

February 25, 2013

To: His Worship the Mayor  
and Members of City Council

Re: WWTP Upgrade – Procurement Recommendation

---

**RECOMMENDATION OF THE EXECUTIVE COMMITTEE  
- FEBRUARY 13, 2013**

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.

*EXECUTIVE COMMITTEE – FEBRUARY 13, 2013*

The following addressed the Committee:

The following addressed the Committee:

Maurice Butler, representing himself;  
Tim Anderson and Guy Marsden, representing CUPE Local 21;  
Jim Elliott, representing the Regina Chapter of the Council of Canadians; and  
John Hopkins, representing the Regina and District Chamber of Commerce

Mayor Michael Fougere, Councillors: Sharron Bryce, Bryon Burnett, John Findura, Jerry Flegel, Shawn Fraser, Bob Hawkins, Terry Hincks, Wade Murray, Mike O'Donnell and Barbara Young were present during consideration of this report by the Executive Committee.

The Executive Committee, at its meeting held on February 13, 2013, considered the following report from the Administration:

**RECOMMENDATION OF THE EXECUTIVE COMMITTEE  
- JANUARY 11, 2013**

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:

- f. 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.
- g. 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.
- h. 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.
- i. 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.
- j. 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.

*EXECUTIVE COMMITTEE – JANUARY 11, 2013*

The Committee adopted a resolution to concur in the recommendation contained in the report.

Mayor Michael Fougere, Councillors: Sharron Bryce, Bryon Burnett, John Findura, Shawn Fraser, Bob Hawkins, Terry Hincks, Wade Murray, Mike O'Donnell and Barbara Young were present during consideration of this report by the Executive Committee.

The Executive Committee, at its meeting held on January 11, 2013, considered the following report from the Administration:

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:
  - f. 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;
  - g. 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;
  - h. a capacity of the upgraded WWTP that will be able to meet the needs of a population of 258,000;
  - i. a construction period that results in substantial completion of the Project in early 2017; and
  - j. 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:
  - k. 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.
  - l. 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.
  - m. 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.
- n. 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.
- o. 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.

## CONCLUSION

The City's Administration followed the steps of the City of Regina Public-Private Partnership (P3) Policy to consider procurement options for the construction and ongoing operation and maintenance of the WWTP.

Phase 1 (Delivery Model Assessment Process), which includes a Screening Assessment, Strategic Assessment and Value for Money Assessment is complete.

The analysis concluded that a Design/Build/Finance/Operate/Maintain (DBFOM) procurement approach, subject to receipt of PPP Canada funding, provides the City with the greatest value for money and meets the City's longer term operational and strategic objectives.

The other procurement options that were assessed had financial/strategic advantages over a traditional Design Bid Build (DBB) approach. However, a DBFOM had greater financial benefits than the others. The advantages of the DBFOM model were derived from more effective transfer of risk and the the opportunity to secure financial support from PPP Canada, through the P3 Canada Fund.

The risks and strategic considerations that apply to the DBFOM model include:

- Ensuring the long term maintenance needs of the plant are addressed throughout its lifecycle (no deferred maintenance);
- Transfer operating risks (i.e. new technology, more automation, staff recruitment and retention challenges) to the private sector;



- Addressing internal capacity constraints (human resource availability, expertise and processes) to effectively manage the delivery of a project of this size, scope and complexity.
- Cost certainty (the contractor will be required to agree to a fixed cost to deliver the project);
- The amount of debt the City would need to issue in addition to the timing of debt issuance; and
- Opportunity for innovation.

The \$224.3 million capital construction cost for the WWTP represents the high end estimate range using a DBFOM model. The estimate includes savings from efficiencies as a result of the DBFOM procurement process and incorporates a cost contingency of 15%. In some projects, such as the Stadium, there is an ability to adjust design to meet the budget. With the WWTP, the final determinant of cost is based on what is needed to meet regulations and is the reason for including a 15% contingency into the estimate. Projects receiving P3 Canada Fund approval are eligible to receive 25% of their capital costs. Even though this project meets the requirements, funding is subject to a final decision of the Federal Minister of Finance.

The following table summarizes the difference in Value for Money between the procurement models, based on the high end estimate, when PPP Canada funding is included:

	DBB	CMAR+DB	DBFOM
Value for Money	0% (Base Case)	7.6%	16.5%

The 30 year estimated life cycle cost of the WWTP including operations, maintenance, life cycle capital renewal and borrowing costs is \$984.5 million, assuming the high end capital cost of \$224.3 million. The long term operation and maintenance costs of the plant will depend on the final design and the results of the procurement process. Once life cycle costs are agreed to, the Project Co. will bear much of the risk of changes in the actual cost.

The DBFOM procurement recommendation meets the conditions within the P3 Policy when considering a P3 delivery model.

The project is aligned with City priorities and strategies	✓	The WWTP has been a planned part of the Utilities capital program.
The public interest is protected	✓	The WWTP will continue to be owned by the City. The regulatory permit requirements will remain with the City.
Risks are identified and managed	✓	Administration has identified the risks for the project and allocated those risks to the party best able to address them.
Value and affordability are demonstrated	✓	A robust financial and value for money model has been developed for the project.
The private sector is appropriately engaged	✓	The Administration, through its consultants, undertook market sounding to understand the expectations and capacity of the market to deliver the project.
Public Sector employees are treated fairly	✓	The City is guided by provincial laws and has identified the necessary provisions to ensure employees are treated fairly throughout the process.
Appropriate governance and accountabilities are established	✓	The right expertise has been identified to assist in delivering the project and the appropriate authorities have been delegated as per the policy to carry out the project.

**BACKGROUND**

On March 26, 2012, Council approved the policy that guides the consideration of procurement options for major infrastructure projects (CR12-30). The P3 Policy lays out the criteria and process for considering procurement alternatives, including public private partnerships.

In June 2012, Council approved a recommendation to screen the WWTP for alternative procurement options, including the use of a P3 as per the P3 Policy. Over the last 6 months, the Administration has been working with AECOM (project management and engineering advisor) and its sub-consultant Deloitte LLP (“Deloitte”) to conduct a screening assessment, market sounding, strategic assessment and value for money analysis.

In December 2012, a report summarizing the costs of the upgrade based on the preliminary design analysis using DBB was presented to City Council. The report clarified that upgrades are required to:

- 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
- meet new Provincial effluent standards.

This report provides Council with a summary of the analysis to determine the appropriate procurement approach for the upgrades to the WWTP.

**DISCUSSION**

In order to determine the appropriate procurement approach for the WWTP upgrade, the Administration followed the P3 procurement process framework approved in March 2012. The framework identifies the following three phases, each requiring City Council approval:

<b>Phase 1</b> (June to December 2012)	<b>The Delivery Model Assessment Process:</b> <ul style="list-style-type: none"> <li>• Screening Assessment;</li> <li>• Strategic Assessment; and</li> <li>• Value for Money Assessment.</li> </ul>	Entering Evaluation Process, Approved by Council June 11, 2012
<b>Phase 2</b> (January 2013 to April 2014)	<b>The Procurement Process:</b> <ul style="list-style-type: none"> <li>• Delegate authority to the Deputy City Manager of City Operations to:                             <ul style="list-style-type: none"> <li>○ Proceed with a DBFOM P3 procurement including RFQ, RFP and award; and</li> <li>○ Submit a business case to the P3 Canada Fund.</li> </ul> </li> </ul>	Recommending approval – January 2013
<b>Phase 3</b> (beginning April 2014 for 30 year Project Agreement term)	<b>The Contract Management Process:</b> <ul style="list-style-type: none"> <li>• Delegate authority to the Deputy City Manager of City Operations to enter into a Project Agreement with a preferred proponent subject to an unqualified opinion on the P3 process from the Fairness Advisor; and</li> <li>• Then proceed into project implementation followed by contract management.</li> </ul>	Recommending approval – contract award approximately April 2014

Significant information on the Phase 1 analysis is contained in Appendix A: *City of Regina Wastewater Treatment Plant Expansion & Upgrade Project – Summary of Delivery Model Assessment*, which is attached to this report. This Appendix provides details on the delivery models, the evaluation process and results of the analysis.

The result of the analysis is based on the collective professional experience and project-specific knowledge of the project team coupled with research and discussion. The project team is comprised of City employees from City Operations, Finance, Legal, Communications, Human Resources, and experts from AECOM (in wastewater treatment plants, alternate procurement methods and financial modeling), and Deloitte (on procurement models, P3 projects, and financial issues).

The Phase 1 assessment encompasses not just P3 models, but the full scope of potential delivery models for the Project. The following five procurement approaches were the short listed candidates for detailed reviewed from an original list of 12 procurement options.

Traditional	Design-Bid-Build (DBB) (multiple tenders) Baseline for analysis only
Alternative	Construction Manager at Risk (CMAR)
	CMAR (brownfield) + DB (greenfield)
P3	Design-Build-Operate-Maintain (DBOM)
	Design-Build-Finance-Operate-Maintain (DBFOM)

A description of these five procurement approaches can be found in Appendix B: *Procurement Options Summary and Pro/Cons Analysis*.

### **Result of Phase One Analysis – Screening, Strategic and Value for Money Analysis**

The recommendation to pursue a P3 procurement approach is based on the following factors:

#### Internal City Resource Capacity

The WWTP is a large and complex project that only occurs once in a generation. Procurement and construction management would be a significant challenge under a traditional procurement approach. There are also significant challenges to coordinate construction and operations as the current WWTP will need to remain in operation during the construction phase. The DBFOM model would allow the Project Co. to begin operating the WWTP at time of construction. This results in better management of the risk of conflicts between construction schedules and operational needs. The CMAR+DB would ease some of the internal resource constraints; however, it would not address the risks from potential conflicts between construction and operation. Resource constraints can be addressed for the CMAR+DB model by contracting with external resources during the construction phase, ramping up in the operating phase.

#### Financial Affordability

The WWTP must meet the City's needs and be economical. Design work done to date is specific enough to ensure the City has a contemporary facility that meets current and future regulatory requirements. The design does not include more than required, but will accommodate future add-on's if and when they are needed.

At this time the P3 Canada Fund is the only source of grant funding that is available for the Project. The only model that has the potential to receive PPP Canada funding is a DBFOM. If the City is successful with its application for PPP Canada funding, it could receive a grant of up to 25% of the construction cost (between \$50 and \$58.7 million). If the City were to pursue a DBFOM, the cost of financing the project would increase (private sector financing is more costly than public sector financing), which does reduce some of the value of a PPP Canada grant. Even with the additional cost of private sector financing, this analysis shows that the DBFOM is the procurement option that provides the greatest value for money.

### Operational Goals and Strategies

A third important consideration is ensuring the facility receives the appropriate investment over its full lifecycle. The WWTP is a critical piece of Regina's infrastructure and requires reinvestment to ensure it meets the longer term needs of the community and protection of public health and the environment. P3 arrangements that include a maintenance component must be life-cycle costed at the time of procurement. The DBFOM will contractually require Project Co. (who as part of its operations) to undertake maintenance at defined times within the Project Agreement. This contractual requirement removes the possibility of deferred maintenance at the WWTP. CMAR+DB does not extend into the operating period and cannot ensure required maintenance is occurring at the facility. The possibility of deferred maintenance in the absence of a contractual commitment to scheduled maintenance is highly probable, although not an absolute certainty. The benefit of the engineering and business analysis is that the City has an understanding of the financial commitment required at the facility over its lifecycle. That information provides for better planning and decision-making should a decision be made not to proceed with a P3 procurement method.

Another important consideration in determining the most appropriate procurement method is the longer term operating needs of the WWTP. The Project will require a new treatment process for the City's waste water. The new treatment process will require a higher degree of automation, monitoring and control than the existing treatment process. There is some expertise at the City with the new treatment process, but there are some knowledge gaps. The DBFOM procurement approach will address the City's operating challenges. The P3 contractors that submit proposals to the RFP will be required to have expertise operating modern WWTPs.

Non-P3 approaches will require the City to operate the facility and assume the risk. Those risks include training, recruiting and retaining qualified staff to operate the facility in a labour force environment that is very competitive across North America.

### Regulatory Timelines

The City is required to have most of the upgrades to the WWTP completed by December 31, 2016 to comply with Ministry of Environment regulatory requirements. The strategic analysis concluded that CMAR+DB would likely be the quickest method of procurement to initiate. The DBFOM procurement approach is at significant risk of not meeting timelines if there are delays beyond the critical path outlined in this report. Once in place the DBFOM delivery model has an excellent track records of meeting completion deadlines.

Innovation

Administration would like to see as much innovation as possible in the Project. The P3 approach provides the most potential for innovation to the Project. A P3 procurement approach will bundle the design, construction, maintenance of operation components of the WWTP into one bid to make it as effective and efficient in meeting the City’s specifications. The competitive procurement process of the P3 will further enhance the opportunities for innovation. The P3 procurement process is outcome based and not design driven, which means that the proponents can bring forward ideas so long as they address the output specifications of the RFP. The other procurement approaches can deliver innovation; however they are not as robust as P3s.

**Financial Analysis**

There are a number of differences between the various options that have implications for the full lifecycle costing of the Project. Under the DBB methodology, cash flow to pay for construction would be required much earlier in the Project. As a result, the City would be required to take debt earlier in the Project. With DBFOM, the majority of the cash flow is deferred until substantial completion of the Project. However, Project Co. does include interim financing costs which are passed along in its price to the City and such interim financing costs (incurred by the contractor) are also calculated as part of the cost of the Project.

Deloitte assisted the City in developing the Value for Money analysis as well as developing a model showing the costs and funding for the Project through its life.

The following table shows the expected costs of the Project, based on the DBFOM model.

**Higher End of Cost Estimate Range**

<b>Expenditure</b>	<b>Expense Amount (millions \$)</b>	<b>Funding Source</b>	<b>Funding Amount (millions \$)</b>
<b>Capital Cost</b>		<b>Capital Funding</b>	
Construction cost (including procurement)*	\$224.3	PPP Canada Grant	\$58.7
		Private Party Financing	118.3
		Previously approved Capital funding	27.5
		General Utility Reserve	19.8
<b>Total Capital Cost</b>	<b>224.3</b>	<b>Total Capital Funding Sources</b>	<b>224.3</b>

<b>Operations, Maintenance &amp; Debt Servicing Payments to Project Co.</b>		<b>Operations, Maintenance &amp; Debt Servicing Costs</b>	
Operations and Maintenance	378.0	General Utility Reserve through Utility Rates	707.6
Financing Costs and Risk Transfer*	265.0	Contractor Funding (incl. deposit interest)	8.0
Major Maintenance Costs	117.2	Utility SAF Reserve (applied to capital financing costs)	44.6
<b>Total Operations, Maintenance &amp; Debt Servicing Costs</b>	<b>760.2</b>	<b>Total Operations, Maintenance &amp; Debt Servicing Costs</b>	<b>760.2</b>

\*Construction costs along with portions of procurement costs (included with Construction Cost) and interim financing costs (included in Financing Costs and Risk Transfer) are eligible for 25% funding through PPP Canada but not detailed in this table. The total eligible costs are \$234.6 million, resulting in a grant application of \$58.7 million.

A P3 DBFOM model was used to develop a 30 year cash flow analysis. In the DBFOM model, capital construction costs are paid to Project Co. based on performance based criteria that are to be set out in the Project Agreement. Based on the current assumptions in the City’s long-term

Utility Financial Model, and using the higher end of the cost estimate range (\$224.3 million), the funding required for construction will come from the following sources:

- \$58.7 million from a PPP Canada grant, based on 25 % of eligible costs;
- \$27.5 million already allocated to this Project from prior year budgets;
- \$19.8 million from General Utility Reserves, through Utility Rates; and
- \$118.3 million in debt financing through the private partner.

The debt for this Project forms a portion of the monthly availability payment, which compensates the private partner for the full range of DBFOM services, to be paid back over a 30 year term.

The operating component of the costs will be funded largely through Utility rates, as identified above. Approximately 22% of the construction cost of the upgrade is eligible for funding from the Utility SAF Reserve. Because this reserve is in a negative position, these funds are not currently available to fund construction. Future Utility SAF revenues will be applied to the ongoing capital financing costs.

While other benefits accrue from a P3 approach, such as innovation, and risk transfer, they are not easily represented in a standard cash flow analysis.

In 2013, a performance-based rate review will be completed for the Utility. In developing rate recommendations, the overall operating and capital costs of the utility must be considered. During the development of the 2013 Utility budget, the expected costs for this Project have been considered.

## **Implications of DBFOM Procurement Decision**

### Public Acceptability

There are a number of stakeholders that will have interest in the Project, and in particular the procurement decision. They include the residents of Regina, the Provincial Ministry of the Environment, Canadian Union of Public Employees (CUPE), WWTP employees, and downstream water users.

All stakeholders are interested in ensuring the City's WWTP is working well to protect health and safety of people and the environment. Those same stakeholders, but in particular, Utility customers, also want the upgrades to be cost effective.

There is a range of opinions on the advantages and disadvantages of P3 procurement. The experience of P3 projects in other jurisdictions serve as examples of how different stakeholders will view P3. CUPE has prepared a guide to municipalities to consider in the evaluation of P3s.

### WWTP Staffing

The City will retain ownership of all assets of the WWTP. There are 31 employees at the WWTP, of which 29 are members of CUPE, one is a member of the Civic Middle Management Association, and one is out of scope. If the City chooses to proceed with a DBFOM procurement approach there will be significant implications for these employees. With the DBFOM model, the employees will become employees of the Project Co. This change in employment relationship will occur within months of the City entering into a contract with the Project Co.

The City appreciates this change will be a concern for these employees. The RFP will contain requirements for the Project Co. to protect these employees. In order to be the successful proponent in the RFP process the Project Co. will have to accept the terms and conditions set out in the RFP, including the terms and conditions relating to employees. These terms and conditions will then be incorporated into the Project Agreement with Project Co.

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, Project Co. will be required to accept the WWTP employees and the collective agreement in place with such employees. By accepting the collective agreement in place at the time that employees transition from City employees to employees of the new contract it means that:

- a. Employees will be employed by Project Co. (or a Project Co Party) from and after Transfer Date;
- b. Project Co. assumes existing collective agreement obligations;
- c. No layoffs or loss of pay, pension, seniority, sick time or benefits as a result of the transfer;
- d. Project Co. will recognize prior service, seniority and entitlements;
- e. Project Co. will continue existing pension plan and become a participating employer in the City's pension plan;
- f. Project Co. will enter into a new Collective Agreement with the affected employee group at the expiration of the collective agreement in place as of the transfer date;
- g. Project Co. will provide equivalent benefit plans during the collective agreement in place on the Transfer Date, but may offer different benefit plans when a new collective agreement is negotiated in the future between Project Co. and the employees, subject to applicable laws and as may be permitted by the pension plan; and
- h. Employees will have an opportunity for transfer back. Transferred employees can elect to revert to City employee status within a prescribed period of time (likely 6 to 12 months).

There may be additional protections that the employees would want and the City's Administration plans to meet with the union representatives to gain their suggestions for additional employee protections.

If a P3 is not considered for the WWTP upgrade, an extended commissioning period will need to be considered. This commissioning period could take two years, as the operation of a new facility is significantly different than today's WWTP. A new WWTP will use contemporary technology that will be unfamiliar to staff and require skills that are currently not found within the existing workforce. The treatment is also more technologically complex and the treatment of sewage within the plant will accelerate from the current 30 day processing time to roughly one day of treatment time before discharge.

### Project Agreement Considerations

Pursuant to *The Cities Act*, the Administration recommends a maximum 30 year Project Agreement period for construction, operation and maintenance, which includes the period for private operation of the current WWTP during construction of the WWTP upgrade. The long term commitment to life cycle maintenance will be specified in the Project Agreement to prevent deferral of major asset maintenance and replacement.

The boundary for the Project would begin upstream of the WWTP valve chamber, includes the WWTP site, and includes the effluent discharge to Wascana Creek. McCarthy Boulevard Pumping Station and the forcemain are not included in the Project's scope.

The Project will not include the transfer of access to recycled effluent and revenue opportunities from the effluent. The City will retain ownership of all assets and Project Co. will operate and maintain the facility under contract. The City will retain the responsibility for the WWTP operating permit, but the Project Agreement will contain significant provisions to heavily penalise the operator for permit violations.

### Timing

The Project needs to move forward to ensure that the City is able to meet the December 31, 2016, permit deadline. This report presents a DBFOM as the recommended delivery method for the upgrade. If a DBFOM model is selected by Council the following would occur:

<b>Action</b>	<b>Date</b>
Submission of Business Case to the P3 Canada Fund	February 2013
PPP Canada reviews submission	February to March 2013
PPP Canada Board reviews recommendations	March 2013
Finance Minister authorizes and funding announcement occurs	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 consortium	June 2013 to January 2014
Administration selects consortium to deliver Project and operations	January 2014
Financial close and contract award	February/March 2014
Consortium begins DBFOM and assumes operation for 30 year period	Spring 2014
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
Post construction operations begins	Fall 2016 – Spring 2017

### **Consideration of Alternatives to the Recommendation**

The Administration has recommended that City Council approve a DBFOM procurement approach for the project subject to the receipt of funding from PPP Canada. The recommendation is supported by the Administration's analysis and the advice of external advisors. The analysis also showed that any of the alternative procurement approaches would provide greater value for money than the traditional DBB.



If Council does not support the Administration recommendation of the DBFOM procurement model, the next best alternative based on the Administration’s analysis would be a CMAR+DB approach. The Administration would return to council at the earliest opportunity with another report and recommendation.

However, the following needs to be considered if Council decides to pursue an alternative to the recommendation.

Timing to Meet Construction Completion Deadlines

The City has a timeline to meet new effluent standards by the end of 2016 in accordance with provincial operating permit requirements. A DBFOM would transfer the risk of construction delays to the Project Co. In a CMAR+DB, some risk of construction delay can be reduced; however, there will still be more risk to the City than if it was a DBFOM.

Access to PPP Canada Funding

The only option for receiving PPP Canada funding is a DBFOM. The finance component provides a strong and liquid security that ensures Project Co.’s long-term performance of the Project Agreement’s specifications in relation to construction, operation and maintenance.

City Operation of the Plant

The Administration has identified risks of retaining responsibility for operations and maintenance. If the operation and maintenance of the plant is not transferred to a private operator, the Administration would recommend that a commissioning period be in place in the first few years of the plant being in operation. That commissioning period would allow the City to work in tandem with a private operator to learn the treatment process so that it can effectively operate the plant.

The following summarizes the pros/cons of the recommendation, alternative and status quo options:

Procurement Model Description	Summary of Key Features and Pros/Cons
<p><b>Design-Build-Finance-Operate-Maintain (DBFOM)</b></p> <p><b><u>Recommended Option</u></b></p>	<p>Pros</p> <ul style="list-style-type: none"> <li>• Best value for money: 16.5% over DBB</li> <li>• Cost certainty over life cycle of the plant</li> <li>• Lowest level of borrowing</li> <li>• 25% PPP Canada funding eligible</li> <li>• Highest level of risk transfer</li> <li>• Highest level of innovation</li> <li>• Best on-time completion record</li> </ul> <p>Cons</p> <ul style="list-style-type: none"> <li>• Potential negative scrutiny</li> <li>• Long-term contract commitment</li> </ul>
<p><b>Construction Manager at Risk (CMAR) – Brownfield/Existing Plant Upgrades</b></p>	<p>Pros</p> <ul style="list-style-type: none"> <li>• Better value for money: 7.6% over DBB</li> <li>• Some Cost certainty in construction</li> <li>• Lower cost of capital</li> </ul>

<p><b>And</b></p> <p><b>Design-Build (DB) – Greenfield/New Plant Components</b></p> <p><u>Preferred Alternative</u></p>	<ul style="list-style-type: none"> <li>• Some risk transfer in construction</li> <li>• Some innovation: only DB construction</li> <li>• Better on-time completion record for DB</li> </ul> <p>Cons</p> <ul style="list-style-type: none"> <li>• Low cost certainty for long term operations and maintenance</li> <li>• Higher level of borrowing</li> <li>• No PPP Canada funding eligibility</li> <li>• Interface risk during construction</li> <li>• No risk transfer for long term operations and maintenance</li> <li>• Lower innovation opportunities (existing plant upgrades)</li> </ul>
<p><b>Design-Bid-Build (DBB) (multiple tenders)</b></p> <p><u>Status Quo</u></p>	<p>Pros</p> <ul style="list-style-type: none"> <li>• Lower cost of capital</li> </ul> <p>Cons</p> <ul style="list-style-type: none"> <li>• No value for money</li> <li>• Lowest cost certainty in construction</li> <li>• Highest level of borrowing</li> <li>• No PPP Canada funding eligibility</li> <li>• Lowest level of construction risk transfer</li> <li>• No risk transfer for long term operations and maintenance</li> <li>• Lowest innovation opportunities</li> <li>• No guarantee of on time completion</li> </ul>

RECOMMENDATION IMPLICATIONS

Financial Implications

The overall Utility Long-term Financial Model projects operating and capital costs for all aspects of the Utility. For the 2013 budget process, this model was developed based on the \$207 million Design-Bid-Build delivery model. As a result, the model does not contain any assumptions of external funding through PPP Canada. Under these assumptions, the total debt required for the full Utility Capital Program would be expected to be approximately \$150 million prior to 2017. At the higher cost of \$207 plus 15%, the required debt would be approximately \$180 million.

This Project has substantial and long lasting financial implications for the City, especially within the first five years. The City has anticipated the WWTP upgrades for a number of years and its cost has been considered in the Utility rate model and Utility rates. The model also considers the ongoing operating costs for the plan.

Operating costs for the DBFOM model are consistent with the operating costs in the model used to develop the 2013 budget. The major maintenance costs in the DBFOM model are also consistent with the 2013 budget model. While the overall debt requirement for the Utility in this model is approximately \$150 million, a portion of that debt is planned to fund the Buffalo Pound Water Treatment Plant. The total interest cost for this debt would be expected to be approximately \$105 million. If the DBFOM delivery method is selected, debt would be taken through the Private Partner and the principle and interest payments would be paid through monthly payments to the Private Partner.

Funding received through PPP Canada would reduce the total debt requirement with no additional debt required beyond the \$118.3 million taken through the Private Partner, providing capacity to address other capital needs and/or limit the impact on Utility rates.

The DBFOM WWTP Upgrade Project, if approved through the P3 Canada Fund, would receive 25% of the eligible capital and procurement costs at substantial completion. Assuming the higher end of the cost estimate range of \$224.3 million for the DBFOM delivery methodology, the expected value of the contribution would be approximately \$58.7 million. Based on the Value for Money analysis, and including the PPP Canada grant, the DBFOM delivery method provides a benefit of 16.5%

In some projects, such as the Stadium, there is an ability to adjust design to meet the budget. With the WWTP, the final cost will be based on the need to meet regulations. As a result, the cost estimates include a 15% contingency.

Approximately \$27.5 million has already been allocated to this Project through prior year budgets. This funding is available to fund the cost of procurement, along with design and construction oversight costs, addressing the capital requirements prior to substantial completion in 2017. This model provides significant benefits in minimizing the need for cash flow until substantial completion of the Project.

An additional consideration is the stability and cost certainty provided through the lifecycle management approach that is fundamental to the DBFOM model. Since the operator of the facility is contractually required to undertake maintenance at defined times, the possibility of deferred maintenance is removed.

While debt approval would be required in 2014 in order to enter into a P3 agreement, reducing the available debt capacity, the debt would be issued by the Private Partner and would be repaid through monthly payments starting at substantial completion in 2017. The debt decision could impact other capital infrastructure projects such as the Stadium Project and other capital projects that are currently unfunded, such as the North Central Shared Facility, Municipal Justice Building, major facilities, roadway and bridge projects.

The timing of the actual cash outflows for the capital, debt and operations and maintenance commitments will be dependent on the final contracts with the preferred DBFOM proponent as well as future debt bylaws.

The 30 year capital commitment for construction and procurement costs is \$224.3 million. The debt, operating and maintenance commitment equates to \$760.2 million in the procurement financial model.

As of December 31, 2012, the outstanding City debt was \$82 million, and with no new debt would be approximately \$51 million by 2017. The debt for this Project could be as high as \$118.3 million. Debt for the Stadium Project could be as high as \$200 million. In addition, the City has previously committed \$38 million in debt from the 2010 to 2012 budgets that may be issued in the future. Currently, the City's debt limit approval from Saskatchewan Municipal Board (SMB) is \$350 million. The City is not allowed to exceed its approved debt limit without approval from SMB. Further application to SMB is required to increase the debt limit before any debt beyond the limit is approved.

### 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

The assessment of alternative procurement methods took into consideration the various factors discussed in this report that are seen as constraints in the Project. Exploring alternative procurement and service delivery options is one of the objectives of Strategic Focus 2012.

Upgrades to the WWTP will ensure that the City meets its wastewater treatment objectives, including the Permit to Operate and aesthetic impacts on the community. In addition, an upgraded WWTP 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.

This Project may 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

There are staffing implications as a result of a DBFOM. The City Solicitor's Office, human resources, and legal consultants have been working on staff strategies that will be reflected in the RFP documents. Staff are valuable and will be treated fairly.

### Accessibility Implications

None with respect to this report.

### COMMUNICATIONS

A phased communications strategy has been developed to provide information on the WWTP upgrade.

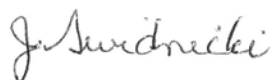
The WWTP staff and their union representatives have been notified that Administration is investigating alternative delivery options for the WWTP upgrade. Once the procurement report is approved to proceed, Administration will meet with staff and unions. Further information will be shared with the public and employees as progress is made.

### DELEGATED AUTHORITY

This report requires City Council approval.

Respectfully submitted,

EXECUTIVE COMMITTEE



---

Joni Swidnicki, Secretary