



**Municipal Finance  
Authority of BC**

**2021  
ANNUAL  
REPORT**

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# Message from the Chair Malcolm Brodie

## Governance

The Municipal Finance Authority (MFA) continues to enhance its market-leading services, providing sophisticated and cost-effective capital financing and investment products for local governments throughout the province. By pooling the needs and financial strength of British Columbia's local governments, we provide access to the lowest borrowing costs together with a suite of low-cost investment products tailored for municipal reserve managers - helping them continue to build and maintain the communities that result in a strong British Columbia.

As Chair, I was pleased to have worked with Vice-Chair Al Richmond (Cariboo Regional District) and re-elected Trustees Rob Gay (Regional District of East Kootenay), Jonathan Côté, Jack Froese, Brad West (Metro Vancouver), Geoff Young (Capital Regional District), Andy Adams (Strathcona Regional District), and Lyn Hall (Regional District of Fraser-Fort George). I welcomed newly-elected Trustee Janice Morrison (Regional District of Central Kootenay). The meetings of the Board of Trustees have included a review of our business plan and priorities, operating performance, access to financial markets, oversight, and administration. The performance and outlook for our Pooled Investment Funds were also regularly reviewed by the Investment Advisory Committee of the Board.

## Vision and Objectives

Our vision is to be recognized as a world-class financial institution for the benefit of taxpayers in British Columbia and to be our clients' preferred choice for financing and investing. We remain committed to maintaining the highest quality products and services to meet the many needs of our local government partners and strive to

increase our value each year. We continue to provide the lowest municipal borrowing rates in Canada for all local governments in British Columbia, regardless of loan or community size.

## Credit Ratings

In 2021, our AAA credit ratings, the highest attainable, were once again reaffirmed by three credit rating agencies: Standard and Poor's, Moody's, and Fitch Ratings. The Commercial Paper program was also given the highest attainable rating. Our AAA credit ratings validate our unique model and operational excellence and reflect third-party analysis of the low-risk to bondholders associated with our debentures.

## Financial Products and Services

MFA's tradition of being our Members' most important financial partner has continued throughout the pandemic and we are very proud to have improved and enhanced our service offerings for BC's local governments. The MFA provides capital financing for regional districts and member municipalities through the issuance of securities at a low cost in the institutional capital markets. In 2021 we issued over \$1.9 billion of long-term securities and \$3.925 billion of short-term securities in the capital markets.

Over the last 2 years, we have debuted several new pooled fund products including Pooled High Interest Savings Accounts, Fossil Fuel Free options, and a Commercial Mortgage fund. In 2022 our latest offering is a multi-asset class growth fund (The Diversified Multi-Asset Class Fund or "DMAC") that will invest in Canadian and international equities - a first for BC. This new Fund is designed for local governments with substantial long-term reserves not needed for 10 years

or longer. The MFA will be working closely with our Members to help them understand the risks and rewards of participating in this new type of investment product that has a higher expected return but is more volatile. Our combined pooled investment funds at the end of this year were close to \$5.6 billion in assets - up about \$1 billion from 2020.

## Education

Part of our mandate is to support education in the public sector, either directly or through our sponsorship of the many high-quality organizations serving the local government sector in BC, including UBCM, GFOA, LGMA and LGLA. In addition to directly contributing over \$149,000 in 2021 to support local government courses, programs, workshops, and conferences throughout the province, trustees and management contribute their time on behalf of the MFA at various local government events to enhance the financial knowledge of our members.

## Management and Staff

2021 was an extremely challenging and busy year for the MFA team given the extraordinary experience of a pandemic that continues to impact us here in BC as well as globally. Management and staff have once again produced strong results and I congratulate them for their efficiency, commitment, and professionalism. In the year ahead, we continue to execute on reducing operational risks while providing more capacity to augment our client experience and service delivery, develop new products and services, and create greater value for BC taxpayers.

**MALCOLM BRODIE** *Chair*

BOARD OF TRUSTEES\*

The Board of Trustees provides oversight of policy, strategy, and business plans, and exercises executive and administrative powers and duties, including the selection of the secretary-treasurer.

MEMBERS OF THE AUTHORITY

The Members of the Authority consist of elected local government officials appointed by the individual boards of each regional district within BC. The number of Members (currently 39) is based on the population of the regional districts. The Members meet twice a year; once at the Annual General Meeting (AGM) held prior to March 31st, and again at the Semi-Annual Meeting held in the fall. At these meetings, the Members review the requests for financing and authorize the issue and sale of securities. At the AGM, in addition to approving both financial statements and external auditors, the Members elect 10 Trustees and a chairperson to govern the Authority until the next AGM. The Board of Trustees must be comprised of four Members from Metro Vancouver, one from the Capital Regional District, and the other five from the remaining regional districts.

Members and Trustees appointed by the Regional Districts of British Columbia

<b>Alberni-Clayoquot</b> John McNabb	<b>Fraser-Fort George</b> Lyn Hall*	<b>North Okanagan</b> Amanda Shatzko
<b>Bulkley-Nechako</b> Gerry Thiessen	<b>Fraser Valley</b> Jason Lum Ross Siemens	<b>Northern Rockies</b> Danny Soles
<b>Capital</b> Ken Williams Geoff Young*	<b>Kitimat-Stikine</b> Gina McKay	<b>Okanagan-Similkameen</b> Karla Kozakevich
<b>Cariboo</b> Al Richmond (Vice Chair)*	<b>Kootenay Boundary</b> Diane Langman	<b>Peace River</b> Dan Rose
<b>Central Coast</b> Travis Hall	<b>Metro Vancouver</b> Mary-Ann Booth Malcolm Brodie (Chair)* Linda Buchanan Jonathan Coté* Jack Froese* George Harvie Mike Hurley Richard Stewart Brad West*	<b>qathet</b> Patrick Brabazon
<b>Central Kootenay</b> Janice Morrison*		<b>Squamish-Lillooet</b> Jen Ford
<b>Central Okanagan</b> Gail Given	<b>Mount Waddington</b> Dennis Dugas	<b>Strathcona</b> Andy Adams*
<b>Columbia Shuswap</b> Kevin Flynn	<b>Nanaimo</b> Bob Rogers	<b>Sunshine Coast</b> Lori Pratt
<b>Comox Valley</b> Melanie McCollum	<b>North Coast</b> Barry Pages	<b>Thompson-Nicola</b> Linda Brown
<b>Cowichan Valley</b> Michael Wilson		
<b>East Kootenay</b> Rob Gay*		

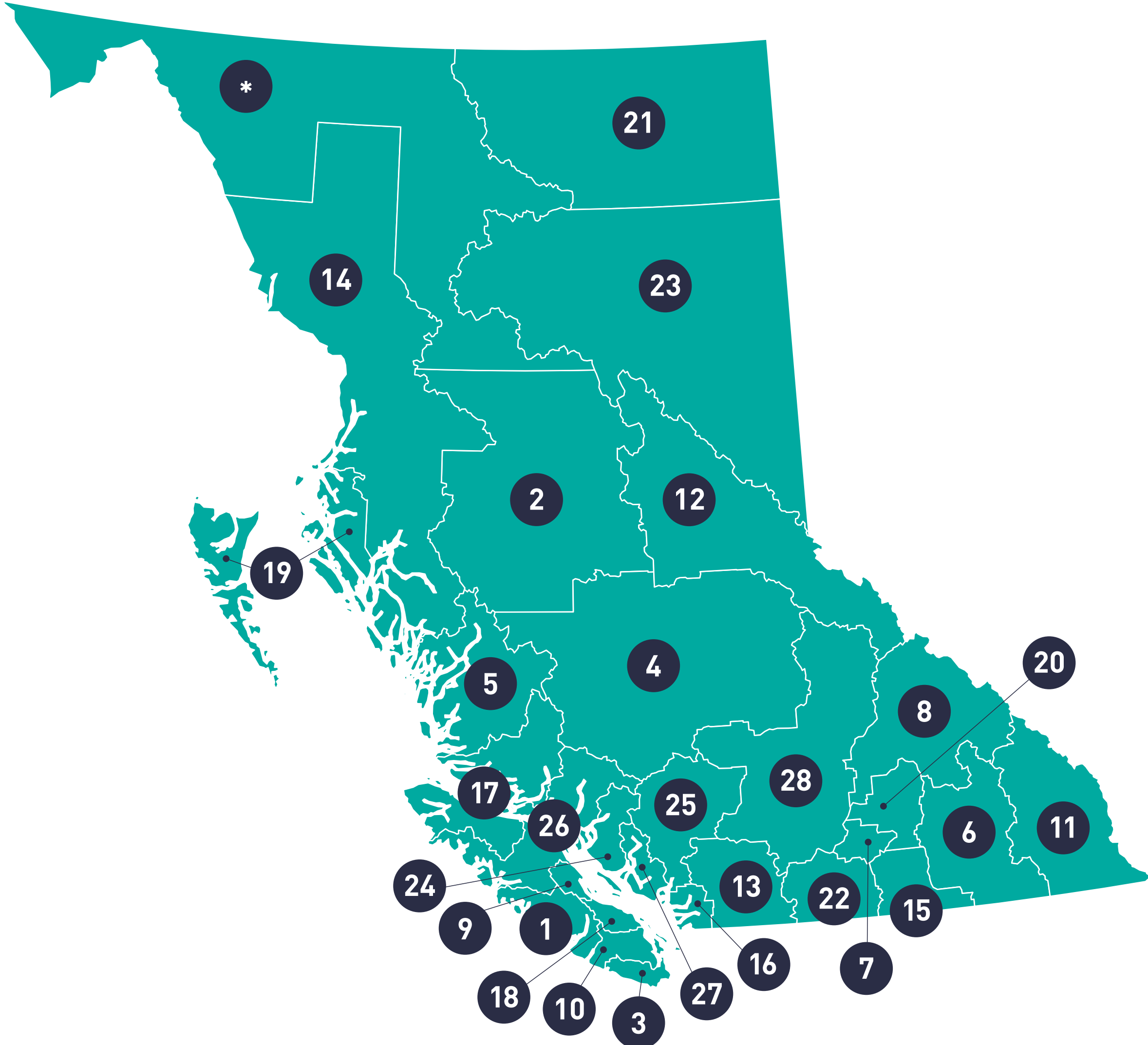
\*denotes elected Trustee



# Map of

# REGIONAL DISTRICTS OF BRITISH COLUMBIA

- |    |                    |    |                      |
|----|--------------------|----|----------------------|
| 1  | Alberni-Clayoquot  | 16 | Metro Vancouver      |
| 2  | Bulkley-Nechako    | 17 | Mount Waddington     |
| 3  | Capital            | 18 | Nanaimo              |
| 4  | Cariboo            | 19 | North Coast          |
| 5  | Central Coast      | 20 | North Okanagan       |
| 6  | Central Kootenay   | 21 | Northern Rockies     |
| 7  | Central Okanagan   | 22 | Okanagan-Similkameen |
| 8  | Columbia Shuswap   | 23 | Peace River          |
| 9  | Comox Valley       | 24 | qathet               |
| 10 | Cowichan Valley    | 25 | Squamish-Lillooet    |
| 11 | East Kootenay      | 26 | Strathcona           |
| 12 | Fraser-Fort George | 27 | Sunshine Coast       |
| 13 | Fraser Valley      | 28 | Thompson-Nicola      |
| 14 | Kitimat-Stikine    |    |                      |
| 15 | Kootenay Boundary  |    | * Stikine Region     |





## Message from the Chief Executive Officer Peter Urbanc

2021 marked another year of challenges, collaboration, and success for BC's Local Governments and the Municipal Finance Authority (MFA). We continued to focus on responding to our members' needs as they navigated the impact of the ongoing pandemic and the effects of climate-related disasters in their communities. Throughout the year, the resiliency of our communities big and small was tested as heatwaves, wide-ranging forest fires, and record-breaking floods caused significant damage to our infrastructure, homes, and businesses. Despite these stresses and those related to Covid in 2021, MFA has not had any increased borrowing from our clients - a testament to both the strength of our system and the mandate of MFA as a long-term infrastructure lender.

MFA has continued to showcase our unique strengths and exemplary financial position to the marketplace as we move forward into 2022. Over the course of the year, we launched 3 bonds totaling \$1,975,000,000 into the markets - our largest year of issuance yet. In 2021, we issued 20-year bonds to complement our traditional 5- and 10-year issuance. We expect longer-dated bonds (20- or even 30-year bonds) to become more common for the MFA in the years ahead to support long-lived infrastructure development in BC, such as water and sewer assets.

We have continued to make important investments in our pooled fund product line. At the end of 2021, MFA saw record-breaking investments under management - peaking at nearly \$5.6 billion in assets. This was up about \$1 billion from 2020, and this total has doubled over the last 5 years. Designed specifically for BC

local governments, our investment product line has expanded from 3 options in 2015 to 9 funds as of February 2022 when we launched the new "Diversified Multi-Asset Class" Fund (DMAC), an innovative new fund specifically designed for long-term reserves earmarked for future infrastructure projects. This low-carbon footprint fund has introduced a broad portfolio of global assets to our clients and has been designed to meet a growing desire by BC's local governments to invest in a socially-responsible way. In addition, five of MFA's other pooled fund offerings are strictly fossil-fuel free.

ESG consideration and strategies are a core component of all our investment product offerings, but I am just as proud to present further development of MFA's ESG-related reporting which is increasingly important to those investing in MFA bonds. We are expanding the conversation around Environmental, Social, and Governance (ESG) factors which impact the MFA's lines of business as well as the financial health and goals of local governments. In our 2020 annual report, we shared elements of MFA's ESG impact for the first time, a pillar of which was full disclosure of where MFA's borrowings are being invested by our clients by ESG category. We are refining this disclosure model with more detailed "Use of Proceeds" elements and other enhancements and look forward to launching this framework as a resource in the future. In this year's annual report, we have focussed on the 'E' of 'Environmental' factors in 'ESG', and feature case studies where MFA has provided funding to complete infrastructure projects to protect sensitive habitats and update wastewater treatment systems. MFA now

has among the most robust and transparent Use of Proceeds disclosures in the market. Our long-term goal is to help implement enhancements and pooling of the reporting on the benefits or Key Performance Indicators of the infrastructure built from our loans.

Throughout the year and as we continue our trajectory into 2022, I am extremely proud of the hard work and dedication of the MFA team. Our overarching goal continues to be a relentless focus on what is best for our Members and providing the best products, services, and education to our customers in the most effective way possible. Whether it be expanding our presence across local government organizations and associations, enhancing collaborative models, or developing our technology, the MFA is committed to listening to our clients and improving our products and services.

**PETER URBANC** *Chief Executive Officer*

# MFA By The Numbers

We highly value our partnership with MFABC. MFABC offers several low-cost pooled funds which we are able to effectively utilize for our investment needs. These pooled funds are custom tailored to the specific needs of local governments. In addition, MFABC has been very proactive in bringing forward new pooled investment funds to help meet our needs for long-term reserves.

Kevin Hughes, CA, CPA, Manager,  
Corporate Financial Planning, City of Kelowna

MFA Credit Ratings  
Over Time

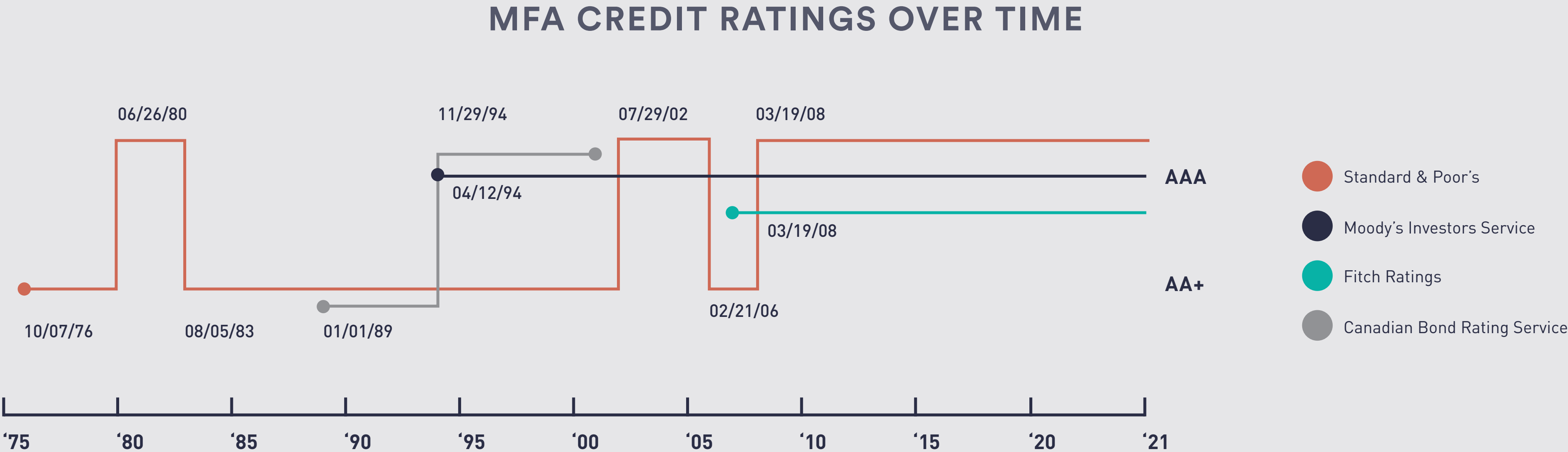
MFA funds its lending program by tapping into global fixed-income investor demand for high-quality, safe investments. The most universal indicator of borrower quality that these investors look to are credit ratings issued by internationally recognized credit rating agencies.

The MFA is in an exclusive group of global issuers that carry multiple “AAA” ratings – the highest-quality credit rating achievable. Not only does a AAA rating allow our organization to raise funds at low rates, it also gives

MFA more control and choice with respect to timing, amount, currency, and term of our issuance. The flexibility enabled by our AAA rating status is a critical tool in managing risk, particularly during times of market turmoil. For MFA and other AAA issuers, the capital markets remained open with strong investor demand.

Historically, MFA has never been rated lower than AA+ by a credit rating agency and despite a very challenging 2020/2021, as of early 2022 we remain at the top of all

three rating scales (Standard and Poor’s: AAA; Moody’s: Aaa; and Fitch Ratings: AAA). These ratings are a direct recognition of the collective financial strength and resiliency of the local government system in British Columbia. For over 50 years, the MFA’s leadership team has rightly regarded strong credit ratings as a top priority and will continue to do so well into the future to protect the financial interests of BC local governments.





# Bond Issuance

## 3

NUMBER OF BONDS ISSUED IN 2021

## \$1,975,000,000

TOTAL DOLLAR VALUE OF ALL BONDS  
ISSUED IN 2021

## \$1,975,000,000

LARGEST SINGLE YEAR ISSUANCE [ 2021 ]

## 1.92%

2021 BONDS WEIGHTED AVERAGE INTEREST RATE

## \$22,375,000,000

TOTAL DOLLAR VALUE OF ALL BONDS  
[ ISSUED 1970-2021 ]

## 14.00%

HIGHEST EVER  
COUPON RATE  
[ 1981 ]

## 1.10%

LOWEST EVER  
COUPON RATE  
[ 2020 ]

Long-Term and Short-Term Lending

237,767

LINES OF CODE IN OUR PROPRIETARY FINANCIAL MANAGEMENT SYSTEM

Long-Term Lending

as of December 31, 2021

79

NEW LONG-TERM LOANS FUNDED IN 2021

1,587

OUTSTANDING LONG-TERM LOANS

\$5,435,435,039.15

TOTAL OUTSTANDING LONG-TERM LOANS

\$230,723,634

SINGLE LARGEST LONG-TERM LOAN

Short-Term Lending

as of December 31, 2021

202

NEW SHORT-TERM LOANS APPROVED IN 2021

458

OUTSTANDING SHORT-TERM AND EQUIPMENT FINANCING LOANS

\$182,281,210.78

TOTAL OUTSTANDING SHORT-TERM AND EQUIPMENT FINANCING LOANS

\$13,000,000

SINGLE LARGEST SHORT-TERM LOAN

# Pooled Investment Funds and Pooled High Interest Savings Accounts

as of December 31, 2021

MFA BY THE NUMBERS

**\$5,618,000,000**

TOTAL ASSETS UNDER MANAGEMENT  
IN THE PIF & PHISA

**531**

TOTAL ACTIVE PIF &  
PHISA ACCOUNTS

**\$1,019,884,000**

TOTAL VALUE OF SUBSCRIPTIONS IN 2021

**+ \$1,002,000,000**

CHANGE IN ASSETS UNDER MANAGEMENT IN 2021

**\$663,368,000**

LARGEST SINGLE INVESTMENT  
ACCOUNT VALUE

**149**

TOTAL NUMBER  
OF SUBSCRIPTIONS  
IN 2021

**\$165,000,000**

LARGEST SINGLE SUBSCRIPTION IN 2021

**\$1,679**  
million

MONEY  
MARKET

**\$312**  
million

GFUS  
BOND FUND

**\$717**  
million

BOND  
FUND

**\$144**  
million

MORTGAGE  
FUND

**\$160**  
million

FFF  
BOND FUND

**\$957**  
million

NBC  
PHISA

**\$663**  
million

CIBC  
PHISA

**\$986**  
million

SCOTIABANK  
PHISA

# The Value of The MFA Model

We have found the MFA to be responsive to our information requests and helpful in their recommendations. Their expertise and experience with other municipalities and the province makes them a wealth of knowledge adding value to our investment and debt decision making needs.

**Corinne Bomben**, Chief Financial Officer, Deputy  
Corporate Administrator, City of Prince Rupert



## The MFA's Unique Model

**In British Columbia, no local government needs to “go it alone” when it comes to funding infrastructure, short-term bridge financing, or investing important reserves.**

**Since 1970, the Municipal Finance Authority (“MFABC” or “the MFA”) has been providing tailor-made financial solutions for BC communities and supporting financial excellence in our province in a unique and collaborative way that is a hallmark of how British Columbians achieve big goals.**

### Who are the Municipal Finance Authority's Clients?

The MFA provides long-term capital financing to all of BC's municipalities\*, regional districts, regional hospital districts, ECOMM and CREST. Short-term lending is available to all of these entities, as well as to school districts. Investment options are available to all of the aforementioned, as well as other para-municipal, publicly controlled entities.

### Why is it Unique?

In other provinces, and elsewhere in much of the world, municipalities and regional governments must resource

their own borrowing and/or investing activities or participate in a limited Provincial or National program without much insight, choice, or voice. In BC, the Municipal Finance Authority supports all of these functions centrally.

Created over 50 years ago by the MFA Act of the Province of British Columbia, the MFA was designed by, created for, and remains governed by BC Local Governments for the benefit of all our province's communities, regardless of size or location. Thirty-nine Member representatives are appointed from all regional districts each year based on population. From this body, 10 Trustees are elected annually to oversee the activities of the Authority.

MFABC is not profit-seeking, however, any profits it does earn are either kept as capital reserves to bolster the financial strength of the organization or re-invested back into the BC Local Government sector by adding services, reducing costs and lending rates, or by investing in financial education for our clients. This successful model capitalizes on the shared purpose and values of BC's local governments, providing value to all stakeholders:

- Our clients who use and benefit from our programs
- BC residents whose needs are supported and funded by our clients and whose taxes fund our communities
- Investors in our bonds and commercial paper issuance

### What Products and Services does the MFA offer?

Long-term lending is funded by the issuance of bonds in the global debt capital markets and may be for terms of 5 to 30 years. Long-term borrowing requests are accepted twice per year and the MFA sells bonds in the capital markets to fund these loans. To achieve the highest possible credit ratings on our bonds and thereby ensure the most stable and lowest-cost funding, the unique MFA model employs several key controls:

- **‘Joint and Several’ security model** - All municipalities within a regional district guarantee each others' debt. These guarantees have never been required.
- **‘Debt Reserve Fund’** - All borrowers contribute a small upfront percentage of each loan to provide additional security and financial supports in the event of a loan default. These deposits, together with any interest earned, are returned to the borrowing Member when the related debt is extinguished. This fund has never been accessed to mitigate a default.
- **Sinking Funds** - An annual principal contribution is collected from all borrowers to create a sinking fund to ultimately pay out the related public market bonds at the end of the term. This fund is invested in high quality securities and reduces the total repayable loan principal for borrowing Members
- **Legislative Controls** - BC local governments are subject to strong legislative controls that limit risk

and exposure for both their own operations and those of the MFA. These include the requirement of balanced budgets, annual completion of audited financial statements, a strict debt limit based on 25% of recurring revenue, regional district borrowing approval, and one of the most transparent public borrowing approval processes in the world. The BC Ministry of Municipal Affairs reviews and certifies all borrowing bylaws and maintains a central database of financial statistics for all BC Local Governments.

- **Direct Taxation Powers** - The MFA has the authority to tax all BC real property without senior-level government approval in the event that the Debt Reserve Fund must be replenished. This power has never needed to be exercised and is a unique feature that is not found with any other public sector infrastructure bank in the world.

**Short-term lending** is funded by the issuance of commercial paper in the Canadian money markets. These programs offer bridge financing for long-term projects, to meet current expenses when revenue that offsets these costs has not yet been received, or to fund equipment purchases over time. Borrowing rates are extremely low and there are no other fees levied. The MFA completes robust credit analysis on clients' financial positions and maintains close contact with borrowers throughout the terms of the loans.

**Pooled Investment options** are available for the prudent and effective investment of reserve funds. Allowable investments are dictated by the Local Government Act and Community Charter; however, BC local governments have access to a broader array of options via the MFA's Pooled investment offerings. While local governments in BC can only access the highest quality fixed income instruments directly, our funds include access to unique asset classes including corporately-issued commercial paper, commercial mortgages, equity holdings, and non-Canadian asset classes.

## How Does the MFA Create Value for BC Local Governments?

The Municipal Finance Authority of BC is effectively a financial institution for BC Communities. Unlike other financial service providers, our only business is local government finance.

- Centralizing functions to reduce the need for municipalities to hire additional staff, maintain specialized knowledge in-house, source appropriate professional support from banks, brokers, lawyers, or pay higher costs by working alone
- Creating economies of scale by pooling all BC local governments' borrowing needs and deposits to increase bargaining power and reduce costs
- Providing products and services without hidden

fees or embedded commissions, as an unbiased, non-commercial service provider specifically designed to support BC communities

- Offering access to a team of professional, experienced team members with extensive knowledge of the BC local government sector, investing, and financial services
- Funding quality financial education through our support of colleague organizations with opportunities for both municipal staff and elected officials to deepen their financial knowledge and expertise
- Sharing valuable insights and information from our service provider network of organizations and individuals across Canada

**The Municipal Finance Authority of BC takes great pride in our long history of service and support to BC's Local Governments. We have funded thousands of infrastructure projects, created opportunities for communities to advance and grow, and upheld the value of BC for more than half a century. As our clients continue to evolve and change, so will the MFA. Our only business is the financial success of our province's communities and people.**

*\* The City of Vancouver does not borrow through the MFA; however, they are still subject to the joint and several guarantee of the Metro Vancouver Regional District on all borrowing within and by the Regional District.*

# Investing for BC Local Governments

Shelley and Lauren were a great resource in helping me understand the products and services available through the MFA. They provided one-on-one virtual training and were very knowledgeable in answering all my questions. MFA's team made sure to note they were always available to help with anything our municipality needed. Much appreciated!

**Pam Anderson**, Director of Finance,  
Village of Burns Lake



## Investment Challenges, Opportunities, Innovations

Since the financial crisis of 2008, a persistent drop in interest rates coupled with a mix of environmental factors have made investing local government reserves increasingly challenging. This heightened complexity, however, rewards improved and strengthened processes and has resulted in new opportunities. The Municipal Finance Authority has been busy actively navigating this ever changing and complex environment to help local governments with new approaches and tools.

### “VUCA”

The continued low-interest rate environment, coupled with market uncertainty due to political, economic, extreme climate events, and Covid-19 concerns has increased the “VUCA” (Volatile-Uncertain-Complex-Ambiguous) nature of the investment world. Inflationary pressures on budgets and investment returns, the widespread implications of asset management and replacement costs, and increased frequency of emergency spending demands are all contributing to pressure on revenues and reserves.

Local Governments are contending with the intricacies and evolving reporting requirements of Public Sector Accounting Board accounting standards for a range of differing investment vehicles, including decisions regarding income recognition, realized and unrealized gains and losses, and the reporting of these holdings at either book or fair market value.

Reporting standards may further evolve to incorporate enhanced data transparency, specifically around climate change impacts, as well as environmental, social, and governance (ESG) matters more broadly. Numerous local governments and other public entities have faced constituent requests to divest from fossil fuel related assets and more than 32 local governments in BC have declared a ‘climate emergency’ or expressed related concerns with similar intent. These factors mean that in addition to ensuring their reserves are invested in legislatively appropriate investment options, municipal finance teams and their councils must also look to accommodate more specific and less straight forward objectives.

Asset managers and financial institutions are responding to an increasing demand for new investment options and introducing a plethora of socially responsible investment (SRI) products in a world where regulators are having difficulty in keeping up with information flow. Greenwashing is increasingly becoming a very real concern. SRI Funds, Green funds, and “Impact GICs”

may purport to invest only in businesses that support ESG goals; however, reporting on these vehicles is not standardized and therefore difficult to assess as accurate or legitimately “impactful”. In many cases, such investments would have been made with or without these labels or the costs associated with this designation.

An already limited universe of direct investment options available to local governments is being compounded by a stated desire for socially responsible investing that often excludes certain asset categories and investment options, creating portfolio concentration risks. In BC, this most often means increasing concentration in financial institution deposits. In particular, Credit Union deposits are both viewed to be socially minded and representing limited credit risk due to deposit insurance schemes that are widely misunderstood.

### Institutional Investor Status

Local Governments are considered “institutional investors”. This designation is applied to organizations with in-house investment knowledge and expertise, organizations that trade securities in larger quantities, and/or that invest money on behalf of other people. These entities may qualify for preferential treatment and lower fees, but because they are considered sophisticated, knowledgeable investors who are therefore less likely to make uneducated investments, they are subject to fewer protective regulatory measures.



“

**Sound investment policy is a touchstone that helps to guide and explain investment choices.**

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The public purpose of investing municipal reserves requires added diligence and brings heightened scrutiny to investment choices. The planning of appropriate investment timelines, the imperative for financial diversification, and the discernment required with regards to what entities and individuals to partner with for fiscal success mean added work for finance teams. Skill sets and resources available and allocated towards investment disciplines vary among local government finance teams which leads to a variety of approaches to investing. For example, the credit process may be more or less robust, and some smaller local governments do not have access to all the tools necessary to investigate and minimize fees and commissions that are levied by brokers. The large nature of the investments and deposits made by BC's local governments mean that they are valued and sought after as clients, yet the means and investment expertise any given local government possesses to make informed decisions varies significantly.

### **Opportunities**

Despite new complexities and constraints, there are also opportunities to improve local government investment systems and practices, and earn prudent, well-reasoned earnings from municipal deposits.

Completing a review of relevant financial timelines and developing longer term cash flow forecasts is not only useful for budgeting purposes and project planning.

Determining time horizons for when invested reserves will need to be drawn results in optimizing these funds and matching them to suitable investment vehicles. Re-evaluating these choices annually ensures that upcoming financial obligations continue to be most efficiently invested and further creates an opportunity to 'dollar-cost-average' transitions from one investment choice to the next.

The development of clear and comprehensive investment policies that meet best practice standards for public entities ensures that investments are made according to plans, within constraints, and encompass all suitability factors for the organization. These policies support staff and council or board members in understanding their goals, limits, and roles in respect of this most significant municipal issue. Sound investment policy is a touchstone that helps to guide and explain investment choices.

Newly available asset classes and ESG, fossil-fuel-free, or other 'carbon-light' focused investment options allow for enhanced diversification and greater fine-tuning of time horizons, risk tolerance, and investment objectives for both the community and its constituents. Skilled research is needed when pursuing any new tactic for reserve management; however, these new tools may provide for greater connection to big-picture community goals.

## MFA Investment Options and Innovations

In 1989, the Municipal Finance Authority of BC launched its first two pooled investment funds. The MFA recognized that in addition to providing long-term infrastructure lending and short-term lending for bridge financing and equipment purchases, our local government clients were looking for opportunities to invest their reserves securely and with greater diversification. The Province of BC amended the MFA Act to allow investing via these professionally managed funds as the MFA is an entity designed with BC local governments' best interests in mind. The list of legislatively appropriate investments was expanded to include MFA Pooled Investment Funds.

These programs have been greatly expanded in the last five years to help our clients meet the increased challenges of investing. Our six pooled funds and three pooled high interest savings accounts are professionally managed, objectively benchmarked, provided by large, secure financial services organizations, and are suitable for our institutional local government investors. There are no hidden fees or commissions in our low-cost and best-in-class investment options. A variety of time horizons and investing goals may be met through these products:

- Pooled High Interest Savings Accounts (PHISAs)
  - CIBC
  - National Bank
  - Scotiabank

- Money Market Fund
- Government-focused Ultra short-term Bond Fund
- Short Term Bond Fund
- Mortgage Fund
- Fossil Fuel Free Short-term Bond Fund
- Diversified Multi-Asset Class Fund

To our original short- and long-term options of the Money Market Fund and Short-Term Bond Fund, we added the PHISAs (2014), the Mortgage Fund (2020), the Fossil Fuel-Free Short-term Bond Fund (2020), the Ultra Short-Government-Focused Bond Fund (2020), and launching in early 2022, the Diversified Multi-Asset Class Fund. These new funds brought asset classes only available to BC Local Governments through the MFA (commercial mortgages, equity investments, global investments) added diversification, and new options to consider that address community goals such as fossil-fuel free or carbon-light options.

In 2019 the MFA created the "Pooled Fund Advisory Committee" with a group of active and skilled local government investment leaders to further understand our client's needs and questions around successful reserve investment. Our organization has added additional team members with institutional investment training and experience and is actively adding technology supports for a growing focus on well-invested reserves.

As a non-commercial service provider, we have assisted our clients in expanding their understanding of investment finance by providing education via quarterly GFOABC webinars, access to professional fund advisors at Phillips, Hager & North, assistance with vendor-neutral investment policy templates, and unbiased credit review insights. The MFA team is always available to speak to staff and/or board and council to provide impartial information that is not tied to commercial profit.

**We are here to support our communities in navigating the complexities of investing and reporting. The MFA continues to augment our impact as a not-for-profit local government financial provider and assist our clients in capitalizing on both constraints and opportunities in a principled and professional manner. The MFA's ONLY business is the financial success of BC local governments and our Province's communities and their constituents.**

# ESG Factors and the MFA

We would like to applaud the MFA for its continued support for both our financing and investing needs. The expertise and guidance we received this past year when exploring Fossil Fuel Free investment options was insightful and greatly appreciated.

**Dan Bailey**, Manager, Accounting Services,  
City of Nanaimo



## Environmental, Social, and Governance Issues – An Update

**The Municipal Finance Authority of BC’s (MFABC) mandate is to provide centralized, low-cost financial solutions designed specifically for BC’s local governments. As a financial service provider, we pay close attention to the ongoing needs of our clients, changes to the risk landscape for ourselves and our communities, and the emerging demands of our investors. We continue to move forward with increased reporting and transparency around these issues of paramount importance to us all.**

### A Year of ESG

In the summer of 2021, the Intergovernmental Panel on Climate Change (IPCC), the United Nations (UN) body for assessing the science related to climate change, released its report which clearly demonstrated that human-induced climate change is already affecting weather and creating climate extremes in every region across the globe. In the fall, the 26th UN Climate Change Conference of the Parties (COP26), concluded with the finalization of the Paris Agreement treaty through the Glasgow Climate Pact, signed by all 200 attendee nations,

to limit global warming to 1.5 degrees Celsius. In British Columbia, we saw these impacts firsthand as drought conditions gave way to wide-ranging forest fires to be followed by an atmospheric river that provoked record floods. Social and Governance issues continued to make headlines, with issues of race, religion, and the residential school system that long existed in Canada. Equality, diversity, and inclusion became frequent topics in our governments and around corporate strategic planning sessions.

### Taking Action

For these reasons, focusing on sustainable growth and improvement has become much more relevant to our communities, our clients, and our businesses. These concerns and constraints can also lead to new opportunities and enhanced resilience for both local governments and investor portfolios. The Province of BC unveiled its Clean BC: Roadmap 2030 plan with continent-leading new measures and a pledge to reach net zero by 2050. Local governments are uniquely placed to make an impact on these goals.

In 2020, MFABC outlined our own commitment to taking action in four main areas:

1. Augmenting long-term loan and related bond issuance ESG-related data collection, classification, and reporting around the projects the bonds support
2. Reviewing our investment products to increase

information on ESG factors, and adding additional investment products for clients seeking options that meet their ESG-related investment plans

3. Reviewing and reporting on our own in-house sustainability
4. Thought leadership, education, and collaboration with the BC local government sector to promote standardized definitions, reporting, and the collection of ESG-related data

As we return to more normal working conditions, in 2022 we will review our own operational ‘footprint’ and practices with an ESG lens.

In the past two years, MFABC brought several innovative new options to our investment product lineup that reflect a growing demand for ESG-related or Socially Responsible alternatives. We now offer several products that meet the needs of local governments who have strict fossil-fuel-free (FFF) investment requirements: three pooled high interest account offerings, an ultra-short government focussed bond fund, and a fossil fuel free bond fund. Our new Diversified Multi-Asset Class Fund introduced in early 2022 is a ‘carbon-light’ socially responsible fund. Additional offerings are continuously considered for introduction. Our policy is to apply an ESG lens in selecting any external asset manager for MFABC pooled funds, with a strict policy to only engage with UNPRI Signatories.

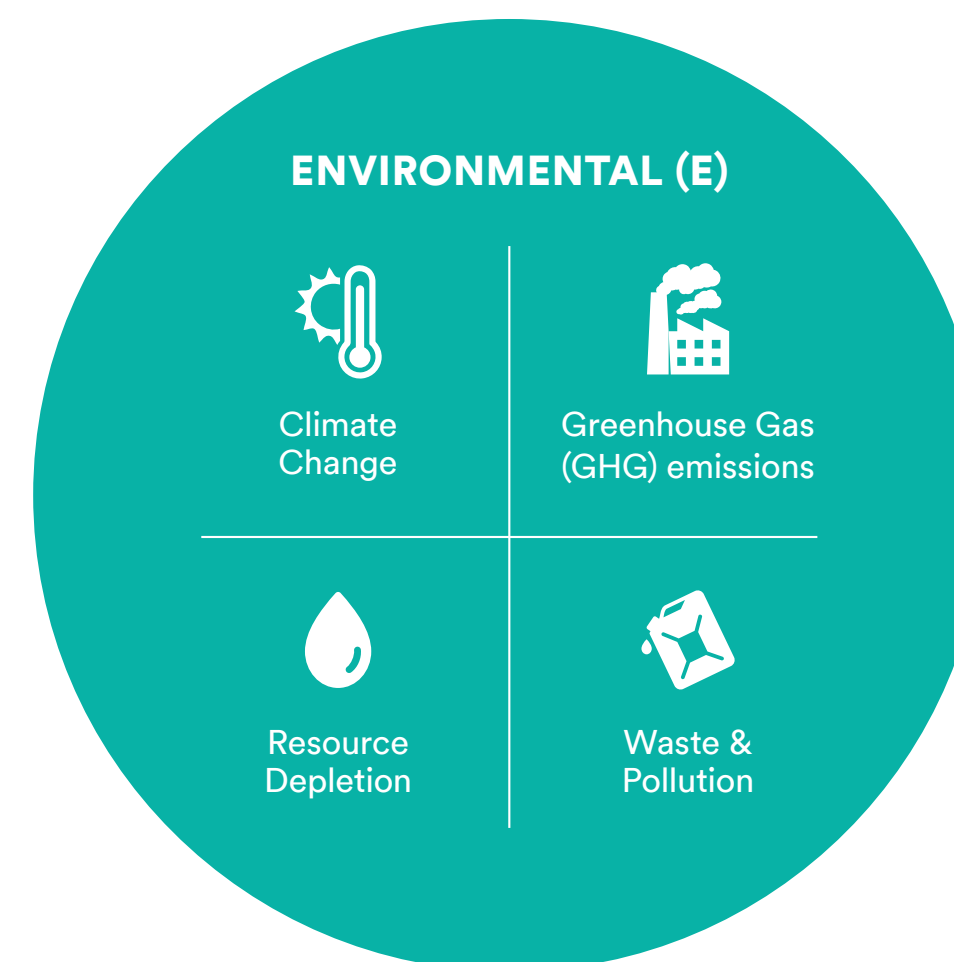


In general, MFABC issues bonds to fund BC local government long-term infrastructure borrowing twice annually. This aggregation results in lower costs and the concentration of needed market expertise in one centralized entity. The projects MFABC funds are not single purpose nor homogeneous. We serve all of our clients' infrastructure borrowing regardless of their location, size, or the specific project being funded. By the very nature of the mandate of local governments, however, we assert that all projects we fund can be considered as social or green (or both) in nature – such as providing new services like recreation centres, adding enhanced water treatment facilities, or upgrading to solar street lighting. Segregating our borrowing needs and issuing a narrowly-focused “Green” or “Social” Bond would raise the cost to our community clients, reduce liquidity of our bond portfolio, create more complexity, and require more staff time. Our approach has therefore been to aggregate our borrowing needs as much as possible.

During 2021, our team completed significant review of all areas of the ‘sustainable bond’ space in the markets, including data collection, reporting standards, various ESG-related bond labels, and spent considerable time evaluating the nature of investor needs served by all these elements. It is becoming apparent for most market participants that the social finance space will only truly become valuable as a tool to help address our significant societal, social, and environmental challenges if stan-

dardization of ESG-related disclosures occurs. Until standardization happens, many investors have asked us to focus on augmenting our “Use of Proceeds” disclosures.

We developed a methodology and mapping tool, consistent with International Capital Market Association (ICMA)



## ENVIRONMENTAL ISSUES stewardship of our natural environment

- Climate change
- Water use
- Sustainable land use
- Fracking
- Methane
- Plastics
- Animal agriculture
- Waste and pollution
- Resource depletion/ observation
- Greenhouse gas emissions
- Deforestation
- Compliance with environmental regulations

principles, for ESG Use of Proceeds data collection and reporting. Prior to each of our bond issues, we can now map a complete account of our Use of Proceeds to the 17 UN Sustainable Development Goals (SDGs) as well as Social Bond Principles and/or Green Bond Principles. This inaugural tool was published in our 2020 50th Anniversary Annual Report along with our initial overview of how our 2020 long -term lending linked to the UNSDGs. In 2021, we enhanced our Use of Proceeds reporting to not only include disclosures in aggregate, but also on a more detailed, loan-by-loan basis, so that investors can see the mapping for themselves ahead of any new bond issue. After reviewing our mapping process and related reporting, Bloomberg began tagging MFABC bonds in 2021 as Sustainability Bonds in their database based on the comprehensiveness of our Use of Proceeds reporting.

## MFABC's Use of Proceeds reporting is enshrined in legislation

It is important to note that MFABC does not issue bonds to create a pool of available capital to later on-lend, but rather issues bonds on a “back-to-back” basis to directly fund specific infrastructure projects or pools of projects. There is no delay in providing funds to our Members once our bonds are issued. Prior to being funded, these loan requests are vetted through one of the most robust and transparent approval systems in the world. By legislation, funds are borrowed for a specific purpose and time, and these requests are vetted at the local, regional district, and provincial Ministry levels,

before final review and approval by the MFABC team and our Trustees and Members. In other words, all our capital market borrowing can be associated with specific projects, that allocation is pre-defined and investors can be confident their funds will be used to support those projects.

The Community Charter lays out the statutory authorities granted to all local governments that borrow from MFABC. Section 190 of the Charter outlines the only purposes for which borrowed money may be used by law. Section 1 speaks to Borrowed monies that “must not be used for a purpose other than that specified in the bylaw or agreement authorizing the borrowing”. As clearly codified in this law, MFABC’s disclosures regarding Use of Proceeds and our mapping to UN SDGs are all related to specific infrastructure projects (or a series of projects within a given ESG category) that have been set by bylaw. In most circumstances, projects have already started before MFABC disburses funds and the related borrowing is used to finish said projects or to pay out short-term borrowing for those specific projects. In some rare instances, a local government may borrow more than is needed to complete the project. In this unusual eventuality, investors can take comfort in the fact that section 190 limits what can be done with this excess borrowing to: paying back MFABC, retire, purchase, or cancel debentures issued for that purpose, or to invest in a temporary reserve fund which must be spent on a similar service. i.e. if funds were originally borrowed for sewer replacement, they must be retained for future similar capital-related expenditures.

## A Roadmap for KPI Reporting

The particular challenges faced by MFABC with respect to reporting back to investors on ESG-related Key Performance Indicators (KPIs), is due to varying resources and capacity within local governments to report, as well as the wide range of potential projects that we fund. The existing system of approvals does not currently



### SOCIAL ISSUES

#### treatment of people and impact on societal issues

- Human rights, labour standards, working conditions, including child labour and slavery
- Community support
- Diversity and representation
- Health and safety
- Consumer protection
- Animal welfare
- Employee relations
- Poverty
- Conflict zones

incorporate ESG factors and there is currently no requirement for this type of reporting when bylaws are submitted to the Province. A lack of standardization for sustainability frameworks and the abundance of approaches to ESG disclosure and measurement increases this complexity, making our desire to share more information with stakeholders more challenging.

To mitigate this constraint, MFABC has committed to partnering with some of our largest Members and other BC agencies to become a conduit and resource center to help standardize reporting on KPIs and other ESG-related matters for all of BC’s local governments, large and small. As investors’ needs evolve and standardization occurs, we will inform our Members on best practices and data collection that will be critical in furthering the usefulness of social finance. This will, of course, take time, but we are committed to doing all we can. We will be announcing more about this initiative in 2022 and look forward to comments and feedback from all stakeholders.

## Sustainability Bond Framework

Our Use of Proceeds disclosures and approach has been very well received and regarded by the investment community, many of whom are incorporating MFABC’s bonds into SRI portfolios. However, some investors do not yet possess the internal capacity to do their own ESG analysis and/or prefer the comfort provided by a vetted “Framework”. As such, in 2022 we will be formulating and disclosing a Sustainability Bond Framework in



alignment with the ICMA Sustainability Bond Guidelines (2021). This framework will be a natural extension of our current approach introduced last year, outline in a more detailed fashion our existing legislated and internal processes for selecting projects, management of proceeds practices, and Use of Proceeds mapping. We will also create a formal plan to enhance KPI reporting. Over time, MFABC's goal is to enhance and begin aggregating follow-up reporting by BC's local governments on the success of projects we have funded, centred on the most relevant and descriptive key performance indicators (KPIs) that illustrate their sustainability impact and furthering of the UNSDGs.

We should note that beginning in 2022, we have formally added several ESG elements to our internal governance of loan approvals and credit analysis which is the responsibility of our Business Committee. The Business Committee is now becoming our Business and Sustainability Committee and is comprised of the leadership of our three functional areas including loan origination, accounting, and technology and strategic planning. The added responsibility for that Committee will include a formal review of the mapping of our loans proceeds as well as developing an ESG lens that incorporates ESG-related risk data into our loan and portfolio credit analysis functions.

### An Optimistic Future

In addition to continued work with investors on

ESG-related topics, the MFABC team has been actively meeting with our largest Members, various Provincial ministries, and other stakeholders to map out an effective approach to ESG reporting that can best meet the needs of BC's businesses and residents who are increasingly focused on tracking progress towards ESG goals.



### GOVERNANCE ISSUES organizational controls and oversight

- Internal controls
- Accounting practices and audits
- Executive compensation
- Corruption
- Board diversity and structure, director nominations
- Cybersecurity
- Management structure
- Employee relations
- Donations and political lobbying

Our CEO, Peter Urbanc, sits on the Canadian Bond Investors Association (CBIA) ESG Committee and has connected with the Canadian Urban Sustainability Practitioners (CUSP) Network and others to discuss many issues including recommendations from the Task Force on Climate-Related Financial Disclosures. We have reviewed the current data collection and reporting done by entities such as the CDP, a not-for-profit that runs a global disclosure system for investors, companies, cities, states, and regions to manage their environmental impacts. We are intently focused on how we can best leverage outside resources to collect and share standardized data on our clients' infrastructure projects and simplify reporting to their constituents, as well as to our investors.

**We are committed to working with our clients and partners, the Province of BC, investors, and industry leaders in sustainability disclosure to enhance reporting, standardize measurement, and improve disclosures of BC local government projects. We will continue to innovate around investment products that offer clear ESG benefits to help our clients invest their reserves and we will expand our review of our own ESG stance. MFABC has demonstrated that through centralizing financial functionality, concentrating expertise, funding quality financial education, and working collaboratively, we can deliver excellent products and services to all stakeholders. Our organization continues to bring people together to solve problems and reduce risks in BC.**

## Internationally Recognized ESG Categories

The MFA has developed an ESG mapping approach which endeavours to provide Environmental, Social, and Governance disclosure by which investors, bond market participants, and other interested stakeholders can better understand how proceeds from our funding program are used. We view each of our bonds as a ‘sustainable bond’, used to support and advance various ESG initiatives throughout the province.

Using our new ESG mapping approach, the MFA aims to provide stakeholders with insight into how the capital projects we fund align to not only specific UN Sustainable Development Goals but also recognized Green Bond Principles and Social Bond Principles. These principles have been used to help guide our project mapping approach but should not be construed as a formal framework where explicit impacts are measured at this time. We encourage stakeholders to reach out and dialogue with us as we continue to improve our ESG approach and disclosures.

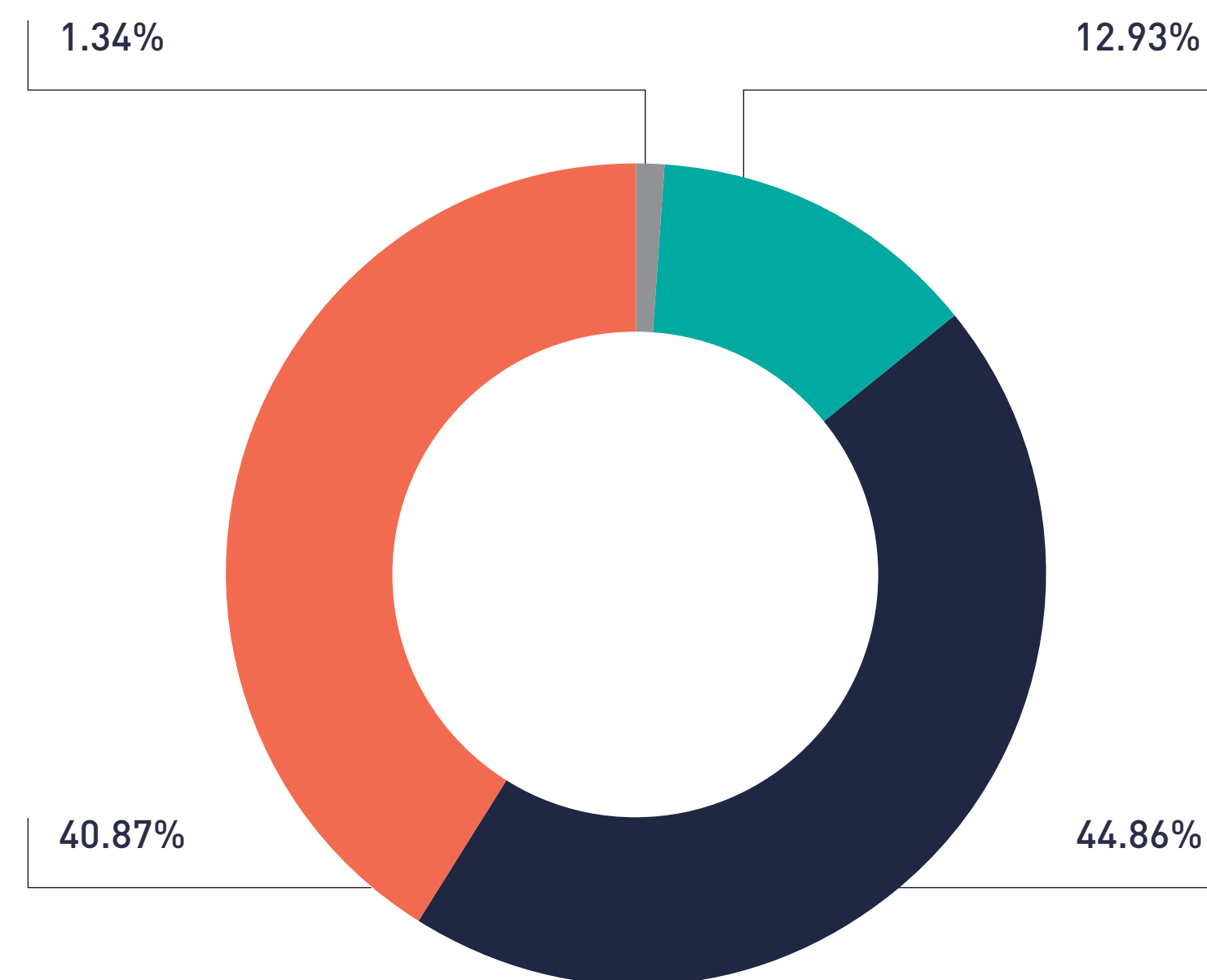




The MFA 'Purpose of Borrowing' may align with and benefit multiple UN SDG goals. For practicality, we have chosen to map each project to its primary objective, where we believe the project will have the most significant impact.

UN SDG Alignment	Green Bond Principles	Social Bond Principles	MFA Purpose of Borrowing	Project Examples In This Category
3 GOOD HEALTH & WELLBEING	–	Access to Essential Services	Health/Social Services	Hospitals, hospital equipment, day cares
6 CLEAN WATER & SANITATION	Sustainable Water & Wastewater Management	Affordable Basic Infrastructure	Water	Water treatment, distribution, storage, water metering
	Sustainable Water & Wastewater Management	Affordable Basic Infrastructure	Sewer/Drainage	Sewage treatment, distribution, storage, storm drainage systems, dikes, flood protection
7 AFFORDABLE & CLEAN ENERGY	Energy Efficiency	Affordable Basic Infrastructure	Renewable Energy Systems	Solar, hydro electric, heat recapture, energy efficiency retrofits
	Renewable Energy	Affordable Basic Infrastructure	Renewable Energy Systems	Solar, hydro electric, heat recapture, energy efficiency retrofits
11 SUSTAINABLE CITIES & COMMUNITIES	Clean Transportation	Affordable Basic Infrastructure	Transportation/Transit	Airports, public transit, cycling and walking infrastructure
	–	Affordable Basic Infrastructure	Roads	Paving, new roads, road safety improvements, bridges, interchanges, street lighting
	Green Buildings	Affordable Basic Infrastructure	Public Safety	Public safety buildings, fire halls, fire trucks
	Green Buildings	Affordable Basic Infrastructure	Local Government Land & Buildings	Land acquisition, City hall, pubic works buildings, animal shelters, other Local Government owned facilities
		Affordable Basic Infrastructure	Communications Utilities	Fibre optic network, TV rebroadcasting, phone network
	Green Buildings	Affordable Basic Infrastructure	Parks/Recreation/Culture	Parkland, park improvements, recreational facilities, libraries, community halls, theaters, museums
	Environmentally sustainable management of natural resources and land use	Affordable Basic Infrastructure	Parks/Recreation/Culture	Parkland, park improvements, recreational facilities, libraries, community halls, theaters, museums
	–	Affordable Basic Infrastructure	Other	Cemetery improvements, cruise ship dock
	Green Buildings	Affordable Housing	Affordable Housing	Social/supportive housing
12 RESPONSIBLE CONSUMPTION & PRODUCTION	Pollution Prevention & Control	–	Solid Waste Management/Recycling	Landfills, landfill closure, recycling facilities, composting facilities, vehicles for these purposes
13 CLIMATE ACTION	Climate Change Adaptation	–	Environmental Conservation/Remediation	Brownfield remediation, habitat restoration
14 LIFE BELOW WATER	Terrestrial & Aquatic Biodiversity Conservation	–	Environmental Conservation/Remediation	Brownfield remediation, habitat restoration
15 LIFE ON LAND	Terrestrial & Aquatic Biodiversity Conservation	–	Environmental Conservation/Remediation	Brownfield remediation, habitat restoration

# Total 2021 Debt Issuance by UN Sustainable Development Goal



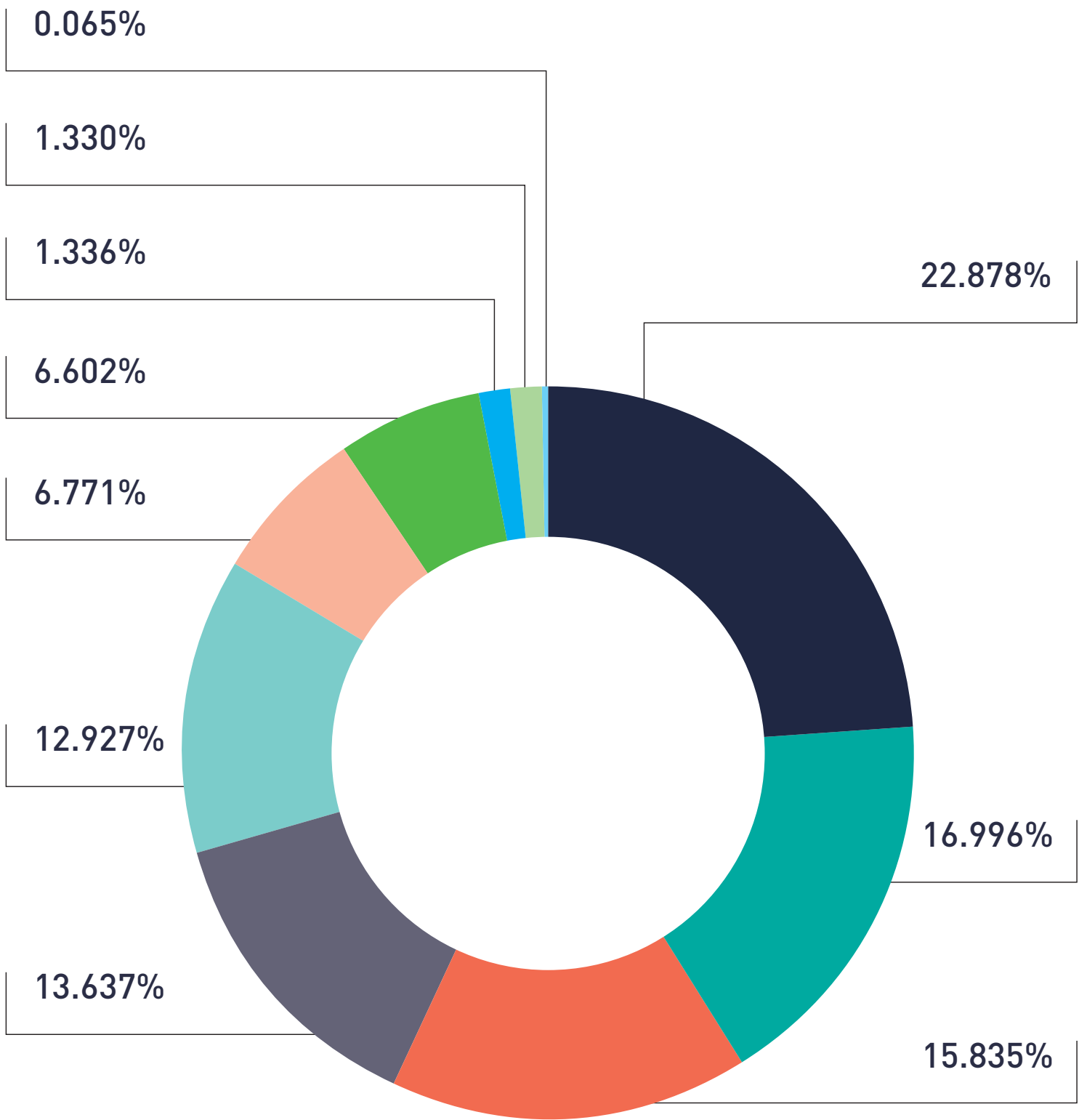
## Total 2021 Debt Issuance by UN Sustainable Development Goal

3 - Good Health & Wellbeing	\$	257,898,126
6 - Clean Water & Sanitation		815,443,109
11 - Sustainable Cities & Communities		894,950,154
12 - Responsible Consumption & Production		26,644,910
15 - Life on Land		63,701
		<hr/>
		\$ 1,995,000,000*
		<hr/>

\* includes \$20,000,000 in flow through Federation of Canadian Municipalities loans



Total 2021 Debt Issuance  
by Borrowing Purpose



Total 2021 Debt Issuance by Borrowing Purpose

Sewer/Drainage	\$	476,364,221
Water		339,078,888
Parks/Recreation/Culture		315,910,037
Transportation/Transit		272,048,491
Health/Social Services		257,898,126
Public Safety		135,080,632
Local Government Land & Buildings		131,700,004
Solid Waste Management/Recycling		26,644,910
Roads		26,540,683
Other		12,925,558
Communications Utilities		744,749
Environmental Conservation/Remediation		63,701
	\$	1,995,000,000*

\* includes \$20,000,000 in flow through Federation of Canadian Municipalities loans





# ESG Case Studies

2021 continued to be a challenging year for many organizations, including those from the local government sector. In addition to the many small or rural local governments who typically have limited financial resources, we heard from many others whose organizations are facing new financial pressures and/or training budget cuts this year. Your generous support has been instrumental in helping to reduce the financial strain for 72 participants and ensuring they had the opportunity to connect and learn together as a community.

**Nancy Taylor**, Former Executive Director,  
Local Government Management Association of BC

# Regional Infrastructure Project Highlights



**Project:** Port Alberni Treatment Lagoon Upgrades Project  
**Borrower:** City of Port Alberni



**Project:** The Comox Valley Water Treatment Project  
**Borrower:** Comox Valley Regional District



**Project:** P25 System Upgrade (Emergency Transmitters and Receivers)  
**Borrower:** Capital Region Emergency Service Telecommunications, Inc





CASE STUDY ONE

Comox Valley  
Water Treatment  
Project

*The CVRD respectfully acknowledges that the new water treatment system is constructed on the unceded traditional territory of the K’ómoks First Nation, the traditional keepers of this land.*

The Comox Valley Water Treatment Project, completed in September 2021, is the largest capital project undertaken by the Comox Valley Regional District (CVRD) and turns the page on a critical need in the community. This critical infrastructure upgrade was required for the community today and into the future. The former Comox Valley Water System provided drinking water to residents in Courtenay, Comox and surrounding areas but did not meet provincial guidelines because it relied on only one level of treatment to remove the risks of viruses and bacteria in the community’s drinking water. This led to recurrent boil-water notices, as the one treatment level could not ensure high enough standards during incidents of turbidity. The history of water quality issues in the Comox Valley dates back to before 2005, when Island Health (then VIHA) ordered the CVRD to complete a Watershed Risk Assessment, which identified major risks to the Comox Lake water source.

The new treatment plant meets provincial health standards and uses three treatment processes: filtration, UV disinfection, and chlorination.

Protecting drinking water requires two important steps: treating the water and protecting the source. The CVRD Watershed Protection Plan recognizes that high-quality drinking water is produced by a healthy ecosystem.

This plan outlines and considers watershed protection actions specific to the Comox Lake Watershed.

The area of land that drains into Comox Lake is approximately 461 square kilometres. Balancing interests such as private ownership, active logging, recreation and hydroelectric power generation, while sustaining critical fish and wildlife habitat, provides challenges for watershed management. Other landowners within the watershed include the Village of Cumberland (Perseverance Creek sub-basin, Cumberland Lake Park), Comox Lake Land Corporation (cabin owners at east end of lake), the Comox Valley Regional District (Coal Beach), the Courtenay and District Fish and Game Society and BC Parks (Strathcona Park and Comox Lake Bluffs Ecological Reserve).

Operational in 2021, the \$126-million system was constructed on the unceded traditional territory of the K’ómoks First Nation, the traditional keepers of this land.





## Relevant Standards of this Project

### Sustainability Standards

The operations centre of the water treatment plant is designed to LEED Gold standards; however, it is not certified. Sustainable design strategies were also promoted and incorporated in the design, including looking for ways to use building materials with high recycled content or products that are manufactured regionally.

### Innovative Design

An underground pump station at Comox Lake minimizes visual and noise impacts on the surrounding environment.

The new system will deliver three main benefits:

1. It will eliminate the need for turbidity-related boil water notices
2. It will remove the risk of viruses and bacteria in our drinking water
3. It will provide a secure supply of reliable, high-quality drinking water for decades to come.

### QUICK FACT:

The Comox Valley Water System provides drinking water to approximately 50,000 residents in Courtenay, Comox and surrounding areas.

### Sustainability Goals

The project outcomes support the following UN Sustainable Development Goals:



**This is ... a great achievement for everyone involved. The new treatment plant will help protect the health of our community and ensure a consistent supply of a critical resource. ...[I] am happy to say people on this beautiful part of Vancouver Island will now have a water system they can depend on, and one that will serve them for generations to come.**

**Ronna-Rae Leonard**, Member of the Legislative Assembly for Courtenay-Comox on behalf of the former Minister of Municipal Affairs





## A Project To Be Proud Of

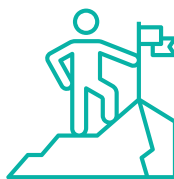
### Successful Construction

The CVRD’s largest infrastructure project undertaken to date was completed on time, and on budget, despite the enormous challenge of a global pandemic. This success is thanks to strong leadership by the project team at CVRD and AECON Water Infrastructure and the hard work of many on the construction site.



### Community Benefits

A new parking lot and trail access next to the water treatment plant has been completed for the community, and partnership with the Courtenay and District Fish and Game Association will provide them with water and access for a new hatchery project.



### Partnership

This project provided an opportunity for the CVRD and the K’ómoks First Nation to work collaboratively with Island Health, BC Hydro, and other stakeholders for the greater good of the community.



## Community Employment Benefits

Goals for employment opportunities for First Nations people, apprentices and others were far exceeded by the project contractor AECON Water Infrastructure.

AECON Water Infrastructure, the project’s contractor, was required to meet a number of community employment benefits, creating opportunities for Indigenous Peoples, apprentices and under-represented populations. All three of these have been far surpassed—at least doubled and in some cases tripled.

	Commitment (hours)	Actual (hours)
Indigenous Peoples	10,000	19,998
Apprentices	15,000	35,872
Under-represented Populations	10,000	37,128



# Project Budget: \$126 million

The project was funded through a combination of grants from federal and provincial governments, reserve funds and borrowing.

GOVERNMENT OF CANADA  
GOVERNMENT OF BC  
COMOX VALLEY REGIONAL DISTRICT  
MUNICIPAL FINANCE AUTHORITY OF BC

## Additional Funding

Funding for the project included over \$62 million in federal and provincial grants to assist in construction of the new system and future connecting infrastructure.

## Partnering with K’ómoks First Nation:

A second project, announced in September 2018, will also benefit from the federal grant. The Water Service (South) Extension Project will service K’ómoks First Nation (KFN) lands to the south of Royston. Funding for the project will be provided by KFN and other potential users of the future system. The KFN and the CVRD signed a Mutual Benefit Agreement on September 28, 2018, confirming cooperation and collaboration in the management of water resources in the region. In the signing of this agreement, KFN has stated its support of the Comox Valley Water Treatment Project and the CVRD’s water license application.

**Comox Valley residents and the CVRD have a lot to be proud of with this sophisticated treatment plant. This is a significant step and investment in protecting individual and population health.**

**Charmaine Enns**, Medical Health Officer  
for Comox Valley, Strathcona, North Island

The average cost to Comox Valley Water System users is estimated at \$86 per household, per year, over a maximum of 25 years.



## Online Resources Links

- ▶ [Comox Valley Regional District](#)
- ▶ [Project Backgrounder](#)
- ▶ [K’ómoks First Nation](#)
- ▶ [Project Gallery](#)
- ▶ [Comox Lake Watershed Protection Plan](#)

*The MFA thanks the CVRD staff team for providing information presented in this case study.*



## CASE STUDY TWO

# Port Alberni Treatment Lagoon Upgrades Project

*The City of Port Alberni boundary lies within the traditional territories of the Hupacasath and Tseshaht First Nations. The City is proud to partner with both Nations through service agreements, recreational programming, and other social, economic, cultural and environmental initiatives.*

In 2003 the City of Port Alberni, in consultation with technical and community stakeholders, identified that the most cost-effective way to meet the City's wastewater treatment needs was to purchase and re-purpose the Catalyst paper mill's effluent lagoons that had become surplus to the needs of Catalyst. In 2018, construction on the newly acquired lagoons began. While the City's long-serving wastewater treatment plant and lagoon has performed well since the 1950s, upgrades to the plant were required to support the community's future needs and meet the new Federal and Provincial Treatment regulations.

The upgrades to the City's wastewater treatment plant are being carried out in four phases. Construction of the current contract was recently completed albeit delayed due to the COVID-19 pandemic and other global impacts.

The City of Port Alberni engaged Associated Engineering (AE) to design an upgrade/expansion to its wastewater treatment system. Key additions include screening and UV disinfection, a new pump station coupled with a new 800m pipeline into the Somass Estuary. Retrofitting of these larger capacity lagoons enabled the City to meet new provincial and federal regulations, in a manner that met sustainability objectives, such as minimizing environmental and land disturbance arising from new construction.





### Relevant Standards of this Project

#### Innovative Design For Protection of Salmon

In order to provide enhanced protection to the fishery, especially during the late summer when salmon congregate in the Alberni Inlet, Associated Engineering (AE) designed a unique adaptive management discharge solution for protection of the salmon fishery:

- Instead of discharge of treated effluent at depth where returning salmon congregate waiting for lower temperatures in the Somass River to begin their migration (but otherwise in accordance with BC regulations), AE received permission for a discharge nearer to the surface.
- Another feature of the discharge system is that it will operate only during an ebb tide, when surface waters are moving out of the Somass River, through the estuary and into Alberni Inlet. The falling tide provides optimal conditions for dispersion of the treated effluent in the receiving environment.
- During the late summer/early fall, the system is designed to provide even more mitigation for protection of salmon. During low river flow/high water temperature conditions, or if salmon are being stressed by low dissolved oxygen conditions, the City can store treated effluent in the lagoon for up to two weeks.



#### Sustainability Goals

The project outcomes support the following UN Sustainable Development Goals:



#### Archaeological Investigations and Design Inputs

Because the project is located in the traditional territories of the Tseshaht and Hupacasath First Nations, great care was taken to respect the cultural heritages of local First Nations. Archaeological investigations were undertaken along the outfall alignment, including in the tidal foreshore areas. Significant artifacts were encountered and carefully collected and documented throughout these explorations and construction.







### The Importance of the Somass River Fishery & Collaboration with First Nations

Discussions with local First Nations and stakeholders of the Somass Estuary underscored the importance of the Somass River fishery, which has been significantly impacted by the cumulative impacts of industry, changes in the watershed, climate change and inherent features of the estuary that lead to periodic episodes of low dissolved oxygen.

Consultation with local First Nations over a period of several years provided the project team with significant insights into the impacts of the City’s existing lagoon discharge:

- First Nation fishers reported that gillnets used in shallower waters adjacent to the City’s existing lagoon discharge were frequently fouled with black organics, likely due to localized nutrient enrichment.
- Although eager for implementation of the new discharge system and improvement to the local environment, fishers were concerned with the potential for their gill nets to become entangled with the new discharge ports. Together the technical team and First Nations fishers designed guards that fit over the discharge ports allowing the nets to pass without becoming snagged.

### When complete, the upgraded plant will:

- Improve effluent quality (treated wastewater discharge)
- Provide enhanced environmental protection
- Increase operational capacity
- Meet the current Canadian wastewater treatment standards

**Upgrading the Wastewater Treatment Plant is an important and necessary step in the City’s continuing efforts to improve the quality of life in Port Alberni while at the same time lessening our impacts on the surrounding environment. When considered together with the City’s ongoing storm and wastewater separation projects, the newly upgraded Wastewater Treatment Plant will have a significant positive effect on the health of the Alberni Harbour, Somass Estuary and neighbouring waterways.**

Tim Pley, Former CAO, City of Port Alberni



# Project Budget: \$41 million

The project was funded through a combination of grants from federal and provincial governments, reserve funds and borrowing.

FEDERAL GAS TAX AGREEMENT GENERAL STRATEGIC PRIORITIES FUND (GSPF)

FEDERAL CLEAN WATER AND WASTEWATER FUND (CCWF)

PORT ALBERNI SEWER INFRASTRUCTURE RESERVE FUND (SIRF)

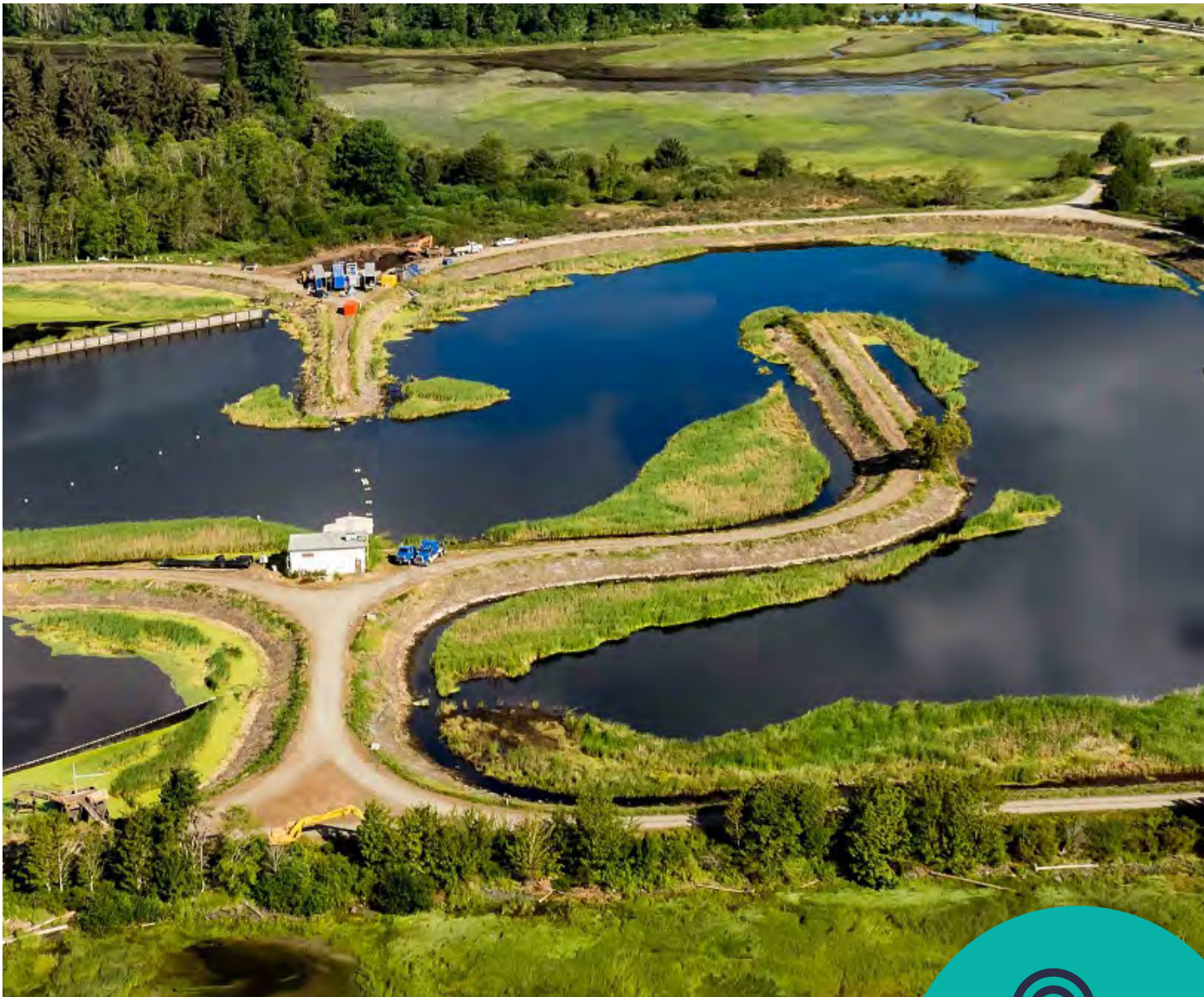
MUNICIPAL FINANCE AUTHORITY OF BC

## “A Commitment to the Community”

The City of Port Alberni is committed to minimizing the impacts of this project on the community, neighbouring First Nations and regional areas, the environment, and to working closely with key stakeholders throughout the project.

As part of their commitment, the City of Port Alberni is:

- Following rigorous permitting and approval processes at all levels of government;
- Working with local First Nations and other government agencies to identify potential project impacts and determine possible mitigation measures; and
- Following a rigorous environmental monitoring program to ensure construction does not negatively impact fish, wildlife and the surrounding estuary or the neighbouring Somass River.



## Online Resources Links

- ▶ [City of Port Alberni](#)
- ▶ [Project Backgrounder](#)

*The MFA thanks the City of Port Alberni team for providing information presented in this case study.*



## CASE STUDY THREE

# CREST P25 System Upgrade

*CREST provides emergency radio communications for 50 emergency response and public service agencies throughout the CRD, an area that spans the Territories of the Coast and Strait Salish and Nuu-chah-nulth peoples. In the delivery of critical public safety services to all citizens, CREST's Board of Directors proudly recognize the First Nations governments across this region the -Lək'wəŋən (Songhees) and Xwsepsum (Esquimalt) Nations in the core area, the WSÁNEĆ Nations {WJOŁEŁP (Tsartlip), BOKEĆEN (Pauquachin), STÁUTW,(Tsawout) WSIKEM (Tseycum)} out on the Saanich Peninsula and Gulf Islands, and to the west Sc'ianew (Beecher Bay), T'Sou-ke, – Pacheedaht, MÁLEXEŁ (Malahat) and Pune'laxutth' (Penelekut) Nations.*

Capital Region Emergency Service Telecommunications (CREST) provides and maintains emergency communications equipment and infrastructure for more than 50 first responder and public service agencies throughout the Capital Region. This includes fire departments, police departments and ambulance services. Over 6 million calls per year go through the system, or one call every four seconds.

CREST's public safety telecommunications network strengthens the safety of our emergency responders and the citizens they serve and protect, and allows our unique island region to be self-reliant in the event of a natural disaster. CREST was formed in 2001 and its radio communications network has been operational since 2003. In 2020, CREST completed the Capital Region's 4-year \$24.5 million technology upgrade to a P25 North American standard of public safety excellence, moving the system and the region's emergency responders and public service agencies onto a fully digital platform that meets world standards for public safety.

The CREST approach allows all of the region's primary emergency response agencies to use the same system, the same technology and the same world-class standard of communication. This 'one-system' approach is the ideal model in which to address public safety from an emergency communications perspective. It allows

for interoperability, reliability and efficiency of communications among all responding agencies. CREST also provides both online and instructor-led training to users of the P25 system and maintains the significant technology infrastructure of the system. This 'next generation' P25 system represents a suite of standards for digital radio communications used by federal, provincial/state and local emergency response agencies across North America. It is considered a world standard.

CREST's P25 network was phased in across the Capital Region ensuring uninterrupted service and allowing for vital testing and training time. The new digital CREST network is meeting and exceeding expectations of CREST user agencies when they need it most. The seamless cut-over and optimal performance of the new network means that the region's first responders and public service agencies have better tools and improved connectivity as they face escalating workplace demands.

CREST completed the final phase of the network upgrade in late 2020 migrating all user agencies in the Capital Region to a new, digital P25 platform with broadcast frequency of 700 MHz in urban areas and using VHF in the rural areas. The new P25 network completed on budget, and phased regional transitions onto the new network over the four-year period were seamless.

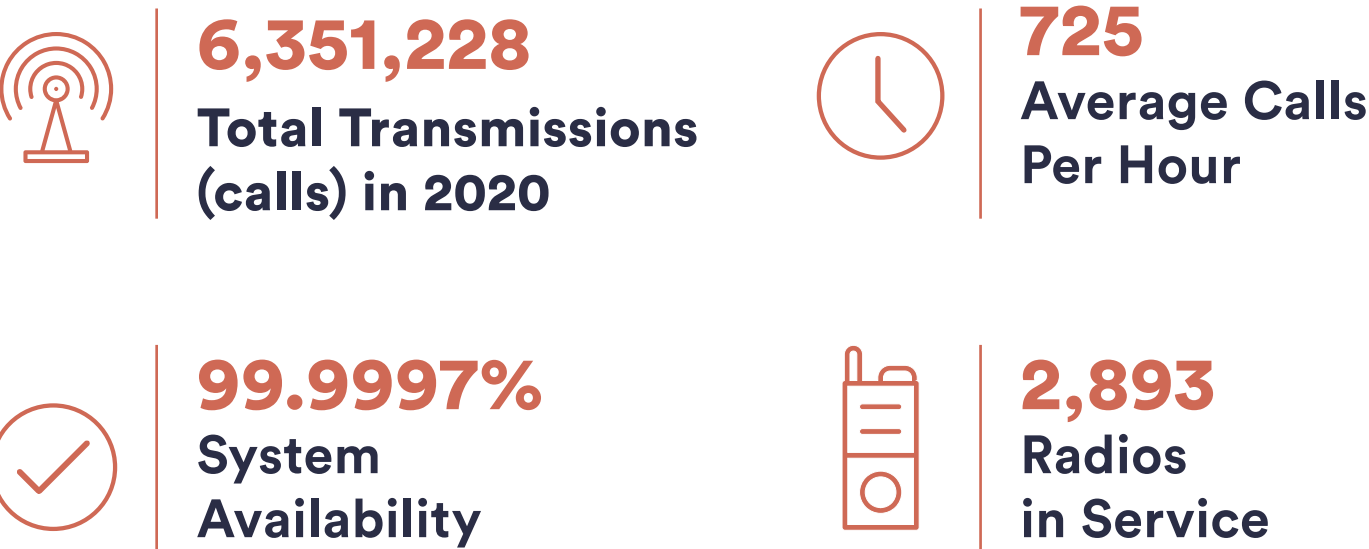




Key Features Of The P25 System Include:

- Increased coverage
- Improved audio clarity and security
- Noise-cancelling technology to reduce background sounds; and
- An expanded range of accessories including the ability to add new features in the future through software upgrades.

CREST By The Numbers



QUICK FACT:

Across the Capital Region, each year over 6 million calls per go through the CREST’s P25 system, or one call every four seconds.

Sustainability Goals

The project outcomes support the following UN Sustainable Development Goals:



The safety and security of our officers and the citizens we serve are of the utmost importance to us. The police radio is arguably the most important tool in our tool belt; It connects us not only to each other and to our police dispatchers, but also to our policing partners including the fire department and BC ambulance paramedics. This transition to the “next generation” radio system is a step in the right direction for our officers and for public safety.

Chief Del Manak, Victoria Police Department



# Project Budget: \$24.5 million

The project was funded over 4 years and all financing was completed solely through the Municipal Finance Authority of BC.

**We have always recognized the advantages of what an interoperable CREST network provides. The new P25 network just takes it to the next level in strengthening public safety. Radio clarity is much improved and so is coverage which is key. As our region develops, the new digital technology allows for better penetration.**

Chief Bob Downie, Saanich Police Department

## Project Outcomes

- **More coverage:** The new system has 3x the number of transmission sites than the old system (30 v 10)
- **More capacity to handle peak times:** The old system encountered a busy signal every 700 calls vs a busy signal every 8500 calls on the new system
- **Better audio clarity:** All digital new system equates to better audio clarity for first responders.

In November 2020, CREST engaged Strategic Initiatives to undertake a formal User Satisfaction Survey to set benchmark measures for the new P25 network, and to gather feedback to assist the CREST organization’s commitment to continual improvement.

## Findings Include:

- Mobile (vehicle) radio users reported high levels of satisfaction with their mobile radios, including their radios’ ease of use (96.4%), clarity of audio (91.9%), coverage within their jurisdiction (84.7%) and coverage outside their jurisdiction (82.0%).
- Portable (handheld) radio users were remarkably satisfied with their radios’ features, including the radios’ ease of use (97.6%) and quality (92.9%). Satisfaction related to audio clarity registered at (88.9%), with coverage within their jurisdictions (81.9%).

## Major Takeaways From The Survey

1. Training continues to be a focal point with a high correlation between satisfaction of the system and devices, when training opportunities have been provided, and taken.
2. The second is the very high satisfaction with staff when it comes to support, service, and knowledge.

## Online Resources Links

- ▶ [CREST Website](#)
- ▶ [CREST Press Release 1](#)
- ▶ [CREST Press Release 2](#)
- ▶ [Times Colonist Press Release](#)

*The MFA thanks the CREST staff team for providing information presented in this case study.*





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