

WATER RESOURCES ZERO-BASED REVIEW AND ADMINISTRATION'S RESPONSE

EXECUTIVE SUMMARY

This report provides the results of an independent consultant's (Scottish Water International (SWI) Zero-Based Review (ZBR) of Water Resources, as well as Administration's response to SWI's recommendations. In the first stage of the ZBR, Administration reviewed all services provided by Water Resources, at a high level, and identified opportunities with the greatest potential for improvements for the in-depth analysis. SWI then reviewed three subject areas in-depth. All (100%) of the annual capital budget of \$350 million was included in the in-depth review for this ZBR. Of the \$474 million Water Resources operating budget, the majority (\$374 million) includes such costs as franchise fees, principle and interest costs on debt as well as depreciation cost, all of which could not be included in the ZBR except through the review of total capital expenditures noted above. The portion of the annual Water Resources operating budget that is relevant to a ZBR is approximately \$100 million. Of this \$19 million was included in the in-depth review. Administration expects that the ZBR recommendations, once implemented, will result in annual capital cost avoidance of \$17.0 – \$20.5 million. These benefits will be phased in over several years as the recommendations are implemented, and are expected to be fully realized by 2022. Capital cost savings will ultimately flow through to operating cost reductions, in the form of lower principle and interest costs. There are also a number of improvements in service effectiveness related to management and delivery of Water Resources capital program and stronger links between customer needs/preferences and capital investment decision making. In addition, SWI outlined a framework approach that would result in potential future changes to wastewater levels of service (increases or decreases) based on customers' priorities. These options will be presented to Council by September 2017.

ADMINISTRATION RECOMMENDATION(S)

That the Priorities and Finance Committee recommend that Council:

1. Approve Administration's Response to the recommendations in Scottish Water International's Report (Attachment 2) and the implementation timeline for addressing Wastewater Levels of Service (Attachment 3);
2. Receive for information the Opportunity Identification Report (Attachment 4) and the Scottish Water International's Report (Attachment 1);
3. Direct Administration to report back to Council by September 2017 with a detailed implementation plan as well as options for changes to wastewater levels of service (increases and decrease);

PREVIOUS COUNCIL DIRECTION / POLICY

On 2014 September 15, at a Special Strategic Planning Meeting, Council approved the recommendations to improve the Zero-Based Review Program (PFC2014-0554). This report included two specific changes:

- The process was changed to increase the role of internal staff vis-a-vis external consultants, so that Administration conducts the initial high-level analysis to identify opportunities for change, which are then pursued with the assistance of an external consultant with subject matter expertise in the service area under review;

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- The ZBR purpose statement was clarified to identify an expectation of changes to service efficiency in order to reduce costs, mitigate future cost increases or accommodate growth within existing resources.

BACKGROUND

The ZBR program was created in response to Council's direction to Administration to increase the focus on the effectiveness and efficiency of City services. It is an ongoing program designed not only to achieve service improvements in the short term, but also to develop and enhance the organization's culture and capacity with respect to continuous improvement. It does this by providing a method, tools and process to systematically and thoroughly investigate City services, using best-practices research, data analysis and expert opinion. The ZBR process looks at what is done (service scope and level) and how it is done (service delivery method). The objective of each review is to provide recommendations to address two fundamental service delivery questions:

- **Efficiency:** What changes could be made to services that would help to achieve greater results within available resources?
- **Effectiveness:** What changes could be made to improve the achievement of service goals or outcomes?

The water Utilities consists of the Water Resources and Water Services business units. Together they deliver water, wastewater and drainage services. The Utilities plan, design build, operate and maintain water, wastewater and drainage systems to supply quality drinking water, collect and treat wastewater and manage urban runoff. Services provided ensure regulatory requirements are met and public health, property and the environment are protected. The Utilities manage natural resources and work with watershed partners to protect river water quality and quantity. The Utilities serve 1.2 million Calgarians, industrial commercial and institutional organizations and regional customers.

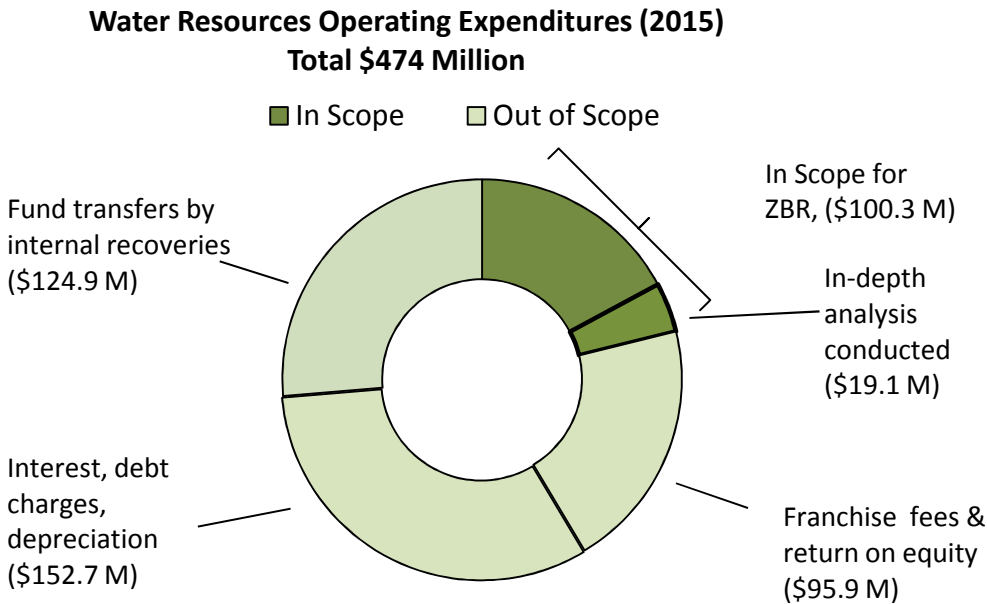
INVESTIGATION: ALTERNATIVES AND ANALYSIS

Initial Analysis to Identify Areas for In-Depth Review

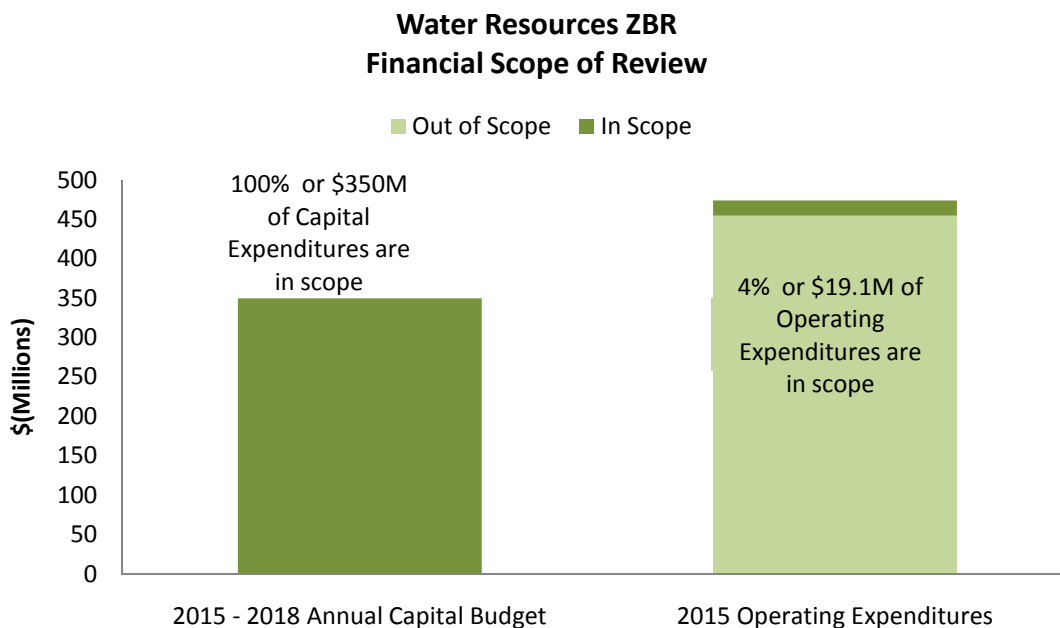
Water Resources is the most capital-intensive business unit to be the subject of a ZBR up to this point. And because it is a self-supported utility, the Water Resources operating budget includes components (notably franchise fees and debt financing costs) that are not suitable for the kinds of analysis undertaken in a ZBR.

As the graph on the following page shows, approximately \$100 million of the \$474 million in annual costs were included in this ZBR and of this amount \$19 million was included in the in-depth review. The remainder of Water Resources operating budget (\$374 million) included such costs as franchise fees, principle and interests costs on debt as well as depreciation costs.

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Given the capital-intensive nature of this business unit's work, the primary focus of the ZBR was on more effective and efficient capital program delivery. The review identified improvements that are relevant to Water Resources entire (\$350 million per year) capital budget.



Consistent with the approved ZBR method, Corporate Initiatives conducted an initial high level review of all of Water Resources services in order to identify areas with the greatest potential for efficiency and effectiveness improvements. A comprehensive summary of the opportunity identification work has been provided with this report (Attachment 4).

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graph LR; S1[Stage 1: Opportunity Identification] --> S2[Stage 2: In-depth review]; S1 --> R1[Review of all Water Resources activities]; R1 --> S2; S2 --> B1[Maximum potential benefit from in-depth review]; S2 --> B2[Limited potential gain and/or low feasibility]; B1 --> B3[Service Levels (Wastewater), Capital Delivery Efficiency, Data Management and Analytics];
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The diagram illustrates a two-stage review process. Stage 1, 'Opportunity Identification', leads to a 'Review of all Water Resources activities'. This review then feeds into Stage 2, 'In-depth review'. Stage 2 can result in either 'Maximum potential benefit from in-depth review' or 'Limited potential gain and/or low feasibility'. The maximum potential benefit further leads to a list of key areas: 'Service Levels (Wastewater)', 'Capital Delivery Efficiency', and 'Data Management and Analytics'.

Stage 1: Opportunity Identification

Review of all Water Resources activities

Stage 2: In-depth review

Maximum potential benefit from in-depth review

Limited potential gain and/or low feasibility

- **Service Levels (Wastewater)**
- **Capital Delivery Efficiency**
- **Data Management and Analytics**

The three areas selected for the in-depth review complement one-another, and address both the long-term (insofar as work on defining levels of service will drive choices about investments in infrastructure that may last on average more than 30 years) and relatively shorter-term opportunities (by maximizing the cost-effectiveness of capital projects that will be built starting in the next five years) in this capital-intensive business unit. The selection of these areas recognizes the importance of first determining appropriate service levels and then identifying and then efficiently delivering the capital projects required to achieve the agreed level of service. Good information (data and analysis) is essential to inform decisions at all stages.

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External Consultant's Recommendations

SWI, an external consultant with expertise in water utilities services, was retained to conduct the in-depth review. The recommendations are divided into four key sections outlined:

1. *Customer Engagement Strategy (Section 5 – p.13)*: Recommends an approach for Water Resources to increase capacity to make more informed choices on future investment which are linked to customer priorities, expectations and perception of value.
2. *Wastewater Level of Service (Section 6 – p.21)*: Recommends the creation of a clear baseline and assessment of the current levels of service offered by the Water Utility and an evaluation of what service level options are appropriate considering customer expectations, varying best practices for service costs and service quality factors for public utilities.
3. *[Capital] Investment Portfolio Management (Section 7 – p.32)*: Recommends the application of different best management practices in planning, managing and monitoring the identification and project management of capital projects with specific focus on cost, time and outcomes.
4. *Capital Delivery Model (Section 8 – p.45)*: Recommends ways to improve the value for money received for their capital investments and increase The City's capacity to address its capital investment requirements over the long term, by applying improved processes and different capital delivery models for capital procurement and delivery. The recommendations in this section will increase value for money and improve the effectiveness and efficiency of the management of the supply chain for all Water Resources capital projects.



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Recommendations on the *Customer Engagement Strategy* and *Levels of Service Framework* highlight the importance of understanding customer expectations and their willingness to pay for different levels of service as a precursor to determining which levels of service to provide and then which capital infrastructure to build. Normally, ZBR reports do not end in a

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recommendation to do more work before service improvements and/or cost savings can be identified; an expectation of the ZBR program is that it will identify specific, tangible improvements, such as the recommendations in Section 7 and 8 noted below. However, in this instance the time required to determine levels of service based on customers' priorities extends beyond the timeframe of the ZBR. Additional data collection and measurement are required to develop service baselines and service-level options, with costs attached, to then be followed by customer engagement to match service levels to customer priorities.

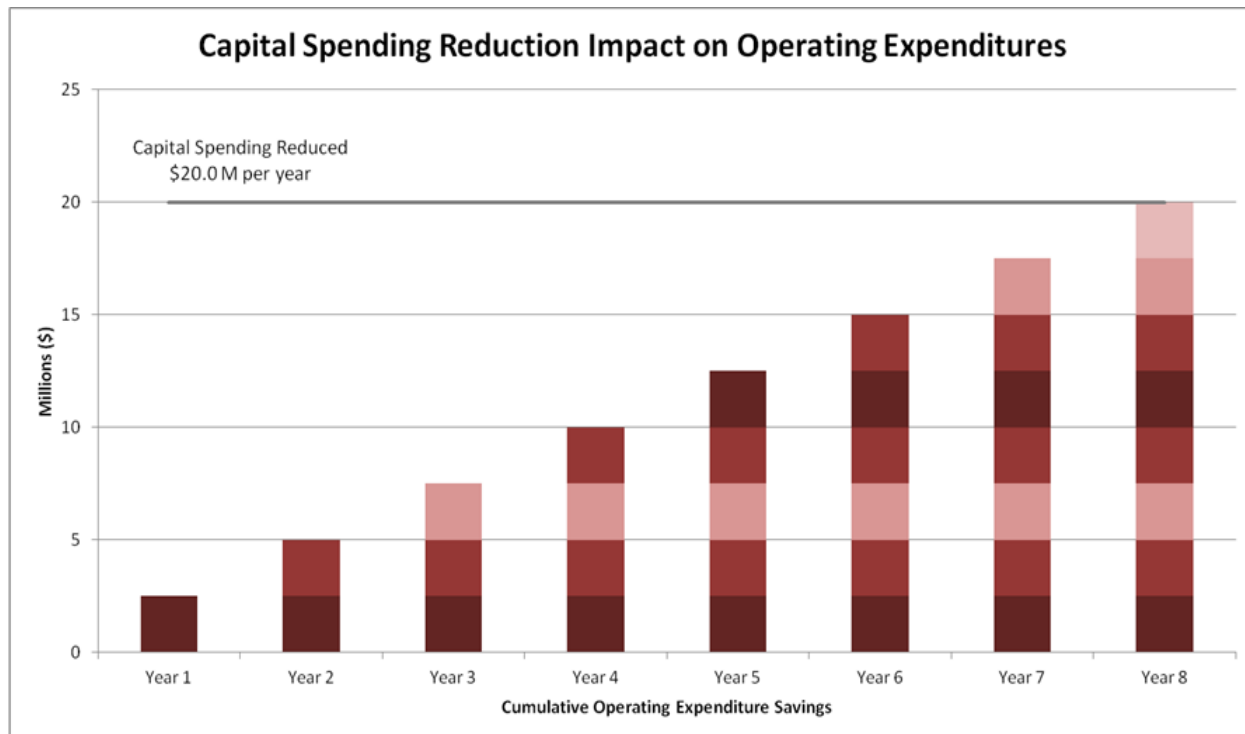
The result will be a thorough, fact-driven and customer centric approach to setting levels of service – initially for wastewater, and subsequently to the other water utility lines of service (water and drainage). Because of the public impact of this work, and the long-term implications of these capital investments, it is important to take the time needed to get this right. For that reason, these recommendations provide a method to establish levels of service, which can be applied to Wastewater services over the next 12 months. The result will be a report to Council (via UCS) in the fall of 2017, which identifies options for future service levels and requests a Council decision.

The recommendations in section 7 and 8 propose a number of ways to improve the efficiency and effectiveness of Water Resources operations as it relates to its capital program, (*[Capital] Investment Portfolio Management* and *Capital Delivery Models*). These recommendations are the source of the estimated annual savings of \$17.0 to \$20.5 million.

Capital cost savings will affect the operating budget by reducing the amount of debt servicing (principle and interest) costs. The operating cost savings realized in the first year will continue into future years, for the term of the debt (typically 25 years). In the second year, additional operating cost savings will be realized as a result of additional capital cost savings in year two. Operating cost savings will therefore continue to increase for a number of years, as a result of the accumulated capital cost savings. This expected growth in operating cost savings will continue until the point when the debt related to the first year's capital cost savings has been retired, at which point it is likely to level off.

The chart on the following page shows how \$20 million in annual capital cost reductions would affect operating costs. Over a period of 8 years, the **average** annual operating cost savings is approximately \$12 million, starting at \$2.5 million in year 1, and increasing to \$20 million in year 8.

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Administration's Response

Attachment 2 provides Administration's proposed response to all of SWI's recommendations. Of the 17 recommendations provided by SWI, Administration recommends acceptance of all 17 recommendations.

Attachment 3 relates to the levels of service framework. It provides an outline schedule of the work that will be completed over the next year to bring options to Council in September 2017 for changing the level of service (increases or decreases) for wastewater services.

Stakeholder Engagement, Research and Communication

The Water Resources ZBR, like others, included consultation with a number of internal and external stakeholders to ensure that their knowledge and experience was considered in developing the recommendations. This included interviews with senior staff, a management team workshop and follow-up interviews. Consultation with Council will continue. As is standard for the ZBR process, Administration will report back within one year of this report going to Council (i.e. by September, 2017) with a detailed implementation plan.

Strategic Alignment

The ZBR recommendations will help to ensure that Water Resources can continue to make progress towards achieving its strategic goal of protecting public health and the environment. The ZBR program supports Council's Priority to be a "Well-Run City", and specifically the direction to be "as efficient and effective as possible, reducing costs and focussing on value for

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money." It also supports the Leadership Strategic Plan approved by Council on 2014 September 14, as part of the Integrated Performance System.

Social, Environmental, Economic (External)

Water Resources contributes to social outcomes by contributing to public health and environmental outcomes through delivering a clean and reliable supply of water, collecting and treating waste water, managing storm water, meeting regulatory requirements, conservation and water management. The ZBR recommendations will support Water Resources in continuing to achieve these outcomes.

Financial Capacity

Current and Future Operating Budget:

The capital cost avoidance benefits identified will have an operating budget impact. On average, Water Resources will require \$12.0 million less in annual utility rate revenue to cover principle and interest payments if an annual capital savings of \$20.0 million is realized.

Current and Future Capital Budget:

The recommendations of the Water Resources ZBR (Administration's Response) will ultimately yield annual capital cost avoidance savings of \$17.0-20.5 million. These will be achieved as the recommendations are implemented and are expected to be fully achieved by 2022. These annual capital savings would also result in a reduction of \$52 million in outstanding debt by 2026.

Risk Assessment

Decisions about service levels include considerations of risk which is a practice that is well established within Water Resources. Also, existing capital project management processes include risk management practices. The recommendations related to Capital Investment Portfolio Management would (once implemented) enhance risk management practices as part of the capital program. SWI outlines (on page 76) four main risks related to implementing its recommendation. The risks include:

- 1) A lack of resources to implement the recommendations
- 2) Poor communication with employees leading to a reluctance to support implementation
- 3) Water Resources capacity for change
- 4) Not measuring performance which impedes ability to demonstrate/measure improvements/success

Also included in the SWI report are the risk management strategies that could be used to address each of these risks.

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REASON(S) FOR RECOMMENDATION(S):

Approval of Administration's recommendations will make it possible for Water Resources to proceed with implementation, and to achieve the benefits described in the report.
Administration will report back in one year with a detailed implementation plan.

ATTACHMENT(S)

1. Water Resources Zero-Based Review Report (SWI)
2. Administration's Response to Water Resources ZBR Report from SWI
3. Implementation plan for Levels of Service
4. Water Resources Zero-Based Review Opportunity Identification Report