the one-time payment it is receiving for the asset. The public sector's debt position and long- term cash flow situation have, therefore, deteriorated even if the short-run cash flow situation has improved.	*A sale-leaseback is not a P3, nor is it at all common as a component of Canadian P3.*

14. What about the transaction costs of P3s?	
The legal, technical and administrative requirements of P3s are acknowledged to be much greater than under conventional public sector procurement. P3s involve complex bidding, corporate and financial arrangements. They also require legal documentation pertaining to financing, design, build, operation and maintenance arrangements, as well as outlining the long-term project handover. Legal documents alone can run into hundreds of pages. The transaction costs of these requirements range between two and five per cent of project capital cost, compared with 0.5 to three per cent for conventional contracts. The average P3 transaction cost is more than twice as high as for conventional projects (3.5 per cent versus 1.7 per cent).8 The size of these costs has led Vining and Boardman to conclude that "the potential benefits of P3s are often outweighed by high contracting costs.	*To properly compare P3 and traditional delivery models, what is important is that all costs for both models are accounted for: the VfM assessment does this. If transaction costs outweigh the benefits of a P3 then the value for money assessment will show it.*
15. How might P3s affect public sector revenues?	
P3s can create new sources of revenue, usually by shifting costs onto the public through increased user fees. These fees are then used to pay P3 leases or operating charges. An example is highway tolls, which shift costs from general tax revenues onto specific users through tolls. Depending on the severity of traffic problems and the availability of toll-free alternative routes, the public may accept the new tolls, as in the case of Highway 407, or may not, as in the case of the Fredericton-Moncton Highway. In the latter case, tolls paid directly by drivers using the highway were abolished after public protest. They were replaced by "shadow tolls," still based on road usage but paid to the private consortium out of general tax revenues. When recreation facilities are built as P3s, the private partner may take over food and concession operations and payments for ice time — revenue previously earned by the local council or by community groups — often raising fees in the process. This was the case in Penticton's South Okanagan Event Centre P3. Concessions were privatized, fees were raised substantially, and money raised by volunteer groups through concessions to allow low-income children to play hockey was cut.	*Generally, P3s are a cost to a municipality to provide a public service, not a revenue source.* *Canadian P3s do not allow the private sector to set rates (be they tolls, recreation fees, etc.). The P3 is a cost to the municipality, and how it funds those costs is up to the municipality. The decision to fund an asset through taxes or user fees is a municipal decision.* *Based strictly on a cursory review of CUPE's report on the "South Okanagan Event Centre P3", it does not appear to be a contemporary Canadian P3 and did not follow best practice, for the following reasons, among others:* • *construction was not fixed-price;* • *the City modified the project scope post-award and prior to construction;* • *negotiations were entered into post-award (contemporary Canadian P3 has all bidders proposing on exactly the same project scope and project agreement);* • *long term operations and maintenance responsibility was retained by the City (so no long term obligation from the private sector was secured).*
16. Who benefits from refinancing of P3 contracts?	
Once the risky construction phase of a P3 is over, projects are often refinanced. This can dramatically increase profit, because borrowing becomes cheaper. The public sector will not benefit from the refinancing unless the contract specifically provides for it. In the United Kingdom, contracts provide for a 30/70 public- private split of refinancing savings. But, based on publicly-available information, most contracts in Canada don't have such a requirement. Since P3 contracts are hidden behind commercial confidentiality rules, it is almost always impossible to calculate the private sector's profit, or how it would increase after refinancing.	*If an owner wishes to share refinancing gains, then it can include such provision in the contract. This is not always considered prudent or in line with a government's policies, and needs to be assessed in each case.* *In projects where refinancing gains are shared, provisions for calculating the gain are included in the contract. The "commercial confidentiality" mentioned is a restriction on release of certain information to the general public, not to the public sector partner in a P3.*

At the refinancing stage, project managers often make large profits by "flipping" ownership to other private companies. Sometimes projects are flipped many times, as in the case of the Abbotsford Hospital in B.C. This makes it impossible for the public sector to know exactly with whom they will be partnering, causing relationship and continuity problems. It is common in the UK — and happening increasingly in Canada — that the final owner is located in an offshore tax haven.	*It is true that an owner must be comfortable with a possible change in ownership of the contractor, or assignment of the contract to a different party, during the contract term. However, the terms of the contract do not change.*
17. What about the renegotiation risk well into the contract?	
P3 contracts are often renegotiated even before the projects are completed, as has happened with some B.C. hospitals. This may happen because the public sector changes its specifications, because of cost overruns, or because expected revenue streams do not materialize. Renegotiations well into the life of a P3 can be expensive for the public sector because, at that stage, there is no competitive process and the public sector is vulnerable to service disruption. If the public sector is perceived to be open to renegotiations further down the line, the private consortium might deliberately underbid for the initial contract. P3s are a relatively recent phenomenon in Canada and their contracts extend well into the future, so it may be too soon to assess the public sector's exposure to possible contract renegotiation. But it is a real risk, as experience in Latin America11 in particular has shown, one that the public sector must be aware of.	*Canadian P3 contracts contain provisions to accommodate changes and protect the public sector from being "held up" by a contractor. Overall though, it is true that this is a real risk that the public sector must be aware of. Neither the private sector or public sector can predict the future.* *It would be incredibly risky for a private consortium to deliberately underbid a P3 contract with the expectation of opening up the contract later. The fact that the consortiums are typically assembled from unrelated companies and includes separate equity and debt investors virtually guarantees that this will not happen.* *The risk of contract renegotiation or termination depends to a large extent on whether the public sector's needs are likely to change during the term of the contract and the ability to foresee these changes. Infrastructure projects where the public sector's needs are difficult to predict over a typical contract horizon are not usually good candidates for delivery as P3s.*
VALUE FOR MONEY AND RISK TRANSFER	
18. Do P3s deliver value for money?	
P3s have been justified on the basis that they provide "value for money," or VfM. Value for money is based on an analysis of "the lowest combination of capital, operating and maintenance costs over the life of a project."12 P3 proponents claim to include considerations such as employment, economic development, the environment, and health and safety. In reality, cost minimization is the real meaning of VfM, and the evaluation process is far from transparent or objective. A VfM assessment compares the costs of delivering a project through a P3 or conventionally. If the P3 costs are lower, the project proceeds as a P3. Without such a calculation, and unless there is no possibility of proceeding with a conventional project, there is absolutely no basis for choosing the P3 model. Yet, there are several examples of Canadian P3s which have not been justified with VfM assessments. These include the Charleswood Bridge, the redevelopment of Ottawa's Lansdowne Park, the New Brunswick deal with Shannex Inc. to pro- vide 216 new nursing home beds, and the Amicus long-term care facility deal in Saskatoon.	*The VfM methodology is part of contemporary Canadian P3 and was not necessarily used on the earliest projects, where the decision on procurement model may have been made based on a "strategic assessment" only.* *It is true that estimating value for money is not straightforward. The primary reason is the difficulty in estimating risk costs, which are part of the VfM assessment.* *Competitive tendering is a fundamental tenet of Canadian P3, and of the City's P3 Policy.* *As noted, the discount rate used to calculate the net present value is an important consideration. Most jurisdictions in Canada use the owner's cost of borrowing, the option "between the two extremes" cited. A rate similar to the cost of borrowing was used on the Stadium VfM assessment, the Central Library VfM assessment, and will be used for the WWTP VfM assessment.*

To calculate VfM, a public sector comparator (PSC) must first be developed. This shows, in detail, the costs and benefits of public sector procurement, including an assessment of the risks over the lifetime of the project. The costs of the P3 will be compared to this comprehensive financial model. While this may sound straightforward, it is not. • The two projects being compared should be of the same capacity and offer the same quality of service. In the case of the Moncton water treatment plant, P3 promoters claim the P3 saved $10 million in capital costs. But the public sector comparator was of a much larger plant and no evaluation was made using comparable plants, nor of what might happen the future when additional capacity was required. • There should be "competitive neutrality" between the public sector and P3 proposals, meaning that each should be treated the same in some important areas. P3 proponents want private bid costs lowered (or the PSC raised) to factor in taxes on a P3 that would not be paid in conventional procurement, such as sales, payroll or land taxes. • Other impacts, such as on employment, economic development, the environment, and health and safety should be considered, but rarely are. • P3s must be put out for open, public and competitive tendering. This is key to establishing a P3's lifetime costs, and is a major pillar of the claims that P3s deliver superior efficiency and VfM. It is also crucial for the transparency and openness of the VfM process, and for reducing the possibility of fraud and corruption. Yet in recent years, several high-profile Canadian P3s have been sole-sourced, without tender (See Question 32, below). • P3 tendering often involves little or no competition. This was the case with the Abbotsford Hospital (where a VfM assessment was carried out only after the contract was signed)13 and the over $2 billion Centre hospitalier de l'Université de Montréal project.14 Large municipal projects such as the Disraeli Freeway extension in Winnipeg have ended up with only two bidders. It is generally accepted that a minimum of three bidders is required in a competitive process. The size, complexity and financial commitment involved in P3s exclude participation by small and medium-sized local construction firms and suppliers, reducing competition**.** • Cost comparisons that estimate the total amount spent over the life of the contract generally skew the results in favour of P3s. Future costs or benefits of a project can be converted into today's money by "discounting" the sums involved, based on the argument that future sums are worth less than sums today because time is money. The higher the discount rate and the further into the future the cost or benefit appears, the lower its present value. While inflation is not the same as discounting, the impact of inflation does show how discounting works. With two per cent inflation, a dollar a year from now will be worth 98 cents.	*The reference to the Canada Line project is presented out of context. The correct context is that KPMG was the only qualified accounting firm that was not otherwise already involved in the Canada Line project, and therefore the only firm available able to provide an independent view*. *Smaller suppliers are not excluded from participating in P3 bids. They are often included as subcontractors.* *It should also be noted that many construction and design firms participate in both P3 and conventional procurements and as such do not necessarily have a preference for the former*. *In most P3 procurements the number of bidders is limited through a stringent prequalification process which is designed to identify the three best qualified bidders, who then compete against each other in a structured and transparent process with the oversight of a Fairness Monitor that assures the integrity of the process. There are usually five to ten respondents to a P3 request for qualifications.*

Using a seven per cent discount rate a dollar will be worth 93 cents a year from now and will continue to decline rapidly into the future.

The choice of discount rate is, therefore, crucial. But there is no agreed-upon rate in Canada. Some argue the discount rate should be low, reflecting the obligation of society to meet the needs of future generations who will bear the costs of P3s. At the other extreme, some argue it should be equal to the private sector's cost of borrowing. Other models use the public sector's borrowing costs, usually between the two extremes.

In Canada, the discount rates that are used tend to be high. This benefits P3s, because public sector comparators tend to "front-end load" costs at the beginning of a project life-cycle, while P3 models load costs onto the end. High discount rates favour P3s, and create the illusion of value for money, by shrinking back-end costs in terms of present value, compared to the public model. A relatively small change in the discount rate can radically alter the overall VfM of a P3. In the case of the Abbotsford Hospital, a six per cent discount rate was used to show VfM of $39 million, but that would have fallen to $13 million had a five per cent discount rate been used.

VfM assessments must be unbiased, without predetermined conclusions. In today's political climate that is difficult to achieve, as national and provincial P3 agencies put pressure on municipalities. While head of Partnerships BC, which advises municipalities on VfM calculations, Larry Blain was quoted as saying that "public sector comparators won't do you much good anyways, because I can make the public sector as bad as we want to, in order to make the private sector look good.

In addition, it is difficult to find objective consultants to prepare VfM assessments. The large consulting firms are all committed to P3s, heavily involved in the projects themselves and, even when not, are active members of the CCPPP. In the case of Vancouver's $2 billion Canada Line project, only KPMG was deemed "sufficiently independent of the process to provide the level of credibility, objectivity, and transparency "required to prepare the PSC,16 but KPMG had direct links to individual members of the bidding consortia and a publicly-expressed bias in favour of P3s.

As Stuart Murray of the Canadian Centre for Policy Alternatives argues, "[t]he major accounting firms now make so much money on P3 projects, it seems un- likely they would ever speak against them."18 So municipalities considering P3s must either find smaller, more impartial consultants, or build in-house capacity to independently evaluate value for money.

19. How important is risk in P3 VFM assessments?	
Given that private financing is more expensive, that the private sector always builds public sector projects whether or not they are P3s, and that P3s have higher transaction costs, how can P3s be seen to deliver value for money? The central justification claims that P3s shift important risks from the public to the private sector. The other claim is that the private sector is more efficient in operating and maintaining projects — an argument that will be addressed later. While the degree and type of risk will vary, the main risks for municipal P3 projects are likely to be project risk during construction (due to costing errors, construction delays, or environmental and technical problems) and the ongoing risk that revenue to support the project will be less than planned (known as demand risk). A full list of risks is outlined in Appendix Two. The project risk is closely related to the financial structure of the P3. The project company may not receive any payments until the project is complete or substantially complete. Borrowed money, usually about 90 per cent of the capital cost, carries a high risk premium. Owners' equity, usually about 10 per cent of the capital cost, is also often most exposed during this phase. This exposure of equity and the need to meet debt commitments is used to explain project risk shifting to the private sector. The private sector has a strong incentive to bring projects in on time and on budget. Once the construction phase is completed, this risk declines dramatically. Debt is often refinanced at lower rates and owner equity is often "flipped." The public sector must quantify the project risk and enter into contracts that clearly shift as much risk as possible onto the private sector. The demand or revenue risk is important when lease payments are linked to the level of use of a P3 asset or service. Leases to pay off highway P3s might be linked to the number of vehicles using the highway and the size of the toll. The lease payments for a water treatment plant may be linked to water rates and consumption levels. If either usage or price estimates are incorrect, there will be revenue shortfalls. The question then becomes, who makes up the difference? Again, these risks need to be quantified and P3 contracts need to specify the degree to which the private sector will assume risks previously carried almost entirely by the public sector. P3 VfM assessments are on the websites of Infrastructure Ontario and Partner- ships BC. For Ontario, the assessments show, very clearly, that risk transfer alone supposedly gives P3s value for money over conventional procurement. The Credit Valley Hospital is said to deliver VfM of $26 million, based on risk transfer valued at $39.7 million. Durham Regional Court House shows VfM of $49 million, while risk transfer is said to be $132 million. The Ministry of Government Services Data Centre shows VfM of $64 million and risk transfer of $150 million. How risk transfer could possibly amount to so much for such pedestrian buildings as a court house (39.5 per cent of final P3 cost) and a data	*P3s contractually shift a number of risks to the private sector that are otherwise retained by the owner in a traditional procurement. Estimating the cost of these risks is important to the VfM assessment. The risk costs are based on consensus of a panel of experts relying on their past experience of traditional and P3 project procurement, and are estimated for both the traditional procurement and P3 procurement. It is important that the owner be involved in the risk assessment to provide its own insight into the risk assessment, to reflect the particular owner's approach and experience on projects, and to accept (or reject) the risk assessment results.* *Regardless of the delivery model, there are significant project risks beyond the construction phase. Operations can be more expensive than planned, equipment may fail earlier than planned, fines may be incurred, and perhaps most importantly, major maintenance may be deferred resulting in run-down assets that perform poorly and need to be replaced early*.

centre (42.6 per cent of final P3 cost) is not explained – the public is simply expected to believe it. A similar methodology has been used in Winnipeg. The Chief Peguis Trail is said by Deloitte & Touche to have a VfM of $31 million and risk transfer is said to amount to $51.4 million, or over a third of the P3 cost of $147.8 million. In this case, about $14 million is said to be shifted on account of project planning and approval risks, just under $10 million for design and construction risks and almost $27 million – or more than the other risks put together – for operations, maintenance and lifecycle risks. These numbers are very hard to believe, but neither the public nor the city council is allowed to see how they were arrived at or to challenge them.	
20. If risk assessment is crucial to VFM calculations, how is it measured?	
Increasingly in Canada, the method of estimating risk used by Infrastructure Ontario, the Ontario government agency assessing and promoting P3s, seems to be gaining ground. Their treatment draws on a consultant's report which is said to have examined 60 different risks involved in infrastructure investment and measured their probability and likely impact. However, there was no evidence provided for these generic estimates of different types of risk, and calculations done for specific projects are not made public. In the case of the Disraeli Bridge, consultants Deloitte & Touche have refused to disclose their risk data on the grounds of commercial confidentiality, despite requests and appeals through City of Winnipeg Access to Information rules. However, the P3 was justified purely on the basis of risk calculations. There is no independent verification of risk transfer assumptions being made in P3 VfM assessments across the country. Yet risk transfer is held up as the main reason to engage in a P3. In the UK, where P3s have a much longer track record, the British Association of Chartered Certified Accountants and Manchester Business School recently concluded that "the general case for private finance is not proven." Their study finds any benefits of private financing, risk transfer and improved decision- making are "too nebulous to allow certainty that they are outweighing the known additional costs that arise on average from the cost of capital, transaction costs, and flexibility."19 Reviewing the global experience of P3s over the past 30 years, the report concludes that "value for money is difficult to establish convincingly, owing to the higher costs associated with private finance and the high premium payable for risk transfer, and there are important accountability issues around the commitments made to providers of private finance."20 Very little is known about risk transfer because there have been few serious studies of the subject. In one review, Vining and Boardman conclude that "although risk transfer is a major posited goal of many public-sector governments. our review of the Canadian evidence suggests that, in negotiating (and re-negotiating) P3s, government has often failed to achieve significant risk transfer, especially that which is related to use-risk."21 They go on to state that "in	*The risk costs are estimated using the consensus of a panel of experts relying on their past experience of traditional and P3 project procurement, and are estimated for both the traditional "public sector comparator model" and P3 model. It is important that the owner be involved in the risk assessment to provide its own insight into the risk assessment, to reflect the particular owner's approach and experience on projects, and to accept (or reject) the risk assessment results.* *Prior to awarding a contract, VfM is a comparison between two estimates. After awarding a contract, VfM is a comparison between the fixed bid price, and an estimate. Therefore, VfM can never truly be measured, it can only be estimated. VfM analysis should be viewed as just one of the key decision-making tools used to inform the selection of a project delivery model.* *It is correct that the public sector has not always succeeded in transferring selected risks to the private sector. This has been much less of a problem in the second wave of P3 projects carried out over the last 5-8 years.*

infrastructure projects, it rarely makes sense to try to transfer large amounts of risk to the private sector."22 A 2010 study of key Canadian P3s also found they generally performed poorly on risk transfer. Evaluating risk transfer is also difficult because P3 contracts are subject to cost overruns, reductions in scope, and delays, all sometimes hidden in contract renegotiation. Pro-P3 claims also neglect to take into account the much longer time needed to negotiate contracts, making on-time delivery a flexible concept. Finally, given the long life of most P3s, contracts may be renegotiated many years into the project, rendering earlier VfM calculations redundant.	
21. Does project risk transfer require P3s?	
Project risk, covering planning, design and construction, is often the main risk in infrastructure projects. Transferring the risk of cost overruns and project delays to the private sector is a central justification of P3s. But there are ways of shifting project risk in conventional procurement. Small contractors, who normally under- take municipal projects, see no need for P3s to deal with this risk John Knappett, a small B.C. contractor, has argued that "our firm has completed hundreds of public sector projects in BC over the past 25 years and we have seldom been late and never over budget. I know that because when we bid on a Stipulated Sum Contract, we have a contracted fixed budget and an attached schedule to the Contract. If we are late the Province has penalties it can assess and if we are over budget we must absorb the cost at no fee to the Province. Project risk can be shifted onto private contractors in conventional procurement through penalties or requirements for insurance. While there are also some problems with projects limited to a combination of design and building (Design/Build), this is another way in which risk can be transferred without private financing or long-term private operation of public facilities.	*Agree that risks can be transferred using procurement models other than P3. An advantage of P3 however is the bundling of design, build, finance and long-term operations and maintenance into a single contract ensures that there are no "gaps" in risk that are inadvertently retained by an owner.*
22. Are municipalities capable of assessing and minimizing risks?	
Appropriate and accurate assessment of risks is difficult in most situations, and generally beyond the capacity of most municipalities. At the same time, unbiased advice is hard to find. In the case of the South Okanagan Event Centre, both project and revenue risks were inadequately estimated, and the P3 contract did not ensure risk transfer to the private partner. The result left the City of Penticton responsible for cost overruns of $25 million on an original projected cost of $56 million. The city also had to cover annual revenue shortfalls caused by poor projections and rising user fees. According to city officials, from the point of view of the private partner, this was "a can't-lose contract."25 Similar cost overruns and revenue shortfalls have plagued several other municipal P3 projects.26 Ultimately, governments are responsible for providing public services. If a P3 operator fails or backs out because profits aren't high enough, all these risks revert to the public sector and are often magnified. Yet, this is rarely accounted for in risk assessments.	*The suggestion is that municipalities are incapable of assessing risks or revenue and are not capable of entering into P3 contracts which transfer risk. This is demonstrably not the case. P3s that transfer design, construction, and long term operations and maintenance risk have been entered into by municipalities using contemporary Canadian P3 practices, such as the Chief Peguis Trail and Disraeli Bridges projects mentioned elsewhere.* *Any project that is expected to be supported by discretionary spending should be approached by municipalities with caution, whether they intend to use P3 delivery or not. The private sector generally will not take revenue risk, for the very reason that such revenues are difficult to predict. Sometimes government is the only party that can take on certain risks.*

	One of the main advantages of the private financing in a DBFOM is that if the operator fails or backs out for any reason, the private financiers must replace the operator or risk losing their capital. The P3 with private financing is, in effect, a long term warranty on performance and asset condition. *The assessment and management of risk on large capital projects can be very challenging for municipalities that only procure major capital projects infrequently and this issue exists regardless of the procurement approach taken. However, one of the benefits of the Canadian P3 model in use today is that it introduces a stringent risk management approach. In particular, the rigor of the VfM evaluation requires that best practice risk assessment techniques be introduced at a very early stage in the project's development. While the adoption of a P3 procurement approach neither introduces nor removes the need to effective risk management, it can have a positive effect on risk management processes that are adopted.*
23. If risk is not transferred in P3 projects, what is the likely impact on municipalities?	
Failure to actually transfer project and demand risk can have serious consequences. Penticton has paid a high price for capital cost overruns, and has to cover on- going annual operating deficits for the South Okanagan Event Centre. These unforeseen deficits have placed an incredible financial burden on the city. The Event Centre is slated to lose $1.6 million in 2012, forcing the city budget into a projected deficit of $1.2 million as of January 2012. Failure to transfer risk has led to cuts in other services and pressure on Event Centre staffing and wages. Further cuts or dipping into reserve funds will be needed to balance the 2012 budget. A P3 recreation complex in Cranbrook also suffered from cost overruns and revenue shortfalls. The project was eventually taken back into public hands, leaving the municipality with the biggest debt burden among B.C. municipalities.27 While failure to transfer revenue or demand risk will be readily apparent, leading usually to pressure on the public sector to make up the difference, failure to transfer project risk in more complex projects may be hidden. In the long run, however, it will take the form of higher payments to private companies.	*Generally, the private sector generally will not take revenue or demand risk on municipal-purpose projects, therefore in most cases municipalities have no choice but to accept this risk, especially on projects such as recreation centres.* *If a project has significant demand or revenue risk and the municipality does not want to subsidize the project from the tax base, the important question is not which delivery model to use, but should the project proceed at all.*
QUALITY OF PUBLIC SERVICES AND THE PUBLIC INTEREST	
24. Do P3s ensure higher –quality service and maintenance?	
Proponents of P3s argue the private sector improves the quality of service delivery. The assumption is that competition and the incentive and penalty structure that P3s are said to offer make the private sector more efficient. P3 advocates also argue that P3 maintenance contracts give a long-term guarantee that public assets will be kept in better shape than is often the case in conventional projects.	

As the International Monetary Fund has put it, “much of the case for PPPs rests on the relative efficiency of the private sector.” Yet, “it cannot be taken for granted that PPPs are more efficient than public investment and government supply of service. While there is an extensive literature on this subject, the theory is ambiguous and the empirical evidence is mixed.”28 In fact, a review of the literature “points strongly to the conclusion that there is no systematic intrinsic advantage to private sector operation in terms of efficiency. Equally, there is no evidence to assume that a public sector operator is intrinsically less efficient and effective.”29 The argument for superior maintenance is also flawed. There is no question more needs to be done to maintain municipal assets. But municipalities should not pay a premium to put in place an inflexible long-term commitment to maintaining. P3 assets. In doing so, they give up the discretion to allocate maintenance dollars where they are most needed in a budget year. It is especially problematic that the public does not know the dollar value of maintenance guarantees for P3 projects. Such information is kept confidential, supposedly for commercial reasons, yet it is available for all public sector projects. This difference in treatment of maintenance budgets makes no sense in terms of transparency and accountability.	*P3s are performance-based. The municipality will receive the quality of service it specifies, which can be higher or lower than if it provided the service in-house.* *A P3 amounts to long-term pre-approval of operations and maintenance activities, because O&M payments are contractually guaranteed to the contractor, who in turn must conduct the necessary activities. Operation and maintenance activities in a P3 are measured through output-based performance specifications, such as ensuring that the facility is open and available for use and that the asset meets certain state-of-good repair conditions at the end of the contract.*
25. Do P3s offer more innovation and better design of public infrastructure?	
P3 proponents argue that private sector involvement generates more innovation and better design of public projects, because of the need to be innovative under fixed budgets. There is little evidence that this is the case. Even if it were, municipalities can enter into fixed price or design-build contracts without engaging in a P3 for financing, ownership, operations or maintenance. Moreover, architects find that by bundling design with construction, P3s sacrifice creatively aesthetic design for cost minimization. In the case of Vancouver’s Canada Line SkyTrain project, part of the private sector’s “innovation” was to project increased revenue from running more mid-day trains, and to decrease costs by building fewer stations. This change was not permitted in the estimate of public sector comparator costs.	*In Canadian P3, three (or more) teams compete to develop the design that will win a competition based on not just construction cost, but on the full life cycle cost of capital, financing and long term operations and maintenance cost. Most other procurement models do not consider full life cycle costs over the long-term within the competitive process..* *Aesthetic features and other non-price aspects can be included in a P3 competition, if it is deemed important by the owner.*
26. Will citizens pay more?	
Sometimes, the need to cover a P3’s higher borrowing and transaction costs (as well as to make money for the private partners, which is not an issue in public projects) will lead to a direct increase in the cost of the service provided. This can be reflected in the introduction of, or increases in, road tolls, water rates, arena fees or fees for using schools after hours The high premium paid for the private partner to accept risk often means that citizens will pay more for infrastructure or services delivered through a P3 model than through conventional methods — even if risk is successfully transferred. These higher payments will be hidden in P3 contract costs that will weigh on municipal budgets for many years into the future.	*Whether or not citizens will pay more is estimated in the VfM assessment. In addition, it is becoming more and more common in Canadian P3 to set “affordability caps” to ensure that bidders submit proposals that can meet both the performance objectives and budget objectives for a project.*

27. What impact do P3s have on workers?	
Often, when the private sector claims to be more efficient than the public sector, this really means cutting labour costs by laying off workers, using non-unionized instead of unionized labour, cutting wages, pensions and other benefits, or reducing hours or conditions of work. This is particularly common in service delivery P3s, where the private partner is handed a budget or part of a budget to deliver services previously delivered by the public sector in return for a share in any savings it can generate. In the case of the Hamilton-Wentworth water and sewage system, the private corporation laid off half the staff, reducing the operating budget by close to 40 per cent.30 The result was a catastrophic reduction in service quality. Cuts in public sector staff were also a key feature of the Ontario Business Transformation Project and the Urban Shared Services hospital food project in Winnipeg, both of which had serious operating problems as a result. Other Canadian P3s have saved money by using non-unionized labour where unionized workers would otherwise have been employed with better wages, benefits and working conditions. This was the case with the Evergreen Park School, the Fredericton-Moncton Highway, the Moncton water treatment plant, and the Moncton water distribution system proposal. Where this is the case, municipalities can reasonably expect strong opposition from public sector workers and their unions.	*P3 contracts can be structured to include provisions for worker protection.*
28. How do P3s affect local communities?	
P3s can have harmful effects on local communities which are not always apparent when contracts are signed. Cuts to wages and jobs have ripple effects on local businesses and quality of life. The insertion of a profit factor into service delivery can shift spending from the community to business centres elsewhere in the country or even abroad. In the United Kingdom and with increasing numbers of Canadian projects, equity flips have meant ownership of P3s ends up in offshore tax havens. Small local contractors, who rely heavily on municipal and other local contracts, say P3s are squeezing them out of business. The Vancouver Island Construction Association, the B.C. and Canadian construction associations and the Independent Contractors and Businesses Association have all raised concerns about P3s. They feel there are too few bidders on P3 projects, and value for money calculations are biased. Together with the Merit Contractors Association of Alberta and the Alberta Construction Association, they have also objected to P3 bundling of small projects to achieve economies of scale. They fear that if larger P3 projects using big, out-of-province construction firms become dominant, local construction expertise and capacity to build and maintain schools, hospitals, roads and bridges might be at risk. Municipalities should be particularly sensitive to the environmental risks of P3s. The workforce cuts in the Hamilton-Wentworth water and sewage project led to untreated sewage polluting Hamilton harbour. The P3	

contract was so poorly put together that the regional government ended up paying the cleanup costs. A study of Whistler, B.C.'s cancelled plans for P3 wastewater treatment found the deal's cost savings came in part from trucking sewage waste through numerous ecologically-sensitive watersheds. The municipality remained responsible for any spills and cleanup costs.31 Not all municipal projects carry this kind of risk, but the ones that do should not be exposed to further risk through corners being cut for the sake of profit.	

29. Do P3s improve transparency and accountability?	
Proponents of P3s argue they make spending on public services and infrastructure more transparent and accountable, as they open up all stages of the project to competitive bidding and outside review. The direct involvement of banks and other financial institutions in P3s is said to add a layer of accountability, compared to conventional projects. In P3s, the private partner is also supposed to be locked into contracts to meet certain performance levels, with mandatory financial penalties if they are not met. In practice, however, P3s may not lead to more transparency, as P3 contracts are often protected by commercial confidentiality and exempt from freedom of information legislation. While P3 agencies in B.C. and Ontario are making more information public, including P3 contracts and VfM assessments, any numbers which are needed to fully evaluate the projects are either left out or deliberately redacted. In B.C., essential financial information about P3s has been withheld on the basis that it is a "cabinet secret." Published information is of limited value in terms of either transparency or accountability of P3 projects. Consultants providing so-called impartial advice also hide behind commercial confidentiality. They will not allow access to assumptions that are vital for their conclusions, such as the source of their risk calculations. Furthermore, their VfM reviews often come with qualifications that render the entire assessment highly questionable. In their assessment of the Brampton Youth Justice Facility, PricewaterhouseCoopers concludes that the P3 would yield value for money compared. to the conventional delivery model. But PricewaterhouseCoopers qualifies this by saying "[w]e did not audit or attempt to independently verify the accuracy or completeness of the information or assumptions underlying the PSC, which were provided by [Infrastructure Ontario], and/or the successful proponent's final offer, nor have we audited or reviewed the successful proponent's financial model."32 P3s also severely restrict democratic accountability by tying the hands of future municipal governments, as far ahead as 30 years or more. Even more troublesome, promoters of P3s in Canada have on occasion made contributions to the political campaigns of sympathetic councillors, as in the case of the Hamilton-Wentworth water and sewage system33 and, apparently, the Lansdowne Park development in Ottawa.34 Though not illegal, such contributions are highly questionable. Finally, it is common practice to withhold information from citizens and prevent public input into decisions about P3s.	*P3s are transparent and accountable in several key areas as follows:* • *VfM evaluation: this analysis leads to a high accountability for the selection of project delivery model.* • *Procurement processes: there are no "backroom deals" as is often stated. All P3 procurement processes in Canada adhere to the highest standards of formal procurement best practice. For example it is standard procedure to employ an independent Fairness Monitor to overview the entire procurement process.* • *As noted, the VfM reports and project agreements and other procurement documentation is typically made public. This includes the total bid cost of the private partner.*

Citizens are rarely permitted to formally express their views on whether they want a project managed as a P3. In the few cases where the public has been given formal input or the issue has gone to a public vote, citizens have rejected P3s. Citizens in Victoria, B.C. used public meetings to oppose a P3 for a new sewage project. In 2011, 75 per cent of voters in Abbotsford, B.C. voted down a P3 water project.	

P3S, MUNICIPALITIES AND ALTERNATIVES

30. Are P3s appropriate for municipalities?

As this guide has documented, there are serious concerns about transparency, loss of local control, and the inflexibility of multi-decade P3 deals. In addition, PPP Canada's own 2009-2014 corporate plan acknowledges some of municipalities' key concerns with P3s: the complexity and cost at the procurement and contract stage – issues felt most acutely by small communities; the long-term expense of higher private-sector financing costs; the erosion of in-house expertise and capacity; and the need to maintain and upgrade existing infrastructure.35 There is a general acknowledgement, even by their proponents, that P3s are not appropriate for small municipalities. There are several reasons: • Transaction costs are expensive and cannot be justified in small projects; • Small municipalities are no match for large international corporations when it comes to negotiating contracts; • Turnover of councillors and staff means that the institutional memory of municipalities is not strong enough to properly supervise and monitor P3 contracts that span decades; and • Large private companies lose economies of scale on small projects and tend not to compete for them. Even large municipalities have had difficulty with P3 contracts, such as cost overruns (the Canada Line in Vancouver), failure to shift demand risk (B.C.'s Golden Ears Bridge), and heavy subsidies and bailouts (for example, in several Ottawa recreation P3s.	*There is a minimum project size threshold for consideration of P3s, depending on the delivery model, type of project, and market conditions.*

31. What capacity does the municipal sector have to monitor P3s?

P3 agreements are unlike any other arrangement that municipalities engage in. They are complex and there can often be disagreements and disputes which may require arbitration or legal action. P3s can also be very demanding in terms of ongoing monitoring and evaluation of private sector performance over the lifetime of the agreement. There has not been any systematic evaluation of the record of Canadian municipalities in monitoring and evaluating P3s, nor of their capacity to do so effectively. The exception is Ottawa, where the city auditor found that P3 contracts were not being formally monitored. The reason appeared to be that while there was an established, funded and staffed process for monitoring conventionally-procured projects, there was none for P3s and the council was reluctant to put the necessary resources into this task.	*It is important that a P3 contract be enforced to ensure that the planned-for risk transfer actually occurs in practice. Municipalities must dedicate adequate resources to contract management.*

The experience of school boards, many of which are comparable to municipalities in terms of size and staff expertise, provides insight into the task that municipalities face in monitoring P3s. In Nova Scotia, the highly-controversial P3 schools established in the 1990s have been beset with ongoing contract monitoring problems. The provincial auditor has documented numerous overpayments to corporations and underpayment to school boards. There were ambiguities in contracts, an absence of systems to check compliance with contracts, ignorance of what contracts contained, and a lack of institutional memory as public sector staff turned over or retired.37 It would not be surprising if municipalities encountered similar problems with P3 contracts.	
32. What do the professionals say about P3s?	
Several professional groups have cautioned against the use of P3s – including engineers, architects and auditors. Engineers have criticized P3s which include design-build because they lose control over project quality to contractors. Quebec government engineers were vocal against developing AutoRoute 30 as a P3, citing excessive and under-recorded consultancy fees, fictional cost savings, unrealistic risk assessment and incorrect provision for inflation.38 Architects have also raised cautions, complaining about high "pursuit" costs (front-end transaction costs of seeking to win P3 bids), their costs not being covered for unsuccessful bids, and cash flow problems. Any cost pressures that arise from a P3 involving design-build or from building delays are often pushed back onto architects, who are not able to absorb them. They also complain about the "frantic pace" of design-build activity which is bundled into a P3. Each of these pressures raises "quality challenges," given fixed construction budgets. Even without these pressures, architects are critical of P3 projects. They say P3s favour cost saving over aesthetic appeal, and often make it difficult for architects to interact with final users of the facilities.[39] Federal and provincial government auditors have long been critical of Canadian P3s. They have raised and continue to raise concerns about: • dubious accounting approaches that attempt to place P3s off-book (Winnipeg, Charleswood Bridge; Canada, Confederation Bridge; Alberta, long-term care homes); • sole sourcing and non-competitive bidding (Ontario, Business Transformation Project; New Brunswick, Shannex nursing homes; Saskatchewan, Amicus long-term care); • the lack of adequate public sector comparators, and/or failure to demonstrate or deliver value for money or risk transfer (Nova Scotia, schools; New Brunswick, Evergreen School, Eleanor W. Graham Middle School and Moncton North School, Fredericton-Moncton Highway; Alberta, long-term care homes, Southeast Edmonton Ring Road; Quebec, data processing; Ontario, Brampton Hospital); • excessive costs of private borrowing (New Brunswick, Fredericton- Moncton Highway, Evergreen School; Nova Scotia, Highway 104; Canada, Confederation	

Bridge); and • Poor contract specification and inadequate systems of monitoring and compliance (Ottawa, all P3s; Nova Scotia, schools; Ontario, Business Transformation Project, Brampton Hospital; British Columbia, Academic Ambulatory Care Centre). Criticism of questionable P3 practices by auditors general has had an impact on formalizing P3 procedures in Canada but, as the list above shows, even very recent P3s have been found lacking. The real problem is that federal and provincial auditors only get to critique P3s after they have been implemented. What is needed is a transparent and accountable institutional process that stops questionable projects before they are implemented.	
33. How easy is it to disengage from P3s?	
If a municipality decides to withdraw from a P3 before the end of the contract, it will be very expensive. The private sector engages in long-term P3 arrangements because of the high returns on equity investment, and the higher than normal returns to holders of debt. They will need to be compensated if these returns are threatened. The level of compensation can be very high. In the case of the Charleswood Bridge, researchers used freedom of information provisions to obtain details of the City of Winnipeg's costs to purchase the bridge before the expiry of the 30-year contract. In one of the options, the city would pay the discounted present value of the outstanding lease payments and option to purchase in year 30. In 2008, this would have amounted to a buy-out cost of approximately $17.5 million. The bridge cost less than $10 million to build, and the city had already made $15.5 million in lease payments between 1995 and 2008.40 Even disengagement before a P3 gets off the ground can be expensive. In Ottawa, a city council decision to cancel a light rail P3 project in 2006 led to a $175 million claim for breach of contract from Siemens, and an eventual settlement of $37 million.41 In considering P3 contracts, therefore, municipalities should also consider possible exit strategies if the P3 does not live up to expectations. It is better that disengagement take place before the municipality has actually signed the con- tract, which means that municipalities should proceed cautiously in the negotiating stage, retaining as much discretion and flexibility as possible. But if the project goes ahead, the municipality should seek to protect the public interest by minimizing the length of the contract, stipulating periodic performance reviews, and negotiating release clauses that are mutually acceptable and sensible. There is a danger that international trade and investment agreements may present problems for municipalities attempting to cancel a P3 or take services back into public hands. These deals include the North American Free Trade Agreement (NAFTA), the World Trade Organization's Government Procurement Agreement, the Trade, Investment and Labour Mobility Agreement (TILMA) between Alberta and	*Government typically retains the right to exit a P3 contract at its convenience. In the case of a financed P3 (DBFOM, DBFM) any outstanding financing must be paid out to the contractor.* .

B.C., the New West Partnership between B.C., Alberta and Saskatchewan, and the Comprehensive Economic and Trade Agreement (CETA) being negotiated between Canada and the European Union. Under NAFTA and the proposed CETA, U.S. and European corporations have the right to sue for lost future profits. These investor rights challenges target the federal government and not the municipality, placing the municipality under extreme pressure from the federal government not to cancel	
34. Are there alternatives to P3s for municipalities?	
Municipalities continue to provide most infrastructure and services through conventional public sector procurement, without using P3s. The recent financial crisis has made P3 financing more expensive and has reduced the value for money of P3s. This has created increased pressure for the public sector to use P3s but contribute more financing to make them more attractive to the private sector. The appropriate response to the concerns raised in this guide is for municipalities to retreat from P3s and focus on improving conventional delivery. This may mean greater use of design-build techniques with appropriate quality safe- guards, improved planning and management of capital projects, and greater use of fixed price contracts with appropriate penalties and incentives. This will inevitably entail improving the planning and monitoring capacity of municipalities in these areas, strengthening staffing expertise and staffing levels, rather than cutting them back. Municipal borrowing costs can be significantly reduced by borrowing through pooled infrastructure funds as is done through the Municipal Finance Authority in B.C. and its counterparts in Ontario, Nova Scotia, New Brunswick and Newfoundland and Labrador. The idea of a Green Infrastructure Fund financed through the issue of bonds by senior levels of government is also worth investigating. Local governments should also continue to encourage the federal government to step up to its infrastructure financing responsibilities. Municipalities are very limited in their revenue sources. At the same time, local infrastructure projects encourage economic development across the country. They are in the national interest. The federal government must renew and improve its infrastructure funding for Canada's cities and communities. Communities also need access to sustainable and growing revenue sources. A number of communities have passed resolutions calling on the federal government not to tie its infrastructure funding to P3s. Restricting federal infrastructure funding to P3 projects limits the autonomy of local governments. The federal P3 fund should be eliminated and the money should be redirected to projects which keep community assets public.	

Appendix 3.2 – Phase two deployment
DRAFT Print Advertisement

Appendix 3.3 – Phase two deployment
DRAFT web advertisement

Appendix 3.4 – Phase two deployment
DRAFT web site copy

Page anchors:

- Upgrading the plant
- Cost of construction
- Review, contracting and oversight process
- Public-private partnerships (P3s)
- Ownership of the plant
- Staffing and expertise
- Utility rates

Overview

A wastewater treatment plant upgrade must be undertaken to meet new federal and provincial regulations for wastewater treatment systems and replace essential infrastructure nearing the end of its lifespan. This will be one of the City's largest and most complex capital projects to date. We need to invest in a modern facility to improve wastewater treatment as part of our commitment to:

• Addressing concerns of downstream residents and businesses;

• Protecting public health and our environment;

• Meeting the needs of our growing population now and for the future.

Experts at the City and world-class, independent consultants have been involved in extensive planning to determine the type of facility the City needs, the cost to construct it, and the procurement approach that provides the best value for the money.

At least 12 traditional and alternative procurement options were evaluated and narrowed down to seven options. From there, five delivery models were selected and carried forward into the assessment phase. And from there, the recommended approach was presented to Council on January 00, 2013.

The recommended option is a public-private-partnership, or a P3, employing a Design-Build-Finance-Operate-Maintain (DBFOM) model.

The upgrades are estimated to cost $207 million +/- 15 per cent based on construction starting in 2014 and completing in 2016. Extensive planning and securing of resources must take place in 2013 before we can break ground. Construction will occur between 2014 and spring 2017 with the bulk of the work being done in 2015 and 2016.

Upgrading the plant

Wastewater management (collection and treatment) is the responsibility of local government. Regina has been providing wastewater treatment for over 100 years with various facilities and processes. The current plant, constructed in the 1970s, was built to service a smaller Regina and meet the standards of an earlier era.

Retrofitting the current plant will not meet new federal and provincial standards. Only a new state-of-the-art facility will satisfy progressive environmental regulations while ensuring the city's infrastructure can reliably meet the day-to-day needs of its residents today and in the future.

As much as possible, we do plan to keep, reuse, retrofit and modify existing assets and components for the new plant.

What are we doing about the odour problem?

The odour was caused by a broken mechanical part, low oxygen levels in the lagoons and warm temperatures. Chemicals were applied following the incident and in spring 2013, the City will have another 500 horsepower blower installed. The City is working to ensure that a similar situation does not occur in the future.

Cost of the upgrade

Based on a comprehensive assessment conducted through a pre-design analysis, the estimated cost, based on construction starting in 2014 and completing in 2016, is $207 million +/- 15 per cent.

Administration is seeking approval from Council for $238.5 million ($207 +15%) in funding which is the maximum projected cost for the project.

The final cost will be in line with current projections as the City will incorporate cost certainty considerations into its request for proposals and quotes. Any overages will be the responsibility of the contractor.

With the lifespan of the current facility nearing expiry, and with the Regina's current and future population trajectory, the City has been anticipating the need for a new plant for years. Ongoing, moderate utility bill increases have prepared us for this investment.

Review, contracting and oversight process

To arrive at a recommendation, the City first had to undertake appropriate due diligence. Starting in 2011, and comprehensively during the past six months, extensive research and exploration has been conducted by City of Regina experts and world-class, independent consultants from AECOM and Deloitte. Careful assessments have been instrumental in determining the procurement model that represents the best option for building and operating the new Wastewater Treatment Plant for our City and delivering the greatest value to residents now and in the future.

In all, at least 12 procurement options were evaluated and narrowed down to seven. From there, five delivery models were selected and carried forward into the rigorous and thorough Value for Money assessment phase. And from there, the preferred option was selected for Council's consideration. As with any project the City undertakes we have made the information publicly available. The report is on our website and we encourage all Reginans to review it. [LINK TO REPORT]

Public-private partnerships (P3s)

Private-public sector partnerships (P3s) are a long-term approach for procuring public infrastructure where the private sector assumes a major share of the responsibility in terms of risk, financing for the delivery and the performance of the infrastructure. The private sector can also play a role in design and structural planning and long-term maintenance. Read more about this kind of partnership at www.p3canada.ca

In most cases, municipalities finance, own, operate and maintain infrastructure assets, while the private sector builds the infrastructure. However, on a project-specific basis –particularly infrastructure-related projects – municipalities have looked at alternative procurement methods that involve assigning greater responsibility and risk to the private sector. Some reasons for choosing a P3 procurement method include:

- Long term cost certainty and predictability;
- Need for new or different resources to manage more complex and/ or emerging technologies (such as wastewater treatment plants), and;
- Desire to protect taxpayers from project risks.

> ***The P3 Canada Fund***
>
> *In the DBFOM procurement method presented to Council in January, the City proposes taking advantage of a P3 Canada Fund grant. This fund was created by the Federal Government to improve the delivery of public infrastructure and provide better value, timeliness and accountability by increasing the effective use of P3. The City has undertaken the appropriate planning to ensure that if Council elects to pursue the DBFOM, the project aligns well with P3 Canada's prerequisites. Click here to read more about the fund.*

Though Regina's wastewater treatment needs and this project are unique to our City – there are about 180 successful P3 projects in Canada, at least seven of which are water treatment and wastewater treatment projects that employ similar procurement and operation models.

Ownership of the plant

Under any scenario, Regina's new wastewater treatment plant will remain publicly owned.

- The City of Regina will retain ownership of the plant and the natural resources coming in and out of the plant.
- The City also retains exclusive control over setting service rates.
- The City will be empowered to hold suppliers accountable for delivering on service, financial and environmental standards.

Successful P3 relationships are founded on clear accountability controls, including clear output-based performance specifications, a commitment from municipal government to dedicate adequate resources to contract management, and ensuring the planned-for risk transfer actually occurs.

Expertise and staffing requirements

A wastewater plant of this calibre and standard of engineering and construction - and one that must be designed for an expected lifespan of 30 years or more - requires expertise and skills beyond what Regina currently contains in its employee pool, so under any scenario, outside expertise will be required.

The new wastewater treatment plant's building and operating standards are highly sophisticated. For example, wastewater volume currently takes 30 days to treat – a new plant will be able to process the same volume in 8 hours. This kind of precision demands a very specific level of technical expertise that is not currently available at the City.

As with other projects of this scope, the City will undertake a fair and transparent procurement process. The project is already attracting the attention of high calibre national and international firms who, along with local suppliers, will be given an opportunity to participate in the RFQ/RFP process. It is our expectation that, regardless of the group ultimately selected to build and manage the new plant, local firms will deliver support and operational services.

The City will also take care to protect the interests of all existing City employees. All City of Regina wastewater treatment plant employees will be offered employment under the same terms as their existing collective agreement with the new plant operator.

Utility rates

Because our existing wastewater treatment plant is nearing the end of its lifecycle, the moderate, ongoing increases we've seen in utility bills during the past few years have achieved two things: 1) They've kept the current plant operational by covering the cost of repairs; and 2) They've offset construction costs required to build the new plant. We can continue to expect rate increases – but at the current pace.

Regardless of the delivery model selected by council, the City will remain solely responsible for determining utility rates now and in the future.

Appendix 4 – Phase three deployment

Summary

The following reflects draft material associated with the Communication Strategy tactics recommended as part of Phase three - Case for Support and includes:

1. DRAFT print advertisement
2. DRAFT web advertisement

Appendix 4.1 – Phase two deployment
DRAFT print advertisement

Appendix 4.2 – Phase two deployment
DRAFT web advertisement

Appendix K – Regulatory Requirements

AECOM

Regulatory Requirements for the Proposed City of Regina WWTP Upgrade Project

The City of Regina is in the process of planning and designing a wastewater treatment plant (WWTP) upgrade project. The proposed project will be subject to federal, provincial and municipal requirements as detailed in the following subsections.

1.1 Federal

1.1.1 The Fisheries Act – s. 35 (Habitat Protection)

Section 35 of the federal *Fisheries Act* states that "*no person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction* [HADD] *of fish and fish habitat* " without Authorization by the Minister. Works covered under this legislation would include construction below or adjacent to the high water mark of Wascana Creek, such as site clearing and grading or modification of the effluent outfall. If works such as these are to be undertaken, an assessment of risk to fish and fish habitat would be required, and details of the works may need to be submitted to Fisheries and Oceans Canada (DFO) with a Request for Project Review under s. 35 of the *Fisheries Act.* As these types of works at the project site would be expected to result in minor effects that could be fully mitigated, DFO would likely stipulate mitigation measures to prevent harmful impacts to fish habitat, and a formal Authorization under s. 35 of the *Fisheries Act* would not be required. However, if DFO deemed the proposed works as creating risk of HADD, the HADD would require formal Authorization. A requirement of the Authorization would be an approved habitat compensation plan to be implemented by the City.

Reductions to effluent volumes, which may arise out of wastewater reuse strategies being explored by the City, could result in impacts to fish habitat by reducing flows in Wascana Creek. Such reductions in effluent volumes, therefore, would require review by DFO under s. 35 of the *Fisheries Act.* Initial discussions with DFO on this subject have indicated that such impacts could be Authorized if compensated for through the habitat compensation measures in the *Act*.

1.1.2 The Fisheries Act – s. 36 (Release of Deleterious Substances)

Section 36 of the *Fisheries Act* prohibits the deposit of deleterious substances into fish-bearing waters unless authorized by regulation. In 1999, the Canadian Council of Ministers of the Environment (CCME) endorsed the *Canada-Wide Strategy for the Management of Municipal Wastewater Effluent* (*MWWE Strategy*), which provides clarity and consistency in the implementation and enforcement of the application of s. 36 to municipal wastewater effluent discharges. The *MWWE Strategy* requires the following:

1. The upgraded WWTP will be required to meet National Performance Standards for Carbonaceous Biochemical Oxygen Demand ($_{C}$BOD), Total Suspended Solids (TSS), residual chlorine, and unionized ammonia.
    - The National Performance Standards are written into the federal *Wastewater Systems Effluent Regulations*, which passed in July, 2012. As detailed in the Effluent Limits Assessment TM (AECOM 2012), the National Performance Standards will be achieved by meeting the provincial effluent discharge criteria (summarized below in Section 1.2.5).
2. Toxicity testing of final effluent, as well as monitoring of effluent flow and specified parameters in the final effluent and receiving waters, with reporting to Environment Canada.

3. Development of site-specific Effluent Discharge Objectives for parameters such as pathogens and nutrients as well as those covered by the National Performance Standards (ammonia, cBOD and TSS).

    - Development and management of the Effluent Discharge Objectives are the responsibility of the local (provincial) jurisdiction, and, in the case of the Regina WWTP, will be implemented through establishment of effluent limits in the Permit to Operate issued by the Saskatchewan Ministry of the Environment (SMOE), described later in Section 1.2.5. The Effluent Discharge Objectives are to consider, at a minimum, the characteristics of the receiving environment and an initial characterization of the WWTP effluent. The City of Regina, in consultation with the SMOE, has undertaken several studies of the receiving environment and is completing the one-year effluent characterization study stipulated in the WWTP's provincial Permit to Operate as a requirement under the federal *MWWE Strategy*. These studies, with consideration of independent studies, contribute to fulfillment of the requirement under the *MWWE Strategy* to develop site-specific Effluent Discharge Objectives. Due to minimal dilution of WWTP effluent downstream of the outfall in Wascana Creek, the City may be required to implement an Environmental Effects Monitoring program to quantify biological effects of the discharge, under terms set out under the *Wastewater Systems Effluent Regulations*. Collectively, these studies are expected to meet the regulatory requirements necessary to justify discharge of ammonia to surface waters in exceedance of provincial and federal instream water quality guidelines and objectives.

1.1.3 Migratory Birds Convention Act

The Canadian Wildlife Service (CWS) of Environment Canada administers the *Migratory Birds Convention Act* and *Migratory Birds Regulation*. It is an offence to disturb, destroy or take a nest, egg, or nest shelter of a migratory bird during the typical nesting period of April 15th to July 31st inclusive.

Some migratory bird species, such as the Burrowing Owl (present in the Regina area in relatively undisturbed grassland habitats) have an extended nesting period or activity restriction period that are set out at the federal and provincial levels. Clearing of trees, shrubs, tall grasses or marsh vegetation should not be conducted prior to or during the restricted activity period in any given year.

1.1.4 The Species At Risk Act

The federal *Species At Risk Act* (SARA) provides for the protection of indigenous species, subspecies, distinct populations and their critical habitats in order to protect biodiversity. Protection for the species listed on *SARA* is determined by the Committee on the Status of Endangered Wildlife in Canada.

The Bigmouth Buffalo is a fish species of Special Concern protected under SARA and present in the Qu'Appelle River and Wascana Creek. Discussions with DFO have indicated that the effluent discharge criteria proposed by the SMOE and adherence to the habitat protection measures of the *Fisheries Act* will meet the protection requirements for this species. Terrestrial and semi-aquatic species are not expected to be at risk from the project, as construction will not extend beyond the previously-disturbed habitats on the WWTP property. If any of the species listed in SARA are present in the project area, activity restrictions and setback distances may apply. If relatively undisturbed habitats are to be disturbed by the project, a biologist should first be employed to survey the area for species at risk and develop mitigation measures acceptable to regulators.

1.1.5 The Navigable Waters Protection Act

The federal *Navigable Waters Protection Act*, administered by Transport Canada, protects the right of navigation on waterways deemed navigable by Transport Canada. As portions of Wascana Creek are classified as navigable, modifications to the channel or to structures over or within it (such as the effluent

outfall) will require submission of an application, with project details, to Transport Canada for approval. Similarly, substantive changes in water depths resulting from altered effluent flows would likely require application to Transport Canada for approval under the Navigable Waters Protection Program.

1.1.6 Canadian Aviation Regulations and Wildlife Control Procedures

Based on Transport Canada's Wildlife Control Procedures Manual TP11500E (2002), wastewater treatment and wastewater discharge plants should be located as far as possible from airport lands, and should practice appropriate wildlife control measures as necessary, to prevent or mitigate potential attraction of avian wildlife near airports. Transport Canada recommends that as wastewater treatment plants are a moderately hazardous land-use practice, they be located at least 3.2 km from airport reference points. The Regina WWTP lagoons are approximately 5 km from the Regina International Airport.

Based on Transport Canada's Airport Bird Hazard Risk-Assessment Process, which categorizes land-use in the vicinity of an airport, the Regina WWTP is located within the Regina International Airport's Secondary Bird Hazard Zone and the Category B Event Zone. Wastewater treatment plants are designated as a moderate risk land use, and Transport Canada recommends that sufficient wildlife control measures be place where they are situated within these zones.

Under the Canadian Aviation Regulations, the Regina International Airport would be required to have an Airport Wildlife Management Plan. Within this plan, issues and solutions regarding the existing WWTP should be included as an existing land use in the vicinity of the airport.

As the upgraded WWTP will be located in the same location as the existing WWTP, existing risks associated with its operation should be known by the Regina Airport and covered within their Airport Wildlife Management Plan. However, discussions with the Regina Airport Authority are recommended to confirm that the operation of the upgraded WWTP will not introduce new hazards to the airport.

1.1.7 Canadian Environmental Assessment Act

The newly promulgated *Canadian Environmental Assessment Act* 2012 includes changes to the types of projects requiring federal environmental assessments. Under the new act, projects must be listed under the *Regulations Designating Physical Activities* to trigger the need for a federal environmental assessment. As wastewater treatment facilities are not listed on the regulations, current understanding is that no federal environmental assessment is required.

1.2 Provincial

1.2.1 Environmental Assessment Act

In Saskatchewan, the *Environmental Assessment Act* is used as one of the province's principal environmental management tools. The environmental assessment process begins with the filing of a project proposal by the project proponent for review by SMOE. Upon receipt of a project proposal, SMOE reviews the proposal to determine if the project is likely to trigger the *Environmental Assessment Act* and require a ministerial approval. The SMOE provides formal notification if the project is considered a "development" under the Act or if it is not a "development". If the project is deemed not a "development", the project may proceed as proposed, subject to any conditions the SMOE may impose and subject to all other applicable regulatory approvals (licences, permits, approvals etc.). If the project is determined to be a "development", the formal provincial environmental assessment is triggered. This formal process includes environmental assessment scoping, impact assessment, SMOE review, public comment and concludes with a decision by the Minister.

The SMOE has indicated to the City that an environmental assessment under the Saskatchewan *Environmental Assessment Act* is not required for the project (i.e. the project is not a "development"). This determination was likely based on the SMOE review of the 2006 Planning Study for the project, which was submitted to the SMOE in 2006.

From 2009 to 2011, the SMOE undertook First Nations and Métis consultation on behalf of the province.

1.2.2 Heritage Property Act

The Saskatchewan *Heritage Property Act* protects heritage, archeological and paleontological resources. In response to a request from AECOM for a Heritage Resource Review, the Ministry of Tourism, Parks, Culture and Sport Heritage Conservation Branch (HCB) indicated in a letter, dated April 18, 2011, that the Project will impact previously disturbed lands with low likelihood of intact archaeological sites being present, and that a Heritage Resource Impact Assessment (HRIA) pursuant to Section 63 of the *Heritage Property Act* will not be required. The HCB stated that it has no further concerns with the development proceeding as planned.

1.2.3 Environmental Management and Protection Act

The SMOE issues a variety of permits under the *Environmental Management and Protection Act* (EMPA) pertaining to protection of fish and wildlife habitats and to development and operation of facilities including WWTPs. For the Regina WWTP, the following permits under EMPA will be required for the upgrade project:

1.2.4 Aquatic Habitat Protection Permit (AHPP)

An AHPP issued by the SMOE permits construction in or adjacent to a fish-bearing waterbody, subject to specified mitigation measures to prevent negative impacts to fish and fish habitat. The information required by the SMOE in an application for an AHPP is similar to that required by DFO in a Request for Project Review, and the scope of the reviews and approvals is similar between the federal and provincial approval processes, although separate applications and approvals are required. An AHPP is valid for one year, with re-application required for re-issuance of a Permit each March.

1.2.5 Permit to Construct Sewage Works

A Permit to Construct Sewage Works, issued by the SMOE ensures the proposed WWTP meets the SMOE's design requirements. The application requires project drawings, land ownership information, results of the HCB heritage screening and details of any First Nation/Métis Consultation undertaken. Permit applications must be received at least 60 days in advance of commissioning any new or significantly altered sewage works. In a meeting held on May 16, 2012, the SMOE indicated that they expect a number of Permits to Construct to be applied for and issued during the course of the WWTP Upgrade Project, to facilitate construction of individual components of the Project as designs become available.

1.2.6 Permit to Operate Sewage Works

The current Permit to Operate a Sewage Works issued under EMPA to the City of Regina by the SMOE (Permit no. 00050853-03-00) came into effect June 1, 2012 and expires May 31, 2014. The Permit contains numerous items pertaining to operation of the sewage collection and treatment systems, including treatment performance, emergency bypass procedures, monitoring and reporting requirements, and criteria regarding land application of sludge. Appended to the Permit are effluent discharge criteria (effluent limits) to come into effect at the end of 2016.

1.3 Local/Municipal

1.3.1 Aquifer Protection Regulations under Regina Zoning Bylaw No. 9250

The City of Regina Zoning Bylaw No. 9250 contains regulations that include the Aquifer Protection Overlay Zone Regulation, intended to protect the Regina Aquifer system from contamination from development activities. The Regulation defines Aquifer Overlay Zones within the city and establishes performance regulations that stipulate mitigation measures to protect underlying groundwater and prohibit some types of development activities within the Overlay Zones.

The WWTP site is outside of City limits; however, the Aquifer Protection Regulations are still expected to be applicable to the site. The WWTP site is nearest the northwest corner of the City, which is within a Low Sensitivity Aquifer Protection Overlay Zone. The regulations for Low Sensitivity Aquifer Protection Overlay Zones include a number of stipulations to prevent groundwater contamination, including:

- Standards for storage tanks;
- Maximum excavation depths of 6 m or less, dependent on overburden thickness over aquifers;
- Aquifer contamination detection plans; and
- Lining of containment ponds.

The Project will implement the mitigation measures stipulated in the Regulations for Low Sensitivity Aquifer Protection Overlay Zones, or equivalent as appropriate. More extensive mitigation measures may be implemented to prevent potential impacts to groundwater identified in the course of the Project through ground-truthing and geotechnical investigations.

1.3.2 Municipal Requirements

Building permits will be required from the Rural Municipality (RM) of Sherwood for construction of the new WWTP. The RM has also requested copies of information on the project, particularly with respect to downstream effects. Specifically, the RM has requested that copies of approvals and of reports submitted to the SMOE be sent to the RM Council.

Appendix L – Project Charter

City of Regina | REGINA Infinite Horizons

PROJECT CHARTER			
PROJECT NAME:	**Wastewater Treatment Plant Upgrade**		
STEERING COMMITTEE:	Executive Sponsor: Dorian Wandzura (not part of SC) Functional Director: Derrick Bellows Project Manager: Rob Court Internal Consultant Support : Fabian Contreras Subject Matter Expert/Client : Jerry Cheshuk Legal : Jayne Krueger Finance : Pat Wilson Communications: Deb McEwen		
Date:	February 26, 2013	**Version Number:**	1.0
Project Start Date:	January 31, 2011	**Project Completion Date:**	December 31, 2016
Estimated Capital Cost:	$224 Million	**Project Management Cost:**	$20 Million

Project Overview

Project Objectives/Outcome Statement:

Current Context – the current wastewater treatment plant ("WWTP") is in need of significant upgrades for the following reasons:

- to meet new regulatory requirements. Outdated technology, antiquated processes will make it near impossible to meet the new effluent standards.
- to replace the worn out assets at the current WWTP. Many of the components of the current WWTP have reached the end of their useful lifecycle and are creating challenges to the reliable operations of the WWTP.
- to accommodate community growth. Increased residential, commercial and industrial growth demands will result in wastewater volumes beyond what the current WWTP can accommodate.

On February 25, 2008, the Administration received approval by City Council to engage professional engineering services for the pre-design, detailed design and construction engineering for the WWTP upgrades based on a traditional design-bid-build model. The City awarded professional engineering services to AECOM Canada Ltd. ("AECOM") to provide the Administration with preliminary design options for an upgraded WWTP. On March 26, 2012, Administration brought before Council a report to broaden the scope of procurement options and review the possibility of an alternative way to deliver a new WWTP.

Outcomes of the Project

The planned outcome for the WWTP upgrade project (the "Project") is a new WWTP that:

- is able to meet future regulatory requirements ;
- is delivered based on the timelines set out by regulators;
- is able to operate reliably and meet Regina's and the Region's future growth needs;
- contains innovation in design, construction and operations/maintenance of the new WWTP;
- provides long term WWTP operations and maintenance requirements that are integrated into the overall Project; and
- has a robust assets management plan for the new WWTP.

Project Scope

In Scope The Project is complex and requires the following considerations:

- Conceptual and Preliminary Design – developing the early stage planning requirements (up to 20%) of the upgrade, including a condition assessment of the current WWTP, identification of options for a future WWTP, development of criteria to evaluate WWTP design options and completion of a preliminary design report;
- Procurement – examining procurement options for the design and delivery of the Project, including but not limited to traditional design-bid-build, Construction Management, Construction Management at Risk, Design Build, and Public-Private Partnership;
- Detailed Design/performance specification – once approval has been given on the procurement method, the preliminary design concepts for the upgraded WWTP and/or performance specification will provide the basis for a detailed design that will be initiated in alignment with the selected procurement option;
- Procurement Planning - development of request for qualifications ("RFQ")/request for proposals ("RFP") and Project agreement (if DBFOM procurement method is selected);
- Construction - once the Project has gone to market and a successful bidder is chosen via the approved procurement option, construction will begin
- Long-term Operations/Maintenance – integrating a 30 years operations/maintenance plan with built assets to ensure long-term business objectives are met.

Out of Scope: The Project will not include the following components:

- Operations/Maintenance of Current Facilities – decisions related to maintenance requirements to keep the WWTP operating within permit requirements will not be a part of this Project during the procurement phase. Scope for operation and maintenance will need to be reviewed in conjunction with the selected procurement option.
- Western Potash Agreement – The Western Potash agreement and discussion are not a part of this Project.
- Water reuse – other water reuse options will remain possibilities for the City regardless of the procurement method chosen.
- McCarthy Boulevard Pumping Station – capital projects, operation and maintenance of the pump station are not part of this Project.

Project Success Indicators:
The overall purpose of the Project is to deliver a new Wastewater Treatment Plant that will allow the City to meet higher quality effluent standards as prescribed by the Province. The upgrades will be complete in accordance with the 2016 timeline established by Provincial regulators. The financial cost of the upgrade will reasonable and within cost estimates.

Success indicators for the Project include:

A. Completion of a preliminary design that has thoroughly explored options for a new WWTP and that will form the basis for detailed design, tender documents, etc.
B. A thorough review of procurement options has been completed and Council has made a decision on the method of procurement.
C. The appropriate tender documents are completed based on the procurement method selected and have been sent to market.
D. City Council has approved the overall outcomes for WWTP design and the procurement option.
E. The completion of construction and commissioning of the new WWTP is on time and on budget.
F. The public is appropriately engaged on the cost of the new WWTP and progress on the completion of the Project. Engagement with the public helps to generate positive support for the direction of the Project.
G. A long term (>20 years) operations/maintenance concession is successfully completed, if O/M are part of the delivery mechanism.
H. Achievable and sustainable capital and operating/maintenance finances with Utility Rates, reserve funding, debt, and grants.

Inputs Required for the Project to be Successful	
Factor	**Key Customer Group or Stakeholder**
Clear and consistent communication on the progress of the Project, resolution of issues and direction to the Project	Executive Sponsor, Project Manager, Steering Committee
Governance of the Project is clear, roles and responsibilities are understood	Executive Sponsor, Project Manager, Functional Director
Communications (external and staff)	Executive Sponsor, Client, Steering Committee, Communications
Legal Review	City Solicitor Office
Consultants are effectively managed	Project Manager, Project Team
Staff resources are available	Project Team, City's Executive Leadership Team, Steering Committee

Major Project Milestones/Activities:
Note: A more detailed Project schedule will be available in the Project plan.

Project Milestone/Activities	**End Date**	**Significance**
PHASE ONE: PLANNING AND PROCURMENT DECISION		
AECOM conceptual report submitted	May 2012	
Application for PPP Canada intake	June 2012	Direction to consider alternatives to traditional DBB

Report to Council on P3 decision by PPP Canada	Sept 24, 2012	Verification that Project meets PPP Canada criteria
Develop Communications plan for procurement decision	Nov 19, 2012	
Develop overall communications plan	Dec 2012	
Complete Preliminary Design Report	Dec 2012	
Complete Screening Process for P3	Dec 2012	
Submission of draft Business Case to PPP Canada (formal submission after City Council approval)	Jan 2013	Tight timing requires the sharing of information to meet PPP Canada deadlines. This does not commit Council
Submit recommendation on project delivery to City Council	Feb 2013	
Public consideration/comment on project delivery recommendation	Feb 2013	Potential public/political controversy on using private operations/maintenance
City Council decision on project delivery	Feb 2013	DBFOM with PPP Canada funding
PPP Canada reviews submission	Jan-Mar 2013	
PPP Canada Board review recommendations	Mar 2013	
Finance Minister authorizes and funding announced	Jun 2013	
PHASE TWO: PROCURMENT AND CANDIDATE SELECTION		
City undertakes RFQ process to select proponents	Apr-Jun 2013	This will narrow the field of potential proponents to three, which is beneficial to the City as proponents do not want to spend the money associated with preparing a full proposal to complete with a wastewater treatment plant design unless they have a 1 in 3 chance of being the successful proponent.
City Council delegates authority to award contract	February 2013	Allow for evaluation of proposals based solely on the proponents' responses to the RFP requirements.
City selects three proponents	June 2013	See note above
City undertakes RFP process to select consortium	Jun 2013 -Jan 2014	The City is obligated to procure assets of this magnitude using a public procurement process. The RFQ and RFP will meet this treaty obligation.
Administration recommends consortium (also referred to as "Project Co.")to deliver Project and operations	Jan 2014	By selecting the highest ranked proponent, the City will select a proponent that can achieve the Project's objectives and be in compliance with trade treaty obligations.
Contract is awarded	Jan. 2014	

PHASE THREE: CONSTRUCTION		
Consortium begins DBOFM and assumes operation	Spring 2014	Having Project Co. on-site and operating the WWTP during construction will facilitate work on the brownfield portions of the Project.
Construction begins	Spring 2014	
Construction reaches substantial completion	Fall 2016-Spring 2017	
25% of capital cost is paid to City at substantial completion	Fall 2016-Spring 2017	
PHASE FOUR: OPERATION & MAINTENANCE		
27.2 year operating contract begins	Fall 2016-Spring 2017	

Deliverables:

- Project Charter and detailed work plan;
- Communications strategy and overall public engagement plan;
- Preliminary design report with a WWTP upgrade options and a recommendation;
- P3 Screening Assessment, Strategic Assessment, Value for Money analysis and Business Case as per PPP Canada requirements;
- Outcome Specifications are completed for the RFP;
- Procurement documents are prepared;
- RFQ and RFP's sent to market;
- Highest ranked Project Co. selected;
- Staff transitioned to Project Co. (if applicable to the procurement option);
- WWTP construction complete;
- New WWTP is commissioned; and
- Long-term operations/maintenance period is completed.

Assumptions:

- Defined outcomes (permit and timing) will not change during construction/commissioning of upgraded plant.
- Funding will be available
- Project will attract competent proponents within a competitive market
- Staff capacity is available to the Project;
- A specialized project manager is in place to ensure that integration/construction/commissioning is completed according to contract requirements and schedule;
- The sponsor will be active and visible throughout the Project and provide timely communication to the City's Executive Leadership Team and Council on the Project; and
- Consultants are able to meet timelines.

The current requirements established by regulators do not change significantly over the course of the Project

Constraints:

- Collective bargaining agreements;
- Current pension plan; and
- Current City of Regina business practise/policy (legal, procurement).

Project Risks:		
Risk	**Explain Risk**	**Risk Management Plan**
Political Risk	• politicians do not make a decision in a timely manner	• Administration must provide clear and accurate reports upon which Council can make informed decisions
Procurement	• procurement rules in trade treaties • obligation to provide access to site, documents and information to allow bidders to bid accurately	• procurement of P3 will be a competitive public process that will meet trade treaty requirements; • external experts will assist in preparing comprehensive procurement documents and the required contracts
Construction	• managing construction • coordination with ongoing operations • on time or compress schedule • on budget • meeting specifications	• Risk is transferred to Project Co. to manage construction, which is a benefit to the City of the P3 model since the City does not think it has the resources and expertise to manage construction. • Project Co. will need to diligently monitor/conduct construction. • City will need to diligently monitor Project Co. and progress associated with payments.
Transition of O & M	• collective agreement • pension	• many of the issues can be resolved with contractual provisions in the contract, but whether contractual provisions are sufficient to appease those opposed is unknown
Regulatory Compliance	• ultimate obligations to meet permit and other regulatory/statutory requirements on the City	• contract will contain contractual and financial penalty provisions for breaches of contract relating to permit as maintaining permit will be a requirement of the contract; • Contract will contain a number of performance security provisions, including Project Co.'s third party financing to ensure compliance with contractual requirements, including regulatory requirements. • ultimately, responsibility and liability will remain with the City
Financing	• financing the capital expense through reserve and debt • debt limits • financing O & M costs over operating term; • O & M costs and impact on debt limits.	• City will need to ensure that it has sufficient funds in place to carry out the P3 project prior to going to market.
City's Internal Ability to do the capital work	• changing processes/lack of communication • once in a lifetime project so lack experience and detailed expertise in-house.	• Project Co. will manage the capital work.

Management of Contract	• long period to manage • City employees transitory • needs careful review before approving payments • need to monitor performance to ensure contract compliance • need to review reports from Project Co. and act accordingly in a timely manner • watching credit rating over time to ensure security still meets contract requirements • City is locked into payments over a long period of time that will likely leave little to no discretionary spending room for future Councils	• The City will need a permanent position(s) within the Administration to administer the contract over the 30-year term. This person needs to be knowledgeable of the milestones in the contract and the requirements that are to be met that trigger payment. • Asset is returned to the City in the state of repair that the City requests (less/no deferred maintenance).
Allocation of Risk	• scope, schedule and cost • performance guarantees with penalties	• the contractual documents will look to transfer as much risk as possible while maintaining reasonable pricing
Ongoing O & M	• operator's competency • labour relation issues • meeting permit requirements to have performance guarantees with penalties • discipline brought by financing • life cycle of assets • latent defects	• Ongoing O&M will be Project Co.'s responsibility, but with links to the City for some latent defects and contract compliance. • Most of the risks can be addressed, at least in some way, contractually.
Environmental Protection	• new WWTP will better protect environment • meet permit	• these will be part of the technical specifications for the WWTP
Human Health	• new WWTP will better protect human health • meet permit	• these will be part of the technical specifications for the WWTP
Access to Information	• disclosure of value for money assessment	• there are provisions in LAFOIP that the City can rely on to keep the information confidential, at least for a period of time, but someone may challenge the decision to keep it confidential in the Courts
PPP Canada	• timeline • requirement to have, operate and maintain as part of the P3 project • indicated that it is only willing to fund DBFOM	• PPP Canada has indicated some willingness to adjust its schedule to help facilitate the City doing the WWTP as a P3

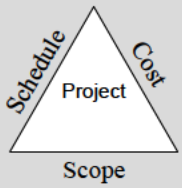
Triple Constraint Prioritization:

Based on Schedule, Cost and Scope

1st Column: Rank in order of flexibility (most flexible, somewhat flexible or fixed).

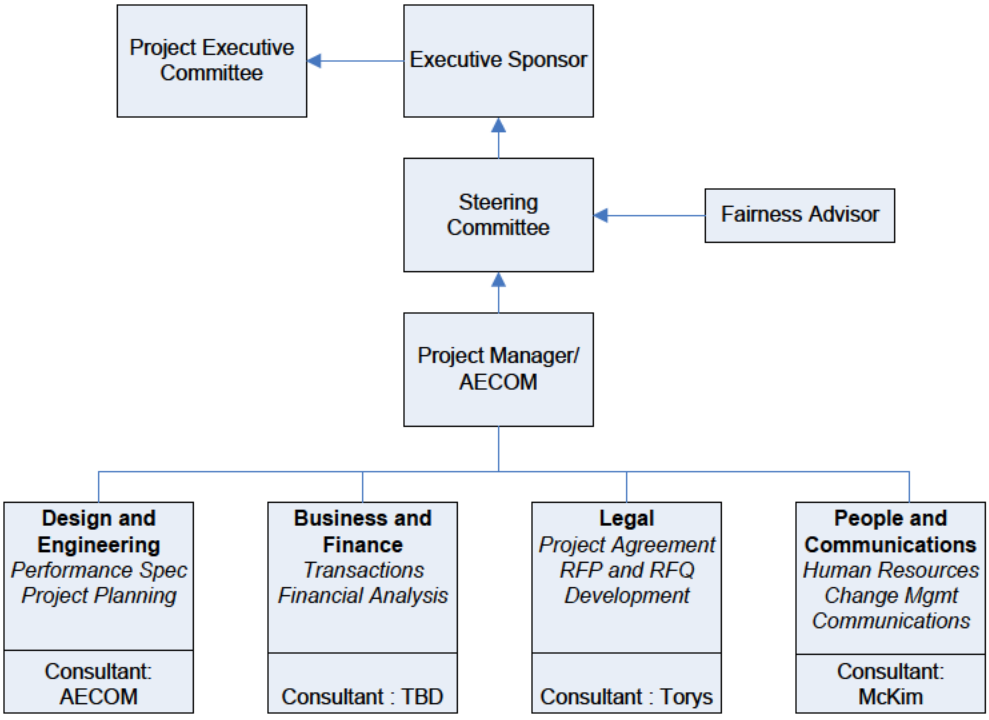
2nd Column: Provide a brief explanation of ranking, for example: your customer has a launch date that cannot be missed, or the client has a very specific amount of budget for the project.

Note: there is a balancing of the three elements that allows for successful planning, resourcing and execution of a project.



Order	Explanation of Ranking
1. Cost	Resources have been identified for this Project with numerous funding sources (reserve, debt, grants). Final cost will be determined by regulated project deliverables (scope and schedule)
2. Scope	The Project outcomes have been established. There is opportunity for scope adjustment delivery mechanisms used to achieve the outcomes
3.Schedule	The Project must meet the timelines as established by the regulator

Project Governance



Status Reporting:

- The Executive Sponsor will report to City Council quarterly or when issues arise that require City Council to be advised;
- The Project Executive Committee will meet quarterly, at minimum, to review Project status and issues or more frequently when issues arise that require executive level resolution;
- The Executive Sponsor will receive updates by the Project Manager monthly, at minimum, or more frequently when issues arise that require executive sponsor level resolution;
- The Steering Committee will meet monthly at minimum or more frequently when issues arise that require Steering Committee level resolution; and
- The Project Team will meet once every two weeks at minimum or more frequently when issues arise that require Project Team level resolution.

Staffing Estimates (Project Resource Needs):		
Resource (name and title)	**Division**	**Percent of time allocated to Project**
Dorian Wandzura	DCM City Operations	20%
Derrick Bellows	City Operations (Special Projects)	70%
Rob Court	City Operation (Environmental Eng)	100%
Jerry Cheshuk	City Operations (WWTP)	80%
Fabian Contreras	Governance and Strategy (Strategy Mgmt)	30%
Pat Wilson	Corporate Services (Finance)	30%
Jayne Krueger	City Solicitor	30%
Deb McEwen	Governance and Strategy (Communications)	10%
Greg Markewich	Corporate Services (Procurement)	25%
Dauna Ditson	Governance and Strategy (Communications)	20%
Greg Jelinski	Corporate Services (Human Resources)	25%
Byron Werry	City Solicitor	5%
Chuck McDonald	Corporate Services (Director of Finance)	5%
Diana Hawryluk	Community Planning and Development (Director of Planning)	5%
Other Required Resources: *e.g. Facilities, Equipment, Software*	**Division**	**Percent of time allocated to Project**
Consolidated office and admin support for Project	Embedded in consultant.	

Roles & Responsibilities
Project Executive Committee **Dorian Wandzura, Byron Werry, Chuck McDonald, Diana Hawryluk** **Role:** The Project Executive Committee will provide Corporate oversight to the Project. **Responsibility:** • Ensure Project is congruent with Corporate strategies, goals and objectives. • Ensure resources are available to complete the Project. • Monitor budget, scope, timelines and deliverables. • Review and endorse Project Charter. • Play an active role in the key decision-making and issue resolution. • Take any action necessary to ensure the smooth integration of tactics and strategies within and between Projects. • Be active and visible with City of Regina staff. • Hold the Executive Sponsor and Steering Committee accountable for progress.
Steering Committee **Rob Court, Derrick Bellows, Fabian Contreras, Jerry Cheshuk, Jayne Krueger, Pat Wilson, Deb McEwen** **Role:** The Steering Committee will provide the overall direction to the Project. **Responsibility:** • Ensure resources are deployed in a manner that benefits the Project and the corporation. • Play an active role in the key decision-making, stakeholder management, risk management and issue resolution, removing obstacles and providing direction pertaining to the Corporate direction where necessary. • Take any action necessary to ensure the smooth integration of tactics and strategies within and between projects. • Hold the Project Manager accountable for progress.
Project Team **Derrick Bellows, Rob Court, Jerry Cheshuk, Jayne Krueger, Dauna Ditson, Pat Wilson, Greg Jelinski, Greg Markewich** **Roles:** The members of the Project Team will provide subject matter expertise to different components of the Project. **Responsibilities:** • Ensures that his/her part of the project work is completed on time, within cost, and satisfies the need of the Project. • Acts as a liaison with his or her supervisor (functional manager). • Directs specialist outside consultants and advisors supporting the Project. • Communicates back to the team on issues and status of their work. • Participates in sub-project components of the overall Project.

Executive Sponsor

Dorian Wandzura

Roles:

Provide ongoing Project oversight on behalf of the Project:

- Ensuring that the Project Charter and plan meet the requirements of the Project and that appropriate consultation has occurred regarding all roles;
- Ensuring that the Project remains consistent with the approved Project Charter and Project Plans;
- Make decisions and commitments on behalf of the Corporation within authority delegated by City Council;
- Be the Administration champion of the Project.

Responsibilities:

- Be active and visible, building the change coalition with management and communicating to employees throughout the Project.
- Approve RFP/RFQ process and proponent selection.
- Enter into a P3 Project Agreement to deliver the Project.
- Submit a project application and negotiate funding agreements with PPP Canada.
- Monitor the implementation of Project plans as required by the particular Project.
- Hold the Project Manager/Steering Committee accountable for progress.
  - Review issues log and manage the overall work of the Project.
  - Review Status updates and progress with the Project.
- Ensure timely communications occur with the City's Executive Leadership Team and City Council.

Functional Director

Derrick Bellows

Roles:

Provides leadership, ensures resources are present and elevates issues to the Executive Sponsor

Responsibilities:

- Ensures that the Project remains consistent with organizational objectives and helps the team overcome obstacles encountered during the Project.
- Ensures the Project has clear direction and support.
- Provides the resources to support the Project from the department.
- Ensures the organisation is utilizing the Project management process.
- Provides expertise in performing a specialized job, task, or skill related to the Project.

Project Manager

Rob Court

Roles: Provides the day to day management of the Project

Responsibilities:

- Take actions necessary to ensure the smooth implementation of tactics and strategies associated with the execution of this Project, including, if necessary escalating conflicts to Functional Director as required.
- Facilitates the team process.
- Collaborates with the team to create and execute the Project Plan.
- Creates and updates the Project Charter.
- Acts as a liaison between the sponsor and the project partners.
- Works directly with PPP Canada on funding application.
- Monitors the progress of the Project and sub-projects.
- Takes any action necessary to ensure the smooth implementation of tactics and strategies associated with the execution of a particular Project, including, if necessary, escalating issues and/or conflicts to the Executive Sponsor.
- Works closely with the Change Management Lead.
- Works with Communications on the overall Communication Plan.
- Provides Status reports to the Sponsor.
- Ensures sign off by all roles indicated in the Project Charter.

Change Management Lead

TBD

Roles: Provides change management support and advice throughout the Project

Responsibilities:

- Filled by an individual certified in the Prosci Change Management process, which is the City of Regina's corporate methodology.
- Develops a change management plan based on situational awareness of the details of the change and the groups impacted by the change.
- Conducts readiness assessments, evaluating results and presenting findings.
- Works closely with the Project Manger.
- Provides Prosci templates where required.

Owner's Engineer

Planning, Support, Compliance - AECOM

Role: Provide technical support on the project management and engineering aspects of the Project

Responsibility:

- Advise and support the Project Manager on planning (e.g. Functional program), design and engineering matters, project management, and Project Co. compliance with design and engineering requirements.
- With respect to design, will be responsible for developing design output specifications, and may develop preliminary design to guide bidder design teams.
- With respect to project management, will provide a project office and all coordination, correspondence management and document control in a secure environment.
- Execute compliance oversight on behalf of Project Manager once Project Co. selected and engaged.

Legal Advisor

Torys LLP

Role: Provide Legal advise throughout the Project

Responsibility:

- Legal advisor works with transaction advisor and other consultants in structuring the RFQ, RFP and Project Agreement.
- Lead responsibilities for the development of the main Project documentation (namely the RFQ, RFP and Project Agreement) and for coordinating the input of required schedules.
- Engages with proponents' legal counsel on Project Agreement amendments.
- May advise on procurement process matters, specifically compliance matters.

Financial/Business advisor

TBD

Role: Provide business and financial advice throughout the Project

Responsibility:

- Transaction advisor works with Project Manager and other advisors to articulate commercial terms of the Project and structures the overall transaction (e.g. Delivery model, payment mechanism, etc.).
- Develops and sometimes manages procurement process for the Project Manager, including working with legal counsel and other advisors to draft transaction documents (e.g. RFQ and RFP), facilitating commercially confidential meetings and devising and coordinating evaluation process.

Fairness Advisor

TBD

Role: To oversee the procurement process to ensure that it is fair and transparent

Responsibility:

- The Fairness Advisor supports the Project by undertaking the following activities:
  - Reviews key aspects of procurement process design;
  - Monitors the execution of the procurement process; and
  - Reports findings and conclusions on the Project's overall compliance with the defined procurement process.

Charter Change Record:	
Date	**Decision and Change Made**
February 21, 2013	Charter reviewed by the Project Executive Committee and Steering Committee
February 26, 2013	Charter signed off by the Steering Committee

Change Management:

Change Management will be extremely important to the success of the Project. The extent of the change is not entirely known; however, it is safe to say that WWTP operations will be considerably different from what exists today. The new operating requirements of the WWTP will necessitate, at the very least, training for existing staff of the WWTP if not new staff to operate the WWTP. The method of procurement and decisions on the operating and maintenance of the WWTP (if a DBFOM is selected) will mean significant change for employees. In addition, if a DBFOM is selected, it will be important to communicate the change to the community so that they understand what it means.

Related Projects:

- Western Potash Corporation's reuse of the City's wastewater
- Maintenance and capital upgrades for short term odor control (digester maintenance, sludge dewatering, aeration, de-sludging lagoons)
- Utility Business Improvement Strategy (UBIS)
- Regina Revitalization Initiative

Outside Consulting Support:

AECOM will be providing engineering expertise on the Project. AECOM through its sub consultant Deloitte LLP ("Deloitte") will be provide business expertise on the Project up to the submission of a business case to PPP Canada Ltd. After submitting the business case to PPP Canada Ltd., the City will look to publically procure a financial advisor to provide business expertise on the Project. Rob Court will be the primary contact for both the engineering and business consultants. AECOM is responsible for engineering and will serve as the City's principle engineering advisor on the Project. The Financial Advisor will be primarily responsible for the support in the procurement option of the new WWTP.

McKim Cringan George Communications will provide communications expertise on the Project. Dauna Ditson will be the primary contact.

Torys LLP will provide legal expertise on the Project. Jayne Krueger will be the primary contact.

Funding:

Funding for this project is planned for in the Utility's long-term financial model. The project has been submitted through City Operations and is being managed through the Special Projects Secretariat. The impact of this project have been considered during the setting of rates and the most current financial information related to this project will form part of the performance based rate review to take place in 2013.

The anticipated sources of funding for this project are:

- Utility Servicing Agreement Fee Reserve (18% of funds allocated prior to the 2013 budget process; 22% of funds to be allocated in 2014 through 2016/7)
- If DBFOM is selected as the delivery model, and PPP Canada approves funding, 25% of eligible costs (with an anticipated maximum of $58.7 million) is expected to come from this source
- The remaining funding for both capital and operating would be provided through the General Utility Reserve, funded by utility rates.

Note: If DBFOM is selected as the delivery model, up to $118 million in financing would be provided by Project Co. This financing would be repaid over the term of the contract through Utility SAF Reserve (through servicing agreement fees) and the General Utility Reserve (through utility rates).

Approvals: *These signatures indicate our agreement to initiating the project defined by this charter and supporting it with resources for the initial project team.*

Steering Committee Approval	**Meeting Date:**
Dorian Wandzura, ***Executive Sponsor***	**Date:** Feb 28/13
Derrick Bellows, ***Special Projects Secretariat***	**Date:** February 26, 2013
Rob Court, Project ***Manager***	**Date:** February 27, 2013
Fabian Contreras, ***Strategy Management***	**Date:** Feb 27, 2013

Jerry Cheshuk, *Manager, WWTP* Date: Feb 26/13

Jayne Krueger, *Legal* Date: Feb. 26, 2013

Pat Wilson, *Finance* Date: Feb 26, 2013.

Deb McEwan, *Communications* Date: Feb. 28, 2013.

McEwen, Kelli McEwen.

Appendix M – Approved Council Recommendations

CR13-26 Executive Committee: Wastewater Treatment Plant Upgrade – Procurement Recommendation

Recommendation

1. That City Council approve proceeding with the Design/Build/Finance/Operate/Maintain (DBFOM) procurement approach for the upgrade of the wastewater treatment plant (WWTP).
2. That City Council authorize the Deputy City Manager of City Operations to proceed with the preparation of procurement documents (Request for Qualifications ("RFQ") and Request for Proposals ("RFP") in support of the DBFOM model for the upgrade of the WWTP (the "Project") based upon the following scope:
    a. the design and construction of a WWTP that meets the City's WWTP permit effluent quality requirements that come into effect on December 31, 2016;
    b. the boundary for the Project that begins upstream of the WWTP valve chamber, includes the WWTP site and the effluent discharge to Wascana Creek. For further certainty McCarthy Boulevard Pumping Station and the forcemain are not included within the scope of the Project;
    c. a capacity of the upgraded WWTP that will be able to meet the needs of a population of 258,000.
    d. a construction period that results in substantial completion of the Project in early 2017; and
    e. a maximum 30 year term in the Project Agreement, which will include construction, operation and maintenance by the successful proponent. This includes the period for private operation of the current WWTP during construction and monthly payments, which will provide a performance based payment for operation, maintenance and financing of the Project. The City will continue to retain ownership of the WWTP.
3. That City Council authorize the Deputy City Manager of City Operations to prepare and issue a RFQ to identify short-listed proponents who could deliver the Project.
4. That City Council authorize the Deputy City Manager of City Operations to award an opportunity to participate in the RFP process to the three highest scoring proponents identified by the RFQ process.
5. The City Council authorize the Deputy City Manager of City Operations to prepare and issue a RFP to identify the successful proponent who will deliver the Project.
6. Subject to the preferred proponent meeting all RFP requirements, that City Council authorize the Deputy City Manager of City Operations to enter into a P3 Project Agreement ("Project Agreement") to deliver the Project with the preferred proponent identified by the RFP.
7. That City Council approve that Administration submit a business case for the Project as a DBFOM delivery model to PPP Canada Inc.

("PPP Canada") for funding consideration.

8. That City Council authorize the Deputy City Manager of City Operations to pursue discussions with PPP Canada, negotiate and finalize any funding agreements required by PPP Canada.
9. That City Council authorize the Deputy City Manager of City Operations to proceed with an RFQ while awaiting a PPP Canada funding decision, but the Deputy City Manager of City Operations shall not issue an RFP without first confirming that the City will receive PPP Canada funding for the Project.
10. That City Council require the City Administration seek further direction from City Council in the event the PPP Canada does not approve the Project for funding from the P3 Canada Fund or in the event that the scope of the Project or capital requirement for the Project change, pursuant to the requirements of *The Regina Administration Bylaw*.
11. That the following funding model for the WWTP Upgrade be approved:
    a. Capital commitment of up to $224.3 million for the design, construction, servicing, planning, procurement and project management costs, for the DBFOM procurement be funded from the following funding sources:
        i. Up to $118.3 million in debt through the private partner;
        ii. Up to $58.7 million, representing 25 % of eligible costs funded through the P3 Canada Fund, offsetting additional City debt;
        iii. $19.8 million from the General Utility Reserve; and
        iv. $27.5 million in previously approved capital funding.
    b. In principle, the ability to pursue up to 30 year debt up to $118.3 million. All debt issues require City Council approval through a debt borrowing bylaw, and will be brought forward to Council at a future date. In addition, the financial model includes payments to cover debt principal and interest payments that must be paid and recovered from revenue streams over 30 years.
    c. In principle, a commitment to providing a performance-based payment for operations, maintenance and availability of the facility, compensating for a range of DBFOM service over the 30 year term, with an estimated cost of:
        i. $378.0 million (assuming 3.5 % inflation) in the operation and maintenance portion of the payment to P3 Contractor ("Project Co.") for the WWTP. These costs are currently an ongoing part of the utility program;
        ii. $117.2 million in the major maintenance portion of the payment to Project Co., to ensure that the WWTP's assets are maintained and upgraded appropriately through the WWTP's lifecycle; and
        iii. $265.0 million towards the capital payment portion of the payment to Project Co.
    d. That the operation maintenance and the debt servicing costs be

considered and funded through future budget proposals over 30 years and funded through revenue sources, including but not limited to the collection of:

i. $44.6 million in funding from the Utility Servicing Agreement Fee (SAF) Reserve, to be applied to capital financing costs;
ii. Up to $707.6 million in utility revenues; and
iii. $8.0 million in funding through contractor funding, including deposit interest.

e. That the debt considered in the above assumptions for $118.3 million be forwarded to the 2014 budget process for consideration.

12. That the City Clerk be authorized to execute the Project Agreement and any funding agreements required by PPP Canada.

Councillor John Findura moved that the recommendations of the Executive Committee contained in the report be concurred in.

Mayor Michael Fougere left the chair to enter the debate. Councillor John Findura took the chair.

Mayor Michael Fougere returned to the chair.

The main motion was put and declared CARRIED.

CR13-27 Executive Committee: Wastewater Treatment Plant Upgrade – Procurement Team Contracts

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Recommendation

1. That the Deputy City Manager of City Operations be authorized to negotiate and approve the terms of an addendum (Addendum) to the Pre-Design, Design and Construction Services Agreement between the City and AECOM Canada Ltd. (AECOM) dated as of January 31, 2011 and amended on September 25, 2012 to have AECOM provide engineering, technical, design and construction advice to the City for the reminder of the Project;
2. That the Deputy City Manager of City Operations issue a request for proposals (Fairness Advisor request for proposal (RFP)) to obtain an independent fairness advisor to advise the City on delivery planning and procurement of the Project;
3. That City Council authorize the Deputy City Manager of City Operations to award and finalize the terms of an agreement with the successful proponent chosen from the Fairness Advisor RFP;
4. That the Deputy City Manager of City Operations issue a request for proposals (Business Advisor RFP) to obtain a business advisor to advise the City with financial and business matters in relation to procurement phase of the Project;
5. That City Council authorize the Deputy City Manager of City Operations to

award and finalize the terms of an agreement with the successful proponent chosen from the Business Advisor RFP; and

6. That the City Clerk be authorized to execute the following agreements after review and approval by the City Solicitor:
    a. the Addendum;
    b. the contract awarded to the successful proponent as a result of the Fairness Advisor RFP; and
    c. the contract awarded to the successful proponent as a result of the Business Advisor RFP.

Councillor John Findura moved, AND IT WAS RESOLVED, that the recommendations of the Executive Committee contained in the report be concurred in.

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