

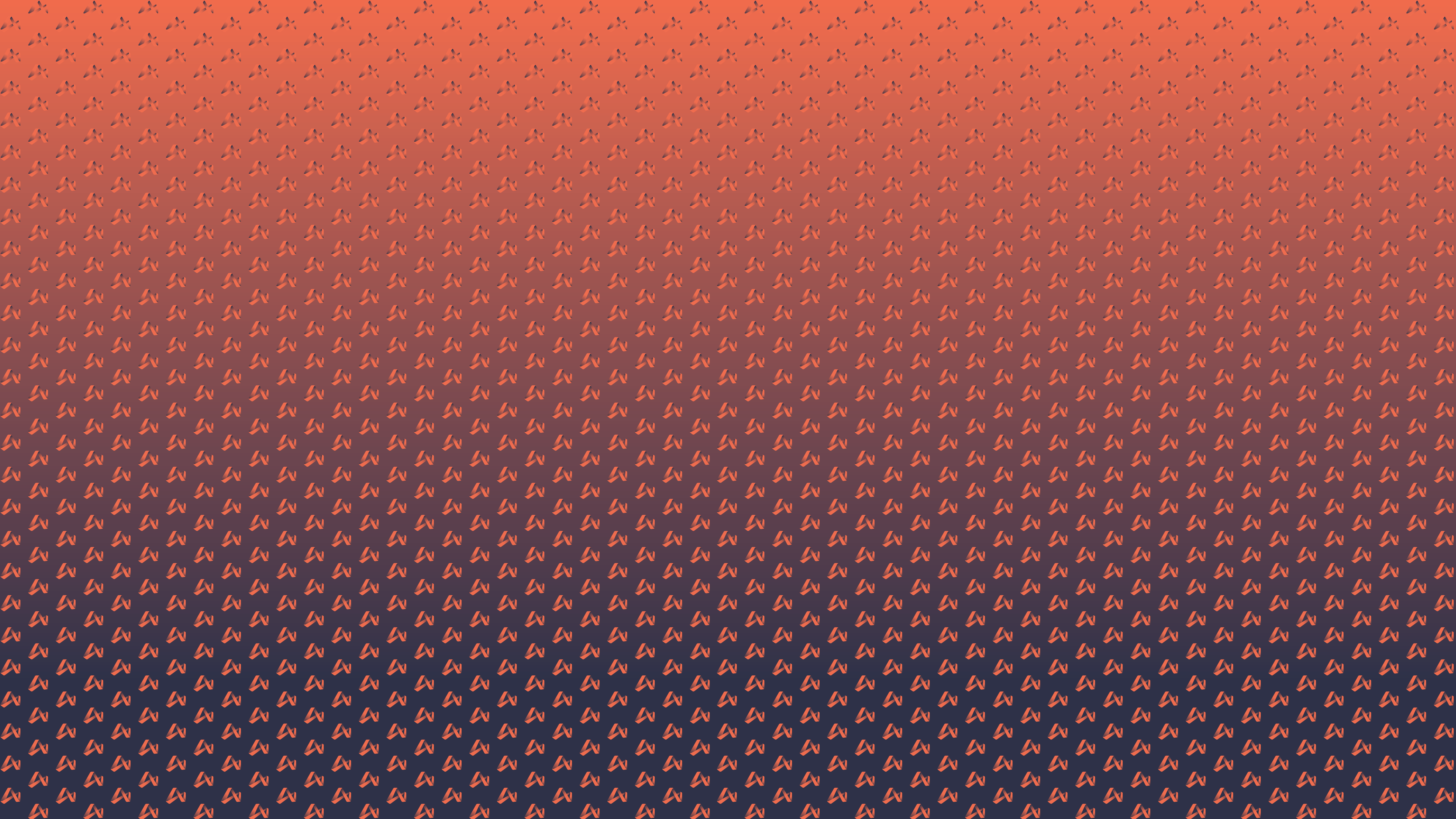


**Municipal Finance
Authority of BC**

**2022
ANNUAL
REPORT**

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Message from the Chair Malcolm Brodie

The Strength of the MFA is based on the Strength of the BC Local Government system

The Municipal Finance Authority (MFA) of BC’s mandate is embedded in legislation, through the *Municipal Finance Authority Act*, the *Local Government Act*, and the *Community Charter*. We achieve our mandate for the local governments we serve thanks to our Triple-A credit ratings, our collective strength, and the dedicated work of our Members, Trustees, and staff. Over the past 52 years, the MFA has enhanced its market-leading services while providing cost-effective capital financing and investment products for local governments throughout the Province.

Today, the MFA manages a loan portfolio of approximately \$5.5 billion representing essential infrastructure projects across most of BC’s communities and regions. In addition, our investments under management have reached \$5.3 billion in 2022. Significant and well-managed local government reserves in BC reflect the sound fiscal strength of our communities as they plan for future growth and mitigate risk. This was evident as we faced the challenges arising out of the pandemic.

As we increasingly turn our attention to environmental, social, and governance (ESG) concepts, we are pleased to highlight the MFA approach. Our model serves the needs of all BC communities and constituents while it limits costs. This promotes accessibility and affordability of community services offered by Members.

Top Tier Credit Ratings

The MFA provides its capital financing through the issuance of securities at relatively low rates in the

institutional capital markets. Our short-term lending and equipment financing programs are funded through the issuance of commercial paper. In 2022, the MFA issued over \$1.3 billion in long-term securities and \$3.6 billion in short-term securities. For more than a decade, MFA bonds have been rated Triple-A, the highest-quality credit rating attainable. Our commercial paper program has also consistently been rated at the highest possible grade since its inception.

Stable Governance and Oversight

The MFA represents all BC local governments through 40 Member representatives appointed by BC’s 28 regional districts, and 10 Trustees elected from these Members.

Because of the municipal elections last fall, we will say farewell to six trustees at our upcoming Annual General Meeting. Leaving us are Mayors Andy Adams, Jonathan Cote, Jack Froese, Lyn Hall, and Janice Morrison, as well as Councillor Geoff Young. Thank you to each of you for your service to the Municipal Finance Authority and to British Columbia’s local governments.

The MFA Staff Team

Management and staff who serve the MFA have again produced favourable results in the face of unsettled financial markets, inflation, and a global environment of uncertainty. Our staff has a proven track record of responsive client support and continual innovation. I congratulate them for their commitment and professionalism.

A Community of Support

Supporting education for local government directly or through sponsorship of other organizations is part of the MFA’s mandate. The organization has become the non-commercial leader in contributing to training and professional development for elected officials and staff teams. In addition to directly funding courses and conferences throughout the Province, Trustees and staff contribute their time on behalf of the MFA to enhance the financial understanding of our Members.

The Road Ahead

2023 promises to be an eventful year as it follows a tumultuous 2022 which featured the highest rates of inflation and rises in interest rates in recent memory. The MFA is pleased to carry on as mandated in order to support the financial position of all its Members. We look forward to again working together for the good of communities across the Province.

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 (39 in 2022) 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

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

*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

While the last three years have brought complexity and challenges, they have also been three years of transformation, advancement, and growth at the Municipal Finance Authority of BC (MFA). We have augmented our staff as we continue to increase capacity and enhance risk management. We upgraded our technology environment for remote work and enhanced cyber security, launched new pooled investment funds, and continued to report on Environmental, Social, and Governance (ESG) elements related to our lending and investment offerings.

In addition to enhancing access to the capital markets, which support our short- and long-term lending programs, we continue to make important investments in our pooled fund product line. By listening to, and working with, local governments, we have created a suite of best-in-class products that complement our clients' investment capabilities and needs. At the end of 2022, MFA assets under management in our investment products peaked at nearly \$5.3 billion. We have introduced many new funds over the last few years and have more exciting developments coming in 2023 as we look to introduce a second pooled fund suitable for long-term reserves: the Fossil Fuel Free Diversified Multi-asset Class Fund ("FFF DMAC"). Introduction is expected in the first half of 2023.

In this year's Annual Report, we are pleased to highlight the impact of collaboration for capacity building among BC local governments. Our elected official members, along with their administrative and finance teams, have championed the power of sharing resources and best practices, and maintaining standards of

excellence in many evolving and emergent areas. MFA is valued for its role in facilitating peer collaboration across our local government Member network to scale up, scale out, and accelerate the advancement of good governance, sustainable stewardship, and service delivery. On pages 14 - 16, we explore MFA's legacy as a major sponsor of financial education and networking events that lead to best practices in governance and developing expertise in the sector.

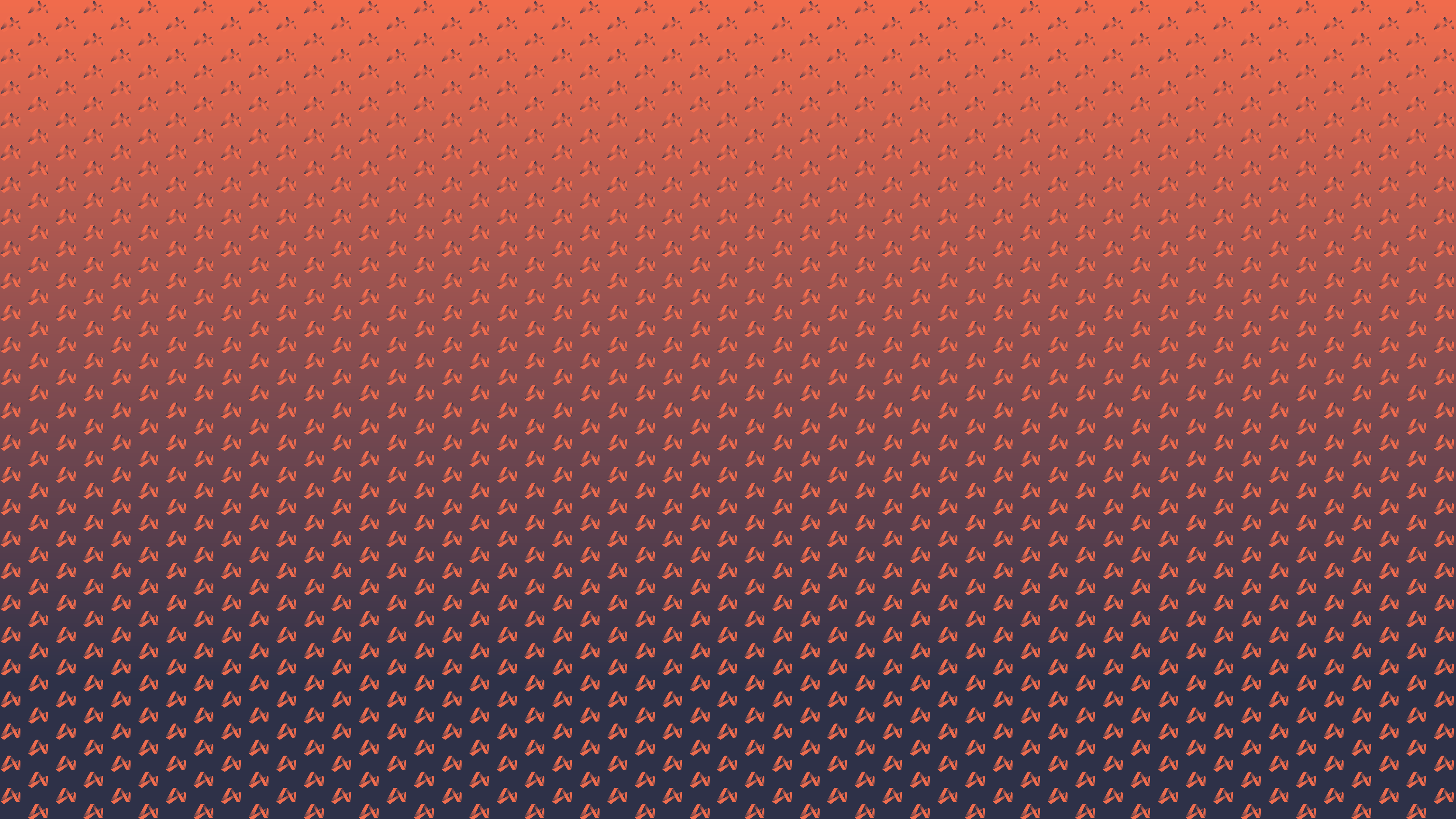
In our 2021 report, we shared elements of MFA's Environmental, Social, and Governance impact and disclosure of where MFA's bond proceeds are being invested by our clients by ESG category. In 2022, we continued this detailed reporting and, as planned, refined and launched our Sustainable Bond Framework "Use of Proceeds" and disclosure model. 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. In this section, we also feature three project case studies where MFA has provided funding to complete infrastructure projects relating to enhancing water quality, public fire safety, and education and culture. As we highlight in these case studies, British Columbia's local governments are leaders in environmental action and sustainability, and innovative projects can be found in communities of all sizes and all across the Province.

In 2023, we will continue to convene conversations with investors and Members around ESG's evolutionary landscape and MFA's lines of business. These material areas of impact relate to our lending and investment offerings to Members. Through the financial resilience

embedded in the provincial legislation governing the MFA, our exposure risk is very low. Nonetheless, as MFA advances its ESG processes and creates new tools and resources, we will work closely with Members, the Provincial government, and other partners to support BC local governments in building their capacity for assessing risks and opportunities, most notably related to the physical and transition risks from climate change. In early 2023, MFA hired a new Director of Sustainability, who will be critical in helping us leverage collaboration and the significant expertise and knowledge among local governments in incorporating climate change and other ESG-related considerations into our collective operations.

Finally, I want to acknowledge the hard work and dedication of an incredible team of colleagues, whose market knowledge and insight, together with critical understanding of local government needs and emerging issues are keys to MFA's success for the benefit of BC communities.

PETER URBANC CEO





MFA by the Numbers

Bond Issuance & Credit Ratings

2 New Bonds AND TWO RE-OPENINGS

NUMBER OF BONDS ISSUED IN 2022

\$1,325,000,000

TOTAL DOLLAR VALUE OF ALL BONDS ISSUED IN 2022

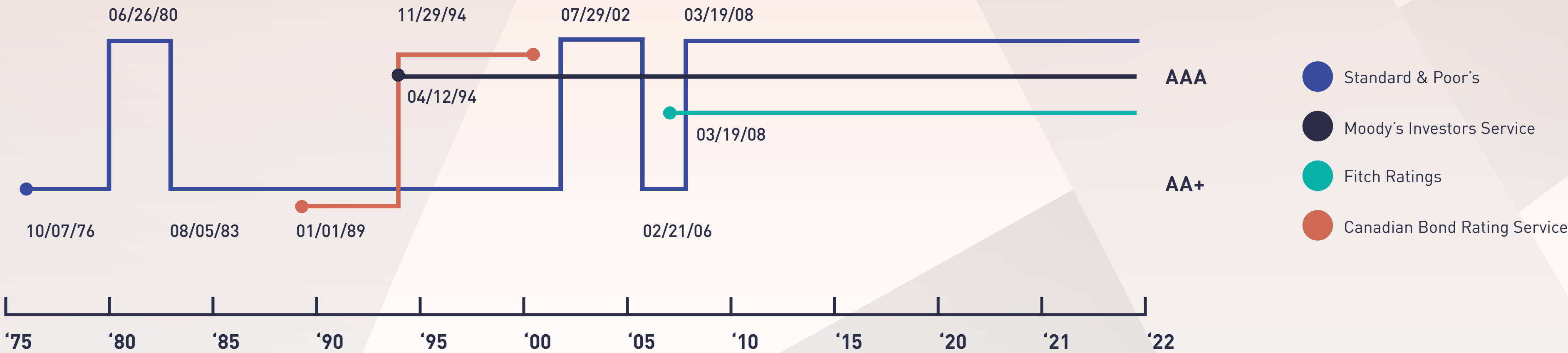
3.663%

2022 BONDS WEIGHTED AVERAGE INTEREST RATE

\$23,700,000,000

TOTAL DOLLAR VALUE OF ALL BONDS ISSUED 1970-2022

MFA Credit Ratings Over Time



Short-Term &
Long-Term Lending

Long-Term Lending

as of December 31, 2022

88

NEW LONG-TERM LOANS FUNDED IN 2022

1,561

OUTSTANDING LONG-TERM LOANS

\$250,618,424

SINGLE LARGEST OUTSTANDING LONG-TERM LOAN

\$5,596,483,687

TOTAL OUTSTANDING LONG-TERM LOANS

Short-Term Lending

as of December 31, 2022

111

NEW SHORT-TERM LOANS APPROVED IN 2022

446

OUTSTANDING SHORT-TERM AND EQUIPMENT FINANCING LOANS

\$15,000,000

SINGLE LARGEST OUTSTANDING SHORT-TERM LOAN

\$168,028,545

TOTAL OUTSTANDING SHORT-TERM AND EQUIPMENT FINANCING LOANS

Pooled Investment Funds & Pooled High Interest Savings Accounts

as of December 31, 2022

MFA BY THE NUMBERS

\$5,325,000,000

TOTAL ASSETS UNDER MANAGEMENT
IN THE PIF & PHISA

\$467,024,000

LARGEST SINGLE INVESTMENT
ACCOUNT VALUE

\$1,189,550,000

TOTAL VALUE OF SUBSCRIPTIONS IN 2022

\$350,000,000

LARGEST SINGLE SUBSCRIPTION IN 2022

604

TOTAL ACTIVE PIF &
PHISA ACCOUNTS

101

TOTAL NUMBER
OF SUBSCRIPTIONS
IN 2022

\$1,423
million

MONEY
MARKET

\$365
million

GFUS
BOND FUND

\$792
million

BOND
FUND

\$253
million

MORTGAGE
FUND

\$199
million

FFF
BOND FUND

\$410
million

DMAC
FUND

\$605
million

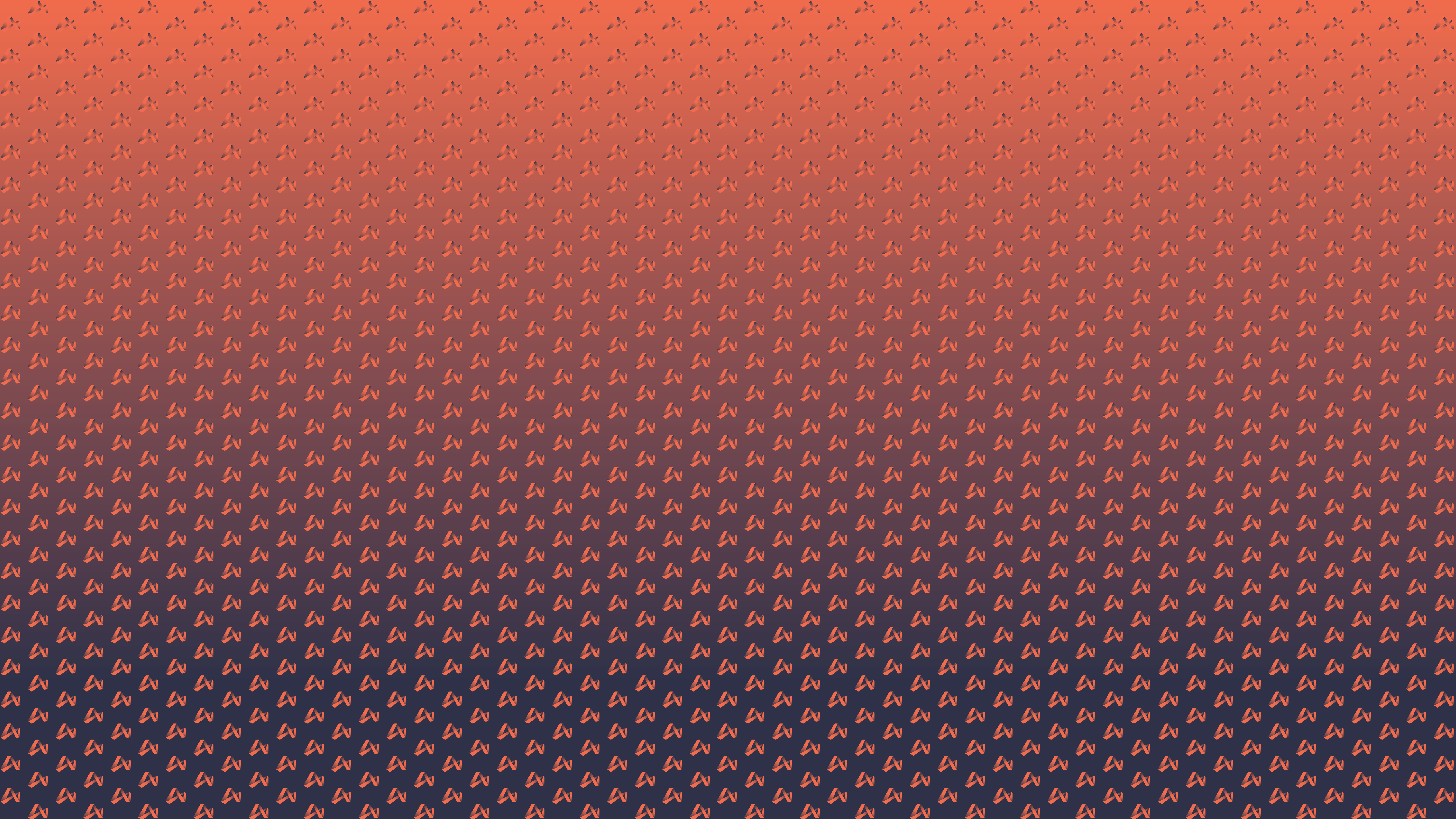
NBC
PHISA

\$785
million

CIBC
PHISA

\$493
million

SCOTIABANK
PHISA





MFA's Third Pillar

The Third Pillar of the Municipal Finance Authority's Mission

The MFA is a world-class cooperative financial institution created by, governed by, and exclusively available to BC's Local Governments. In addition to our low-cost, uniquely tailored financial products/services, we have also developed a substantial program of funding for education and community that directly supports our clients' elected officials and staff teams in their own fiscal excellence. We call this program the "third pillar" of our Mission.

When the MFA began operations in 1970, the focus was on creating the lowest cost of long-term infrastructure borrowing for BC local Governments through a cooperative model that was not previously seen in Canada. A decade later, with this program firmly established and successful, we began offering both short-term lending services and bespoke investment vehicles that provided access to investment classes not available to BC local governments anywhere else. During this time,

the MFA's expertise and staff complement expanded as our product line broadened, enhancing our ability to assist Regional Districts, Municipalities, and other para-municipal entities in meeting their financial goals. As participation in these new programs grew, the small management fees we levied to operate our programs increased and accumulated. The MFA reached the point where we were self-sufficient and no longer required an annual levy to fund our operations. Our leadership team began to look to the future and how these monies could be invested back into the system.

A formalized commitment to education

Numerous "colleague" organizations and post-secondary education institutions were offering training and events in support of professionalization, leadership, and best practices in municipal government. They were offering opportunities to connect and learn from fellow practitioners and were delivering uniform and certificated educational opportunities at all levels, including Bachelor and Masters-level degrees. The MFA realized that our clients' elected officials and their staff teams had widely disparate knowledge of, access to, and/or budget for financial training and education. In response to the need and the opportunity, in 1999 the MFA formally created an education fund to give back to the local level of government of BC and re-invest some of our earnings not required for operations back into the system itself.

Non-commercial support for Local Government training

The MFA's position as a non-commercial financial services provider, created to be an integral part of the local government landscape, means that our support, financial or otherwise, is not tied to the use of our services. We are not profit-motivated, but rather our success is reflected in that of BC's communities: their fiscal excellence and the tax dollars saved. Our financial support of local government education and conference events ensures that these offerings remain available and increases the overall professionalism of the sector. Enhanced knowledge and skills of key officials and staff further reduce risk to their organization individually but also to the Province and the MFA. There is a positive feedback loop in this financial support that we believe results in far greater value than the actual out-of-pocket cost.

An organizational legacy of contribution

Our organization's contribution to education for BC's regional district and municipal teams has been developed and inspired by our own team at all levels. James R. Craven, former MFA Executive Director for 16 years from 1984 to 2000, set the tone from the top in creating a culture where MFA staff travelled around the province to support communities regardless of their population or location. He built strong relationships between our organization and our colleagues at Civic Info, GFOABC, LGMA, UBCM, and others, ensuring MFA team members

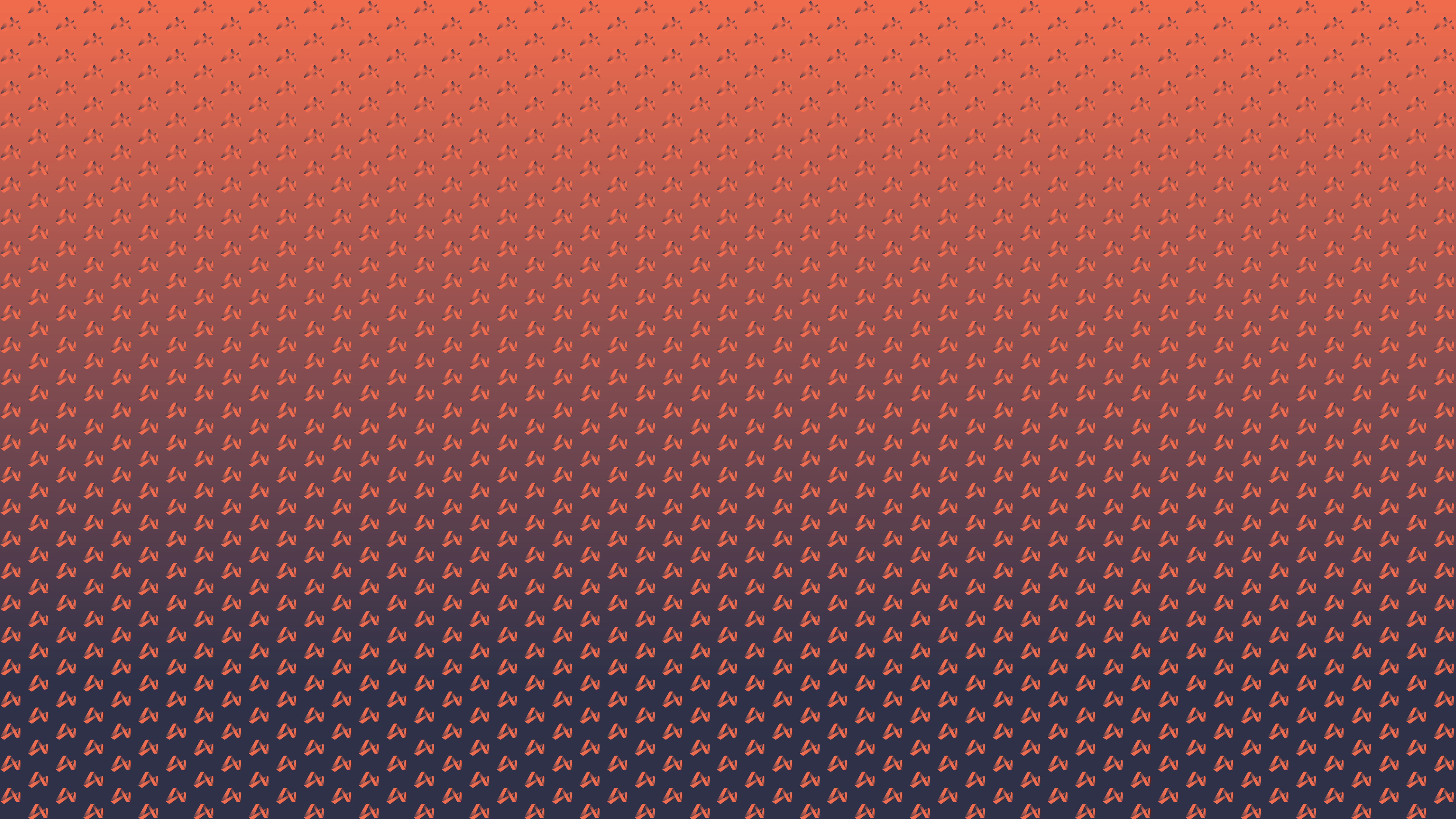
were subject matter experts for relevant programs and delivered training directly where appropriate. Len Traboulay, our former Chair from 1997 to 2000, was an educator before he was a politician and was a major influence and advocate in establishing our formal program of support, making certain that conferences and courses for both elected and staff leaders were subsidized. Many MFA Team members now contribute to our education third pillar, and our long-time staff member and current Chief Services Officer, Shelley Hahn, is a great example. She has not only been an instructor but has also passed on her knowledge and experience by writing course materials as new topics and priorities emerge.

Over time, the focus of the conferences, training, and education we fund has evolved as the pace of change, complexity, and uncertainty of the world outside local government has risen. Good financial practices are also enhanced by good governance in general. The MFA now funds programs and events directly or with partners that focus not only on finance, but also on leadership, risk management, cybersecurity, asset management, and sustainability.

Since 1999, The MFA has provided just under \$2.5 million dollars in these areas, and almost \$1.4 million dollars in the last ten years alone. We intend to continue this support to ensure that non-commercial funding remains available to our stakeholder conference events and that meaningful, relevant education is an obtainable priority for our elected and staff client partners.

ORGANIZATIONS THE MFA HAS FUNDED







ESG Factors & the MFA

Environmental, Social, and Governance Issues – An Update

Environmental, social, and governance (ESG) issues represent the primary human societal concerns we face today. These sustainability and climate related risks, and the opportunities they can present, will be important drivers of conversation into the foreseeable future. In other words, responding to these problems is a global imperative. Our organization is taking action to help our various stakeholders mitigate and manage these risks, while respecting the unique position our organization holds within the fabric of BC Local Government.

The Municipal Finance Authority of BC (MFABC) supports the financial needs of British Columbia’s communities and their constituents by connecting them with the global financial markets to fund their infrastructure, and by developing appropriate products to meet their reserve investment goals. In this capacity, we are working with colleague organizations to build the enabling conditions for integrity, credibility, consistency, comparability, and transparency of decision-useful information for our

various stakeholders as they respond to these challenges. Individuals, investors, regulators, and governments at all levels are both worried about our planet and looking to make things better for all. Broad concerns about organizational risks, profitability, resilience, and equity can only be addressed if we can gain more clarity and comparability between entities. 2022 was another year with numerous milestone moments and emerging trends with matters of climate change dominating the news.

The United Nations Environment Programme (UNEP) published their 2022 Emissions Gap Report which indicated “the international community is falling far short of the Paris goals, with no credible pathway to 1.5°C in place”. A plethora of companies worldwide have now made “Net Zero” commitments; however, questions around their credibility, and the integrity of the process used to arrive at and measure progress towards these goals, has come into question. The UN Secretary-General established a task group, chaired by former Canadian Minister of Environment and Climate Change and of Infrastructure and Communities, Catherine McKenna, to recommend criteria and standards to improve the credibility and comparability of such commitments by non-state actors (corporations, financial institutions, and local and regional governments). While these entities are not presently required to make net zero commitments nor disclose the alignment of their plans and actions towards them, it is only a matter of time before such information is compulsory. Both the Government of Canada and Province of British Columbia

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Standardization with aligned taxonomy and shared definitions and documents will dramatically improve insight into what organizations are doing and how their operations impact and are impacted by issues of ESG.

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have enshrined their net zero commitments and interim targets in legislation requiring transparency and accountability in disclosing their process and progress.

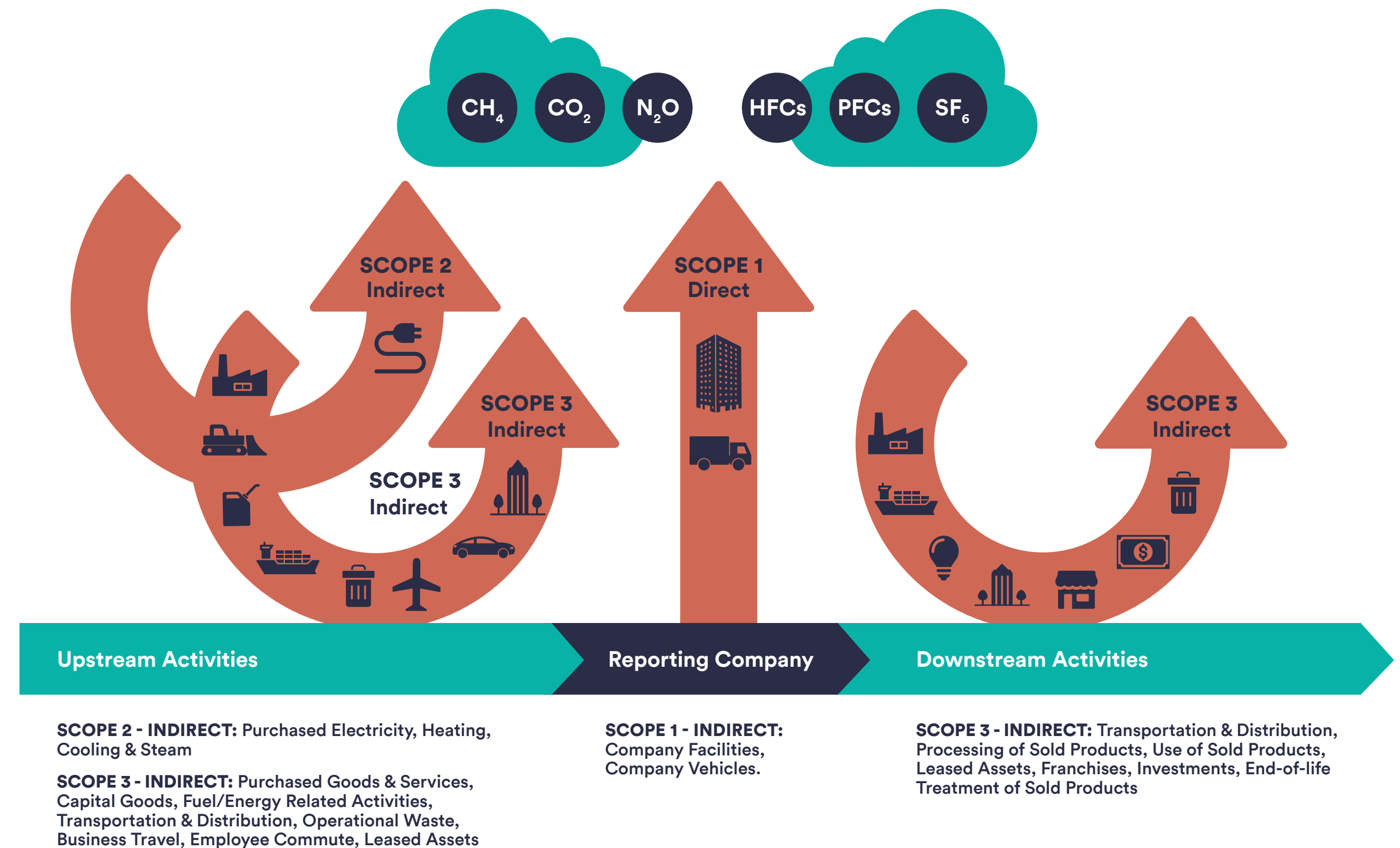
Created at COP26 in late 2021, the International Sustainability Standards Board (ISSB) was created to design a standardized global set of sustainability-related disclosure standards to aid in informed decision-making and reporting around ESG matters. Montreal was selected as the North American location for this new organization that has begun work toward this ambitious goal. The ISSB has announced that these standards are being finalized and will launch in June 2023, with 2024 being the first reporting year in legislated jurisdictions and by voluntary preparers. Standardization with aligned taxonomy and shared definitions and documents will dramatically improve insight into what organizations are doing and how their operations impact and are impacted by issues of ESG.

While COP 27 had little progress to share, the COP 15 UN Biodiversity Conference hosted by Canada in Montreal ended the year on a positive note, with an historic agreement to protect 30% of our planet against further degradation by 2030. The UN Convention on Biological Diversity is not only dedicated to promoting sustainable development, but also recognizes that biological diversity is about more than plants, animals, and their ecosystems. It is about people from all countries having equal access to healthy environments. To ensure food security, medicine, and clean water.

Environmental, social, and governance concerns are often intertwined as we have seen with the ongoing crisis in Ukraine. The Ukraine-Russian war not only continues to demonstrate both serious social and governance failings but has also highlighted European dependence on fossil fuel energy from Russia. While initially a negative outcome, this situation has now

inspired renewed commitments to energy security and decarbonization via development of renewable energy sources.

Finally, as if an exclamation mark at the end of the year, in November earth's population crossed the 8 billion mark for the first time, only 11 years after reaching 7 billion in 2011.



The MFA is responding to investor and other stakeholders' demands for more expanded reporting regarding both our and BC local governments' activities and how they impact our region and the planet.

2022 was a year of connection to both better understand the ESG landscape for us and our Members, to share the ways in which our own processes were evolving, and to collaborate on governance, strategy, and metrics.

We consulted with CDP (formerly known as the Carbon Disclosure Project), the Municipal Natural Assets Initiative (MNAI), the Climate Caucus, ESG leaders within our financial networks, and sustainability professionals from local governments actively pursuing these issues through policy and practice. Our CEO, Peter Urbanc, presented at the Asset Management BC Conference on ESG implications for this field and the MFA's upcoming changes to data collection on borrowing for capital infrastructure.

The Province of BC launched the Local Government Climate Action Program (LGCAP) that provides significant multi-year funding for local governments and Modern Treaty Nations to plan and implement climate action that will reduce emissions, create new opportunities for people in the clean economy, and prepare communities for future climate impacts. The MFA leadership team worked with the Climate Action Secretariat within the Ministry of Environment

and Climate Change Strategy to understand their goals and align with their reporting requirements as much as possible to reduce impacts to our clients as we begin to develop our own. Local governments report relevant and valuable information to both provincial and federal government ministries. We will seek to leverage these existing processes and datasets in the development of relevant key performance indicators (KPIs) to facilitate our own reporting on material and relevant information sought by our investors and other stakeholders.

In 2021 we made commitments to both document our bond framework and measure our baseline carbon footprint for our own operations.

In June 2022, we published our initial Sustainability Bond Framework that describes our long-term lending program and related bond issuance. In it we have detailed all the relevant information we are currently able to share with investors on the ESG elements of the long term borrowing we fund with our bonds. This Framework builds on the tool we developed to map our long-term lending purposes to the United Nations seventeen Sustainable Development Goals, as well as the Social and Green Bond Principles.

Near the end of the year, we completed an initial simplified carbon footprint of our own operations and, armed with this data, plan to monitor, reduce, and offset this impact where possible. We are proud that our organization,

with an almost \$11 billion dollar balance sheet, remains a very lean business with a light carbon footprint. We have no Scope 1 emissions (direct emissions from facilities or company vehicles), and very low Scope 2 emissions (indirect emissions from hydroelectricity), with the pre-dominate contributor being Scope 3 (indirect emissions from upstream supply chain, business travel, staff commuting, waste, and downstream services provided). As our capacity increases, Scope 3 recommendations emerge, and standards converge in 2023, we can begin to measure the most material of scope 3 emissions in our value chain – our financed emissions. MFA's financed emissions arise from our loans to local governments for public infrastructure and equipment, and from our investment holdings – both those owned by MFA, and those managed on behalf of our Members.

2023 will build on our extensive work of the last two years

In early 2023, we will bring our new Director of Sustainability, Allison Ashcroft, on board to help us to devise a process by which to collect and regularly report on the ESG elements of the long-term infrastructure projects we fund with our bonds. She will attend Climate Action secretariat events throughout the province to assess readiness of BC local government for assessing and reporting on sustainability and climate-related risks related to their public infrastructure investments, operations, and services. From these consultations,

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We will work towards being a knowledgeable catalyst to enable resilience in the system, become a repository of useful metrics, and to be an outspoken advocate for standardization in ESG reporting.

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we will gauge leadership response to their capacity and capability to comply with emerging data demands.

In addition, the MFA will sponsor a Climate Caucus event in February to ensure our local government leaders have access to information and resources pertinent to their needs and the changes that this new reporting environment will require. Climate Caucus is a Canadian non-partisan network of local government elected officials and allies working collaboratively to achieve sustainability goals in their communities. We will endeavour to support similar events going forward to both learn from and provide information to local government leaders.


We anticipate the introduction of yet another “fossil fuel-free” Pooled Investment Fund to our slate of offerings in the second quarter of 2023 – the Fossil Fuel Free Diversified Multi-Asset Class Fund. This new option builds on the successful launch of the Diversified Multi-Asset Class Fund in 2021 and joins our Fossil Fuel Free Short Term Bond fund in meeting our Members’ desire for socially responsible investment options. In addition, all other MFA investment offerings incorporate forms of ESG integration which may meet our clients’ sustainability goals.

A measured and supportive path forward

MFA’s very existence is predicated on creating value – saving taxpayers money while professionalizing the borrowing and investing function. Our mandate is to

help our clients secure ongoing equitable access to low-cost funding, and to offer purpose-built, inexpensive, institutional-quality investment services that reflect the needs of all communities. Our role will be to help make meaningful data available, reduce uncertainty, and mitigate risk – all so that better decisions can be made. The integration of ESG elements into our business lines is a natural extension of our position in both financial and local government settings. We commit to becoming an ESG knowledge hub, by hosting a repository of useful and relevant metrics that enhance decision making. The MFA will be a catalyst for increasing resilience in the system and to being an outspoken advocate for and partner in the standardization of ESG reporting within the local government context.

Our sustainability work will continue to be measured, deliberate, and unhurried. Our emphasis on credibility and integrity remains paramount, as is transparency around our activities, our progress, and ultimately, our impact. Our sustainability actions will continue to maintain and support our significant financial responsibilities to both BC local governments and the investors who invest in the economic prosperity, resilience, and low carbon transition of BC’s communities.



Sustainability Bond Framework

About MFABC

The Municipal Finance Authority of British Columbia (MFABC) was created in 1970 to contribute to the financial well-being of local governments throughout BC. MFABC pools the borrowing and investment needs of BC communities through a collective structure. We provide a range of low cost and flexible financial services to our clients equally, regardless of the size or location of the community. MFABC is independent from the Province of British Columbia and operates under the governance of a Board of Members appointed from the various Regional Districts within the province.

MFABC provides long-term and short-term lending, equipment financing, investment management, and other financial services to communities and public institutions in BC.

MFABC's Approach to ESG

In general, MFABC issues bonds twice annually to fund BC local government long-term infrastructure borrowing. This aggregation results in lower costs and the concentration of needed market expertise in one centralized entity. The projects MFABC funds are therefore not single purpose nor homogeneous. We serve all our clients' infrastructure borrowing regardless of their location, size, or the specific project being funded. 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.

To facilitate ESG reporting related to our issuance, we developed a methodology and mapping tool for ESG Use of Proceeds data collection and reporting that is consistent with International Capital Market Association (ICMA) principles. Prior to each of our bond issues, we map a complete account of our Use of Proceeds to the 17 UN Sustainable Development Goals (SDGs) as well as Green Bond Principles and/or Social Bond Principles.

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 reporting on BC local government projects.

Sustainable Bond Framework

MFABC has developed a Sustainable Bond Framework ("Framework") under which it can issue three types of bonds ("Bonds"):

Green Bonds – bond instruments where the proceeds will be exclusively applied to finance or refinance, in part or in full, new and/or existing Green Assets (as defined in "Use of Proceeds" below) and which are aligned with the four core components of this Framework.

Social Bonds – bond instruments where the proceeds will be exclusively applied to finance or refinance, in part or in full, new and/or existing Social Assets (as defined in "Use of Proceeds" below) and which are aligned with the four core components of this Framework.

Sustainability Bonds – bond instruments where the proceeds will be exclusively applied to finance or refinance, in part or in full, new and/or existing Green Assets and Social Assets (as both terms are defined in "Use of Proceeds" below) and which are aligned with the four core components of this Framework.

Following the International Capital Market Association Green Bond Principles 2021, Social Bond Principles 2021 and Sustainability Bond Guidelines 2021, the Framework is based on four core components:

- Use of proceeds
- Process for evaluation and selection
- Management of proceeds
- Reporting

The Framework also describes the way MFABC Green, Social and Sustainability Bonds support and contribute towards meeting the United Nations Sustainable Development Goals (SDGs). Upon issuance, additional details regarding the objective of the Bond, intended benefits and Eligible Categories of the assets may be disclosed.

To garner efficiencies, and due to the smaller size of MFABC’s annual bond issuance program, MFABC is most likely to continue comingling borrowing needs across Green and Social Assets and primarily issuing Sustainability Bonds.

Use of Proceeds

MFABC’s Use of Proceeds documentation 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 staff and our Trustees and Members. In other words, all our capital market borrowing can be associated with specific projects. This allocation is pre-defined by legislated authority and investors can be confident their funds will be used to support those projects.

MFABC intends to allocate an amount equivalent to the net proceeds from the sale of any Sustainable Bond issuances to finance or refinance, in whole or in part, one or more new or existing Eligible Green or Social Assets in the following Eligible Categories outlined below.

	Asset Category	Eligible Criteria	UN SDG Alignment
GREEN CATEGORIES	Renewable Energy	<p>Proceeds may be allocated to the construction, development, operation, acquisition, maintenance, connection, transmission, and distribution including, but not limited to, following renewable energy generation sources:</p> <p>A. Wind B. Solar C. Geothermal D. Waste biomass E. Tidal F. Run of river and small-scale hydroelectricity <25 MW G. Refurbishment of existing hydroelectricity facilities H. Heat recapture</p> <p>In addition, proceeds may be allocated to expenditures related to transmission and distribution networks projects that aim to connect renewable energy sources and/or support increased deployment of renewables on the grid.</p>	7. Affordable and Clean Energy
	Energy Efficiency	<p>Proceeds may be allocated to products and systems that reduce energy consumption or mitigate greenhouse gas (GHG) emissions, including:</p> <p>A. Energy efficient heating and cooling systems B. Energy efficient lighting and appliances C. Centralized energy control systems D. Energy storage systems E. Smart grid investments for more efficient transmission and distribution of energy F. Other energy efficiency retrofits</p>	7. Affordable and Clean Energy

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	Asset Category	Eligible Criteria	UN SDG Alignment
GREEN CATEGORIES	Sustainable Water and Wastewater Management	Proceeds may be allocated to the construction, development, operation, acquisition, and maintenance of infrastructure for: A. Collection, treatment, recycling or reuse of water, rainwater, or wastewater B. Flood prevention, flood defense or storm water management	6. Clean Water and Sanitation
	Clean Transportation	Proceeds may be allocated to the construction, development, operation, acquisition, and maintenance of low carbon transportation assets, including: A. Fully electric, hydrogen, or other zero-direct emissions transport including private vehicles, passenger trains, urban subway/metro, trams, and their directly supporting infrastructure B. Public walking and bicycle infrastructure C. Electric charging and hydrogen fuelling infrastructure D. Public transit connections to airports	11. Sustainable Cities and Communities
	Green Buildings	Proceeds may be allocated to the construction, development, acquisition, re-development, operations, and maintenance of properties that have received or are expected to receive applicable green building certification(s). Eligible green building certifications are LEED (Gold or Platinum) or BOMA BEST (Gold or Platinum), or other equivalent domestic or international certifications.	11. Sustainable Cities and Communities
	Environmentally Sustainable Management of Natural Resources and Land Use	<ul style="list-style-type: none">• Proceeds may be allocated to the conservation of biodiversity and terrestrial and aquatic ecosystems through preservation, restoration and sustainable management activities as applied by public sector and not-for-profit environmental organizations or equivalent private initiatives.• Promote, restore, or preserve biological diversity in urban areas such as parks, green rooftops, and other green spaces.	11. Sustainable Cities and Communities
	Climate Change Adaptation	<ul style="list-style-type: none">• Proceeds may be allocated to the redesigning, retrofitting, and upgrading of buildings and infrastructure (including policy, projects, and capital investment) to mitigate the negative impact of climate change and build resilience for extreme weather events, e.g., flooding, extreme rain, high wind, or extreme temperatures.• Climate risk information and planning: information support systems (e.g., climate observation, early-warning systems); hazard/vulnerability and cascading-effects analysis; heat/air quality mapping; integrated water-drainage modelling; Climate Lens approach development.• Procurement, restoration and conservation of natural areas and urban forest in response to climate change and carbon sequestration.	13. Climate Action
	Pollution Prevention and Control	Proceeds may be allocated to the construction, development, operation, acquisition and maintenance of land, facilities, systems, or equipment used for: A. Collection, treatment/remediation, recycling or reuse of emissions, waste, hazardous waste, or contaminated soil B. Facilities, systems, and equipment that are used to divert waste from landfills or reduce emissions including composting facilities	12. Responsible Consumption and Production
	Terrestrial and Aquatic Biodiversity	Proceeds may be allocated to projects that contribute to the enhancement or conservation of terrestrial or aquatic biodiversity, such as: conservation and protection of coastal, marine and watershed environments	14. Life Below Water 15. Life on Land

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	Asset Category	Eligible Criteria	UN SDG Alignment
SOCIAL CATEGORIES	Affordable Basic Infrastructure	Proceeds may be allocated to the construction, development, operation, renovation and/or maintenance of facilities, services, systems, or equipment used for: A. Development of infrastructure to provide underserved/remote communities that have limited access or no access to services such as clean drinking water, sewers, sanitation, transport, and energy	6. Clean Water and Sanitation 7. Affordable and Clean Energy 11. Sustainable Cities and Communities
	Access to Essential Services	Proceeds may be allocated to the construction, development, operation, acquisition, and maintenance of publicly available, free, or subsidized essential services, including: A. Education (including public universities, schools, and training centres) B. Healthcare (public hospitals, medical equipment, mental health facilities and programs, homes, or health facilities for aged or people with disabilities) C. Rehabilitation of parks and other public spaces	3. Good Health and Well-Being
	Affordable Housing	Proceeds may be allocated to the construction, rehabilitation and/or preservation of quality affordable housing for low- and moderate- income, and other target populations including seniors and vulnerable or underserved residents	1. No Poverty 11. Sustainable Cities and Communities

Process of Project Evaluation and Selection

By the very nature of local government mandates, we assert that all projects we fund can be considered as social, green, or both in nature. Examples include providing new services like recreation centres, adding enhanced water treatment facilities, increasing community fire protection, or upgrading to solar street lighting.

The responsibility for operational oversight of MFABC’s sustainability activities is held by our Business and Sustainability Committee (the “Committee”) whose mandate is to:

- Provide oversight and management of the Framework,
- Determine the eligible green and social projects that would qualify for proceeds from a green, social or sustainability bond issuance

Members of the Committee will include representatives from MFABC’s Business & Client Services, Finance & Accounting, and Technology & Stakeholder Relations functions.

The Sustainable Bond Asset Portfolios will be reviewed by the Business and Sustainability Committee ahead of any new bond issue to ensure that all Eligible Assets

continue to meet the Eligible Categories. Assets that have been terminated or no longer comply will be removed from the Sustainable Bond Asset Portfolios.

Management of Proceeds

The Finance and Accounting Team will track the allocation of net proceeds from the sale of any Green, Social, or Sustainability Bonds to eligible Green and Social Assets. It is MFABC’s intention to maintain, directly or indirectly, an aggregate amount of assets in each of the Sustainable Bond Asset Portfolios on a quarterly basis to ensure the total Eligible Assets in each portfolio is equal to or great-

er than the aggregate amount of proceeds raised by each of the applicable Bonds. Pending allocation, an amount equal to the net proceeds from the sale of any of the applicable Bonds may be temporarily invested in cash or cash equivalents, and/or held in accordance with MFABC's internal liquidity policy.

Reporting

MFABC intends to make and keep readily available Sustainable Bond reporting within a year from any issuance, to be updated annually until full allocation and in case of any material changes. MFABC Sustainable Bond reporting will be made publicly available on MFABC's website and may include, but will not be limited to:

Allocation Reporting

- Funds raised from each Green, Social or Sustainability Bond
- Aggregate amounts of funds allocated to each of the Eligible Categories

The balance of unallocated proceeds at the reporting period end would form part of this reporting; however, the legislative system under which BC Local Governments borrow make this a highly unlikely outcome. Most projects financed via MFABC bond issuance have already started before MFABC disburses funds and the loan used to finish the project or to pay out related short-term borrowing. In the unusual eventuality that a local government borrows more than needed to complete the project, investors can

take comfort in the fact that legislation limits what can be done with this excess borrowing:

- pay back MFABC
- retire, purchase, or cancel debentures issued for that purpose
- invest in a temporary reserve fund which must be spent on a similar service. i.e., unused funds must be retained for future similar capital-related expenditures.

Impact Reporting

Impact reporting will initially take the form of Case Studies of selected projects funded through our bond issuance and become more robust over time. Over time, our goal is to collect and provide detailed KPI reporting for the vast majority of our Sustainable Assets (our loan portfolio). The report will include qualitative and quantitative key performance indicators on the Eligible Assets, reported at category level. Below are examples of impact measures that may be reported depending on the Eligible Asset.



Asset Category	Eligible Criteria
Renewable energy	<ul style="list-style-type: none">Total installed capacity (MW)GHG emissions avoided per year (tCO2e)
Energy efficiency	<ul style="list-style-type: none">Expected energy savings per year (MWh)GHG emissions avoided per year (tCO2e)
Sustainable Water and Wastewater Management	<ul style="list-style-type: none">Wastewater treated to appropriate standards or raw/untreated wastewater discharges avoided (liters)Wastewater avoided, reused, or minimized at source (liters)Vulnerability assessment and adaptation plan
Clean Transportation	<ul style="list-style-type: none">Total in km of new or improved train lines/dedicated bus, BRT, LRT corridors bicycle lanesAnnual GHG emissions reduced/avoided in tCO2eIncrease in number of people with access to public transit
Green buildings	<ul style="list-style-type: none">GHG emissions avoided per year (tCO2e)Floor space of green real estate (m2)Water reduced/avoided (litres)
Environmentally Sustainable Management of Natural Resources and Land Use	<ul style="list-style-type: none">Maintenance/safeguarding/increase of protected area/habitat in km²Absolute number of indigenous species, flora or restored through the projectAnnual GHG emissions reduced/avoided in tCO2eEnvironmental remediation or protection plansDetails on positive impacts of rehabilitated sites
Climate Change Adaptation	<ul style="list-style-type: none">Reduction in flood damage costsNumber of adaptation and resilience measures installedReduction in the number of wildfires, and/or in the area damaged by wildfires (km2)
Pollution Prevention and Control	<ul style="list-style-type: none">Recycling rates in a given municipalityEnergy recovered from waste (MWh or KJ)Number of people or percentage of population provided with improved municipal waste treatment or disposal services
Terrestrial and Aquatic Biodiversity	<ul style="list-style-type: none">Area protected (km2)Maintenance/safeguarding/increase of natural landscape area in urban areas (km2)
Affordable Basic Infrastructure	<ul style="list-style-type: none">Additional people served by infrastructure type (#)Number of people with access to improved sanitation facilities under the project
Access to Essential Services	<ul style="list-style-type: none">Number of hospitals and other healthcare facilities built/upgradedNumber of education facilities built and/or initiatives providedNumber of vulnerable individuals benefiting from training/education programs
Affordable Housing	<ul style="list-style-type: none">Units built or refurbishedNumber of people with access to safe, affordable, and sustainable housing

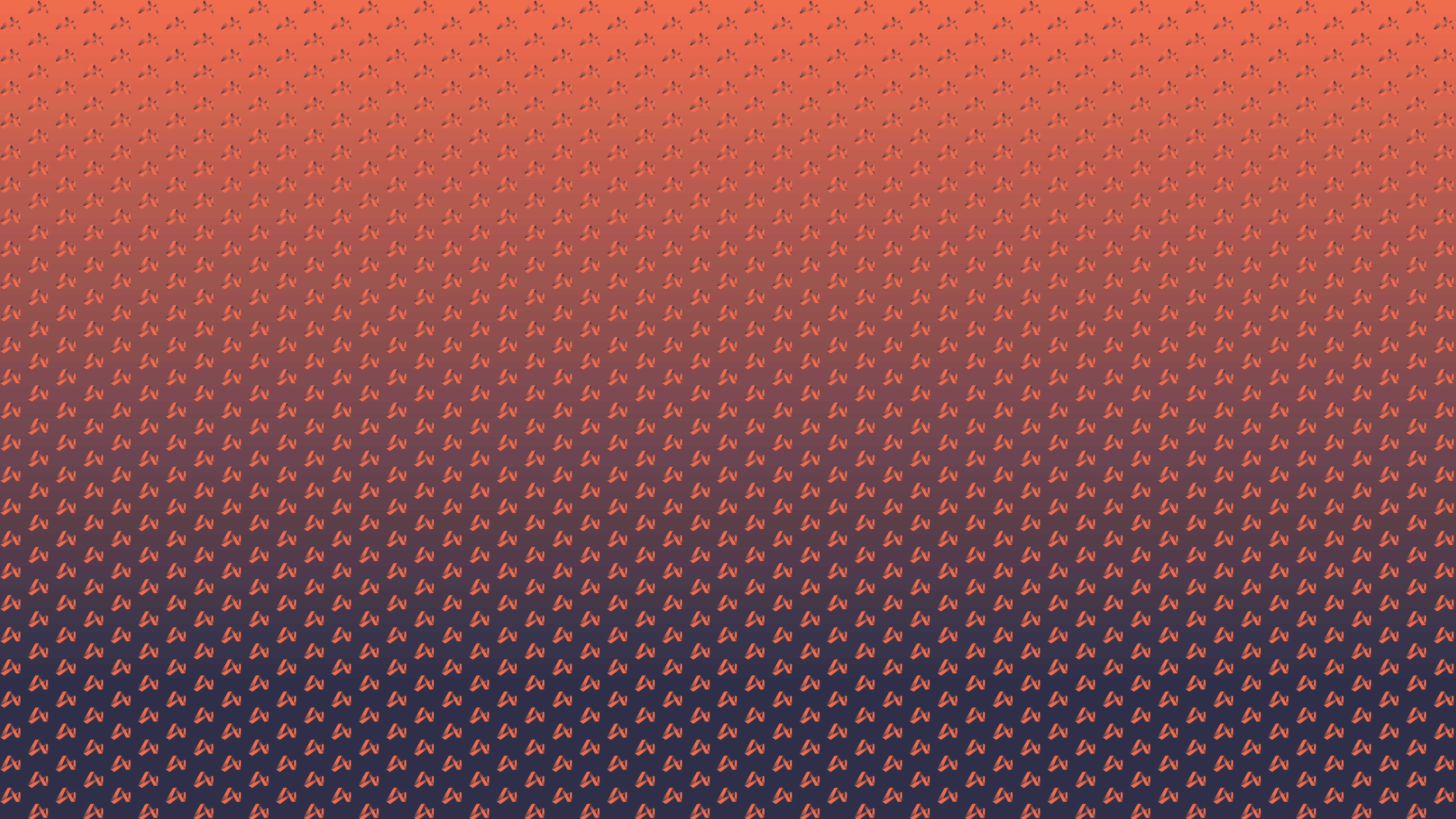
Amendments to this Framework

The Committee will review this Framework on a regular basis, including its alignment to updated versions of the ICMA Green, Social, and Sustainability Bond Principles and Guidelines.

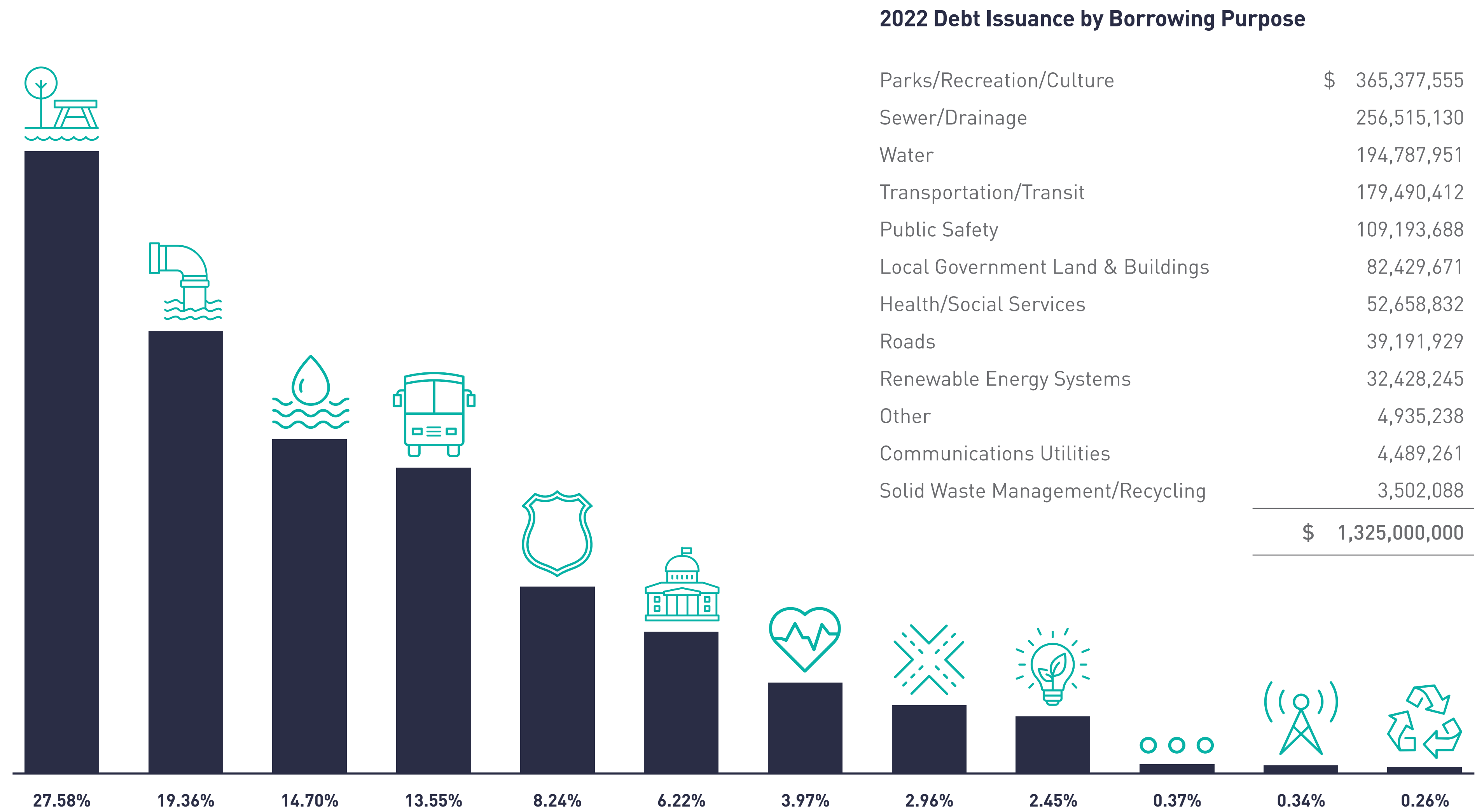
Such review may result in this Framework being updated and amended. Any future updated version of this Framework that may exist will either maintain or improve the current levels of transparency and reporting disclosure requirements. The updated Framework, if any, will be published on MFABC’s website.

Disclaimer

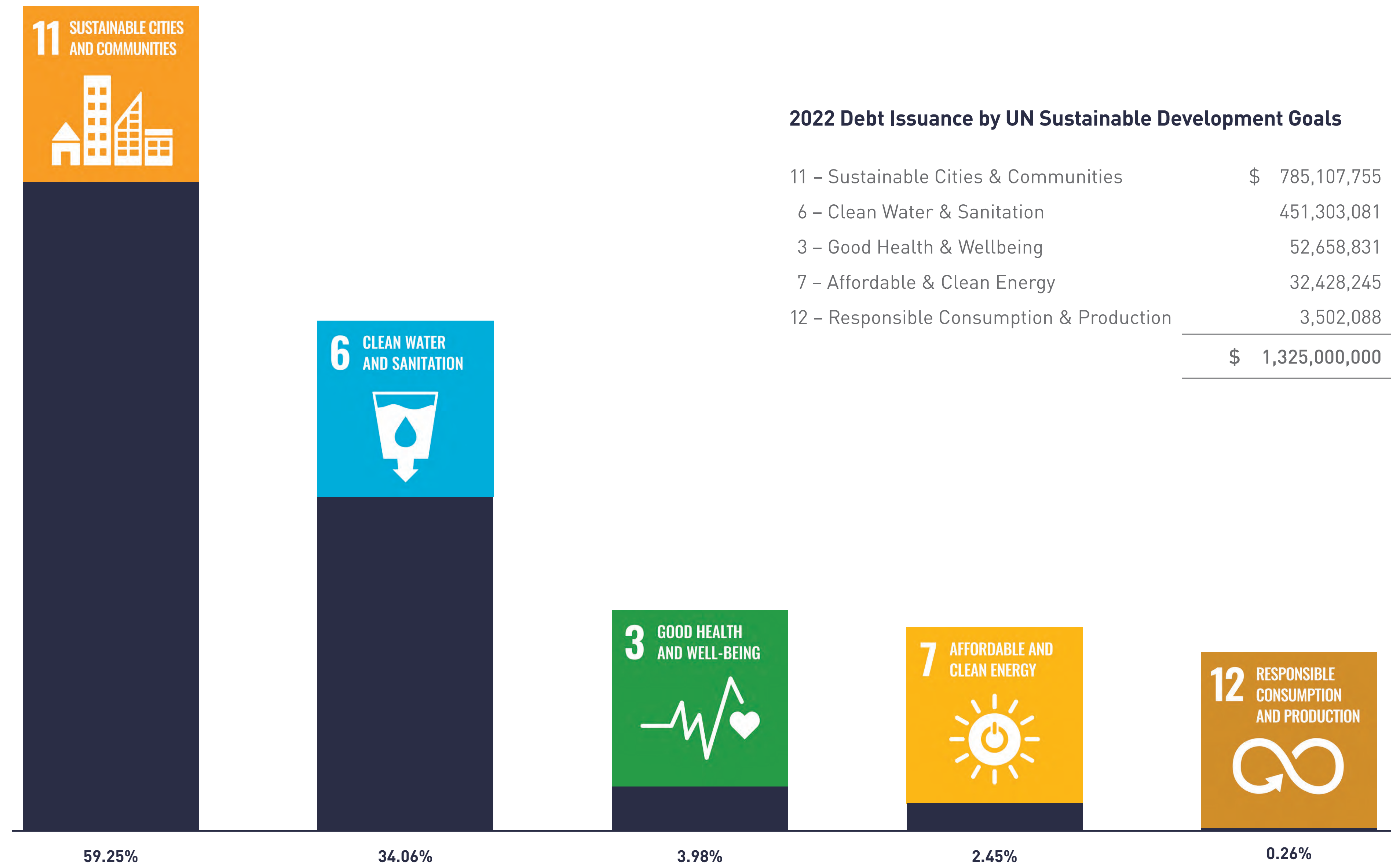
This Sustainability Bond Framework does not constitute an offer or solicitation, or invitation to apply for, or a recommendation to buy securities to any person in any jurisdiction and may not be relied upon for investment purposes. MFABC is not liable or responsible to any person for any harm, loss, damage, proceedings, costs, claims, liabilities, damages, and/or expenses in connection with the use of this Framework. Any offers or invitations to apply for securities will be made in accordance with all applicable laws.



2022 Debt Issuance by Borrowing Purpose



2022 Debt Issuance by UN Sustainable Development Goals





ESG Case Studies

Regional Infrastructure Project Highlights



Project: Sooke Branch - Vancouver Island Regional Library
Borrower: Capital Regional District



Project: Fire Hall #1
Borrower: City of Prince George



Project: Peachland Water Treatment Plant
Borrower: District of Peachland

CASE STUDY ONE

Sooke Branch - Vancouver Island Regional Library

Vancouver Island Regional Library acknowledges the land on which we gather is the unceded traditional territory of the Coast Salish peoples, specifically the T'sou-ke First Nation, whose historical relationships with the land continue to this day.

As a regional system, Vancouver Island Regional Library (VIRL) covers a vast geographic area, from Sooke and Sidney in the south to Port Hardy, Haida Gwaii, and the Central Coast. The system includes a mix of urban, rural, and remote communities that work together to ensure exemplary library services for all members. VIRL's new branch location in Sooke is a state-of-the-art facility constructed to provide a safe and inviting space for the community to come together.

The new branch was designed to provide the growing District of Sooke and its neighbouring communities with a vibrant, open, and welcoming space. The new building provides over 13,000 square feet that will serve as a cornerstone of education and entertainment for the residents of Sooke. The library's public areas offer a variety of different spaces including a vibrant children's area, multipurpose room, a fireplace lounge, laptop bar, and study space. VIRL's branches reflect the new ways communities interact with libraries and work to balance the traditional services provided with flexible spaces, new technologies, digital resources, and unique programming.

Between 2016 and 2021, the population of Sooke grew by over 2,400 people. This was a 13.7 percent increase in the potential patrons served by the library branch.

The original Sooke branch of the VIRL system was established in 1963 and the building and amenities were too limited to serve the growing region and to offer residents the library experience they deserved. This building was also a rented space, which hampered VIRL's ability to make meaningful updates to the building to meet evolving needs. The site of the new library on Wadams Way allowed VIRL to build and own a state-of-the-art facility that better reflects the growth and development projections of the District of Sooke, including the surrounding communities of Shirley, East Sooke, Jordan River, and Port Renfrew. The new facility also provides VIRL with control over how the space is managed, maintained, and enhanced over the years.

Construction began in October 2020 in the midst of the Covid-19 pandemic and was completed in the spring of 2022. VIRL partnered with Island West Coast Developments (IWCD) and HDR Architecture Associates and their team of subtrades in the execution of the Sooke branch project. Energy performance and operating costs were considered early in the design process using energy modelling software. The new library is low-carbon, using only clean hydroelectricity to power, heat, and cool the facility. Featuring an iconic circular design with matching curved bookshelves, the unique design, finishes, and custom furnishings ensure the library is a marquee community amenity.



A Cornerstone Of The Community

Multi-functional Space

With its iconic circular design, the new facility offers an enhanced library experience featuring:

- 13,412 square feet
- 35,000 items in circulation
- Increased staffing
- Expanded hours of operation
- Expanded program schedule
- Wheelchair accessible
- Natural & sustainable design elements
- Vibrant children's area
- Fireplace lounge area
- Laptop bar
- Study space
- Bookable rooms



QUICK FACTS:

VIRL uses a floating collection, where cardholders can request any title in the library's collection and have it delivered to their branch. This model ensures equity of access for all VIRL cardholders, no matter where they live.

Key Metrics Of Success

- In the first five months after opening, the new Sooke branch circulated almost 25,000 physical items.
- In one month (April 2021), more than 5,000 visitors came through the doors of the new branch.
- The overall customer satisfaction score, based on an ongoing analysis for all branches at VIRL, for the Sooke branch is 9.54/10

Libraries reflect the communities they serve, and the Sooke library is growing right along with your thriving region. Residents are richer for this incredible new, larger branch which gives people of all ages a special place to gather, grow and learn. Libraries play a critical role in providing access to reliable information on important issues essential to our civic life.

Nathan Cullen, MLA, Minister of Water, Land and Resource Stewardship, former Minister of Municipal Affairs



Designing with Sustainability in Mind

Environmental Considerations

The unique design of the building lends itself to unconventional design and use of materials. The building contains several sustainability features to help minimize its impact on the environment, including:

- Alignment with the Wood First Initiative, which sources local, sustainably procured wood
- Inclusion of an electric vehicle charging station and provisions for future solar energy integration
- A solar shading device to prevent solar heat in summer and allow heat gain in winter
- Installation of energy efficient LED light fixtures
- A tubular daylighting system that introduces natural light into the space without the glare of conventional skylights
- Marmoleum flooring, which contains an average of 97% natural raw materials (72% are renewable) and is 100% biodegradable
- Flotex floor tiles which contain up to 52% recycled content
- Rooftop rainwater capture and rock pit absorbs water instead of releasing into drainage system
- Runoff water is captured and filtered through a bioswale



Sustainability Goals

The project outcomes support the following UN Sustainable Development Goals:



QUICK FACTS:

- With its regional model, VIRL is able to leverage economies of scale, discounted prices on library materials, and a robust eLibrary with the very latest in ebooks, audiobooks, streaming and downloadable music, movies and TV, and online learning opportunities.
- The lead architect of the project, Rod Windjack, also designed Edward Milne Community School, Journey Middle School, and Poirier Elementary School in the region.

Award Winning Project

Island West Coast Developments Ltd. won the 2022 Vancouver Island Construction Association project achievement award in the Prime Contractor \$5-10 million category for the Sooke branch construction.

Project Budget: \$7.5 million

The project was funded by long-term borrowing through the Capital Regional District provided by the Municipal Finance Authority of BC.

CAPITAL REGIONAL DISTRICT
MUNICIPAL FINANCE AUTHORITY OF BC

Sourcing Local Materials

Renewable Natural Resources

Island West Coast Developments (IWCD) was able to source materials from the local community. A local mill felled and milled the material for a unique ceiling and entry wall detail that features fir 1x2's and 2x4's incorporated between exposed fir mass timber beams and millwork panels. The exterior of the building features local cedar tongue & groove boards.

Funding Breakdown

The project's \$7.5 million budget included the cost of construction, furnishings, technology infrastructure, and site preparation. Funding was secured through a loan from the Municipal Finance Authority to the Capital Regional District.

Each of the VIRL's member jurisdictions contributes to a pooled budgeting system, as mandated by the Library Act. The cost of the new Sooke branch is shared by member jurisdictions rather than paid for by Sooke resident taxpayers alone through their regional district contribution.

As anyone who has visited the Sooke region in recent years can attest, the community is developing quickly and is only poised to continue its growth...We know that vibrant, well used libraries are important indicators of healthy communities — when the doors open and the public experiences it for themselves, all will understand how this new library marks an important milestone in our community's evolution.

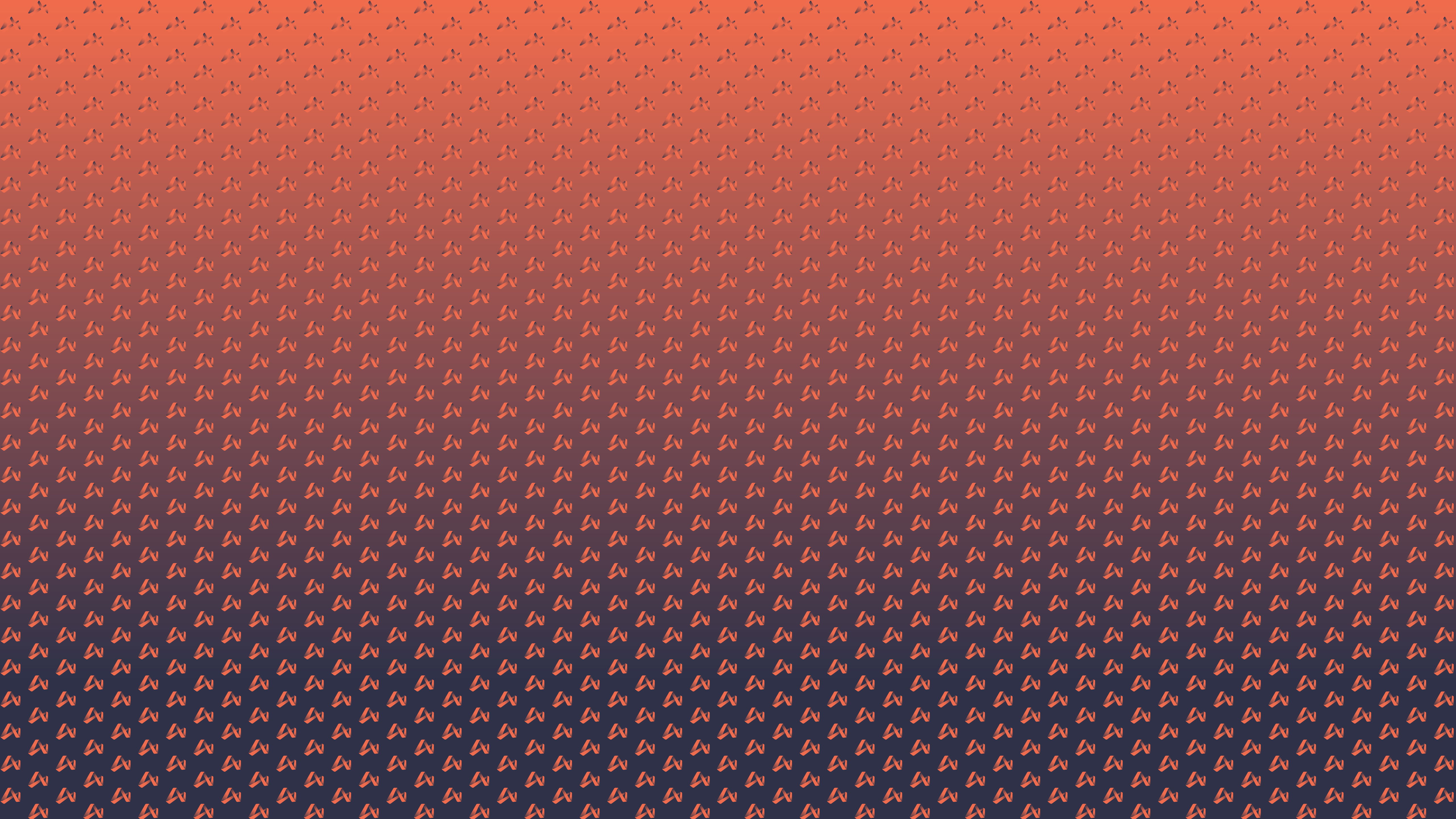
Maja Tait, Mayor, District of Sooke



Online Resources

- ▶ [Sooke Branch - VIRL Website](#)
- ▶ [Media Release - January 2022](#)
- ▶ [Media Release - June 2022](#)
- ▶ [Media Release - 2022 Budget](#)

The MFA thanks VIRL staff, IWCD, and project collaborators for providing the information presented in this case study.



CASE STUDY TWO

Peachland Water Treatment Plant

The District of Peachland acknowledges that the new water treatment system is constructed on the traditional territory of the Syilx/Okanagan People.

Residents of the District of Peachland will benefit from improved drinking water with a new water treatment system designed for efficiency and increased capacity for the District's growing community. Construction on the new treatment plant began in January 2019 and was completed in January 2021. The facility was operational in April 2021 and services a community of approximately 5,800 residents.

The Peachland Water Treatment Plant project was initially envisioned in the District's Water Master Plan in 2006 when the need for various water infrastructure improvements was identified by Council and reflected in their strategic priority plans. Through the significant financial aid of government grants (both federal and provincial), as well as internal reserves and long-term borrowing, staff and project partners worked to make it a reality. The Government of Canada and the Province of British Columbia jointly contributed to the project through The Small Communities Fund, which provided support for priority public infrastructure projects in communities across Canada with fewer than 100,000 residents.

The main outcome of the new water treatment plant's construction was to meet the standards of drinking water quality as laid out by the Canadian Drinking Water Guidelines and the

Ministry of Health's Drinking Water Treatment Objectives for Surface Water Supplies in BC. The new plant and treatment system replaced the District's rudimentary water treatment system that had been constructed in the 1960s. This system was inefficient and used coarse screening and gas chlorination for disinfection. For years, Peachland residents expressed concerns with the degrading water quality and increase in turbidity values following annual spring freshet, or seasonal runoff. These increased flows and resulting scouring of the creek banks routinely prompted the need for a Water Quality Advisory or Boil Water Notice. The new treatment plant now exceeds the noted drinking water standards, and since the new plant began servicing the residents of Peachland, it has not been required to institute those advisories or notices due to increasing turbidity values.

An additional goal of the project was to consolidate Peachland's water distribution system - to have one Water Treatment Facility that services all of Peachland and uses one source of water: Peachland Creek/Lake. Peachland residents previously received water from one of two water systems, each serviced by a different creek (Peachland Creek and Trepanier Creek). As the majority of Peachland is located on a hillside, next to Okanagan Lake, it was neither economically nor environmentally feasible to pump water uphill. To best serve all Peachland residents, the new system was designed for water to flow downhill from Peachland Lake.



Essential Services for a Growing Community

The new Peachland Water Treatment Plant solved three issues facing Peachland residents:

- Improving water quality** – The Peachland Water Treatment Plant provides year-round, safe, clean drinking water for Peachland residents. The new plant includes a filtration component, eliminating water cloudiness that residents previously encountered in their drinking water. The new system uses both chlorine and ultra-violet (UV), which are both safe and highly efficient methods to disinfect water. As a result, regular annual boil water advisories will no longer be necessary.
- Consolidating Peachland's current water distribution system** – Peachland's current water distribution system was inefficient. The District of Peachland acquired three systems in the 1980s, all of which were originally built to service the tree fruit industry, not a growing District. The new Water Treatment Plant supplies clean water to Peachland residents from a single water source: Peachland Lake.
- Servicing the future growth of Peachland** – The new Water Treatment Plant was designed to service the planned future growth areas of Ponderosa-Pincushion and New Monaco. The new system will also ensure existing and future neighbourhoods experience adequate water pressure and fire flows.

Sustainability Goals

The project outcomes support the following UN Sustainable Development Goals:





Building Design, Construction & Environmental Considerations

Energy-efficiency and minimal environmental impact were incorporated into the design and construction of the Water Treatment Plant. The facility includes functional design features that support energy-efficiency and reduce energy usage in regards to lighting, heat penetration, and cooling requirements.

- The building was constructed to high environmental and emission standards and, whenever possible, used clean (electric) energy in place of fossil fuels for heating and cooling. All thermostats within the building are programmable.
- Skylights were installed over the main floor of the plant to allow natural light to enter and reduce the need for lighting during working hours. All lighting installed was LED.
- Windows were installed with a tint to allow light entry but reduce heat penetration, reducing the cooling requirement.
- During construction, the bare minimum number of trees were removed but all those that were have been replaced with supplementary plantings of native species. As these plantings and the existing trees mature, they will offer further shade benefits to both the building and nearby habitats.



Approximately \$7 million will be invested into this project, providing many benefits for Peachland. Not only will the residents get to share in the direct benefits of the new water filtration plant, but the construction, maintenance, and operations of the treatment centre will create numerous employment opportunities for the community.

Dan Ashton, MLA

How Does The Water Treatment Plant Work?

- **Step 1:** Water is supplied from one water source: Peachland Lake.
- **Step 2:** Water is transmitted to the Water Treatment site via Peachland Creek.
- **Step 3:** Via low lift pumps, water from Peachland Creek is transported to the Plant where it undergoes flocculation, clarification, filtration, UV disinfection and chlorine disinfection.
- **Step 4:** The clean, treated water leaves the plant and is either stored in a nearby reservoir or distributed directly to Peachland residents via the existing water distribution system.



Project Budget: \$24,573,000

The project was funded through a combination of internal reserve funds, provincial and federal grants, and borrowing through the Municipal Finance Authority of BC.

SMALL COMMUNITIES FUND

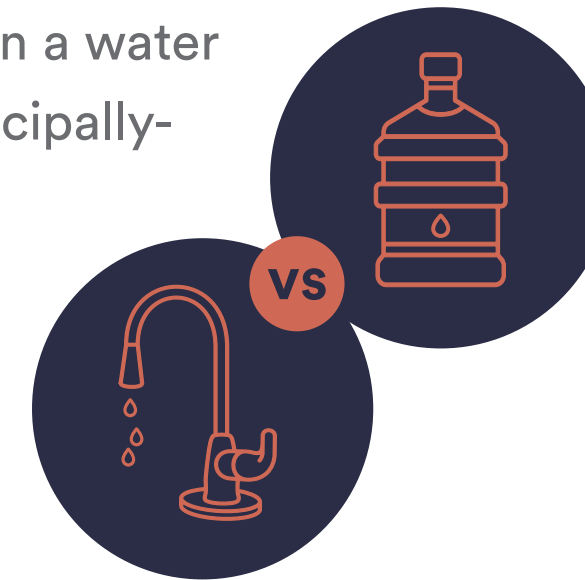
COVID-19 SAFE RESTART GRANT

MUNICIPAL FINANCE AUTHORITY OF BC

Cost Savings For Residents: A Comparison

Bottled vs. Tap

Prior to improved water disinfection, bottled water consumption during spring freshets and within the instituted water quality advisories/boil water notices was common, although water could be boiled to ensure safety. Residents may not have preferred to drink water with discolouration or cloudiness. Comparing the same volumes (considering a common 18.9L bottle used on a water cooler), the unit rates for municipally-supplied water is significantly lower than bottled vs water (bottled = \$0.92/L vs municipal = \$0.0006/L).



QUICK FACT:

The Water Treatment Plant and distribution system are operated and maintained by highly trained and certified operators. By regularly checking infrastructure, observing and recording data provided by treatment and monitoring equipment, and sampling and testing water at various points along the system for different parameters, operators adjust the plant's performance to meet or exceed Canadian Drinking Water Standards.

We are very grateful for the participation and support of senior governments on this transformative project for our community. Their funding and support on this project helped us achieve our goal of ensuring there is improved, quality drinking water for our residents and that we are no longer affected by seasonal water quality advisories moving forward.

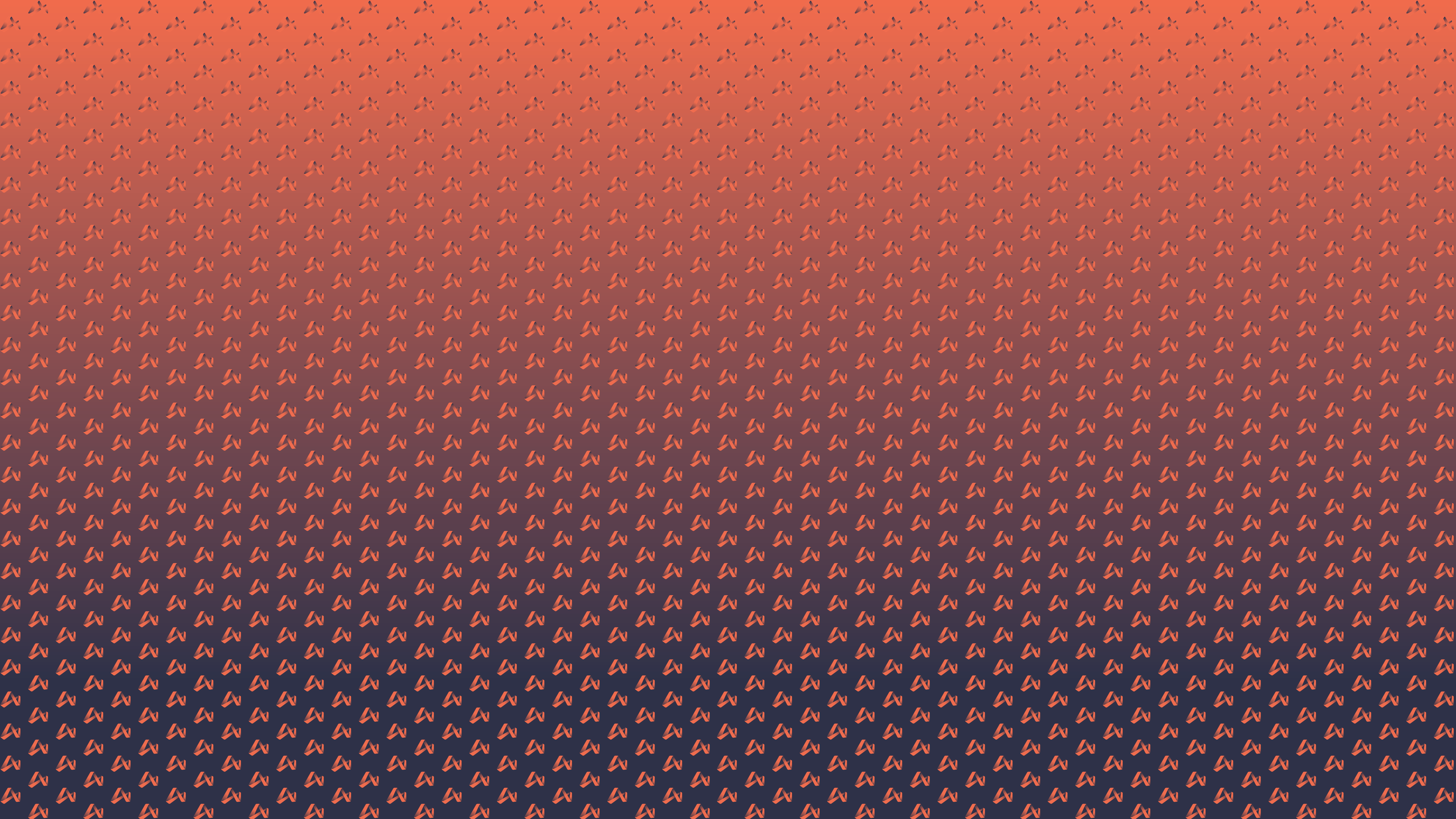
Cindy Fortin, Former Mayor, District of Peachland

Online Resources

- ▶ [Project Website](#)
- ▶ [Media Release - April 2021](#)
- ▶ [Informational Newsletter - January 2020](#)
- ▶ [Peachland 2022 Annual Report](#)

The MFA thanks the District of Peachland staff and collaborators for providing the information presented in this case study.





CASE STUDY THREE

City of Prince George Fire Hall #1

The City of Prince George respectfully acknowledges the unceded ancestral lands of the Lheidli T'enneh on whose land we live, work, and play.

To accommodate better response time and coverage area while delivering better services to residents, the City of Prince George built a new fire hall, in addition to its three other halls. In late 2021, the City of Prince George completed construction on Fire Hall #1's replacement facility at 2012 Massey Drive. The facility was fully operational in January 2022 and the transition to the new facility was completed in October 2022 as fire dispatchers began operating out of it.

Prince George Fire Rescue operates four fire halls and each hall is responsible for a particular response zone that covers a section of the city. The replacement of Fire Hall #1 was proposed by Prince George's city council, and in 2017 following a referendum, residents voted nearly 83% in favour of the replacement facility. The former 60-year-old facility was too small to meet current standards as an integrated fire and rescue facility and was located in an area that hindered response times to several expanding parts of Prince George. The newly built facility is approximately 50 percent larger and centrally located which can greatly improve life safety and outcomes for incident response.

Fire Hall #1 has a state-of-the-art, modern dispatch centre that also serves as an operations centre during and after

a disaster or catastrophic event. This facility incorporates the latest in design best practices and meets the current standards for fire halls and post-disaster emergency facilities. At 2,500 m² (27,000 ft²) the new facility is approximately 50% larger than the old Fire Hall #1 and houses a new Emergency Operations Centre (EOC) and Fire Operations Communications Centre (FOCC) serving the central part of the province.

The fire hall's new design includes five drive-through truck bays, allowing for positioning support fleet (water rescue boat, rescue UTV, and fire investigation trailer), and future expansion of fire hall staffing and apparatus. This multi-purpose facility also includes spacious crew living quarters as well as a hose tower and radio tower. The modern dispatch centre provides functional, efficient space and state of the art equipment to serve fire rescue dispatching for years to come.



A Purpose-Built Facility

The features of the new fire hall include:

- **Central and strategic location to improve fire safety and emergency response times**

The new facility's location near Massey Drive increases the area firefighters can reach within an 8-minute response time by 50 per cent – this measure of time relates to the speed by which a contained fire can spread from a single room to the rest of the structure, greatly increasing the risk of fatalities.



Crew workspaces and living quarters are located in close proximity to the fire apparatus, so firefighters can easily access their equipment, board trucks, and leave the hall quickly when an alarm sounds.

- **Large truck bay with five drive-through doors**

The drive-through bays allow trucks to enter and exit without the need to reverse.

- **Enhanced crew workspace and living quarters layout**

The crew living quarters includes private universal gender-neutral dorms, washrooms, and shower facilities.

The use of exposed wood throughout the interior as a finishing material offers crew added biophilic benefits for their health and wellness.

Sustainability Goals

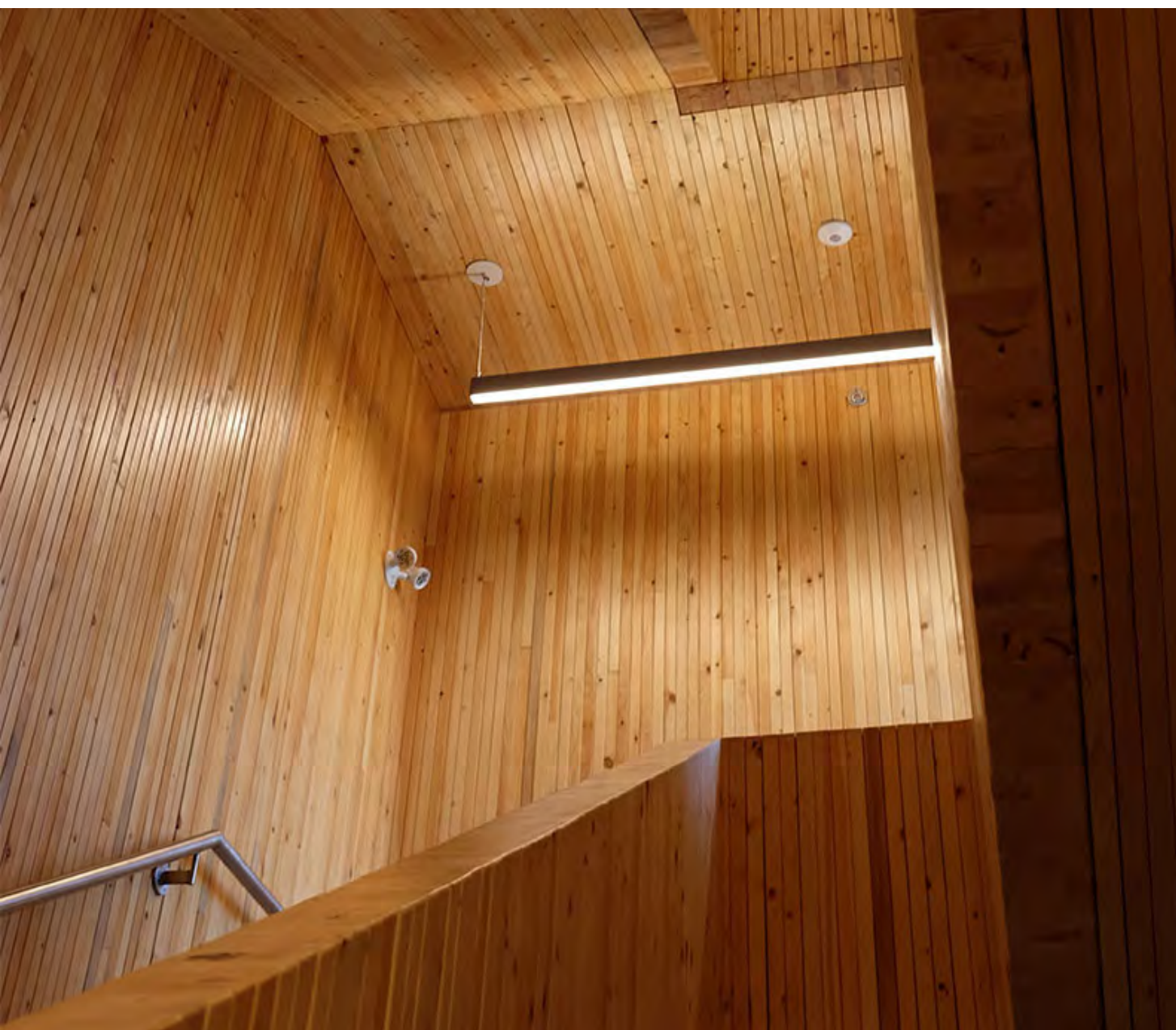
The project outcomes support the following UN Sustainable Development Goals:



- **Modern standards for health and safety**

The new fire hall's design and facilities allows firefighters to decontaminate both themselves and their equipment, given potential exposure to harmful chemicals.

Focusing on reducing cancer-causing carcinogen spread, firefighting staff are provided a decontamination program, including gear decontamination, for detoxification, meeting modern industrial hygiene and decontamination standards to safeguard fire-fighter health. All of these design features have also been incorporated within Prince George's other three fire halls.



Wood as a Central Design Feature

Fire Hall No.1's hybrid wood, steel, and concrete structure is designed to accommodate five drive-through truck bays and the latest in modern firefighting equipment. The building's height rises from one storey at its western end to three stories on its eastern side, where the administrative offices, an emergency operations centre, and a dispatch centre are housed. A hose tower and radio tower occupy the back side.

The timber-built feature stairwell and roof is proudly showcased in the building's design. The front entrance floor-to-ceiling stairwell is made of nail-laminated timber (NLT) construction. Over 3,000 pieces of lumber were used to construct the facility's stairwell. Laminated veneer lumber (LVL) and plywood decking were used for the roof of the facility's large truck bays. Mass timber products such as NLT and LVL are fire-safe – if exposed to flame the material chars, forming a protective layer.



Supporting the Local Economy

This use of timber showcases the importance of forest products to the region's culture and economy. The building features a recognizable design with exposed fir and larch in its interior, as well as fire-resistant design and materials. Along with locally-sourced wood products, more than 250 people were employed during the construction of the new fire hall.

Leadership in Wood Design

The City of Prince George was recognized at the 2022 Union of BC Municipalities (UBCM) convention for leadership in wood design for the new Fire Hall #1.

Incorporating use of a hybrid wood and mass timber structural system, the design of the new facility was developed by HCMA Architects and Planning and an engineering design team led by L&M Engineering.

This beautiful new facility represents more than five years of concentrated efforts, dedicated team work, and outstanding collaboration between the Regional District 911 Team, the Prince George Fire Operations Communications Centre and Dispatch team, and many others at the Regional District, the City of Prince George, and industry partners.

Marty Dupas, Chief Communications Officer,
Prince George Fire Rescue

Project Budget: \$17 million

The project was funded by a combination of internal reserve funds and borrowing through the Municipal Finance Authority of BC.

MUNICIPAL FINANCE AUTHORITY OF BC

Responding from Fire Hall No. 1

- 7-11 Firefighters
- Incident Commander Truck
- Fire Engine
- Rescue Apparatus



A State-of-the-art Emergency and Post-disaster Facility

The facility is equipped with the latest in fire-fighting technologies and serves as a critical post-disaster facility, not only for the City, but also the northern region of the province. Built to post-disaster standards, the three-storey structure meets rigorous code requirements and is able to resist seismic forces 1.5 times that of a regular building.

This state-of-the-art building not only services the dedicated members of Prince George Fire Rescue, but also the city's residents, and our regional partners throughout the province for many years to come.

Cliff Warner, Fire Chief, City of Prince George

QUICK FACT:

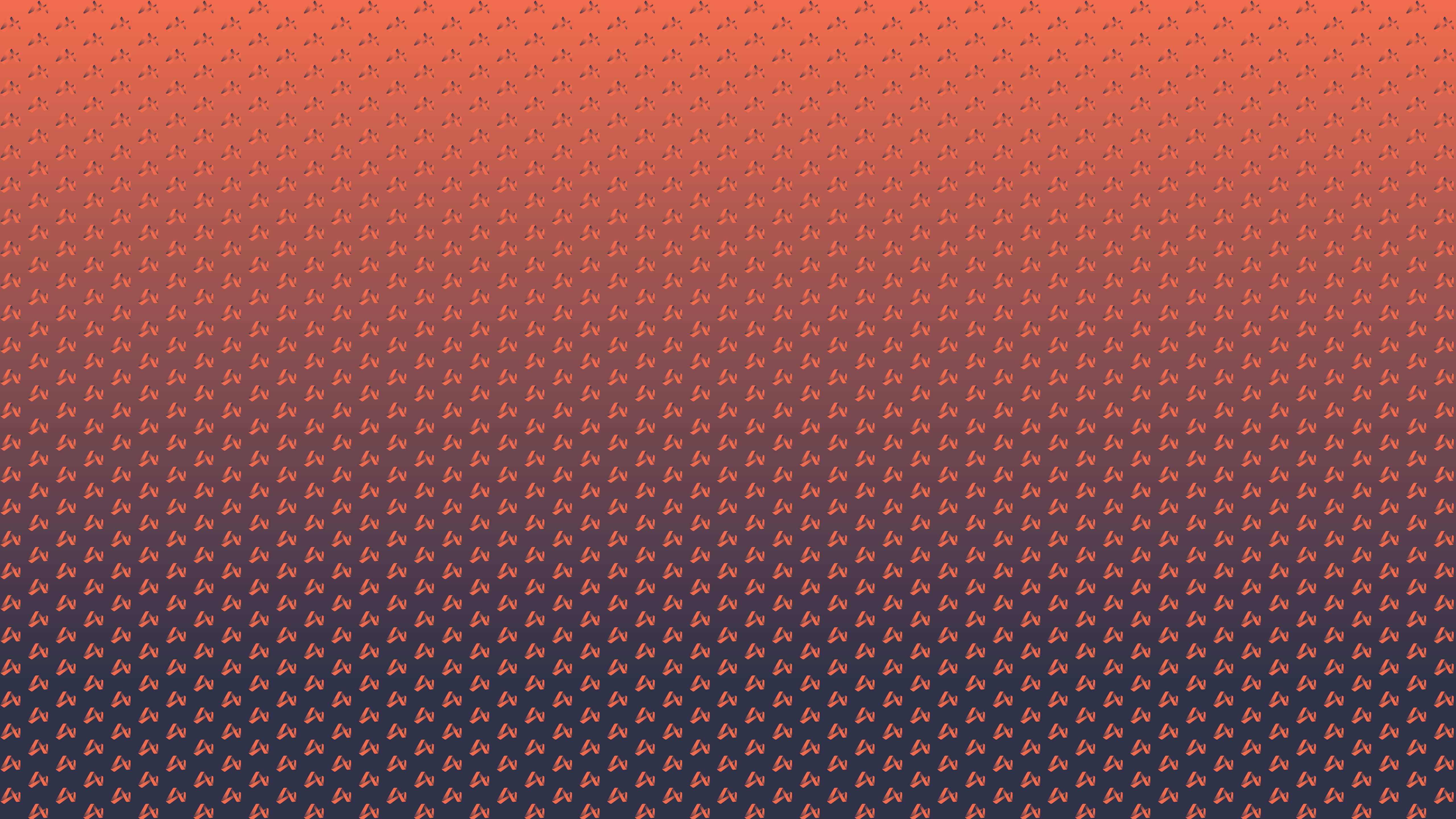
The Rescue Apparatus is a purpose built fire truck without a pump and water tank. It primarily has compartments containing equipment for rescue-type incidents and support functions at a fire scene. This includes 'Jaws of Life' for vehicle accidents, specialty rescue equipment for high angle/confined spaces, water, and ice rescue. Fire Hall #1's unit has an incident command desk and a very high lumen scene light.

Online Resources Links

- ▶ [City of Prince George Website](#)
- ▶ [Article - January 2019](#)
- ▶ [Media Release - September 2021](#)
- ▶ [Media Release - October 2022](#)
- ▶ [Naturally Wood - Project Overview](#)
- ▶ [Interview & Tour of Fire Hall \(video\)](#)

The MFA thanks City of Prince George staff and collaborators for providing the information presented in this case study.





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