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To: Performance and Audit Committee

From: Joe Sass, Deputy Chief Financial Officer

Date: December 16, 2021 Meeting Date: January 13, 2022

Subject: **MVRD Audit Plan from BDO Canada LLP**

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### **RECOMMENDATION**

That the Performance and Audit Committee receive for information the report dated December 16, 2021, titled “MVRD Audit Plan from BDO Canada LLP”.

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### **EXECUTIVE SUMMARY**

Metro Vancouver Districts and the Metro Vancouver Housing Corporation are required under provincial legislation to prepare annual financial statements, audited by a public accounting firm and approved by the Board by May 15<sup>th</sup> each year. The 2021 annual financial statements, along with the draft auditors report, will be presented to the Performance and Audit Committee at its April meeting, prior to Board approval. Attached for information is the audit planning report prepared by BDO Canada LLP, Metro Vancouver’s auditors.

This report outlines the audit approach, key audit areas, auditor responsibilities and audit deliverables. In addition, the report highlights a number of upcoming accounting standards, the most significant being the Asset Retirement Obligation requirement, effective fiscal year 2023. Management has started an impact assessment for this standard and will report back to the Committee on a continuous basis throughout the project.

### **PURPOSE**

To provide the committee with our external auditor’s plan for the completion of the annual external audit for the Metro Vancouver Districts’ and Housing Corporation for fiscal year 2021.

### **BACKGROUND**

Under provincial legislation, an external audit is required to be undertaken annually for all Metro Vancouver Districts’ and the Metro Vancouver Housing Corporation. This audit must be conducted by a public accounting firm that is licensed to conduct such audits. The results of the annual audit along with the draft audit report and the 2021 Audited Financial Statements will be presented to this committee at its April meeting with the financial statements to be forwarded to the Board for approval. Legislation requires that the final Board approval of the annual financial statements take place on or prior to May 15, 2022.

BDO Canada LLP was approved by the Board on July 25<sup>th</sup>, 2019 as Metro Vancouver’s external auditors for a five-year period. Fiscal year 2021 is the third year of that five-year period.

## **ANNUAL AUDIT PLAN**

The Audit Plan from BDO LLP for the Metro Vancouver Districts and Housing Corporation is included as an attachment to this report. The audit plan outlines the audit approach, key audit areas, auditor responsibilities and audit deliverables.

In addition, the report also highlights upcoming changes to public sector accounting standards that will impact upcoming fiscal years. It is anticipated that the most significant of these standards is the Asset Retirement Obligation Standard. Due to COVID-19, the implementation date for this standard has been delayed by one year, to fiscal 2023. This standard requires that any legal obligation associated with the retirement of a tangible capital asset be recorded as a liability upon the acquisition of the asset rather than at the retirement date, which is current practice. This enhanced reporting will allow Metro Vancouver to better understand the long term financial obligations associated with the retirement of end-of-life assets and to improve transparency around those obligations. Management is in the process of reviewing asset inventories in each of its entities to determine if such obligations exist and their impact and will report findings back to the Committee throughout the project.

## **ALTERNATIVES**

This is an information report. No alternatives are presented.

## **FINANCIAL IMPLICATIONS**

The completion of the annual financial statement audit fulfills a statutory requirement. The cost of the audit is included in the approved annual budget.

## **CONCLUSION**

As prepared by BDO Canada LLP, our external auditors, the plan for the 2021 external audit of the Metro Vancouver Districts' and the Metro Vancouver Housing Corporation is presented to the committee for information.

## **Attachments**

1. Audit Planning Report to the Performance and Audit Committee

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# Metro Vancouver Regional District

Audit planning report to the Performance and Audit Committee for the year ending December 31, 2021

START

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# To the Performance and Audit Committee of Metro Vancouver Regional District

We are pleased to provide you with this planning report to highlight and explain key issues which we believe to be relevant to the audit of the financial statements of Metro Vancouver Regional District (“MVRD”) (consolidated), Greater Vancouver Water District (“GVWD”), Greater Vancouver Sewerage and Drainage District (“GVSDD”) and Metro Vancouver Housing Districts (“MVHC”) (collectively referred to as the “Districts”) for the year ending December 31, 2021.

The enclosed planning report includes our approach to your audit, the significant risks we have identified and the terms of our engagement. At the year-end meeting, we will provide you with a copy of our draft audit opinion and discuss the nature, extent and results of our audit work. We will also report any significant internal control deficiencies identified during our audit and reconfirm our independence.

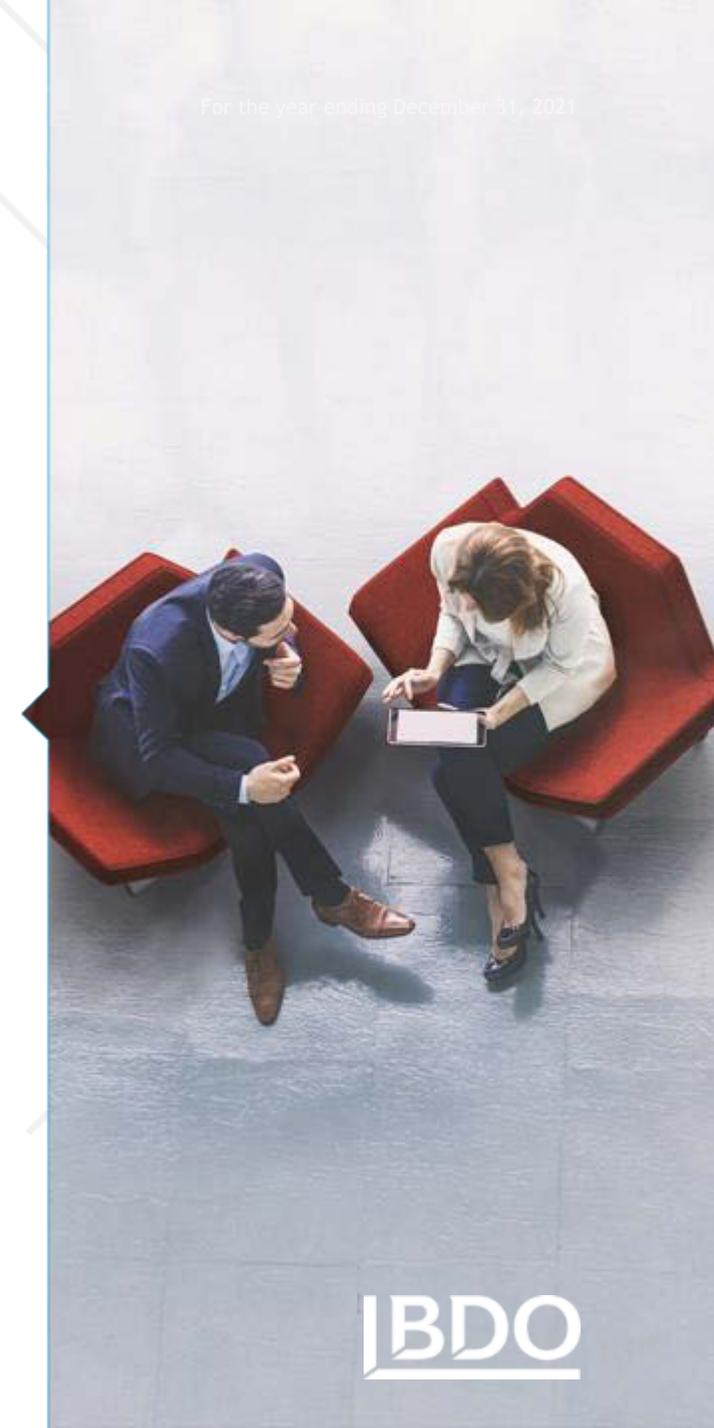
Our audit and therefore this report will not necessarily identify all matters that may be of interest to the Performance and Audit Committee in fulfilling its responsibilities. This report has been prepared solely for the use of the Performance and Audit Committee and should not be distributed without our prior consent. Consequently, we accept no responsibility to a third party that uses this communication.

We look forward to completing our audit and discussing our conclusions and our draft audit opinions with you. In the meantime, please feel free to contact us if you have any questions or concerns.

Yours truly,

*BDO Canada LLP*

BDO Canada LLP





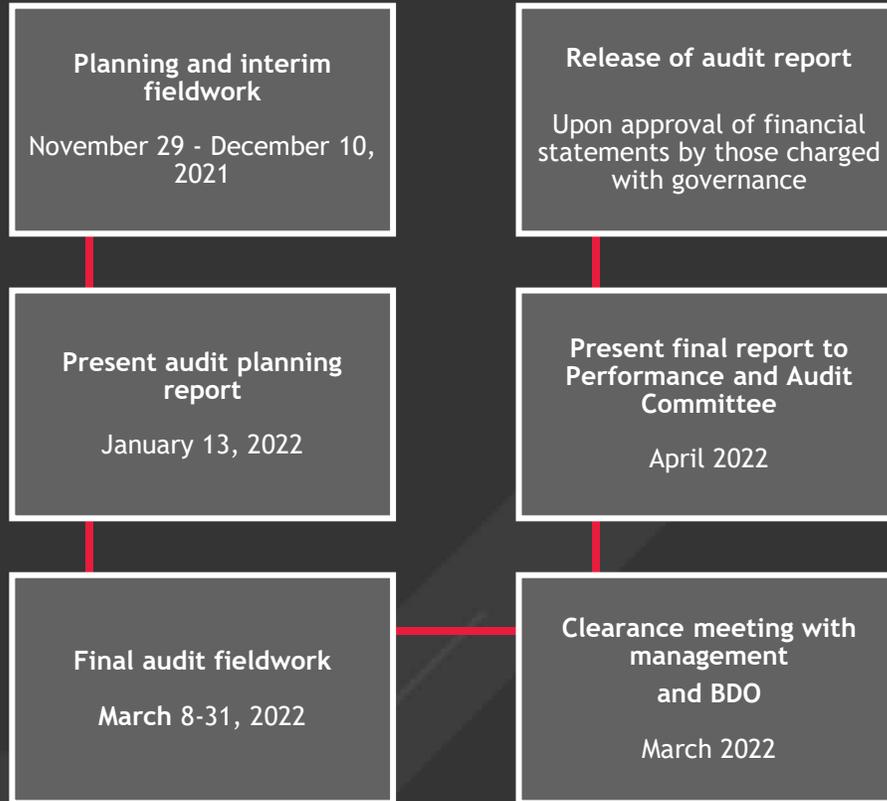
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# Audit timeline



For the year ending December 31, 2021



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# Your dedicated BDO audit team



**Brian Szabo, CPA, CA**

T: 604.646.3389  
E: bszabo@bdo.ca

Brian Szabo has over 30 years of audit experience, working with various organizations. This experience allows him to address the unique audit and operating needs his clients have.

Brian Szabo will be the Engagement Partner for your assurance services. He will assume ultimate responsibility for the provision of all services, monitoring and controlling costs to ensure you receive quality, effective and value-added service.



**Mario Piroddi, CPA, CA**

T: 250.372.9505  
E: mpiroddi@bdo.ca

Mario has over 20 years of experience in general accounting, audit, and information systems audits. He is active in BDO's national office in providing commentary on implementation of data analytics to audit approaches, assurance methodology changes, and responses to exposure drafts issued by CPA Canada.

Mario will be the Quality Review Partner and oversee information systems testing as part of your assurance services.



**Darren Taylor, CPA, CA**

T: 604.443.4725  
E: dtaylor@bdo.ca

Darren Taylor has over 20 years of tax experience, specializing in indirect tax matters impacting entities in the public sector.

This experience allows him to address the unique tax needs his clients have. Darren will be the Indirect Tax Partner for your tax services.

## Our independence



We have complied with relevant ethical requirements and are not aware of any relationships between Metro Vancouver Regional District and our Firm that may reasonably be thought to bear on our independence.

## Your dedicated BDO audit team (cont'd)



**Kayan Yu, CPA, CA**

T: 604.646.4417  
E: [kayu@bdo.ca](mailto:kayu@bdo.ca)

Kayan Yu has over 13 years of audit experience, working with various organizations.

Kayan will be the Engagement Senior Manager for the consolidated audit of MVRD and oversee the execution of the overall audits of the Districts. She will assume responsibility for the planning and execution of the audit engagement, including supervision of staff and coordination with the Districts.



**Sonya Keene, CPA, CA**

T: 604.646.6212  
E: [skeene@bdo.ca](mailto:skeene@bdo.ca)

Sonya Keene has over 10 years of audit experience in both Canada and the United Kingdom.

Sonya will be the Engagement Senior Manager responsible for MVHC and oversee the execution of the audit and supervision of staff.



**Navin Kini**

T: 604.688.5421  
E: [nkini@bdo.ca](mailto:nkini@bdo.ca)

Navin Kini has over 10 years of audit experience in both Canada and India.

Navin will be the Engagement Manager responsible for GVWD and GVSDD. He will assist in the overall planning and execution of the audit engagement, and coordination of the Districts.



# Auditor's responsibilities: financial statements

We are responsible for forming and expressing an opinion on the financial statements that have been prepared by management, with oversight by those charged with governance. The audit of the financial statements does not relieve management or those charged with governance of their responsibilities. The scope of our work, as confirmed in our engagement letter attached as Appendix A to this letter, is set out below:

## Year-End Audit Work

- ▶ Work with management towards the timely issuance of the financial statements.
- ▶ Provide timely and constructive management letters. This will include deficiencies in internal control identified during our audit.
- ▶ Present significant findings to the Performance and Audit Committee including key audit and accounting issues, any significant deficiencies in internal control and any other significant matters arising from our work.

## Year-Round Work

- ▶ Consult regarding accounting, income tax, and reporting matters as requested throughout the year.



We are required to obtain an understanding of the system of internal control in place in order to consider the adequacy of these controls as a basis for the preparation of the financial statements, to determine whether adequate accounting records have been maintained and to assess the adequacy of these controls and records as a basis upon which to design and undertake our audit testing.

We are required to report to you in writing about any significant deficiencies in internal control that we have identified during the audit.

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# Auditor's responsibilities: fraud

We are responsible for planning and performing the audit to obtain reasonable assurance that the financial statements are free of material misstatements, whether caused by error or fraud, by:

- ▶ Identifying and assessing the risks of material misstatement due to fraud;
- ▶ Obtaining sufficient and appropriate audit evidence regarding the assessed risks of material misstatement due to fraud, through designing and implementing appropriate responses; and
- ▶ Responding appropriately to fraud or suspected fraud identified during the audit.

The likelihood of not detecting a material misstatement resulting from fraud is higher than the likelihood of not detecting a material misstatement resulting from error because fraud may involve collusion as well as sophisticated and carefully organized schemes designed to conceal it.

## Behind the audit report



Learn how we audit your financial statements

[SEE OUR PROCESS](#)

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## Auditor's responsibilities: fraud

Throughout our planning process, we performed risk assessment procedures and related activities to obtain an understanding of the entity and its environment, including the Districts' internal control, to obtain information for use in identifying the risks of material misstatement due to fraud and made inquiries of management regarding:

- ▶ Management's assessment of the risk that the financial statements may be materially misstated due to fraud, including the nature, extent and frequency of such assessments;
- ▶ Management's process for identifying and responding to the risks of fraud in the Districts, including any specific risks of fraud that management has identified or that have been brought to its attention, or classes of transactions, account balances, or disclosures for which a risk of fraud is likely to exist;
- ▶ Management's communication, if any, to those charged with governance regarding its processes for identifying and responding to the risks of fraud in the Districts; and
- ▶ Management's communication, if any, to employees regarding its view on business practices and ethical behavior.

We are not currently aware of any fraud affecting the Districts. If you are aware of any instances of actual, suspected, or alleged fraud, please let us know.



# Areas of focus and planned responses

Based on our knowledge of the Districts’ business, and knowledge gained from management to date, we have identified the following areas of focus and significant risks that, in our judgment, require special audit consideration.

Areas of focus arise mainly because of the complexity of the accounting rules, the extent of estimation and judgment involved in the valuation of these financial statement areas, and the existence of new accounting pronouncements that affect them. We request your input on the following areas of focus and whether there are any other areas of concern that the Performance and Audit Committee has identified.

## MANDATORY AUDIT RISKS

The following areas of focus are mandatory areas of audit consideration required for all audits conducted under Canadian Audit Standards and are not specific to the Districts. As such, we are required to document and discuss these areas of focus with you:

Financial statement areas	Risks noted	Audit approach
Management Override of Internal Controls (Mandatory audit consideration)	<p>Management is in a unique position to perpetrate fraud because of their ability to directly or indirectly manipulate accounting records and prepare fraudulent financial statements by overriding controls that otherwise appear to be operating effectively.</p> <p>This is a mandatory risk to be address for all audits pursuant to Canadian audit standards.</p>	<ul style="list-style-type: none"> <li>Review of transactions recorded in the various ledgers for unusual or non-recurring adjustments not addressed by other audit procedures.</li> <li>Test the appropriateness of journal entries recorded in the general ledger.</li> <li>Review key estimates and other adjustments made in the preparation of the financial statements.</li> </ul>
Risk of Fraudulent Revenue Recognition (Rebuttable risk)	<p>Under Canadian auditing standards, we are required to consider whether there is a risk of material misstatement due to fraudulent revenue recognition in all audits. Based on our understanding of the Districts’ significant revenue streams, we have rebutted this risk.</p> <p>However, there continues to be a risk of misstatement, unrelated to fraud, with respect to revenue as accounting standards over revenue recognition are complex and subject to variation in application.</p>	<ul style="list-style-type: none"> <li>Grant funding received will be confirmed through a review of agreements, which ensures that the amounts recorded exist. We will also ensure the revenue is recorded accurately in accordance with the settlement of any stipulations.</li> <li>Other revenues streams may have revenue recognition issues which will be reviewed in accordance with the latest revenue recognition standards.</li> </ul>



# Areas of focus and planned responses (cont'd)

## OTHER AREAS OF FOCUS

Financial statement areas	Risks noted	Audit approach
Operational Impacts of COVID-19	<p>The global health crisis known as ‘COVID-19’ continues to cause significant disruptions to workforces, financial markets, and the economy at large.</p> <p>Management has made changes to operations as a response to COVID-19’ which continues to disrupt workforces, financial markets, and the economy at large. COVID-19 has impacted virtually all organizations across the world. Due to the nature of the Districts’ operations, this continues to present unique risks and challenges that may impact its financial reporting.</p>	<ul style="list-style-type: none"> <li>• Continue to make enquiries with management relating to the impact of COVID-19 on operations generally to date, as well as other significant or unusual transactions that have occurred as a result of COVID-19.</li> <li>• We will continue to review COVID-19 reporting prepared by management to the Committee to identify any items that may have a financial reporting implication.</li> <li>• We will review specific balances that may be susceptible to COVID-19 impacts such as investments, accounts receivable, and cost centers where incremental COVID-19 expenditures have been recorded.</li> <li>• We will also review financial statement disclosures to ensure that the impact of COVID-19 continues to be appropriately disclosed, as required.</li> </ul>
Landfill Closure and Post-Closure Costs	A complex area that requires much estimation and reliance on expert reports and management assumptions and calculations.	<ul style="list-style-type: none"> <li>• We will enquire with management regarding any significant changes to the remaining life and associated costs of the landfill. Planned audit procedures also include evaluation of key inputs used in the valuation of the landfill post-closure liability and review of calculations and disclosure prepared by management.</li> </ul>
Contaminated Sites and Asset Retirement Obligations	<p>The contaminated sites standard is complex and therefore there is a risk that liabilities may not be identified and/or appropriately accounted for.</p> <p>The new standard PS 3280 Asset Retirement Obligations will be implemented by the Districts in F2023.</p>	<ul style="list-style-type: none"> <li>• Review potential contaminated sites, and management’s assessment of whether a liability exists.</li> <li>• We will also obtain an update of liabilities recorded for contaminated sites identified in prior years to determine if the accounting treatment continues to be appropriate and accurate.</li> <li>• We will continue to work with management and provide guidance as needed towards the future implementation of PS 3280.</li> </ul>



## Areas of focus and planned responses (cont'd)

Financial statement areas	Risks noted	Audit approach
Staff Compensation and Employee Future Benefits	<p>Staff compensation is a significant expenditure category that covers many employees and departments. As a public body, this figure is often of particular interest to financial statement users (taxpayers).</p> <p>The Districts record a liability for post-retirement and post-employment liabilities. Employee future benefits is a complex area that requires much estimation and reliance on actuarial experts.</p>	<ul style="list-style-type: none"> <li>• We will perform tests of controls and substantive procedures over payroll transactions and year-end accruals.</li> <li>• We will review actuarial reports and audit the significant assumptions and data inputs provided by the Districts for completeness and accuracy. Third party confirmations will be obtained over the accuracy and valuation of plan assets.</li> <li>• We will directly communicate with the external actuaries.</li> <li>• We will review the consistency and appropriateness of allocations of staff costs and liabilities from Metro Vancouver Regional District to the other Districts and MVHC.</li> </ul>
Contingent Liabilities	<p>There are various lawsuits pending against the Districts, arising in the ordinary course of business and from specific events. There is a risk that potential losses related to these lawsuits have not been appropriately accrued for, or disclosed in, the financial statements. The Districts carry insurance to minimize the overall financial impacts of adverse outcomes.</p>	<ul style="list-style-type: none"> <li>• We will enquire with management of ongoing litigation, and potential claims that have an impact on the Districts.</li> <li>• We will obtain confirmations from external solicitors of any potential contingent liabilities.</li> <li>• We will also review financial statement disclosures to ensure that disclosures are complete and in accordance with Canadian public sector accounting standards.</li> </ul>

# Materiality

ENTITY	MATERIALITY	PERFORMANCE MATERIALITY	REPORTING THRESHOLD
MVRD (Consolidated)	17,000,000	13,600,000	850,000
MVRD (Non-consolidated)	15,300,000	12,240,000	765,000
GVSD	13,600,000	10,880,000	680,000
GVWD	13,600,000	10,880,000	680,000
MVHC	2,000,000	1,600,000	100,000

Misstatements are considered to be material if they could reasonably be expected to influence the decisions of users based on the financial statements.

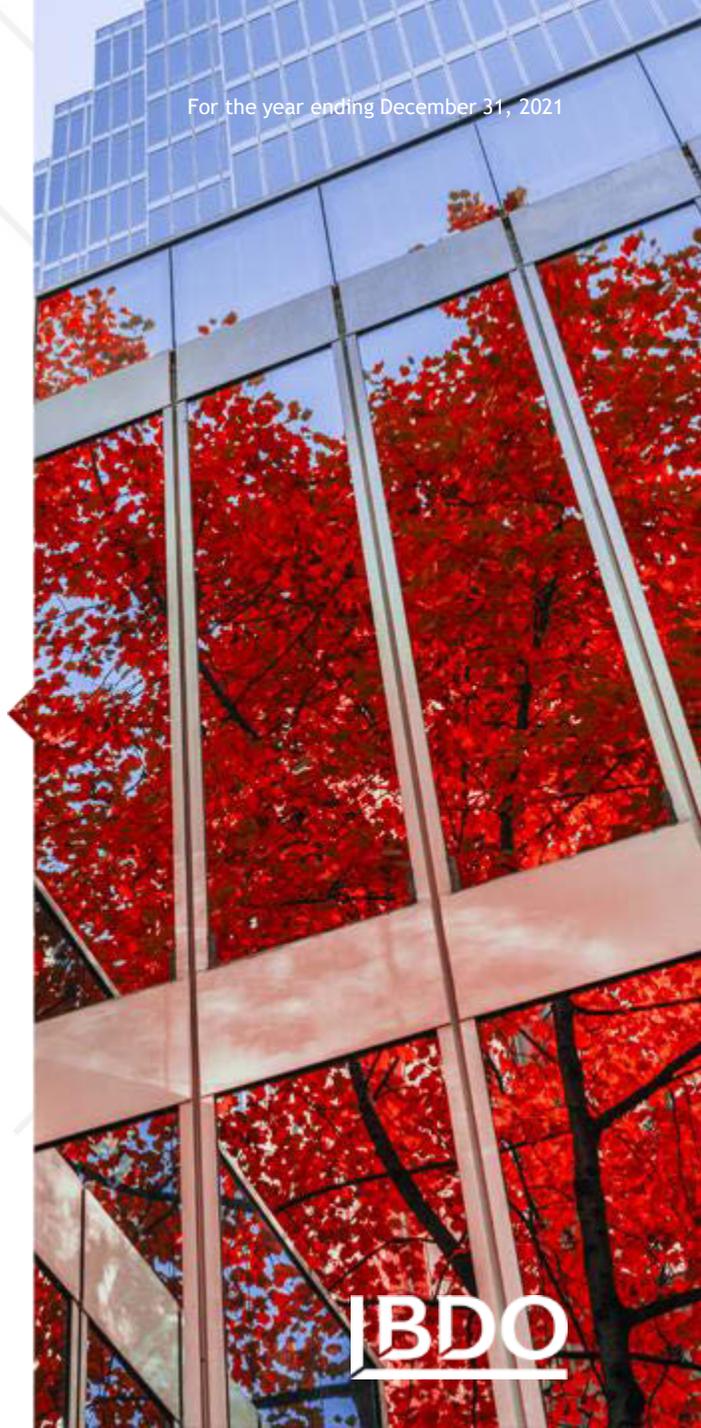
Our materiality calculation is based on the Districts' prior year results. In the event that actual results vary significantly from those used to calculate preliminary materiality, we will communicate these changes to the Performance and Audit Committee as part of our year-end communication.

Overall materiality has been determined based on prior year total expenses. For our audit work over tangible capital assets ("TCA") and other assets and liabilities related to TCA, we have set a higher materiality based on the net book value of TCA. This is to recognize the fact that the Districts have a significant value of TCA which is much larger in comparison to its operating activities.

Preliminary materiality for the current year audit is determined based on 3% of expenses and 2% of tangible capital assets, respectively. Performance materiality (lower level used for sampling) will be based on 80% of these limits.

We will communicate all corrected and uncorrected misstatements identified during our audit to the Performance and Audit Committee, other than those which we determine to be "clearly trivial."

We encourage management to correct any misstatements identified throughout the audit process.





# Using the work of others

## Experts

In order for us to perform adequate audit procedures on certain financial statement areas, we will be relying on the work of, and the report prepared by, HUB International Limited (formerly named Morneau Shepell) for calculations over post-retirement and post-employment liabilities. Canadian generally accepted auditing standards require us to communicate with the expert. We propose to discuss the following with HUB:

- ▶ The objective and nature of our audit engagement and how we intend to use the expert's findings and report.
- ▶ Our assessment of the significant and risk aspects of the engagement that will affect the expert's work.
- ▶ The requirement to advise us if they have any relationship with the Districts which could impair their judgment or objectivity in the conduct of their engagement.
- ▶ The nature, timing and extent of the expert's work and our planned review of it, possibly including review of their working papers.
- ▶ Confirmation that the assumptions used in their calculations are consistent with those used in the prior periods and with industry standards.
- ▶ Their obligation to advise BDO Canada LLP of any matters up to the estimated audit report date that may affect their calculations and their report.

Our scope of work assumes that the appropriate level of management reviews the data provided to HUB and that they also review the assumptions used and results reported by the expert for reasonableness.

The landfill closure and post-closure liability is based on an assessment performed by a third party engineer engaged by the City of Vancouver. As part of our audit, we will discuss with management the significant assumptions used by the engineer and enquire of changes to the operation or status of the landfills, if any, during the year.





# How we audit financial statements: Our six-step audit process

## IDENTIFY AND ASSESS RISK

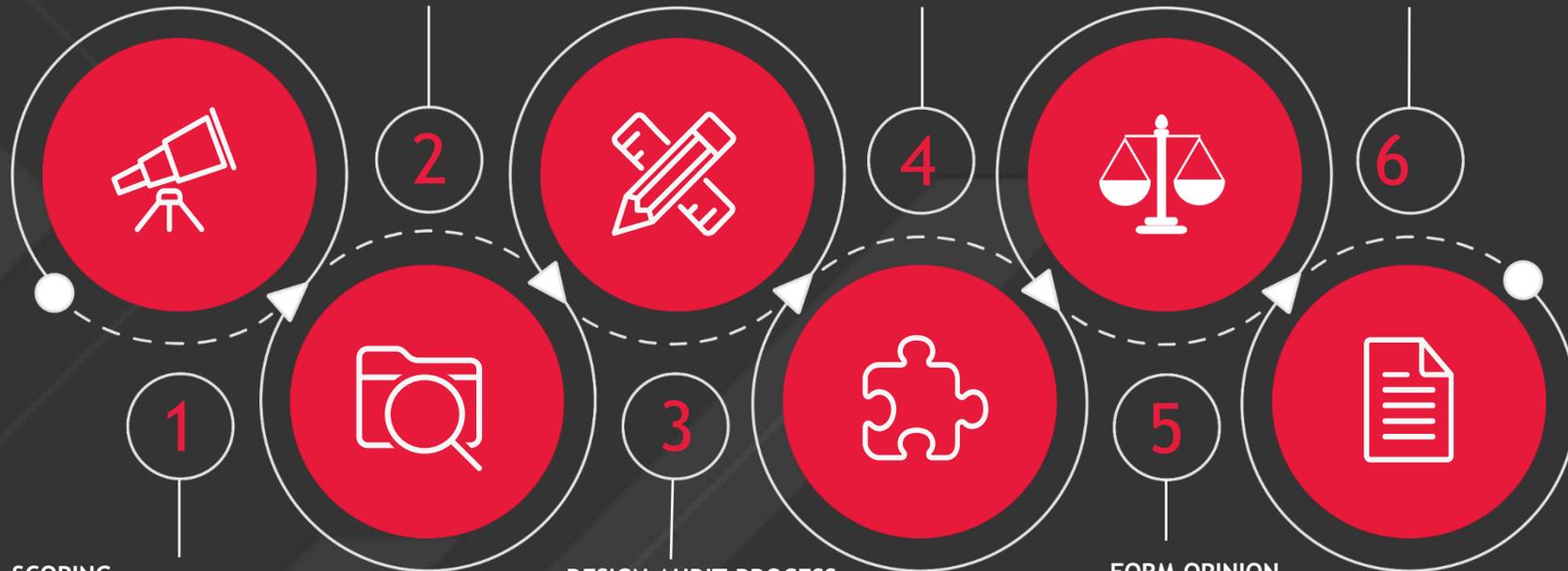
Focus on those areas of financial statements that contain potential material misstatements as a consequence of the risks you face

## OBTAIN AUDIT EVIDENCE

Perform audit procedures while maintaining appropriate degree of professional skepticism, to conclude whether or not the financial statements are presented fairly

## REPORT

Communicate our opinion and details of matters on which we are required to report



## SCOPING

Complete a preliminary review to plan the audit, determine the materiality level, and define the audit scope

## DESIGN AUDIT PROCESS

Design an appropriate audit strategy to obtain sufficient assurance and enable us to report on the financial statements

## FORM OPINION

Evaluate whether we have enough evidence to conclude that the financial statements are free from material misstatement, and consider the effect of any potential misstatements found

## New Standard for Audit Quality



## ISQM 1

The quality of an audit depends not only on the people conducting it—but also on the systems underpinning it. These new rules up the ante for your audit quality.

[SEE THE STANDARD](#)

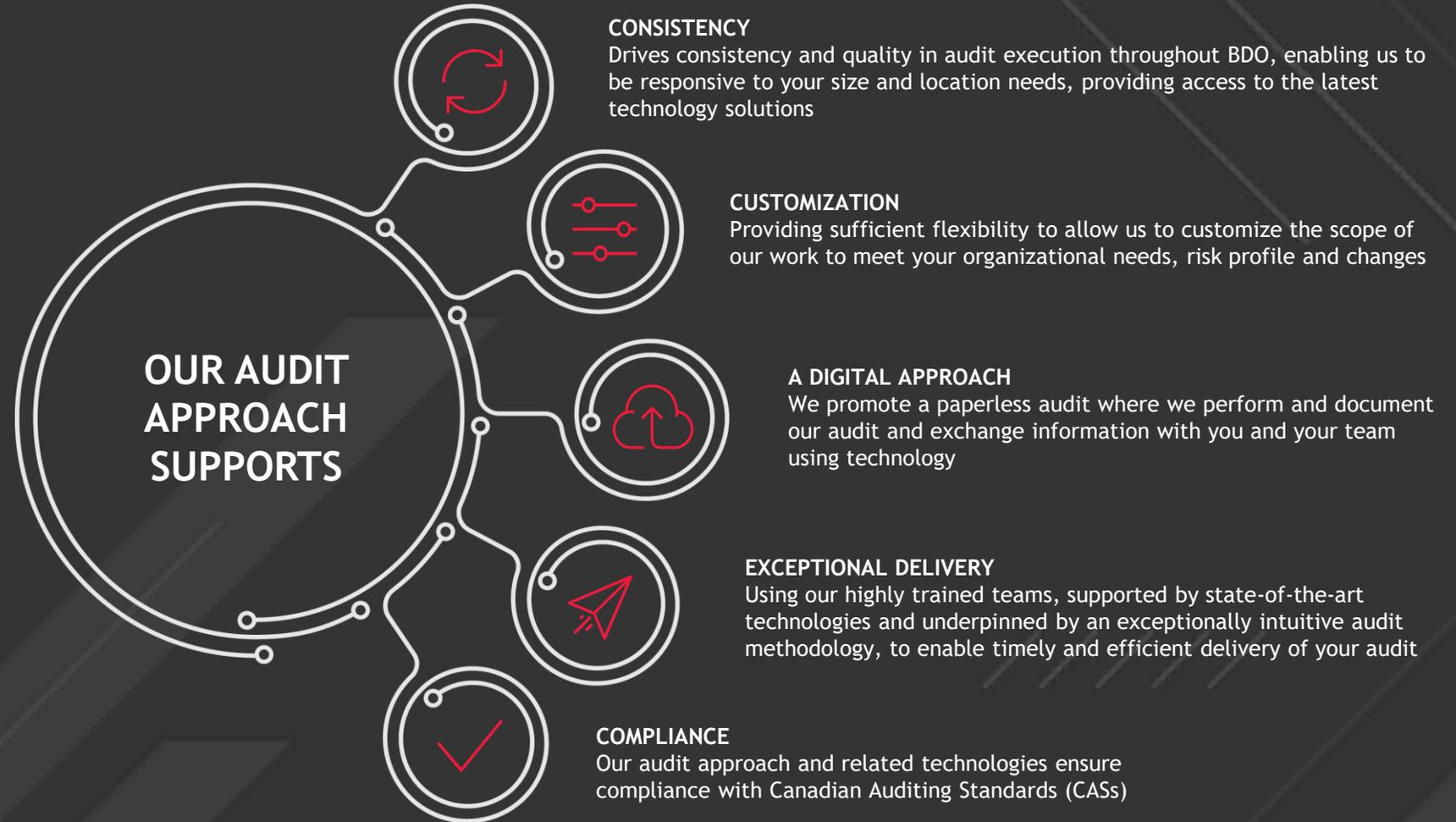
# Our audit approach: Responsiveness in action

The cornerstone of each audit engagement is how we deliver our services.

Our firm is deliberately structured to allow one partner to every six staff members. This means easy access to senior staff and the lead partner throughout your audit, as well as a quick turnaround on any questions. It also helps our team gain a better understanding of your organization.

Our audit process differs from the typical audit in our use of in-field reviews, subject to COVID-19 safety protocols. The benefit of these in-field reviews is that final decision-makers are on site ensuring issues are resolved and files closed quickly.

We offer clients the full-service expertise of a national firm. Even more: As part of the global BDO network, we provide seamless and consistent cross-border services to clients with global needs. Yet we maintain a local community focus. The comprehensive range of services we deliver is complemented by a deep industry knowledge gained from nearly 100 years of working within local communities.





# Recommended resources

## Resuming the public sector in the new normal



The COVID-19 pandemic has created a new working normal for public sector organizations. In this video, BDO discusses some of the biggest challenges facing public sector organizations as Canada enters a new phase of recovery.

**BUSINESS NOT AS USUAL**

## How to protect against fraud and security attacks



Given the current state of vulnerability, hackers are in a prime position to take advantage. Explore optimizing the cloud for data and AI technologies, critically assessing security risks, examining best practices for online collaboration, and more.

**FRAUD AND SECURITY**

## COVID-19: From surviving to thriving



Whether you're building a recovery plan, scanning new opportunities for growth, or revisiting your response—you'll find something to help you in our library of 100-plus webinars, articles, infographics, and videos.

**EXPLORE OUR COVID-19 RESOURCE HUB**

## Key changes to financial reporting



When the rules of reporting change, you may need to fine-tune how to present financial statements and govern the organization.

**ACCESS OUR KNOWLEDGE CENTRE**

# Spotlight on Sustainability

Transformative world events—an international health crisis, social movements, shareholder and investor values, global supply chains, energy transition, smart cities, and sustainable finance—are transforming Canadian business.

Standards and regulations are rapidly changing to reflect the goals of all your stakeholders. Organizations, investors, and customers are embracing environmental, social, and governance (ESG) considerations as important measures of success. Non-financial and financial information is becoming more interconnected.

How climate change became a business issue worth reporting



[READ ARTICLE](#)

Why manufacturers should be reviewing their ESG strategy now



[READ ARTICLE](#)

What executives need to do to align ESG with strategy



[READ ARTICLE](#)

5 reasons why businesses should care about ESG



[READ ARTICLE](#)

How does COVID-19 impact the environment?



[READ ARTICLE](#)

BDO Global Sustainability Resource Hub



[EXPLORE NOW](#)

ESG, and the business case for dealing with climate change



[READ ARTICLE](#)

# Appendices

- ▶ Appendix A: Engagement Letter
- ▶ Appendix B: Changes in Accounting Standards with Potential to Affect your Organization

## Appendix A: Engagement Letter

Our engagement letter sets out the terms of our appointment as auditors of the Districts. The engagement letter is available from management.



# Appendix B: Changes in Accounting Standards with Potential to Affect your Organization

*The following summarizes the status of new standards and the changes to existing standards as of the fall of 2021. The Appendix also reviews Exposure Drafts, Statements of Principles, Projects and Post Implementation Reviews that provide information on the future direction of CPA Public Sector Accounting Handbook.*

## NEW STANDARDS NOT YET IN EFFECT

### Section PS 3400 Revenue (effective years beginning on or after April 1, 2023 - date revised due to COVID)

This section is related to revenue recognition principles that apply to revenues of governments and government organizations other than government transfers and tax revenue.

The Public Sector Accounting Handbook has two Sections that address two major sources of government revenues, government transfers and tax revenue. Revenues are defined in Section PS 1000, Financial Statement Concepts. Recognition and disclosure of revenues are described in general terms in Section PS 1201, Financial Statement Presentation.

This section addresses recognition, measurement and presentation of revenues that are common in the public sector. It is less complex than the comparable new IFRS standard, although generally consistent in philosophy.

This new Section will be effective for fiscal years beginning on or after April 1, 2023. Earlier adoption is permitted.

### Section PS 3280, Asset Retirement Obligations (effective years beginning on or after April 1, 2022 - date revised due to COVID)

This new Section establishes standards on how to account for and report a liability for asset retirement obligations. The main features of the new Section are:

- An asset retirement obligation is a legal obligation associated with the retirement of a tangible capital asset.
- Asset retirement costs associated with a tangible capital asset controlled by the entity increase the carrying amount of the related tangible capital asset (or a component thereof) and are expensed in a rational and systematic manner.
- Asset retirement costs associated with an asset no longer in productive use are expensed.
- Measurement of a liability for an asset retirement obligation should result in the best estimate of the amount required to retire a tangible capital asset (or a component thereof) at the financial statement date.
- Subsequent measurement of the liability can result in either a change in the carrying amount of the related tangible capital asset (or a component thereof), or an expense, depending on the nature of the re-measurement and whether the asset remains in productive use.



# Appendix B: Changes in Accounting Standards with Potential to Affect your Organization (cont'd)

- A present value technique is often the best method with which to estimate the liability.
- As a consequence of the issuance of Section PS 3280:
  - editorial changes have been made to other standards; and
  - Section PS 3270, Solid Waste Landfill Closure and Post-Closure Liability has been withdrawn.

This Section applies to fiscal years beginning on or after April 1, 2022. Earlier adoption is permitted.

Section PS 3270 will remain in effect until the adoption of Section PS 3280 for fiscal periods beginning on or after April 1, 2022, unless a public sector entity elects earlier adoption.

This is one of the most significant new standards in years and will require considerable staff time in most entities to prepare for compliance. BDO has tools and resources to assist in this regard including our ARO Implementation Checklist.

## **Section PS 2601, Foreign Currency Translation** (effective years beginning on or after April 1, 2022 - date revised due to COVID)

This Section revises and replaces PS 2600, Foreign Currency Translation. The following changes have been made to the Section:

- The definition of currency risk is amended to conform to the definition in PS 3450, Financial Instruments;
- The exception to the measurement of items on initial recognition that applies when synthetic instrument accounting is used is removed;
- At each financial statement date subsequent to initial recognition, non-monetary items denominated in a foreign currency that are included in the fair value category in accordance with Section PS 3450 are adjusted to reflect the exchange rate at that date;
- The deferral and amortization of foreign exchange gains and losses relating to long-term foreign currency denominated monetary items is discontinued;
- Until the period of settlement, exchange gains and losses are recognized in the statement of re-measurement gains and losses rather than the statement of operations; and
- Hedge accounting and the presentation of items as synthetic instruments are removed.

The new requirements are to be applied at the same time as PS 3450, Financial Instruments, and are effective for fiscal years beginning on or after April 1, 2022. Earlier adoption is permitted.



# Appendix B: Changes in Accounting Standards with Potential to Affect your Organization (cont'd)

## **Section PS 3450, Financial Instruments** (effective years beginning on or after April 1, 2022 - date revised due to COVID)

This new Section establishes standards for recognizing and measuring financial assets, financial liabilities and non-financial derivatives.

The main features of the new Section are:

- Items within the scope of the Section are assigned to one of two measurement categories: fair value, or cost or amortized cost.
- Almost all derivatives, including embedded derivatives that are not closely related to the host contract, are measured at fair value.
- Fair value measurement also applies to portfolio investments in equity instruments that are quoted in an active market.
- Other financial assets and financial liabilities are generally measured at cost or amortized cost.
- Until an item is derecognized, gains and losses arising due to fair value re-measurement are reported in the statement of re-measurement gains and losses.
- Budget-to-actual comparisons are not required within the statement of re-measurement gains and losses.
- When the reporting entity defines and implements a risk management or investment strategy to manage and evaluate the performance of a group of financial assets, financial liabilities or both on a fair value basis, the entity may elect to include these items in the fair value category.
- New requirements clarify when financial liabilities are derecognized.
- The offsetting of a financial liability and a financial asset is prohibited in absence of a legally enforceable right to set off the recognized amounts and an intention to settle on a net basis, or to realize the asset and settle the liability simultaneously.
- New disclosure requirements of items reported on and the nature and extent of risks arising from financial instruments.

The new requirements are to be applied at the same time as PS 2601, Foreign Currency Translation and are effective for fiscal years beginning on or after April 1, 2022. Earlier adoption is permitted. This Standard should be adopted with prospective application except for an accounting policy related to embed derivatives within contracts, which can be applied retroactively or prospectively.

Note also that Narrow Scope Amendments are expected (see below) that will not impact many readers of this Appendix.



# Appendix B: Changes in Accounting Standards with Potential to Affect your Organization (cont'd)

## **Section PS 3041, Portfolio Investments** (effective years beginning on or after April 1, 2022 - date revised due to COVID)

This Section revises and replaces Section PS 3040, Portfolio Investments. The following changes have been made:

- The scope is expanded to include interests in pooled investment funds;
- Definitions are conformed to those in PS 3450, Financial Instruments;
- The requirement to apply the cost method is removed, as the recognition and measurement requirements within Section PS 3450 apply, other than to the initial recognition of an investment with significant concessionary terms; and
- Other terms and requirements are conformed to Section PS 3450, including use of the effective interest method.

The new requirements are effective for fiscal years beginning on or after April 1, 2022. Earlier adoption is permitted.

## **Financial Instruments Narrow Scope Amendments** (effective years beginning on or after April 1, 2022 - date revised due to COVID)

As the name implies, these amendments are quite narrow in scope and will not impact many entities.

The amendments are intended to:

- clarify how to deal with financial instruments intended to maintain orderly conditions for the circulation of the Canadian dollar (will impact Federal Government only)
- change treatment of bond repurchases such that will not always be an immediate extinguishment of debt
- clarifies and simplifies certain transitional provisions

An Exposure Draft was issued in January 2019 and a Final Standard was issued in March 2020.



# Appendix B: Changes in Accounting Standards with Potential to Affect your Organization (cont'd)

## **Purchased Intangibles: Narrow Scope Amendments** (effective years beginning on or after April 1, 2023)

This project came together quickly as a result of a submission to the Public Sector Accounting Discussion Group. An Exposure Draft was issued in November 2019 and comments closed January 31, 2020. It is expected that PSAB will approve the amendments in fall 2020.

The main features of these amendments will be to:

- remove the recognition prohibition on purchased intangibles from Section PS 1000;
- remove the disclosure requirements from Section PS 1201 relating to purchased intangibles not recognized; and thus,
- allow for the recognition of purchased intangibles in public sector financial statements.

PSAB approved final amendments to the Handbook and a new guideline, PSG-8, Purchased Intangibles, at its September 2020 meetings. The final standard was issued in November 2020 and is effective for fiscal years beginning on or after April 1, 2023.

## **Public Private Partnerships** (effective years beginning on or after April 1, 2023)

This project has been underway since 2014 and is nearing completion. PSAB is currently deliberating feedback received on the exposure draft which closed at the end of February 2020. The exposure draft recommends the following:

- an asset would be recorded when the public sector entity controls:
  - the purpose and use of the infrastructure;
  - access to the infrastructure; and
  - any significant interest accumulated in the infrastructure when the public private partnership's term ends.
- asset to be recorded at cost/fair value -- usually based on present value of future payments related to construction/acquisition of asset
- record liability at same amount as asset
- liability a financial liability when cash/asset consideration, but if non-financial consideration may be:
  - a non-financial liability such as unearned revenue
  - or if no performance obligations may be immediate recognition of proceeds from grants of rights for use
- where a liability is recorded, it should be reduced as performance obligations are settled
- fairly detailed disclosure requirements

The Public Private Partnerships standard, Section PS 3160, was approved in December 2020. The standard was issued in the PSA Handbook in April 2021, and is effective for fiscal years beginning on or after April 1, 2023.



# Appendix B: Changes in Accounting Standards with Potential to Affect your Organization (cont'd)

## CONSULTATION PAPERS AND INVITATIONS TO COMMENT

### Concepts Underlying Financial Performance

This project includes both the "Conceptual Framework" and "Reporting Model" related to it. It is also nearing completion with feedback currently being deliberated on two exposure drafts.

The existing Conceptual Framework found in Sections PS 1000, Financial Statement Concepts and PS 1100, Financial Statement Objectives will be replaced by 10 new chapters. Because the Conceptual Framework is used to develop generally accepted accounting principles (GAAP) but is not considered GAAP itself, there is not expected to be immediate impact from the introduction of the Conceptual Framework. It will, however, influence future Standards development so it is important that the concepts and principles be understood and considered.

Further a new Reporting Model will come along to amend and/or replace PS 1201, Financial Statement Presentation. It is expected that the new Reporting Model will allow better flexibility for application of PSAS to financial statements of government organizations and general improvements to aid understanding of financial statements. In particular, potential options for presentation of endowment investments and related fund balances.

PSAB deliberated the feedback received on the initial Statement of Concepts and Statement of Principles and developed two exposure drafts (one for a revised conceptual framework and one for a revised reporting model), with two accompanying bases for conclusions documents, and two other exposure drafts outlining the resulting consequential amendments.

PSAB is currently deliberating the feedback on the four exposure drafts related to this project (The Conceptual Framework for Financial Reporting in the Public Sector, Consequential Amendments Arising from the Proposed Conceptual Framework, Financial Statement Presentation, Proposed Section PS 1202 and Consequential Amendments Arising from Financial Statement Presentation, Proposed Section PS 1202).



# Appendix B: Changes in Accounting Standards with Potential to Affect your Organization (cont'd)

## Review of International Strategy

On May 5, 2020, PSAB voted to approve “Option 2 - Adapt IPSAS principles when developing future standards,” as described in Consultation Paper 2, “Reviewing PSAB’s Approach to International Public Sector Accounting Standards.” This decision resulted from extensive consultation with Canadian stakeholders. The Board initiated the project through its 2017-2021 Strategic Plan, “Review of PSAB’s Approach to International Public Sector Accounting Standards.”

Option II: Adapt IPSAS principles when developing future standards. PSAB would continue to develop PSAS, but future standards would be based on principles in existing individual IPSAS as each is considered by PSAB. The Board would establish a “Criteria for Modifying Principles” document to provide guidance on when departures from IPSAS principles in a standard under consideration are permitted. The Board’s conceptual framework and financial reporting model would continue as the foundation for Canadian public sector generally accepted accounting principle (GAAP). So, a departure from principles in an individual IPSAS would be required if they conflict with the Board’s framework or model. Changes to GAAP under this option would occur prospectively, and the Board’s due process would be modified to incorporate the Criteria for Modifying Principles. Given that future PSAS would be based on principles in existing individual IPSAS, there would be an increased focus toward influencing the principles under development for new IPSAS.

## Government Not-for-Profit Strategy

When government not-for-profits were brought into the PSA Handbook they were given the option of applying PSAS standards or PSAS standards in conjunction with the “4200 Series” of standards that mirror Part III of the CPA Handbook. It was always recognized that the 4200 Series was likely a stop-gap measure with additional NPO-specific standards being brought into the “regular” PSA Handbook. The need to review the GNFPO strategy became more urgent with several provinces mandating that their organizations not use the 4200 series.

This is a difficult area because of the fact that many GNFPOs operate quite differently than governments do and therefore do not fit well into a government financial reporting model. Moreover, not-for-profit organizations that are not government controlled follow different standards than GNFPOs do (particularly those GNFPOs that do not use 4200 series) which makes comparisons between some entities difficult.

PSAB has recognized the issues facing the GNFPO sector and has created a GNFPO Strategy Committee to guide it through a process of developing improved guidance for GNFPOs.

Retired BDO partner Bill Cox is the Chair of this committee. The committee issued its first Consultation Paper in May 2019 which was mostly fact-finding. A second consultation paper issued in January 2021 included options and a recommended strategy. The recommendation is for GNFPOs to go “full PSAS” but that as part of this process the existing PS 4200 standards will be reviewed on a standard by standard basis. Each existing 4200 standard will either be brought in to amend or supplement PSA standards or be discarded.

The comment deadline for this consultation paper was extended from May 12, 2021 to June 30, 2021 and PSAB is currently deliberating the feedback received.



# Appendix B: Changes in Accounting Standards with Potential to Affect your Organization (cont'd)

## Employee Benefits

The existing Employee Benefits standards in PS 3250, Retirement Benefits and PS 3255, Post-employment Benefits are some of the older standards currently existing in the PSA Handbook. Quite frankly, they have not kept pace with the changes that have occurred in the industry. New concepts such as "Target-Benefit Plans" and "Shared-Risk Plans" do not fit in neatly to existing standards.

In recognition of the wide scope of review required to modernize these standards, PSAB had broken initial review into three different sections:

- Deferral Provisions (Invitation to Comment issued in November 2016)
- Discount Rate Guidance (Invitation to Comment issued in November 2017)
- Non-Traditional Pension Plans (Invitation to Comment issued in October 2018)

The first exposure draft, "Employee Benefits, Proposed Section PS 3251", and the accompanying Basis for Conclusions, was issued on July 28, 2021.

The first phase of this multi-phase standard is focused on the topics of deferral provisions and discount rate guidance. Future phases will focus on non-traditional pension plans and other issues.

Deferral provisions updated under the Exposure Draft propose that revaluations of the net defined benefit liability (asset) be recognized immediately on the statement of financial position within the net defined benefit liability(asset) and the accumulated other component of net assets. Deferral and amortization of actuarial gains and losses would no longer be used. Further, it is proposed that plan assets would be measured at market value.

Discount rate guidance from PSAB proposes that a public sector entity would assess the funding status of a post-employment benefit plan to determine the appropriate discount rate by considering the proportion of the current and projected plan assets balance compared to projected benefit payments, and the unique circumstances and characteristics of their post-employment benefit plan.

The comment deadline for the first Exposure Draft was November 25, 2021.



# Appendix B: Changes in Accounting Standards with Potential to Affect your Organization (cont'd)

## PSAB's Draft 2022-2027 Strategic Plan

The Strategic Plan sets out the following broad strategic objectives that help guide PSAB in achieving its public interest mandate over a multi-year period:

- Develop relevant and high-quality accounting standards
- Enhance and strengthen relationships with stakeholders
- Enhance and strengthen relationships with other standard setters
- Support forward-looking accounting and reporting initiatives

Feedback on PSAB's next Strategic Plan closed on October 6, 2021.

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To: Performance and Audit Committee

From: Roy Moulder, Director, Purchasing and Risk Management  
Financial Services Department

Date: December 15, 2021 Meeting Date: January 13, 2022

Subject: **Tender/Contract Award Information – September 2021 to November 2021**

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### **RECOMMENDATION**

That the Performance and Audit Committee receive for information the report dated December 15, 2021 titled “Tender/Contract Award Information – September 2021 to November 2021”.

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### **EXECUTIVE SUMMARY**

During the period September 1, 2021 and November 30, 2021, the Purchasing and Risk Management Division issued twenty-seven (27) new contracts, each with a value in excess of \$500,000 (exclusive of taxes). All awards and amendments were issued in accordance with the “*Officers and Delegation Bylaws 1208, 284 and 247 – 2014*” and the “*Procurement and Real Property Contracting Authority Policy*”.

### **PURPOSE**

To provide the Performance and Audit Committee information with regard to contracts, handled through the Purchasing and Risk Management Division, with a total anticipated value at or in excess of \$500,000 (exclusive of taxes).

### **BACKGROUND**

The Purchasing and Risk Management Division of Metro Vancouver awards contracts for goods, services and construction in accordance with the “*Officers and Delegation Bylaws 1208, 284 and 247 – 2014*” (*Bylaws*), and the “*Procurement and Real Property Contracting Authority Policy*” (*Policy*) adopted by the Board of Directors on July 11, 2014, effective September 1, 2014. These *Bylaws* and *Policy* outline thresholds for competitive bidding and contracting authorities. Contracts in excess of \$500,000 will be reported to the Performance and Audit Committee to align with the thresholds outlined in the *Policy*.

Capital projects may result in the awarding of one or more contracts to complete the project. Budget availability is verified prior to the execution of contracts.

**NEW CONTRACTS - \$500,000 to \$5,000,000**

The following contracts were **awarded** during the months of *September 2021 to November 2021*  
 (Details attached as **APPENDIX A**):

		(Exclusive of taxes)	
1.	Hub Fire Engines & Equipment Ltd. RFP No. 21-062 <i>Supply and Delivery of Fire Truck and Pumper</i>	\$524,356	MVRD
2.	IDR Commercial Construction Management Tender 21-259 <i>Construction Services for Office Renovations at 2751 Production Way</i>	\$595,264	MVRD
3.	Tritech Group Ltd. Tender No. 20-218 <i>Seymour Capilano Filtration Plant Polymer System Improvement Project</i>	\$2,719,256	GVWD
4.	505401 BC Ltd. RFP No. 21-212 <i>Gutter Cleaning Services</i>	\$618,575	MVHC
5.	Bennett Mechanical Installations (2001) Ltd. Tender No. 21-191 <i>Construction Services for Kersland Reservoir Unit No.1 Structural Improvements</i>	\$3,077,000	GVWD
6.	Integra Architecture RFP No. 21-164 <i>Architect and Design Services for Affordable Housing Project – Southwynde</i>	\$1,902,670	MVRD
7.	Katzie Development Limited Partnership Sole Source No. 21-403 <i>Phase 3 Archaeological Impact Assessment and Investigation</i>	\$2,253,999	GVS&DD
8.	Evoqua Water Technologies Ltd. RFP No. 20-042 <i>Design and Supply of South Surrey Interceptor - Delta Air Management Facility</i>	\$3,747,940	GVS&DD

9.	Trittech Group Ltd. RFP No. 21-073 <i>Supply, Installation and Commissioning of Two Polymer Injection Systems</i>	\$874,303	GVS&DD
10.	Tetra Tech Canada Inc. RFP No. 21-229 <i>Consulting Engineering Services for Design of the Lulu Island WWTP Digester Area ICS I/O Replacement</i>	\$642,319	GVS&DD
11.	Ebara Corporation RFP No. 19-284 <i>Supply and Delivery of a Trickling Filter Spare Pump</i>	\$1,777,590	GVS&DD
12.	Transwest Roofing Ltd. Tender No. 21-211 <i>Construction - South Co-Gen Building- Building Envelope Refurbishment</i>	\$865,507	GVS&DD
13.	Cedar Crest Lands (BC) Ltd. Tender No. 21-226 <i>Construction of the Full Service Washrooms and Day Use Area at Derby Reach Regional Park</i>	\$2,045,000	MVRD
14.	Westcoast Highland Building Solutions Inc. Sole Source No. 21-434 <i>Design Build Services - Pacific Spirit Regional Park Service Yard Replacement</i>	\$947,550	MVRD
15.	R.F. Binnie & Associates Ltd. RFP No. 20-376 <i>Surveying Services for High-Precision Deformation Monitoring and Vibration Monitoring</i>	\$829,681	GVS&DD
16.	Lucent Quay Consulting Inc. Sole Source No. 21-440 <i>Engagement Services – Coquitlam Lake Water Supply Project</i>	\$521,685	GVWD
17.	Dillon Consulting Limited RFP No. 21-092 <i>Waste Composition Program</i>	\$1,479,679	GVS&DD

18.	Metro Testing & Engineering Ltd. Tender No. 21-327 <i>Whalley Reservoir Structural Repairs</i>	\$1,001,356	GVWD
19.	VIA Architecture Inc. RFP No. 21-163 <i>Architect and Design Services for Affordable Housing Project – Eastburn Square</i>	\$2,356,938	MVHC
20.	Tritech Group Ltd. RFP No. 21-192 <i>Design, Supply and Installation of an Active and a Passive Air Management Facilities For the North Surrey Interceptor Including Site Works</i>	\$937,017	GVS&DD

**NEW CONTRACTS – BOARD APPROVED**

The following contracts were **authorized for execution** by the GVS&DD and GVWD Boards of Directors during the months of *September 2021 to November 2021* (as such no further information is included in this report):

		(Exclusive of taxes)	
1.	Northwest Pipe Company RFP No. 21-063 <i>Supply and Delivery of Steel Pipe for 2021 Water Services Construction Projects</i>	\$16,973,012	GVWD
2.	Hatch Ltd. RFP No. 20-287 <i>Coquitlam Main No. 4 Tunnel – Preliminary Design, Detailed Design and Construction Consulting Engineering Services – Phase A only</i>	\$7,018,783	GVWD
3.	Traylor-Aecon General Partnership RFP No. 20-354 <i>Annacis Water Supply Tunnel - Construction</i>	\$287,842,000	GVWD
4.	Yellowridge Construction Ltd. Tender No. 21-241 <i>Construction of Welcher Avenue Multi-Family Affordable Housing</i>	\$24,838,050	MVHC

5.	Pomerleau Bessac Infrastructure RFP No. 20-345 <i>Construction Services for the Burnaby Lake North Interceptor No. 2 – Winston Street Phase 2 Trenchless Section</i>	\$62,942,479	GVS&DD
6.	Brown and Caldwell Consultants Canada Ltd. RFP No. 20-358 <i>Engineering Services for Annacis Island WWTP Stage 5 Expansion Trickling Filter Pump Station and Trickling Filters. Phase A – Preliminary and Detail Design Services</i>	\$24,801,041	GVS&DD
7.	CDM Smith Canada ULC RFP No. 20-358 <i>Engineering Services for Annacis Island WWTP Stage 5 Expansion Trickling Filter Pump Station and Trickling Filters</i>	\$17,802,757	GVS&DD

**AMENDED CONTRACT**

The following '**not previously reported**' contract was **amended** during the months of *September 2021 to November 2021 (APPENDIX B)*:

	<u>Value of Amendments</u>	<u>Total Amended Value of Contract</u>
1. Stantec Consulting Ltd. Sole Source No. 21-065 <i>Cleveland Dam Drum Gate Return to Services Project</i>	\$385,189	\$595,479

The following **previously reported** contracts were **amended** during the months of *September 2021 to November 2021 (Details attached as APPENDIX C)*:

	<u>Value of Amendments</u>	<u>Total Amended Value of Contract</u>
1. Opus Dayton Knight Consultants Ltd. (WSP) RFP No. 14-191 <i>Northwest Langley Wastewater Treatment Plant 25kV Substation Replacement Project- Engineering Services</i>	\$522,325	\$1,092,325
2. AECOM Canada Ltd. RFP No. 15-175 <i>Consulting Engineering Services for the Pump Station and Conveyance for Lions Gate Secondary WWTP Project</i>	\$2,820,944	\$7,719,488

3.	Katzie Development Limited Partnership Sole Source No. 18-163 <i>Archaeological Monitoring for Geotechnical Exploration for the Northwest Langley Wastewater Treatment Plant Projects</i>	\$1,519,165	\$4,084,546
4.	Matcon Civil Constructors Inc. RFP No. 20-357 <i>Annacis Main No. 5 South - 96th Avenue Pre-Build</i>	\$1,165,400	\$5,728,900
5.	Golder Associates Ltd. RFP No. 14-031 <i>Geotechnical, Environmental, and Archaeological Site Investigation and Consulting Services for Lions Gate Wastewater Treatment Plant and Sewer Conveyance</i>	\$597,531	\$1,268,761
6.	CH2M Hill Canada Limited RFP No. 18-057 <i>Annacis Island Wastewater Treatment Plant Trickling Filter Media, Distributor Arms and Ducting Replacement Engineering Services</i>	\$1,721,558	\$4,760,913
7.	CH2M Hill Canada Limited RFP No. 16-145 <i>Consulting Engineering Services for Coquitlam Intake No. 2 - Project Definition</i>	\$2,262,870	\$8,479,315

**COMPETITIVE SELECTION PACKAGES - anticipated to be greater than \$500,000 (Issued but not awarded)** (Details attached as **APPENDIX D**).

#### **ALTERNATIVES**

This is an information report. No alternatives are presented.

#### **FINANCIAL IMPLICATIONS**

The contract approval process includes a review of available budget. The contracts presented herein are consistent with budget authority provided by the respective Boards.

#### **CONCLUSION**

The contracts presented herein were awarded in accordance with the *“Officers and Delegation Bylaws 1208, 284 and 247 – 2014” (Bylaws)* and the *“Procurement and Real Property Contracting Authority Policy” (Policy)* and comply with competitive bidding laws and applicable legislation.

Further, the competitive selection packages were carefully crafted by teams of subject matter experts resulting in the award of contracts that are fiscally responsible, and balance risk, economic, ethical and legal obligations.

**Attachments**

**APPENDIX A:** Information with regard to newly awarded contracts - \$500,000 to \$5,000,000.

**APPENDIX B:** Contract amended to a value of more than \$500,000 but not previously reported to the Performance and Audit Committee

**APPENDIX C:** Previously reported contracts that have been amended.

**APPENDIX D:** Competitive Selection Packages anticipated to be greater than \$500,000 (Issued but not awarded).

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AWARD OF CONTRACT

RFP No. 21-062

1. A contract was awarded, June 8, 2021 for the **Metro Vancouver Regional District**.

To: **Hub Fire Engines & Equipment Ltd.**

in the anticipated amount of up to **\$524,356** (exclusive of taxes) for Supply and Delivery of Fire Truck and Pumper. The anticipated amount is a combination of the successful proponent's proposed price of \$452,662 (exclusive of taxes) and an additional \$71,694 (exclusive of taxes) to account for the acceptance of various optional pieces of equipment as allowed for in the RFP.

The contract price is within the overall budget.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on February 5, 2021.

Closing Date: April 7, 2021

3. Proposals received (exclusive of taxes):

Hub Fire Engines & Equipment Ltd.	\$452,662
Commercial Emergency Equipment Co.	\$486,744
Safetek Emergency Vehicles Ltd.	\$521,459

4. Proposals reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Fleet Services Division Staff

5. Award was made to the highest ranked proponent and lowest cost based on the evaluation criteria established in the RFP.

AWARD OF CONTRACT

TENDER No. 21-259

1. A contract was awarded, September 7, 2021 for the **Metro Vancouver Regional District**.

To: ***IDR Commercial Construction Management***

in the amount of **\$595,264** (exclusive of taxes) for Construction Services for Office Renovations at 2751 Production Way.

The contract price is within the overall budget.

2. Tenderers were invited by Metro Vancouver's and BC Bid websites and private invitation on July 26, 2021.

Closing Date: August 17, 2021

3. Tenders received (exclusive of taxes):

IDR Commercial Construction Management	\$595,264
Holaco Construction (1997) Ltd.	\$1,131,000

4. Tenders reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Liquid Waste Services Department Staff

5. Award was made to the lowest compliant tender submission.

AWARD OF CONTRACT

TENDER No. 20-218

1. A contract was awarded, September 10, 2021 for the **Greater Vancouver Water District**.

To: ***Tritech Group Ltd.***

in the amount of **\$2,719,256** (exclusive of taxes) for Seymour Capilano Filtration Plant Polymer System Improvement Project.

The contract price is within the overall budget.

2. Three (3) firms were shortlisted as a result of RFQ No. 20-217 (publicly advertised on Metro Vancouver's and BC Bid websites) and invited to bid on ITT No. 20-218 on June 24, 2021.

Closing Date: August 4, 2021

3. Tenders received (exclusive of taxes):

Tritech Group Ltd.	\$2,719,256
Maple Reinders Construction Ltd.	\$3,124,002
Carver Construction Ltd.	\$3,211,335

4. Tenders reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Water Services Department Staff

5. Award was made to the lowest compliant bidder.

AWARD OF CONTRACT

RFP No. 21-212

1. A contract was awarded, September 14, 2021 for the **Metro Vancouver Housing Corporation.**

To: **505401 BC Ltd.**

in the anticipated amount of up to **\$618,575** (exclusive of taxes) for Gutter Cleaning Services over a five (5) year period. A contract in the amount of \$247,430 (exclusive of taxes) was awarded on an “as and when required” basis for a period of two (2) years with an option to extend the contract for an additional three (3) year period subject to mutual agreement.

The contract price can be accommodated within the annual operation’s budget.

2. Proponents were invited by Metro Vancouver’s and publicly advertised on Metro Vancouver’s and BC Bid websites on June 18, 2021.

Closing Date: July 16, 2021.

3. Proposals received (exclusive of taxes):

	<u>Per Year Amount</u>
505401 BC Ltd.	\$123,715
Green Graduates Exterior Cleaning Ltd.*	\$167,799
Gorilla Property Services	\$474,921
Marine Roofing (1996) Ltd.	\$1,371,699

\*Only applied to 2 out of 4 regions.

4. Proposals reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Regional Planning and Housing Services Department Staff

5. Award was made to the highest ranked proponent and lowest cost based on the evaluation criteria established in the RFP.

AWARD OF CONTRACT

TENDER No. 21-191

1. A contract was awarded, September 15, 2021 for the **Greater Vancouver Water District**.

To: ***Bennett Mechanical Installations (2001) Ltd.***

in the amount of **\$3,077,000** (exclusive of taxes) for Construction Services for Kersland Reservoir Unit No.1 Structural Improvements.

The contract price is within the overall budget.

2. Four (4) firms were shortlisted as a result of RFQ No. 20-341 (publicly advertised on Metro Vancouver's and BC Bid websites) and invited to bid on ITT No. 21-191 on July 21, 2021.

Closing Date: August 24, 2021

3. Tenders received (exclusive of taxes):

Bennett Mechanical Installations (2001) Ltd.	\$3,077,000
PCL Constructors Westcoast Inc.	\$4,122,368
Jacob Bros. Construction Inc.	\$5,166,021
Metro Testing & Engineering Ltd.	\$6,981,104

4. Tenders reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Water Services Department Staff

5. Award was made to the lowest compliant bidder.

AWARD OF CONTRACT

RFP No. 21-164

1. A contract was awarded, September 24, 2021 for the **Metro Vancouver Regional Housing**.

To: ***Integra Architecture***

in the anticipated amount of up to **\$1,902,670** (exclusive of taxes) for Architect and Design Services for Affordable Housing Project – Southwynde. The anticipated amount is a combination of the successful consultants’ proposed price of \$2,530,891 (exclusive of taxes) less \$628,221 (exclusive of taxes) to account for an adjustment of required hours and fees that had been defined in the RFP, Integra indicated they could do the services for less hours than were defined in the RFP. The initial award is limited to Phase A – Schematic Phase and Phase B – Design Development and Municipal Approvals at a cost of \$495,602 (exclusive of taxes) and subsequent phases of the work will be awarded subject to mutual agreement.

The contract price is within the overall budget.

2. Seven (7) firms were shortlisted as a result of RFQ No. 20-373 (publicly advertised on Metro Vancouver’s and BC Bid websites) and invited to bid on RFP No. 21-164 on May 4, 2021.

Closing Date: May 27, 2021

3. Proposals received (exclusive of taxes):

Ryder Architecture	\$1,882,844*
Martin Pykalo Architect	\$1,857,695
<b>Integra Architecture</b>	<b>\$2,530,891*</b>
VIA Architecture	\$2,059,591

\*As was defined in the RFP, for responses that didn’t base the proposed fee on the hours prescribed in the RFP, an average hourly rate was calculated and multiplied by the RFP prescribed hours in order to form a basis of comparison.

4. Proposals reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Regional Planning and Housing Services Department Staff

5. Integra Architecture was the top ranked proponent as they had far superior technical scores in their submission. They indicated in the proposal different hours for total fees as was defined in the proposal and their adjusted fees were used for evaluation purposes. Upon discussions with them prior to award they indicated they would do the work for reduced hours and for the reduced fees as was indicated in their submission.

AWARD OF SOLE SOURCE CONTRACT

No. 21-403

1. A contract was awarded September 27, 2021 for the **Greater Vancouver Sewerage and Drainage District**.

To: ***Katzie Development Limited Partnership***

in the anticipated amount of **\$2,253,999** (exclusive of taxes) for the purchase of Phase 3 Archaeological Impact Assessment and Investigation.

A sole source contract was awarded to Katzie Development Limited Partnership for the Archeological Impact Assessment (AIA) and Archeological Investigations for the Phase 3 and 4 Ground Improvements of Northwest Langley Wastewater Treatment Plant Project. The initial award is limited to Phase A – Archeological Impact Assessment (AIA) at a cost of \$789,984 (exclusive of taxes). Phase B – Archeological Investigation will be awarded at a later time, if required and subject to mutual agreement.

AWARD OF CONTRACT

RFP No. 20-042

1. A contract was awarded, September 28, 2021 for the **Greater Vancouver Sewerage and Drainage District**.

To: ***Evoqua Water Technologies Ltd.***

in the anticipated amount of up to **\$3,747,940** (exclusive of taxes) for Design and Supply of South Surrey Interceptor - Delta Air Management Facility over a one (1) year period.

The contract price is within the overall budget.

2. Two (2) firms were shortlisted as a result of RFQ No. 18-325 (publicly advertised on Metro Vancouver's and BC Bid websites) and invited to bid on RFP No. 20-042 on March 26, 2020.

Closing Date: June 11, 2020

3. Proposals received (exclusive of taxes):

BIOREM Technologies	\$2,475,000
<b>Evoqua Water Technologies Ltd.</b>	<b>\$3,599,790</b>

4. Proposals reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Liquid Waste Services Department Staff

5. Award was made to the second highest ranked proponent and second lowest cost based on the evaluation criteria established in the RFP.
6. Negotiations were held with the highest ranked proponent; however, during negotiations it was clarified that their proposed equipment was incapable of meeting the required specifications defined in the RFP. Subsequently, negotiations were initiated with the second highest ranked proponent, which resulted in a slight increase of 4.5% in overall cost due to clarification of scope and levels of effort.

AWARD OF CONTRACT

RFP No. 21-073

1. A contract was awarded, September 28, 2021 for the **Greater Vancouver Sewerage and Drainage District**.

To: ***Tritech Group Ltd.***

in the anticipated amount of up to **\$874,303** (exclusive of taxes) for Supply, Installation, and Commissioning of Two Polymer Injection Systems.

The contract price is within the overall budget.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on June 7, 2021.

Closing Date: July 30, 2021

3. Proposals received (exclusive of taxes):

Bisan Trading and Industrial Services Inc.	\$390,000
Bi Pure Water (Canada) Inc.	\$590,250
Tritech Group Ltd.	\$874,303
BlueCon Design & Construction	\$1,375,000
SCG - Process	\$1,499,109
Bennett Mechanical Installations (2001) Ltd	\$1,547,000

4. Proposals reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Liquid Waste Services Department Staff

5. Award was made to the highest ranked proponent based on the evaluation criteria established in the RFP.
6. Tritech ranked first in technical and third in financial criteria and had the highest total score overall. Tritech's proposal offered the most comprehensive response to each of the requested technical criteria. Additionally, Tritech offered a detailed plan on integration with owner supplied equipment.

AWARD OF CONTRACT

RFP No. 21-229

1. A contract was awarded, October 5, 2021, 2021 for the **Greater Vancouver Sewerage and Drainage District**.

To: ***Tetra Tech Canada Inc.***

in the anticipated amount of up to **\$642,319** (exclusive of taxes) for Consulting Engineering Services for Design of the Lulu Island WWTP Digester Area ICS I/O Replacement. The award is for all Phases of the services which includes Preliminary Design, Detailed Design, Construction and Post Construction services and provisional services for commissioning services may be awarded at a later date subject to mutual agreement.

The contract price is within the overall budget.

2. Five (5) firms were shortlisted as a result of RFQ No. 20-210 (publicly advertised on Metro Vancouver's and BC Bid websites) and invited to bid on RFP No. 21-229 on July 14, 2021.

Closing Date: August 6, 2021.

3. Proposals received (exclusive of taxes):

Wood Canada Limited	\$491,222
mCloud Technologies Services Inc.	\$495,724
Tetra Tech Canada Inc.	\$642,319
Stantec Consulting Ltd.	\$724,753
WSP Canada Inc.	\$791,818

4. Proposals reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Liquid Waste Services Department Staff

5. Award was made to the highest ranked proponent based on the evaluation criteria established in the RFP.
6. Tetra Tech Canada Inc. submitted an exceptional technical proposal. Their proposal also highlighted that they are currently working with another client evaluating ABB Select I/O for a project. This current experience with Select I/O, which none of the other proponents have, will be highly beneficial to Metro Vancouver.

AWARD OF CONTRACT

RFP No. 19-284

1. A contract was awarded, October 6, 2021 for the **Greater Vancouver Sewerage and Drainage District**.

To: ***Ebara Corporation***

in the anticipated amount of up to **\$1,777,590** (exclusive of taxes) for Supply and Delivery of a Trickling Filter Spare Pump.

The contract price is within the overall budget.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on January 29, 2020.

Closing Date: March 10, 2020

3. Proposal received (exclusive of taxes):

Ebara Corporation	\$1,777,590
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4. Proposal reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Liquid Waste Services Department Staff

5. Award was made to the sole compliant bidder.

AWARD OF CONTRACT

TENDER No. 21-211

1. A contract was awarded, October 12, 2021 for the **Greater Vancouver Sewerage and Drainage District**.

To: ***Transwest Roofing Ltd.***

in the amount of **\$865,507** (exclusive of taxes) for Construction – South Co-Gen Building – Building Envelope Refurbishment work that includes labour, materials, supplies, tools, equipment for replacing the existing bitumen roofing with protected membrane roofing (PMR) and resealing the exterior panels and skylights. Three (3) provisional items are included, i.e., extended roof warranty (20-year labour and material), double pane insulating glass for skylights, and a new roof hatch.

The contract price is within the overall budget.

2. Tenderers were invited by Metro Vancouver’s and BC Bid websites and private invitations on August 17, 2021.

Closing Date: September 10, 2021.

3. Tenders received (Item 1 – 6, P1, P2, P3, and not including P4) (exclusive of taxes):

Transwest Roofing Ltd.	\$865,507
Marine Roofing (1996) Ltd.	\$894,908
Metro Roofing & Sheet Metal Ltd.	\$981,293
Langley Roofing Co. Ltd.	\$985,000
Bollman Roofing & Sheet Metal Ltd.	\$1,086,000
Olympic Roofing Ltd.	\$1,186,735

4. Tenders reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Liquid Waste Services Department Staff

5. Award was made to the lowest compliant bidder with and without provisional items.

AWARD OF CONTRACT

TENDER No. 21-226

1. A contract was awarded, October 21, 2021 for the **Metro Vancouver Regional District**.

To: ***Cedar Crest Lands (BC) Ltd.***

in the amount of **\$2,045,000** (exclusive of taxes) for the Construction of the Full Service Washrooms and Day Use Area at Derby Reach Regional Park.

The contract price is within the overall budget.

2. Five (5) firms were shortlisted as a result of RFQ No. 21-189 (publicly advertised on Metro Vancouver's and BC Bid websites) and invited to bid on ITT No. 21-226 on September 2, 2021.

Closing Date: October 7, 2021

3. Tenders received (exclusive of taxes):

Cedar Crest Lands (BC) Ltd.	\$2,045,000
Golden Globe Construction Ltd.	\$2,144,800
KDS Construction Ltd.	\$2,287,869
Fricia Construction Inc.	\$2,391,930

4. Tenders reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Parks and Environment Department Staff

5. Award was made to the lowest compliant bidder.

AWARD OF SOLE SOURCE CONTRACT

No. 21-434

1. A contract was awarded October 25, 2021 for the **Metro Vancouver Regional District**.

To: ***Westcoast Highland Building Solutions Inc.***

in the amount of **\$947,550** (exclusive of taxes) for the purchase of Design Build Services - Pacific Spirit Regional Park Service Yard Replacement.

A sole source contract was awarded to Westcoast Highland Building Solutions Inc. for the design and build of a new modular building to replace the existing trailers and outbuildings at the existing Pacific Spirit Regional Park service yard for the Design Build Services - Pacific Spirit Regional Park Service Yard Replacement Project. Successful discussions were held with Westcoast Highland Building Solutions Inc. after a RFP was run and subsequently cancelled due to no valid responses were received. Westcoast Highland Building Solutions Inc. indicated interest in the original RFP but did not submit a response. Discussions were successfully held with them following the cancellation of the original RFP and they submitted an acceptable proposal for the project.

AWARD OF CONTRACT

RFP No. 20-376

1. A contract was awarded, October 28, 2021 for the **Greater Vancouver Sewerage and Drainage District**.

To: ***R.F. Binnie & Associates Ltd.***

in the anticipated amount of up to **\$829,681** (exclusive of taxes) for Surveying Services for High-Precision Deformation Monitoring and Vibration Monitoring. The anticipated amount is a combination of the successful consultants' proposed price of \$702,100 (exclusive of taxes) and an additional \$127,581 (exclusive of taxes) to account for issues identified during negotiations as allowed for in the RFP. The initial award is limited to Phase A – Golden Ears Pump Station and Forcemain Monitoring at a cost of \$453,791 (exclusive of taxes) and subsequent phases of the work will be awarded subject to mutual agreement.

The contract price is within the overall budget.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on March 3, 2021.

Closing Date: April 7, 2021

3. Proposals received (exclusive of taxes):

R.F. Binnie & Associates Ltd.	\$702,100
Global Raymac Surveys Inc.	\$757,673
McElhanney Ltd.	\$1,764,195

4. Proposals reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Project Delivery Department Staff

5. Award was made to the highest ranked proponent and lowest cost based on the evaluation criteria established in the RFP.

AWARD OF SOLE SOURCE CONTRACT

No. 21-440

1. A contract was awarded October 28, 2021 for the **Greater Vancouver Water District**.

To: ***Lucent Quay Consulting Inc.***

in the amount of **\$521,685** (exclusive of taxes) for the purchase of Engagement Services – Coquitlam Lake Water Supply Project.

A sole source contract was awarded to Lucent Quay Consulting Inc. for support of the Coquitlam Lake Water Supply Project in the engagement of permitting and regulatory process with First Nations, key stake holders and the public.

AWARD OF CONTRACT

RFP No. 21-092

1. A contract was awarded, November 1, 2021 for the **Greater Vancouver Sewerage & Drainage District**.

To: ***Dillon Consulting Limited***

in the anticipated amount of up to **\$1,479,679** (exclusive of taxes) for Waste Composition Program over a possible four (4) year period. The initial award of \$369,920 (exclusive of taxes) is for an ‘as and when required’ basis, for a period of two (2) years with an option to extend for an additional two (2) year extension, upon mutual agreement with the successful proponent.

The contract price is within the overall budget.

2. Proponents were invited and publicly advertised on Metro Vancouver’s and BC Bid websites to bid on RFP No. 21-092 on September 10, 2021.

Closing Date: October 6, 2021

3.	Proposals received (exclusive of taxes):	<u>Per Year Amount</u>
	Tetra Tech Canada Inc.	\$343,186
	<b>Dillon Consulting Limited</b>	<b>\$369,920</b>
	Metro Testing & Engineering Ltd.	\$425,010

4. Proposals reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Solid Waste Services Department Staff

5. Award was made to the highest ranked proponent based on the evaluation criteria established in the RFP.
6. Dillon Consulting Ltd. is the top ranked proponent. The technical component of their proposal was ranked highest. Their proposal includes a very strong project team with a great deal of waste composition experience for which excellent references were provided. They had the second lowest bid price.

AWARD OF CONTRACT

TENDER No. 21-327

1. A contract was awarded, November 15, 2021 for the **Greater Vancouver Water District**.

To: ***Metro Testing & Engineering Ltd.***

in the amount of **\$1,001,356** (exclusive of taxes) for Whalley Reservoir Structural Repairs.

The contract price is within the overall budget.

2. Tenderers were invited by Metro Vancouver's and BC Bid websites and private invitation on September 21, 2021.

Closing Date: October 19, 2021

3. Tenders received (exclusive of taxes):

Metro Testing & Engineering Ltd.	\$1,001,356
Retro Specialty Contractors Inc.	\$1,161,448
Polycrete Restorations Ltd.	\$1,273,512
Jacob Bros. Construction Inc.	\$1,337,490

4. Tenders reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Water Services Department Staff

5. Award was made to the lowest compliant bidder.

AWARD OF CONTRACT

RFP No. 21-163

1. A contract was awarded, November 16, 2021 for the **Metro Vancouver Housing Corporation**.

To: **VIA Architecture Inc.**

in the anticipated amount of up to **\$2,356,938** (exclusive of taxes) for Architect and Design Services for Affordable Housing Project – Eastburne Square. The anticipated amount is a combination of the successful consultants’ proposed price of \$2,244,704 (exclusive of taxes) plus \$112,234 (exclusive of taxes) to account for an adjustment of required hours and fees that had been defined in the RFP and for defined disbursements. The initial award is limited to Phase A – Schematic Phase and Phase B – Design Development and Municipal Approvals at a cost of \$560,503 (exclusive of taxes) and subsequent phases of the work will be awarded subject to mutual agreement.

The contract price is within the overall budget.

2. Seven (7) firms were shortlisted as a result of RFQ No. 20-373 (publicly advertised on Metro Vancouver’s and BC Bid websites) and invited to bid on RFP No. 21-163 on April 21, 2021.

Closing Date: May 27, 2021

3. Proposals received (exclusive of taxes):

Martin Pykalo Architect	\$2,109,285
Ryder Architecture	\$2,230,575*
<b>VIA Architecture Inc.</b>	<b>\$2,244,704</b>
Integra Architecture	\$2,873,355*

\*As was defined in the RFP, for responses that didn’t base the proposed fee on the hours prescribed in the RFP, an average hourly rate was calculated and multiplied by the RFP prescribed hours in order to form a basis of comparison.

4. Proposals reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Regional Planning and Housing Services Department Staff

5. VIA Architecture Inc. was the top ranked proponent as they had the strongest technical merit as well as the third lowest proposed cost (after adjusted hours), however, the difference in the financial amount was negligible. VIA’s technical proposal provided a detailed understanding of project goals, including: high-performance building design, partnerships with BC Housing and CMHC, accessibility, child care and multi-family affordable housing buildings designed for families.

AWARD OF CONTRACT

RFP No. 21-192

1. A contract was awarded, November 24, 2021 for the **Greater Vancouver Sewerage and Drainage District**.

To: ***Tritech Group Ltd.***

in the anticipated amount of up to **\$937,017** (exclusive of taxes) for Design, Supply and Installation of an Active and a Passive Air Management Facilities for the North Surrey Interceptor Including Site Works. The anticipated amount is a combination of the successful consultants' proposed price of \$895,553 (exclusive of taxes) and an additional \$41,464 (exclusive of taxes) to account for issues identified during negotiations as allowed for in the RFP.

The contract price is within the overall budget.

2. Proponents were invited by Metro Vancouver's and BC Bid websites and private invitation on June 17, 2021.

Closing Date: July 20, 2021

3. Proposal received (exclusive of taxes):

Tritech Group Ltd.	\$908,860
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Note: The Proposal amount included Lifecycle Cost Calculation in the amount of \$13,308, which was included for evaluation purposes, but excluded from the award.

4. Proposal reviewed by:

Contractual: Purchasing and Risk Management Division Staff

Technical: Liquid Waste Services Department Staff

5. Award was made to the only compliant bidder.

CONTRACTS AMENDED TO A VALUE OF  
MORE THAN \$500,000  
BUT NOT PREVIOUSLY REPORTED TO THE  
PERFORMANCE AND AUDIT COMMITTEE

Sole Source No. 21-065  
PURCHASE ORDER No. 704808

Stantec Consulting Ltd.

Cleveland Dam Drum Gate Return to Services Project  
for the **Greater Vancouver Water District**

1.	Original Value of Contract (exclusive of taxes):	\$210,290
2.	Amendment Value (exclusive of taxes):	\$385,189
3.	Amendment Number:	01
4.	Total Amended Value of Contract (exclusive of taxes):	\$595,479

5. Budget Status:

This contract is funded within the operation budget for this project.

6. Reasons for Amendment to Contract:

A Sole Source contract was awarded to Stantec Consulting Ltd. (Stantec) to undertake risk review and develop short-term mitigation strategies for Cleveland Dam Drum Gate Return to Services Project. The scope of works for Stantec associated with returning the Cleveland Dam Drum Gate to service was substantially increased due to the number of risks identified during the initial investigation. The additional level of effort required by Stantec in order to address the identified risks and allow the return of the drum gate into service were agreed to by the Project Team and the Senior Staff Steering Committee.

AMENDMENT TO A PREVIOUSLY REPORTED CONTRACT

RFP No. 14-191  
PURCHASE ORDER No. 134922

Northwest Langley Wastewater Treatment Plant 25kV Substation  
Replacement Project Engineering Services  
for the **Greater Vancouver Sewerage and Drainage District**

- |  |   |
|--|---|
| 1. Name of Contractor:   | Opus Dayton Knight Consultants Ltd. (WSP) |
| 2. Date Contract Reported:   | <b>July 2015</b>                          |
| 3. Actual Awarded Value (all phases)   | \$570,000                                 |
| 4. Amendment Number:   | 01  |
| 5. Value of Amendment (exclusive of taxes):                                  | \$522,325                                 |
| 6. Amendment Type:   | Additional Services                       |
| 7. Total Revised Anticipated Amended Value of Contract (exclusive of taxes): | \$1,092,325                               |

8. Budget Status:

This contract is funded within the capital budget for this program.

9. Amendment No. 01 is the result of eight (8) change orders incorporating: contract extension of 11 months for construction engineering services, additional geotechnical assessments for potential impacts to the Golden Ears Bridge and additional design scope requested by internal operations staff.

AMENDMENT TO A PREVIOUSLY REPORTED CONTRACT

RFP No. 15-175  
PURCHASE ORDER No. 140211

Consulting Engineering Services for the Pump Station and Conveyance for  
Lions Gate Secondary WWTP Project  
for the **Greater Vancouver Sewerage & Drainage District**

- |  |                           |
|--|---------------------------|
| 1. Name of Contractor:   | AECOM Canada Ltd.         |
| 2. Date Contract Reported:   | <b>October 2016</b>       |
| 3. Original Awarded Value of Phase A (October 2016):                         | \$1,398,544               |
| Board Approved Phase B (July 2017):  | \$2,000,000               |
| Board Approved Phase C (July 2018):  | \$1,500,000               |
| <b>Subtotal:</b>   | <b><u>\$4,898,544</u></b> |
| 4. Amendment Number:   | 02                        |
| 5. Value of Amendment (exclusive of taxes):                                  | \$2,820,944               |
| 6. Amendment Type:   | Additional Services       |
| 7. Total Revised Anticipated Amended Value of Contract (exclusive of taxes): | \$7,719,488               |
| 8. Budget Status:  |                           |

This contract is funded within the capital budget for this program.

9. Amendment No. 02 is the result of Change Orders No. 1 and No. 2 for additional services resulting from project construction extensions.

AMENDMENT TO A PREVIOUSLY REPORTED CONTRACT

Sole Source No. 18-163  
PURCHASE ORDER No. 604471

Archaeological Monitoring for Geotechnical Exploration for the  
Northwest Langley Wastewater Treatment Plant Projects  
for the **Greater Vancouver Sewerage and Drainage District**

- |    |  |   |
|----|--|---|
| 1. | Name of Contractor:  | Katzie Development Limited<br>Partnership |
| 2. | Date Contract Reported:  | <b>April 2021</b>                         |
| 3. | Original Awarded Value of Contract:  | \$466,289                                 |
|    | Value of previous Amendment No. 1:   | \$979,517                                 |
|    | Value of previous Amendment No. 2:   | \$576,782                                 |
|    | Value of previous Amendment No. 3:   | \$542,793                                 |
|    | <b>Subtotal:</b>   | <b><u>\$2,565,381</u></b>                 |
| 4. | Amendment Number:  | 04  |
| 5. | Value of Amendment (exclusive of taxes):   | \$1,519,165                               |
| 6. | Amendment Type:  | Additional Services                       |
| 7. | Total Revised Anticipated Amended Value of Contract<br>(exclusive of taxes):   | \$4,084,546                               |
| 8. | Previous Amendment Explanation (Reported to Performance and Audit Committee - April 2021,<br>July 2021 and October 2021) |   |

Amendment No. 01 is for archaeological inspection services and assessment of deposits found when monitoring of the phase 2 ground improvement subgrade at Northwest Langley. Several archaeological sites have been identified for inspection. Amendment No. 02 is the result of the second phase of archaeological inspection services and sifting of archaeological deposits recovered from the site identified through monitoring of the phase 2 ground improvement subgrade at Northwest Langley. Amendment No. 03 is for archaeological monitoring of the subgrade excavation in Area 11E and archaeological machine testing of the Influent Sewer Alignment. Area 11E is located along the eastern site boundary, where the valve chamber and waterline will be installed and the Influent Sewer Alignment is located along the southern haul road. This is related to Northwest Langley Wastewater Treatment Plant expansion project.

9. Budget Status:

This contract is funded within the capital budget for this program.

10. Amendment No. 04 is for the investigation of positive intact archeological sites in Areas 7, 8, and 9 that were discovered through archaeological monitoring of Phase 2 Ground Improvements. The work will include systematic data recovery (SDR) methods and require duration of 84 filed days.

AMENDMENT TO A PREVIOUSLY REPORTED CONTRACT

RFP No. 20-357  
PURCHASE ORDER No. 722833

Annacis Main No. 5 South - 96th Avenue Pre-Build  
for the **Greater Vancouver Water District**

- |  |                                |
|--|--------------------------------|
| 1. Name of Contractor:   | Matcon Civil Constructors Inc. |
| 2. Date Contract Reported:   | <b>October 2021</b>            |
| 3. Original Awarded Value (exclusive of taxes):                              | \$4,563,500                    |
| 4. Amendment Number:   | 01                             |
| 5. Value of Amendment (exclusive of taxes):                                  | \$1,165,400                    |
| 6. Amendment Type:   | Additional Services            |
| 7. Total Revised Anticipated Amended Value of Contract (exclusive of taxes): | \$5,728,900                    |
| 8. Budget Status:  |                                |

This contract is funded within the capital budget for this program.

9. Amendment No. 01 is the result of Change Order No. 1 to install approximately 170m of additional 1828mm steel pipe to avoid potential future property development conflicts and City of Surrey future sanitary main installation.

AMENDMENT TO A PREVIOUSLY REPORTED CONTRACT

RFP No. 14-031  
PURCHASE ORDER No. 615899

Geotechnical, Environmental, and Archaeological Site Investigation and Consulting Services for  
Lions Gate Wastewater Treatment Plant and Sewer Conveyance  
for the **Greater Vancouver Sewer & Drainage District**

- |  |                        |
|--|------------------------|
| 1. Name of Contractor:   | Golder Associates Ltd. |
| 2. Date Contract Reported:   | <b>February 2015</b>   |
| 3. Actual Awarded Value (all phases)   | \$671,230              |
| 4. Amendment Number:   | 01                     |
| 5. Value of Amendment (exclusive of taxes):                                  | \$597,531              |
| 6. Amendment Type:   | Additional Services    |
| 7. Total Revised Anticipated Amended Value of Contract (exclusive of taxes): | \$1,268,761            |
| 8. Budget Status:  |                        |

This contract is funded within the capital budget for this program.

9. Amendment No. 01 is the result of five change orders which aimed to understand the sources and extent of contamination at the Lions Gate Wastewater Treatment Plant site through soil sampling and long-term groundwater monitoring programs. These programs were performed based on comments from the Province, the Federal Government, the District of North Vancouver and the Squamish Nation. Furthermore, the long-term groundwater monitoring program was extended due to delays experienced by the North Shore Wastewater Treatment Plant.

AMENDMENT TO A PREVIOUSLY REPORTED CONTRACT

RFP No. 18-057  
PURCHASE ORDER No. 607624

Annacis Island Wastewater Treatment Plant Trickling Filter Media, Distributor Arms and Ducting  
Replacement Engineering Services  
for the **Greater Vancouver Sewerage and Drainage District**

- |   |                           |
|---|---------------------------|
| 1. Name of Contractor:  | CH2M Hill Canada Limited  |
| 2. Date Contract Reported:  | <b>April 2021</b>         |
| 3. Original Reported Value of Contract:   | \$3,407,188               |
| Value of Phase A:   | \$736,783                 |
| Value of Phase B:   | \$642,614                 |
| Value of Phase C1:  | \$1,659,958               |
| <b>Subtotal:</b>  | <b><u>\$3,039,355</u></b> |
| 4. Amendment Number:  | 01                        |
| 5. Value of Amendment – Phase C2:   | \$1,721,558               |
| 6. Amendment Type:  | Additional Services       |
| 7. Total Revised Anticipated Amended Value of Contract<br>(exclusive of taxes): | \$4,760,913               |
| 8. Budget Status:   |                           |

This contract is funded within the capital budget for this program.

9. Amendment No. 01 is the result of awarding Phase C2 for provision of construction engineering services for Trickling Filters #2 and #4. The contract entailed design and construction engineering services for all four trickling filters. The original RFP prescribed hours needed for each phase; the construction engineering services for all four trickling filters was based on a single construction shift per day. The contractor's schedule for the construction of Trickling Filters #1 and #3 required two construction shifts per day, as a result the hours for construction engineering services increased. The contractor's schedule for the construction of Trickling Filter #2 and #4 also requires two construction shifts per day which results in additional construction engineering services hours being required. Both construction engineering phases required amendment to the contract to higher values than originally reported to the Performance and Audit Committee.

AMENDMENT TO A PREVIOUSLY REPORTED CONTRACT

RFP No. 16-145  
PURCHASE ORDER No. 142229

Consulting Engineering Services for Coquitlam Intake No. 2 - Project Definition  
for the **Greater Vancouver Water District**

- |     |  |   |
|-----|--|---|
| 1.  | Name of Contractor:  | CH2M Hill Canada Limited  |
| 2.  | Date Contract Reported:  | <b>February 2017</b>  |
| 3.  | Original Awarded Value of Contract:  | \$5,457,726   |
|     | Value of previous Amendment No. 1:   | \$758,719   |
|     | <b>Subtotal:</b>   | <b><u>\$6,216,445</u></b>   |
| 4.  | Amendment Number:  | 02  |
| 5.  | Value of Amendment (exclusive of taxes):   | \$2,262,870   |
| 6.  | Amendment Type:  | Additional Services   |
| 7.  | Total Revised Anticipated Amended Value of Contract (exclusive of taxes):  | \$8,479,315   |
| 8.  | Previous Amendment Explanation (Reported to Performance and Audit Committee - April 2020)  |   |
|     |  | Amendment No. 01 includes change orders for the following additional work: hydraulic modelling and related services to verify required capacity for proposed 2nd intake, simulated distribution system testing for disinfection byproducts assessment, conduct risk assessment to determine probability of requiring filtration treatment for water supply from Coquitlam Intake No. 2, future buildout options for filtration and extension of schedule approximately 15 month and additional services resulting from tunnel length increase from 6km to 10km. |
| 9.  | Budget Status:   |   |
|     |  | This contract is funded within the capital budget for this program.   |
| 10. | Amendment No. 02 includes change orders for the following additional work: Value Engineering optimization of project options, hydraulic modelling related to Environmental Assessment work, additional geotechnical field investigations in the treatment plant site, preparation of Comprehensive Site Investigation Plan for Phase 2 field investigations, borehole core delivery and storage in the Coquitlam Watershed, revision of indicative design and drawings, and additional support and technical studies for engagement with Stakeholders and First Nations. |   |

**Competitive Selection Packages Anticipated to be greater than \$500,000  
(Issued but not awarded)**

*Note: All contracts listed below are within the project budgets approved by the Board of Directors*

<b>Tender/RFP</b>	<b>Closing Date</b>
RFP No. 20-235 <i>Solid Waste Weigh Scale Software Replacement</i> <b>(Awarded less than \$500K)</b>	January 14, 2021
RFP No. 21-032 <i>Supply and Delivery of a Sewer Cleaning Truck</i>	March 31, 2021
RFP No. 21-125 <i>Employee and Family Assistance Program – Metro Vancouver</i>	April 21, 2021
RFP No. 21-027 <i>Bottom Ash Beneficial use</i> <b>(Cancelled)</b>	May 14, 2021
RFP No. 21-026 <i>Fire Protection System Inspection and Equipment Maintenance</i> <b>(Awarded less than \$500K)</b>	July 23, 2021
RFP No. 21-010 <i>Pre-Selection of Polymer Equipment for the Northwest Langley Wastewater Treatment Plant Upgrade</i>	July 5, 2021
Tender No. 21-136 <i>Supply and Delivery of Metal-Seated Butterfly Valves and Rubber-Seated Butterfly Valves – Kennedy Newton Main Phase 3 and Other Related Projects</i>	September 22, 2021
RFP No. 21-014 <i>Pre-Selection of Low Pressure Gas Holder and Pressurisation Blowers for the Northwest Langley Wastewater Treatment Plant Upgrade</i>	September 16, 2021
RFP No. 21-006 <i>Pre-Selection of Rotary Drum Thickening Equipment for the Northwest Langley Wastewater Treatment Plant Upgrade</i>	September 9, 2021

Tender No. 21-225 <i>Construction Services for the Lulu Island Wastewater Treatment Plant Secondary Clarifier (SCL) ICS I/O Upgrade</i> <b>(Awarded less than \$500K)</b>	September 8, 2021
Tender No. 21-300 <i>Semlin Low-Slope Roof Replacement</i>	October 29, 2021
RFP No. 21-240 <i>Provision of Light and Medium Duty Lease Vehicles</i>	October 8, 2021
RFP No. 21-238 <i>Iona Island Foreshore Ecological Restoration Projects: Data Collection, Modelling and Design</i>	October 6, 2021
RFP No. 21-213 <i>General Housekeeping and Refuse Removal Services</i>	November 30, 2021
RFP No. 21-353 <i>Record Centre Services</i>	November 26, 2021
RFP No. 20-192 <i>Consulting Engineering Services for the Rechlorination Stations Upgrade (Cape Horn, Pitt River, Clayton)</i>	November 23, 2021
Tender No. 21-462 <i>2751 Production Way Roof Renewal - West Section</i>	November 23, 2021
RFP No. 21-144 <i>Environmental Engineering Services Related to Remediation And Risk Assessment For Iona Island Wastewater Treatment Plant Upgrade Project</i>	November 19, 2021
RFP No. 21-272 <i>Scour Protection Design and Construction Services for Maple Ridge Forcemain, North Surrey Interceptor, and Annacis Main No. 3</i>	November 18, 2021
Tender No. 21-268 <i>LSG Tank Inspection and Membrane Replacement at Annacis Island and Lulu Island WWTP</i>	November 17, 2021
RFP No. 21-276 <i>Consulting Engineering Services for Annacis Island Wastewater Treatment Plant (AIWWTP) Electrical Studies and Upgrade</i>	November 12, 2021
Tender No. 21-234 <i>Construction Services for Capilano Middle-Lake Debris Boom</i>	November 9, 2021

RFP No. 21-460 <i>Architect and Design Services for Affordable Housing Project - Malaspina Village Phases I &amp; II</i>	December 21, 2021
ITT No. 21-447 <i>Supply and Installation of Scour Protection for Tilbury Main South Arm Crossing</i>	December 17, 2021
Tender No. 21-039 <i>Construction of the Lower Seymour Conservation Reserve Watershed Administration Building</i>	December 16, 2021
RFP No. 21-334 <i>Construction of Hastings-Cassiar Intake Connection</i>	December 15, 2021
RFP No. 22-001 <i>High Speed Wide Area Network (WAN) - Network Services</i>	December 14, 2021
RFP No. 21-466 <i>Coquitlam Recycling and Waste Centre Demolition</i>	December 7, 2021
RFP No. 21-283 <i>Program Management Consulting (PMC) Services for the Iona Island Wastewater Treatment Plant Projects</i>	January 19, 2022
RFP No. 22-012 <i>2022 Iona Deep Sea Outfall Receiving Environment Monitoring Program - Sediment Effects Survey</i>	January 13, 2022
Tender No. 21-001 <i>Construction - Fleetwood Reservoir Phase 1</i>	January 12, 2022

## DELEGATION EXECUTIVE SUMMARY

**Name or Organization:** Alex Boston, ED Renewable Cities & Fellow, SFU Morris J Wosk Centre for Dialogue

**Subject:** Making Metro 2050 Matter: Climate, Congestion, Affordability & Prosperity

**Presenting to:** Regional Planning Committee

**Date of Meeting:** January 14, 2022

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*Metro 2050* is the product of an institution inadvertently designed to change incrementally and operate in silos. Many regional district and municipal elected officials and staff have conscientiously endeavoured to create a regional land use agenda that acknowledges some shifting priorities and meets minimum expectations. They have succeeded.

Meeting minimum expectations is no longer satisfactory. The urgent crises of affordability and climate with calamitous consequences to property, infrastructure, human life, economic activity and ecosystems behove the region to steward a course correction. Fortunately, this new direction also offers greater prosperity, including lower congestion and higher industrial and employment land outcomes and the lowest cost solutions to some of our highest priorities.

In its current form *Metro 2050* will sustain high transportation GHGs—the region’s largest and fastest growing GHG source—increased congestion, increased unaffordability and growing vulnerability to climate change impacts. While the draft RGS includes some commendable new work to manage civic infrastructure costs, the overarching policies and trends will result in rising civic infrastructure deficits and upwards pressure on transit fares. *Metro 2050* inadvertently facilitates a high cost, high carbon, high congestion, high risk region.

Two transformative series of events thrust Metro Vancouver Directors, staff and member local governments into a unique position to steward this course correction, stemming public cynicism and meeting public expectations for leadership: 1. while challenging, unprecedented, imperfect and wildly successful, local governments’ commendable COVID response, and 2. the catastrophic series of multi-billion-dollar climate impacts across B.C. communities.

### **Land Use Driving the Largest and Fastest Growing Emission Sector: Transportation**

Transportation is the Metro’s largest and fastest growing GHG source. A major driver is land use. A disproportionately large share of job and residential growth is further and further from major job hubs (the #1 determinant of household carbon and congestion). The vast majority of general urban fabric is losing density. Average commute distances and times are rising. Transit mode share is slipping. Vehicle growth rates are outstripping population growth.

The only jurisdiction to cut transportation GHGs below 1990 levels is Sweden. B.C. is starting to raise key Swedish pillars: 1. bold carbon tax, 2. strong vehicle efficiency & ZEV mandates, 3. renewable fuels. Sweden has another key pillar: 4. sustainable land use. According to the European Environmental Agency, Sweden has essentially eliminated farmland and natural area loss to commercial, industrial, residential and transportation infrastructure sprawl. Transit mode share is rapidly growing and traffic-related death and serious injury has plummeted.

While B.C.’s and Metro Vancouver’s transportation GHGs have steadily risen, almost 20% since 2007, California has driven seven percent reductions. California also employs these four pillars.

The *Clean Air Plan* recently adopted by Metro Vancouver has a 65% emission reduction target for passenger transportation. Although there are no “Big Moves” for land use—questioning the Plan’s defensibility—it does state:

***Strong regional land-use policies are foundational to achieving the targets in the Clean Air Plan. Building compact, mixed-used communities that connect homes, jobs and recreation with walking, cycling and public transit will reduce driving emissions and will support the protection of important lands such as agricultural and industrial lands, and natural areas.***

What is the magnitude of these reductions? There are likely negligible reductions attributable to the RGS. Land use is becoming less versus more sustainable. Strategically located Industrial land is being displaced by residential. Agricultural and natural areas are being displaced by sub-standard industrial sprawl, exacerbating risks to climate change. At the same time, leading U.S. cities—including competing port cities—are building state-of-the-art, multi-storey warehouses on century-old, central industrial lands, cutting freight and employee congestion, carbon and transportation costs.

### **Technology Innovation & Sustainable Land Use Implementation**

It takes 30 years for 100% vehicle stock turnover. Of the new vehicles driven off of car lots today, the last will be scrapped just after 2050, frustrating Metro’s long term carbon neutral commitments. Ninety percent of these new vehicles are fossil fueled. Moreover, due to auto-oriented urban growth, Metro Vancouver’s total vehicle stock is rapidly

rising. Without sustainable land use, there will be more fossil fuel vehicles and congestion in 2030 than at any other time in history. The *Clean Air Plan's* 65% reduction target for light duty vehicles appears illusory.

While most transportation sector GHG growth historically has been in passenger vehicles. Today, the region's fastest growth in carbon and congestion is urban freight – the “Prime” sector. Similarly, *Metro 2050* and *Transport 2050* have omitted consideration of meaningful precedents in land use and transportation to address this sector.

Land use planning is local governments' wheelhouse. If there is any planning agenda where Metro Vancouver should align its GHG reduction targets it is *Metro 2050*. The IPCC underscores the imperative for local leadership and focus.

***Thousands of cities are undertaking climate action plans, but their aggregate impact on urban emissions is uncertain... Current climate action plans focus largely on energy efficiency. Fewer climate action plans consider land use planning... Effective mitigation strategies involve packages of mutually reinforcing policies, including co-locating high residential with high employment densities, achieving high diversity and integration of land uses, increasing accessibility and investing in public transport...***

**IPCC, Assessment Report 5, Mitigation Working Group, 2014**

***effective urban planning can reduce GHG emissions from urban transport between 20% and 50%***  
**IPCC, Special Report on Global Warming of 1.5°C, 2018**

### **Policy Alignment: Metro 2050, Climate 2050/Clean Air Plan, CleanBC**

Currently RGS Goal #3 states: “Protect the Environment and Respond to Climate Change and Natural Hazards.” This goal avoids addressing Metro Vancouver's climate policy imperative to reduce emissions 45% by 2030 consistent with IPCC 1.5°C conclusions regarding emission reductions and the strategic role of local government land use action. To ensure consistency with the *Clean Air Plan's* “evidence-based” and “comprehensive & integrated” principles, it is incumbent on Metro Vancouver to lay out a more sustainable land use agenda.

Moreover, rather than simply “responding to Climate Change and Natural Hazards,” there is an urgency to *reduce* vulnerability. Over the past year, Abbotsford, Merritt, Lytton, Princeton *responded* to climate change. Communities need proactive leadership. Sustainable land use is a key cornerstone for reducing vulnerability to climate impacts. This should be central to the *Clean Air Plan's* “preventative” principle.

*CleanBC's Roadmap to 2030* has underscored the need to robustly integrate land use to meet transportation GHG targets. 2030 targets include reducing total driving distance (vehicle km travelled) 25%. Fortunately, the *Clean Air Plan* is underpinned by an “ambitious” principle. *Metro 2050* should meet this target.

With 30% renewable fuels by 2030 and a 90% ZEV mandate for new vehicle sales under *CleanBC's Roadmap to 2030*, Metro Vancouver can readily calculate the land use contribution to meet Metro's target to cut light duty vehicle GHGs 65%. It has the data. Metro's commitment to “evidence based,” “continuous improvement,” and “transparency” principles should drive this analysis, make it available to elected officials and the public and drive *Metro 2050* direction.

Not having defensible and quantified modal shift, transportation demand management and GHG reduction targets attributable to land use, renders *Metro 2050* and *Climate 2050* inadequate responses to rising catastrophic losses.

### **Land Use: Lowest Cost, Highest Benefit Strategy Wedge**

Sustainable land use is the lowest cost climate action strategy wedge. As the OECD and the Global Commission on Climate and Economy have underscored, sustainable land use is a negative cost, i.e., a money maker!

Focussing growth along transit corridors and around rapid transit stations cuts congestion and puts riders and revenue into TransLink coffers. Supportive land use can extend improved traffic flow on billion-dollar bridge and highway expansions for decades, delaying (sometimes permanently) further costly expansion. Smart land use can cut transportation spending—the largest household expenditure after housing. Sustainable land use can dramatically reduce the magnitude of losses to property, infrastructure, ecosystem services and human life from climate impacts. Sustainable land use offers some of the least expensive, affordable housing solutions; some are money makers!

Metro Vancouver can protect the pocket books and prospects of people in this region. A course correction is needed.

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**Metro Vancouver, Clean Air Plan**

Jan 12, 2022

Concerns re: Metro Vancouver 2040: Shaping Our Future Land Use Designation Amendment Request from the City of Surrey – South Campbell Heights

The lands proposed for industrial development (2.3 km<sup>2</sup>) are critical for protecting the health of the Little Campbell River (TA'TALU in SENĆOŦEN) and receiving waters of Boundary Bay. As recent extreme flooding events have shown us, there is an urgent need to assess the way we manage land in a way that enhances resiliency to climate change. Industrial development of this scale could have **irreparable impacts**: flooding, erosion, aquifer contamination, and degradation of critical salmon spawning habitat. During the extreme weather events of this fall, we have already begun to see this damage: flooding of the hatchery, scouring out of recently laid salmon eggs, landslides on Semiahmoo First Nation land.

The proposed industrial lands overlay a shallow unconfined aquifer that provides drinking water and irrigation water for thousands of residents in South Surrey/Langley and supplies river flow for critical salmon spawning habitat. Additionally, **Semiahmoo First Nation has not been adequately consulted** about this proposal that directly affects the health of their territory, their home on the river and their traditional food sources.

The TATALU River supports five significant runs of Pacific Salmon as well as the endangered Salish Sucker. Productive spawning and rearing habitat exists mainly within and directly downstream of the Study Area. As one of the most endangered rivers in BC, serious consideration must be taken while reviewing the potential impact of this revised plan.

Expanding the Urban Containment Boundary for this development **will go against Climate 2050 and Metro 2040/50 goals** to: 1) ensure nature based solutions, 2) create a compact urban area, 3) protect land for agriculture, 4) protect and enhance natural features and their connectivity, reduce greenhouse gas emissions, and mitigate and prepare for climate change, 5) develop healthy and complete communities, and 6) direct growth and development to make it easier for residents to get to, from and around the region for their jobs and daily needs. Our concerns are as follows:

1. **Lack of Indigenous consultation** and free, prior, informed consent. The Semiahmoo First Nation's reserve lands reside at the estuary of the TATALU River and their traditional territory extends throughout the entire watershed. Traditionally they have relied on the TATALU for clean water and food security: abundant salmon and shellfish. Without free, prior and informed consent, this proposal should not move forward<sup>1</sup>.
2. **Information gaps**. The revised plan was presented to Metro Vancouver before recommended studies were completed: a) groundwater review to understand groundwater/surface water interactions to inform the development of Aquifer Protection Measures, b) Integrated Stormwater Management Plan<sup>2</sup> – to consider environmental consequences prior to build out, and c) archaeological review - the entire area is of high archaeological potential, aside from the areas of

<sup>1</sup> BC Legislative Assembly. 2019. [Bill 41 – 2019](#): Declaration on the Rights of Indigenous Peoples Act.

<sup>2</sup> Kerr Wood Leidal. 2011. Little Campbell River Integrated Stormwater Scoping Study. Final Report. Prepared for City of Surrey and Township of Langley.

historic gravel extraction<sup>3</sup>. Proximity of the river, possibility of culturally modified trees, traditional use site, and historic travel corridors would require detailed archaeological study prior to permitting development under the Heritage Canada Act<sup>1</sup>.

- 3. Water quality impacts.** Run-off of fine sediments, hydrocarbons and other contaminants are likely to enter the river during wet weather. The Study Area drains directly into a segment of critical spawning habitat within the TATALU. Spawning occurs during the fall corresponding with heavy rain events – sediments can smother eggs in spawning beds and damage gills, impeding respiration. Surrey staff, along with A Rocha, Semiahmoo First Nation and 30 other organizations and levels of government sit on a working group to improve water quality in the Little Campbell River and Boundary Bay receiving waters so that Semiahmoo First Nation might be able to return to their traditional practices of shellfish harvest<sup>4</sup>. Development of these lands along the river as industrial goes against Surrey's efforts to restore water quality conditions and does not support reconciliation action.
- 4. Groundwater impacts.** This Study Area overlays the unconfined Brookwood aquifer, which has been identified as highly vulnerable to contamination from surface sources<sup>56</sup>. The proposed development site is also shown as one of the highest value natural recharge areas in the South Campbell Heights Special Study Area. Conversion of well-draining gravel soils to impervious or compact surfaces for industrial or commercial development would greatly impede infiltration of rainwater needed to maintain flows in this groundwater-fed river system. There are already stretches of river (up to 2km in length) that flow underground during summer months, stranding thousands of juvenile salmon, indicating existing pressure on groundwater resources in the watershed.
- 5. Biodiversity value and Species at Risk.** Much of the Study Area has been designated as a high ecological value forest hubs and corridors<sup>7</sup>. The Hubs and Corridors support diverse forest and wetland ecosystems and wildlife including species at risk: Red-legged Frog, Western Toad, Little Brown Myotis, Olive-sided Flycatcher. Critical habitat for Western Painted Turtle and Salish Sucker has been designated over much of the Study Area and the current plan is not in compliance with Recovery Strategy requirements. Converting this land to industrial would not be considered "effective protection".

Many trees in these hubs are over 1m diameter and approximately 100 years old<sup>5</sup>. The value of these hubs and corridors is in large part because they are contiguous and function as a network. Removing some of the pieces diminishes the function of all remaining pieces.

This area is ideal for a Nature Park and should be protected to sustain biodiversity health and carbon sinks within the region.

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<sup>3</sup> Kremsater, L., T. Elliot, and S. Hamm. 2015. South Campbell Heights Environmental Study #1220-030-2015-008. Produced by Madrone Environmental Services Ltd. Submitted to Surrey City Hall Finance and Technology Department, Surrey BC.

<sup>4</sup> Shared Waters Alliance. n.d. <https://sites.google.com/view/shared-waters/home>

<sup>5</sup> Kremsater, L., T. Elliot, and S. Hamm. 2015. South Campbell Heights Environmental Study #1220-030-2015-008. Produced by Madrone Environmental Services Ltd. Submitted to Surrey City Hall Finance and Technology Department, Surrey BC.

<sup>6</sup> BC Government. 2018. Aquifer Description for Langley/Brookwood Aquifer (Aquifer No. 41).

<sup>7</sup> Surrey, City of. 2014. Biodiversity Conservation Strategy. Produced by Diamond Head Consulting, January 2014. [https://www.surrey.ca/sites/default/files/media/documents/Surrey\\_BCS\\_Report.pdf](https://www.surrey.ca/sites/default/files/media/documents/Surrey_BCS_Report.pdf)

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To: Climate Action Committee

From: Sheryl Cumming, Project Engineer  
Parks and Environment Department

Date: December 16, 2021 Meeting Date: January 14, 2022

Subject: **Metro Vancouver Regional Consumption-Based Emissions Inventory**

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### RECOMMENDATION

That the Climate Action Committee receive for information the report dated December 16, 2021, titled “Metro Vancouver Regional Consumption-Based Emissions Inventory”.

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### EXECUTIVE SUMMARY

Metro Vancouver developed a consumption-based emissions inventory (CBEI) to provide a comprehensive understanding of greenhouse gas emissions, as a complement to the in-region (territorial) emissions inventory. The CBEI extends the analysis to account for embodied emissions that occur outside the region’s geographical boundary, but are associated with goods and services that are consumed within the region. The CBEI helps complete the picture of how in-region economic activity and consumption habits influence greenhouse gas emissions globally. This approach informs the development of potential emission reduction plans, policies, and regulations at the regional and municipal levels to reduce not only territorial but also embodied emissions. Consumption-based greenhouse gas emissions are 23.3 million tonnes, compared to the 2015 in-region emissions estimate of 14.8 million tonnes.

### PURPOSE

To provide the Climate Action Committee with information about a consumption-based emissions inventory developed for Metro Vancouver, including key findings, trends, and potential implications for future greenhouse gas emissions policies, programs, and inventories.

### BACKGROUND

Metro Vancouver’s *Climate 2050* roadmaps and the *Clean Air Plan* set the direction for greenhouse gas emissions reduction actions towards a carbon neutral region by 2050. The Metro Vancouver regional CBEI is intended to inform the development of policies and implementation of actions in both the *Clean Air Plan* and the longer-term *Climate 2050* roadmaps. The CBEI helps identify embodied greenhouse gas (GHG) emission sources associated with the goods and services consumed by residents and businesses in the region. The regional CBEI can also support the efforts of Metro Vancouver member jurisdictions, a number of which are expressing interest in understanding and applying a consumption-based lens in reducing GHG emissions.

### A CONSUMPTION-BASED APPROACH TO REGIONAL GREENHOUSE GAS EMISSIONS

A CBEI (Reference 1) was developed to complement Metro Vancouver’s territorial (or in-region) emissions inventory, which provides foundational data for managing air quality and GHG emissions in the region. Metro Vancouver compiled its first inventory of air contaminants and GHG within the

regional boundaries for the year 1985, and has completed inventories every 5 years since then. Staff are preparing an inventory for 2020, which will be reported to the Committee later in 2022.

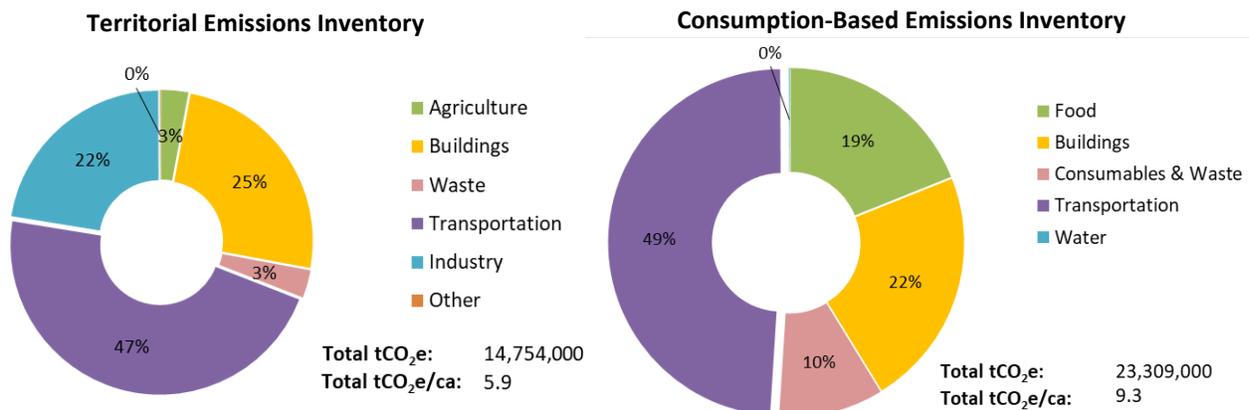
The territorial emissions inventory does not take into account embodied emissions that occur outside the region’s geographical boundary and thus a regional consumption-based emissions approach helps complete the picture of how in-region economic activity influences greenhouse gas emissions globally (see Attachment, Figure 1). The CBEI was developed using available regional data and organized by emissions source: buildings, transportation, food, “consumables & waste”, and water. In both the territorial and consumption-based inventories, GHG emissions from the operation of buildings and transportation (“operating emissions”) are included, while embodied emissions (i.e. from energy and materials) are captured only in the CBEI. The different emissions categories used in the territorial and consumption-based inventories reflect the different approaches to measuring emissions and relative importance of emission sources under those approaches.

A CBEI captures GHG emissions generated from the production, transport, use, and disposal of goods, or from services (e.g. drinking water, waste management) that we depend on in the region, including related emissions that occur outside of Metro Vancouver. A CBEI can help in understanding the impacts of regional consumption habits on GHG emissions, and inform decarbonization policies and programs within *Climate 2050* and the *Clean Air Plan*.

**Metro Vancouver’s Consumption-Based Emissions**

The CBEI shows that, as a region, Metro Vancouver consumption-based greenhouse gas emissions are 58% higher than the 2015 territorial emissions inventory. The CBEI reports an estimated total of 23.3 million tonnes of GHG (Mt CO<sub>2</sub>e), while the territorial emissions were estimated at 14.8 Mt CO<sub>2</sub>e. This result reflects a typical ‘consumer’ society that relies on imports of its consumable goods from outside the region as opposed to a ‘producer’ society where a greater proportion of emissions are associated with the manufacture of goods inside that jurisdiction.

The consumption-based emissions inventory shows that transportation (49%) and buildings (22%) are the top two sources of emissions associated with consumption in the region (see next figure). This is similar to the proportional contribution of transportation and buildings in the territorial emissions inventory. The results also show that food, and “consumables & waste” (e.g. paper and plastic products, organic waste, packaging and other household waste), make up the next largest portions of the CBEI, contributing about 19% and 10% of consumption-based GHG emissions.



Food and “consumables & waste”, which are only partially accounted for in the territorial inventory, add about 6.7 million tonnes of GHG emissions (Mt CO<sub>2</sub>e). The embodied emissions associated with buildings and transportation account for a combined 5.5 Mt CO<sub>2</sub>e, which is roughly half of the operational emissions from buildings and transportation. While the territorial inventory includes emissions from all industrial sources in the region, the CBEI only includes industrial greenhouse gas emissions associated with goods and services consumed within the region.

### **CONSUMPTION-BASED GREENHOUSE GAS EMISSIONS AT THE COMMUNITY LEVEL**

In response to requests from member jurisdictions, the CBEI also provides estimates of the relative distribution of consumption-based GHG emissions across Metro Vancouver’s member jurisdictions. Generally, the larger communities in the region have the highest overall emissions totals due to the larger population of “consumers” (Attachment, Figure 2), but other community characteristics also influence per capita emissions from buildings and transportation. Figure 3 in the Attachment and following sections describe those differences. For food, “consumables & waste”, and water, estimates are generated by allocating emissions by population, and thus are equivalent across the region on a per capita basis. Where available, local activity data for the major GHG emission sources in the region – buildings and transportation – were used to present community level emissions for the 21 Metro Vancouver municipalities, 1 electoral area, and 1 treaty First Nation.

#### **Buildings**

In the CBEI, total regional emissions from buildings (e.g. from energy use, embodied energy and materials) were estimated at 5.2 Mt CO<sub>2</sub>e. The emissions varied across Metro Vancouver communities driven by differences in housing size, housing type, and the level of commercial and institutional activity. Communities that do not have residential apartments in their building stock have greater proportions of lower density housing, which generally results in higher per capita embodied as well as operating emissions. The inventory also shows that increasing housing size or decreasing occupancy levels can lead to both higher per capita embodied and operating emissions.

#### **Transportation**

Transportation (e.g. emissions from fuel use, embodied energy and materials from vehicles and roads) contributed the highest CBEI emissions at about 11.4 Mt CO<sub>2</sub>e. Metro Vancouver communities with higher per capita greenhouse gas emissions from transportation in the CBEI are linked with high per capita private vehicle ownership, high percentages of larger-sized vehicles owned, and high average vehicle trip distance. The CBEI shows lower greenhouse gas emissions associated with communities that have high density urban centres with lower vehicle ownership levels. Emissions from commercial vehicles, bus travel, BC Ferries, air travel, and non-road equipment/vehicles for each community were assigned the same per capita emissions for all member jurisdictions.

### **IMPLICATIONS FOR REGIONAL GREENHOUSE GAS EMISSIONS MANAGEMENT**

A growing number of local governments, including Metro Vancouver member jurisdictions, are looking to consumption-based emissions inventories and similar quantification approaches to better understand the “embodied” or “upstream” GHG emissions attributed to consumption in their communities. The CBEI can inform the development of GHG emission reduction plans, policies, and regulations at the regional and municipal levels by expanding the understanding of the GHG emission impacts of the region’s consumption. It can also inform decision-making and identify co-benefits and

trade-offs in emissions reduction measures, encouraging approaches that not only reduce regional emissions, but also maximize reductions in global greenhouse gas emissions.

As an example, the CBEI shows that operating emissions from transportation and buildings still make up the larger proportion of GHG emissions. These results reinforce that GHG reduction measures such as switching to low- to zero emissions vehicles and equipment, shifting to clean, renewable sources of heating in buildings, and improving energy and material efficiency use remain a top priority and thereby highlighting the importance of local government policies and programs in reducing emissions from these sources.

As government efforts to reduce operating emissions from buildings and transportation progress, the CBEI underscores the importance of considering the implications of these policies and other policies that address embodied emissions. Buildings policies such as low carbon products, and material recycling and reuse requirements can reduce embodied emissions. In transportation, zero emissions vehicle policies alone can increase embodied emissions, without complementary policies that support active transportation and transit. A consumption based approach also reveals that food and “consumables & waste” contribute a larger portion of greenhouse gas emissions than those estimated in the territorial inventory, and points to potential areas for future policy to reduce emissions. The *Clean Air Plan* and the *Climate 2050* roadmaps include actions focused on reducing operating emissions as well as actions to reduce embodied emissions.

#### **ALTERNATIVES**

This is an information report. No alternatives are presented.

#### **FINANCIAL IMPLICATIONS**

The overall resources required to develop a regional CBEI were approved in program budgets, including staff time and procurement of consulting services. Considerations for updates to Metro Vancouver’s regional emissions inventories and implementation of greenhouse gas emissions reduction actions are made during annual and 5-year work plans and long term financial planning.

#### **CONCLUSION**

The Metro Vancouver regional consumption-based emissions inventory (CBEI) is intended to inform the development of policies and implementation of actions in both the *Clean Air Plan* and the longer-term *Climate 2050* roadmaps. While the CBEI aligns with the continuing need to reduce operating greenhouse gas emissions from buildings and transportation, it can also help in the development of greenhouse gas emission reduction plans and policies by understanding the broader greenhouse gas emission impacts of the region’s consumer lifestyle and related behaviours, within and beyond the Metro Vancouver region.

#### **Attachment**

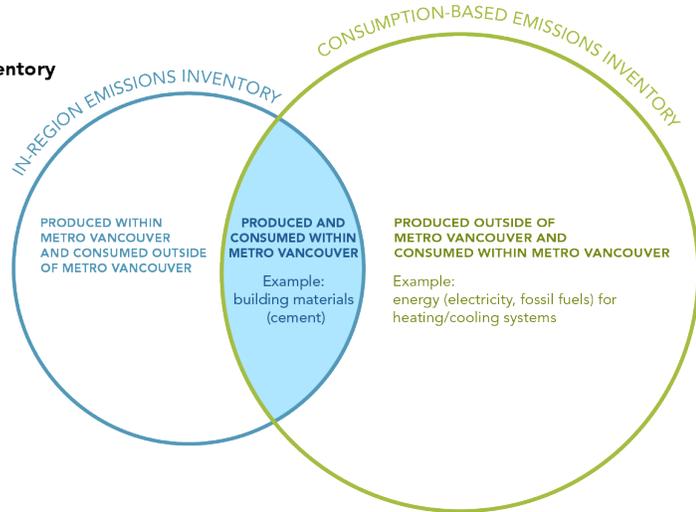
Consumption-Based Emissions Inventory Trends (*Doc #49726569*)

#### **Reference**

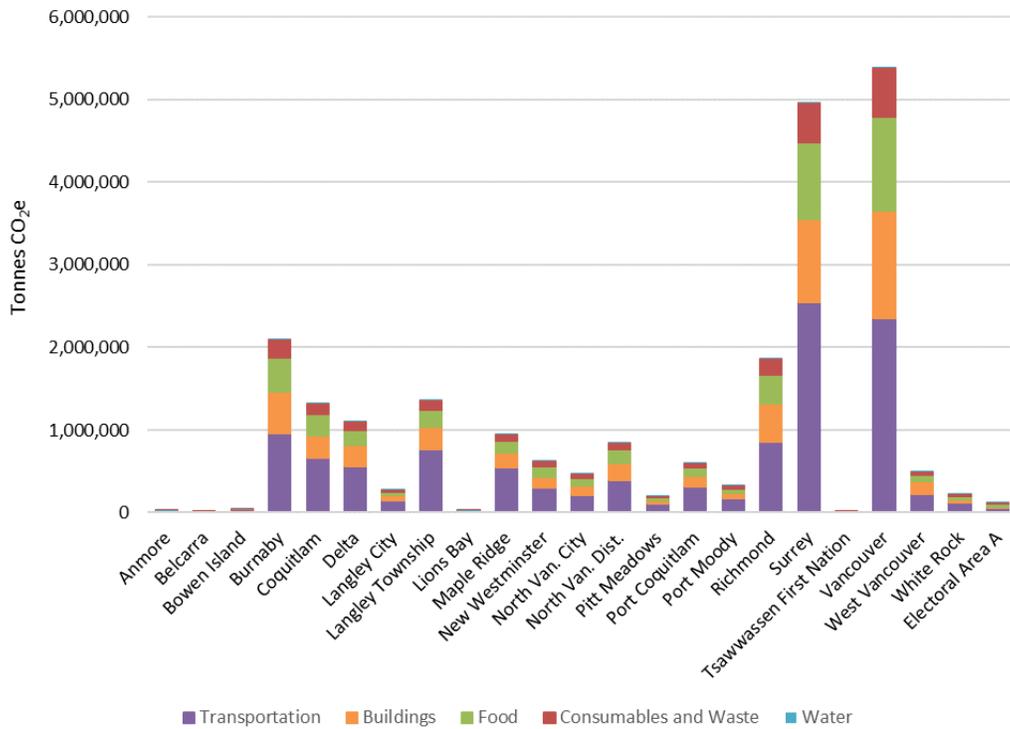
1. [Metro Vancouver Regional Consumption-Based Emissions Inventory – Final Report](#)

**GHG emissions included in an in-region emissions inventory vs. a consumption-based emissions inventory**

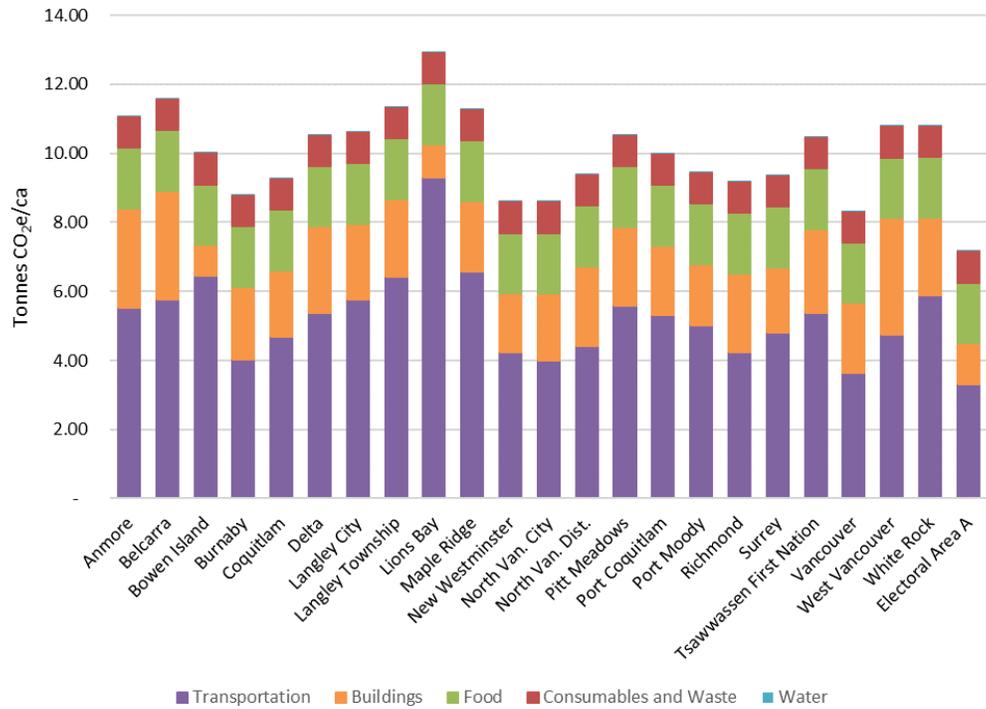
Example: GHG emissions from goods and services for a building



**Figure 1: Territorial (or In-Region) versus Consumption-Based Approach in an Emissions Inventory**



**Figure 2: Consumption-Based Emissions Inventory (in tonnes CO<sub>2</sub>e) by Metro Vancouver Community, 2015**



**Figure 3: Consumption-Based Emissions Inventory (in tonnes CO<sub>2</sub>e) per capita by Metro Vancouver Community, 2015**