



**RESORT MUNICIPALITY OF WHISTLER**

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## STAFF REPORT TO COUNCIL

**PRESENTED:** September 20, 2022      **REPORT:** 22-131  
**FROM:** Capital Projects – Infrastructure Services      **FILE:** E40503  
**SUBJECT:** WASTEWATER TREATMENT PLANT SECONDARY CLARIFIER  
REFURBISHMENT PROJECT

### RECOMMENDATION FROM THE CHIEF ADMINISTRATIVE OFFICER

**That** the recommendation of the General Manager of Infrastructure Services be endorsed.

### RECOMMENDATION

**That** Council award the contract for the Wastewater Treatment Plant Secondary Clarifier Refurbishment project in the amount of \$1,376,305.00 (exclusive of GST) to Filtrum Inc. in accordance with their tender proposal dated August 31, 2022 attached as Appendix A to Administrative Report 22-131.

### PURPOSE OF REPORT

The purpose of this report is to inform Council of the status of the Wastewater Treatment Plant (WWTP) Secondary Clarifier Refurbishment project and procurement process and to request approval to proceed with the contract award for the WWTP Secondary Clarifier Refurbishment in the amount of \$1,376,305.00 (exclusive of GST).

Information Report       Administrative Report (Decision or Direction)

### DISCUSSION

#### **Background**

The Whistler WWTP is a biological nutrient removal facility that treats domestic wastewater and discharges treated effluent to the Cheakamus River. The WWTP is equipped with four Secondary Clarifiers: two smaller clarifiers (SC401, SC402), each 16 m in diameter, and two larger clarifiers (SC403, SC404), each 22.5 m in diameter. In the past, depending on the flow entering the WWTP, the operators would utilize one large clarifier, or one large and one small clarifier at any given time. In order to optimize the treatment process in the future, the treatment plant operators (acting on advice from our process consultants) intend to operate all four clarifiers simultaneously.

To determine the condition of the four clarifiers, staff engaged Kerr Wood Leidel (KWL) consultants in 2019 to complete a condition assessment of the four tanks and the internal components. The condition assessment noted that only minor repairs were required for three of the four tanks. Secondary Clarifiers

SC401 and SC402's internal mechanisms had been refurbished in 2007, and SC404 was constructed in 2007, so only minor repairs were required. The minor repairs took place during 2020 and 2021.

Secondary Clarifier SC403, which was constructed in 1996, has had only minor upgrades over the past two decades. Appendix B shows photos from the condition assessment of SC403. The drive mechanism is 24 years old and considered end of life for this type of rotating equipment. The launders and weirs are also at end of life. The steel components within the tank are showing significant corrosion and rusting. To guarantee continuous performance, KWL recommended a complete refurbishment of Secondary Clarifier SC403.

The project scope is as follows:

- Demolition and removal of existing mechanical equipment.
- Structural repairs to the concrete tank.
- Supply and installation of the new clarifier mechanism, inset weir launders, bridge and controls.
- Commissioning, start-up, and operator training for the refurbished SC403.

The procurement for the supply of the internal components and the installation was completed in two parts:

#### Part one

Staff issued a Request for Proposals (RFP) to pre-select the supplier for all the internal components. This RFP was posted from February 4, 2022 to February 25, 2022 and awarded to Wes Tech Engineering L.L.C for on March 30, 2022 in the amount of \$50,000. This contract with the supplier is only for the new equipment shop drawings (design).

#### Part two

Staff issued an Invitation to Tender (ITT) for an installation contractor to complete the scope of work shown above to refurbish this clarifier. The agreed-upon price for the clarifier mechanisms from Wes Tech was carried as an allowance line item on the Form of Tender bid form, so all bidders would install the mechanical components from Wes Tech that we had selected.

This approach was taken to allow our project team to select the best components to meet our requirements, but ensure that the installation contractor was still responsible for the schedule of delivery of the mechanical components.

The project is scheduled to commence in late April 2023, with substantial completion set for June 14, 2023.

### **Analysis**

#### **TENDER RESULTS**

The Invitation to Tender for the WWTP Secondary Clarifier Refurbishment was posted on the RMOW bid opportunities page, and BC bid. The tender was advertised publicly between April 29, 2022, and August 31, 2022. One non-mandatory pre-tender site meeting was held on May 19, 2022, and five contractors attended.

The procurement process resulted in four tenders submitted to complete the work, and all tenderers are qualified to complete the work. Results from the four bidders are listed in Table 1 – Tenderers Submissions.

Table 1 – Tenderers Submissions

TENDERER		TOTAL PRICE (EXCLUDING GST)	VARIANCE TO ENGINEER'S ESTIMATE (%)
1	Filtrum Inc.	\$1,376,305.00	+10
2	Tritech Group Ltd.	\$1,687,021.07	+35
3	Bennett Mechanical Installations (2001) Ltd.	\$1,787,700.00	+43
4	Drake Excavating (2016) Ltd.	\$1,932,205.00	+54
<b>Engineer's Estimate (KWL Consulting Engineers)</b>		<b>\$1,250,739.00</b>	

## POLICY CONSIDERATIONS

Council Policy F-29: *Procurement Policy* and Administrative Procedure D-1: *Procurement* require Council approval for any contracts over the value of \$500,000.

### Corporate Plan

The RMOW Corporate Plan is updated annually and articulates strategic direction for the organization. This section identifies how this report links to the plan.

#### Council Focus Areas

- Community Balance

*Effectively **balance resort and community needs** through deliberate planning, partnerships and investment*

- Climate Action

*Provide leadership to **accelerate climate action and environmental performance** across the community*

- Housing

*Advance strategic and innovative initiatives to enable and **deliver additional employee housing***

- Pandemic Recovery

*Leadership and support for **community and tourism recovery and sustainability** – priority focuses are where recovery needs intersect with other Council focus areas*

- Not Applicable

#### Corporate Goals

- Community character and mountain culture is reflected in municipal initiatives

- Municipal decision-making supports the effective stewardship of natural assets and ecological function
- Corporate policies and operations ensure continuous excellence in infrastructure, facility and program management
- A high level of accountability, transparency and community engagement is maintained
- Corporate financial health is optimized to ensure long-term community success
- A vibrant local economy and safe, resilient resort community is effectively reinforced by organizational activities
- Pandemic recovery

## **Community Vision and Official Community Plan**

### **Goals, Objectives and Policies**

Awarding this work to upgrade an important component of our WWTP supports the following goals, objectives, and policies in our OCP:

**12.2. Goal** Whistler's sewer systems meet all applicable standards and are maintained in a manner that is cost-effective, ensures reliability and minimizes or eliminates environmental impacts.

**12.2.1. Objective** Maintain and develop sewer systems to service planned development in a manner that is compatible with environmental sensitivities of Whistler's natural areas, meets regulatory obligations and sets standards consistent with Whistler's move toward sustainability.

**12.2.1.1. Policy** Maintain a sewage collection and treatment system that transports and treats sufficient wastewater quantities for current and planned future development, and ensures discharge quality meets or exceeds the Operational Certificate issued by the B.C. Ministry of Environment & Climate Change Strategy.

**12.2.1.2. Policy** Maintain at least tertiary level wastewater treatment facilities and a sewage collection system to serve existing and planned development within the sewer system service area with a sewage treatment facility at the location shown in Schedule I.

**12.2.1.3. Policy** Follow the implementation plan set out in the municipality's Liquid Waste Management Plan.

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## **BUDGET CONSIDERATIONS**

The current approved budget for the WWTP Secondary Clarifier Refurbishment draws on the budget code E40503, which is funded from the sewer reserves. The project budget is shown below in Table 2 – Total Project Budget.

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The breakdown of the tender result per activity and budget comparison are shown below in Table 3 – Filtrum Inc. Tender Results and Budget Comparison. Both project tender prices are below the 2023 budget.

Table 2 – Total Project Budget

BUDGET CODE NAME AND NUMBER	ESTIMATED 2022 ACTUAL COSTS	2023 BUDGET (PROPOSED)	TOTAL PROJECT BUDGET
E40503 Secondary Clarifiers Weir Structure Replacement	\$125,000	\$1,850,000	<b>\$1,975,000</b>

Table 3 – Filtrum Inc. Tender Results and Budget Comparison

BUDGET CODE NUMBER AND NAME	ENGINEERS COST ESTIMATE	FILTRUM INC. TOTAL PRICE (EXCLUDING GST)	VARIANCE (%)
E405-03 Secondary Clarifiers	\$1,250,739	\$1,376,305	+10

### TOTAL PROJECT COST OVERVIEW

Shown below in Table 4 is a summary of the estimated total project cost for the procurement, construction, and project management in 2022 and 2023.

Table 4 – Estimated Total Project Cost and Variance to Total Project Budget

BUDGET CODE NUMBER AND NAME	2022 COSTS (DESIGN AND SHOP DRAWING COSTS)	2023 PROJECT COST – FILTRUM INC.	2023 ESTIMATED PROJECT MANAGEMENT COST	TOTAL ESTIMATED PROJECT COST	VARIANCE TO TOTAL PROJECT BUDGET (%)
E40503 Secondary Clarifiers	\$125,000	\$1,376,305	\$140,000	\$1,641,305	-17

### LÍŁWAT NATION & SQUAMISH NATION CONSIDERATIONS

The RMOW is committed to working with the Líl'wat People, known in their language as *L'il'wat7úl* and the Squamish People, known in their language as the *Skwxwú7mesh Úxwumixw* to: create an enduring

relationship; establish collaborative processes for Crown land planning; achieve mutual objectives; and enable participation in Whistler's resort economy. This section identifies areas where RMOW activities intersect with these relationships.

There are no specific considerations to include in this report.

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## COMMUNITY ENGAGEMENT

Level of community engagement commitment for this project:

Inform     Consult     Involve     Collaborate     Empower

Comment(s):

RMOW staff actively update Whistler residents with regard to this project and its impact to the community through the Project website.

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## REFERENCES

Appendix A – E40503 Tender Award Recommendation  
Appendix B – WWTP Overview and Secondary Clarifier SC403 photos

## SUMMARY

Staff recommend Council award the contract for the WWTP Secondary Clarifier Refurbishment project in the amount of \$1,376,305.00 (exclusive of GST) to Filtrum Inc. in accordance with their tender proposal dated August 31, 2022. This project will update the internal mechanism of one of the four Secondary Clarifiers at the WWTP. This project is an important part of our ongoing plan to optimize treatment at the WWTP, and complete preventative maintenance on aging infrastructure.

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## SIGN-OFFS

### Written by:

Chelsey Roberts,  
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Services

### Reviewed by:

James Hallisey,  
General Manager, Infrastructure Services

Virginia Cullen,  
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