Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Notice of Meeting and Meeting Agenda
Environmental Services Committee

Wednesday, September 25, 2024 | **1:30 PM** | **6th Floor Boardroom, 625 Fisgard St. Victoria, BC V8W 1R7**

Special Meeting

B. Desjardins (Chair), S. Tobias (Vice Chair), J. Brownoff, J. Caradonna, G. Holman, D. Kobayashi, D. Murdock, M. Tait, D. Thompson, A. Wickheim, C. Plant (Board Chair, ex-officio)

The Capital Regional District strives to be a place where inclusion is paramount and all people are treated with dignity. We pledge to make our meetings a place where all feel welcome and respected.

1. Territorial Acknowledgement

2. Approval of Agenda

3. Presentations/Delegations

The public are welcome to attend CRD Board meetings in-person.

Delegations will have the option to participate electronically. Please complete the online application at www.crd.bc.ca/address no later than 4:30 pm two days before the meeting and staff will respond with details.

Alternatively, you may email your comments on an agenda item to the CRD Board at crdboard@crd.bc.ca.

4. Special Meeting Matters

4.1. 24-864 Environmental Resource Management - 2025 Operating and Capital Budget

Recommendation: The Environmental Services Committee recommends the Committee of the Whole recommend to the Capital Regional District Board:
That Appendix A, 2025 Operating and Capital Budget - Environmental Resource Management be approved as presented and form the basis of the Provisional 2025-2029 Financial Plan.

Attachments: Staff Report: ERM - 2025 Operating & Capital Budget

Appendix A: 2025 Environmental Resource Management Budget

Presentation: ERM 2025 Operating & Capital Budget

4.2. 24-851 New Hartland Policies - Quarterly Update

Recommendation: There is no recommendation. This report is for information only.

Attachments: Staff Report: New Hartland Policies - Quarterly Update

4.3. 24-865 Update on Corporate Greenhouse Gas Emissions Targets

Recommendation: There is no recommendation. This report is for information only.

Attachments: Staff Report: Update on Corporate Greenhouse Gas Emissions Targets
Appendix A: Timeline of Work - Recent CRD Board Directives & CAS Renewal
Appendix B: P & A Action Details: CRD Corporate GHG Reduction Projects

4.4. 24-870 Climate Budgeting Update

Recommendation: The Environmental Services Committee recommends to the Capital Regional District Board:
That staff be directed to:
1. Work internally on the elements of Climate Budgeting to understand what new governance mechanisms would look like in practice.
2. Develop public communications materials, based on the latest greenhouse gas inventory data, for use by the CRD and local governments that more clearly communicate the urgency of this policy issue; and
3. Utilize Climate Budgeting approaches in the CRD's next climate action strategy planning cycle.

Attachments: Staff Report: Climate Budgeting Update
Appendix A: What We Heard Summary Report - Climate Workshop (Dec 2023)
Appendix B: Climate Budgeting Report - C40 Cities & Arup

4.5. 24-914 Organic Matter Recycling Regulation, Biosolids Literature and Legal Review - Verbal Update

Recommendation: There is no recommendation. This verbal update is for information only.

4.6. 24-873 Solid Waste Disposal: Hartland Landfill Tonnage Report - July 2024

Recommendation: There is no recommendation. This report is for information only.

Attachments: Staff Report: Solid Waste Disposal: Hartland Landfill Tonnage Report - July/24
Appendix A: Solid Waste Disposal: Hartland Landfill Tonnage Report

4.7. 24-877 Previous Minutes of Other CRD Committees and Commissions for Information

Recommendation: There is no recommendation. The following minutes are for information only:
- Solid Waste Advisory Committee - September 6, 2024

Attachments: Minutes: Solid Waste Advisory Committee - September 6, 2024

5. Adjournment

The next meeting is October 16, 2024.

To ensure quorum, please advise Jessica Dorman (jdorman@crd.bc.ca) if you or your alternate cannot attend.

Making a difference...together

ERM 24-49

REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, SEPTEMBER 25, 2024

SUBJECT **Environmental Resource Management – 2025 Operating and Capital Budget**

ISSUE SUMMARY

To provide an overview of the draft Environmental Resource Management (ERM) 2025 budget, highlighting the changes from the 2024 budget.

BACKGROUND

The Capital Regional District (CRD) established a local service for solid waste disposal in 1973. The ERM division is responsible for municipal solid waste management, including waste reduction, recycling programs and the operation of Hartland Landfill.

ERM in the capital region is based on the Ministry of Environment & Climate Change Strategy's 5R pollution prevention hierarchy of Reduce, Reuse, Recycle, Resource Recovery and Residuals Management, with the goal of extending the life of Hartland Landfill by minimizing waste disposal and maximizing diversion opportunities. The CRD's solid waste mandate, using the 5R pollution hierarchy, is delivered to the community through a provincially mandated and recently approved regional Solid Waste Management Plan (SWMP). The SWMP targets reducing per capita waste generation from the current rate of 409 kg/capita to 250 kg/capita by 2030.

All costs associated with the CRD's solid waste disposal and diversion programs are funded through tipping and user fee revenues at Hartland Landfill, service delivery agreements for stewarded materials, sale of energy and sale of recyclables. There is no requisition for this service.

The draft ERM 2025 budget has been prepared for consideration by the Environmental Services Committee (Appendix A).

2024 Year-End Financial Projections

There is an estimated one-time net favorable variance of $1,250,000 for ERM's 2024 operating budget. This variance will be utilized as a transfer to capital reserve at year end. The net variance is primarily a result of savings in operating expenditures ($2.85 million) offset by a reduction in revenue ($1.6 million). Details can be found in Appendix A under the 2024 Estimated Actual column.

Year-end revenue and expenditure projections for 2024 have been established, and estimated variances are summarized, as follows:

Budget Item	Variance ($) Surplus / (Deficit)	Variance (%) Surplus / (Deficit)
Diversion Services Expenditures	$1,750,000	
Landfilling Services Expenditures	$750,000	
Energy Recovery Services Expenditures	$350,000	
Total Operating Expenditures	$2,850,000	7.8%

Budget Item	Variance ($) Surplus / (Deficit)	Variance (%) Surplus / (Deficit)
Revenue: Tipping Fee	$1,650,000	
Revenue: Other	-$3,250,000	
Total Revenue	-$1,600,000	-3.9%
Reserve Fund Transfers	$1,250,000	

Operating cost variance/savings (7.8%): Expenses related to the processing of materials contract in the waste diversion services, heavy equipment services and bird control in the landfilling services, and landfill gas program in the energy recovery services are forecasted to be lower than budget, resulting in $2.85 million savings.

Revenue variance/pressures (-3.9%): Overall total revenue is expected to be lower than budgeted by $1.6 million. While solid waste tipping revenue for 2024 is forecasted to be higher than budgeted by $1.65 million, the Operating Reserve transfer is forecasted to be $2.7 million below the budget. Renewable Natural Gas (RNG) net sales revenue is also forecasted to be lower than budgeted by $495,000 due to the postponed project completion date of the Hartland Biogas Upgrading Plan construction.

The 2024 net budget surplus of $1.25 million will be transferred to the ERM capital reserve funds to assist in funding the substantial 2025-2029 capital plan requirements.

2025 Operating Budget

While the draft ERM 2025 budget was prepared, considering the Board's service planning and financial expectations, the 2025 budget proposes significant operating and capital budget increases that will assist the community in achieving the goals set out in the new SWMP. The additional budget pressures are fully funded through revenue increases, resulting in no bottom-line impact. The following are key components of the proposed ERM 2025 budget:

Operating Budget

Operating budget expenses have increased by a total $11.2 million over 2024 budget (31%), as follows:

- Diversion Services: increased by $6 million over 2024 budget (26%)
  - Material Stream Diversion expenses ($2.7 million)
  - New Curbside Blue Box contract in 2025 ($2.4 million)
  - Increase in Solid Waste Management Plan programming ($700,000)

- Landfilling Services: increased by $2.6 million over 2024 budget (21%)
  - Corporate overhead ($1 million)
  - Heavy equipment contract ($1.5 million)

- Energy Recovery Services: increased by $2.6 million over 2024 budget (162%)
  - RNG operating contract ($1.4 million)
  - RNG plant electricity usage ($1.0 million)

Capital/Reserve Transfer

Relates to transfers to reserves to the Operating Reserve fund, Equipment Replacement fund (ERF) and Capital Reserve fund. The 2025 transfer to reserve budget is $5.4 million, which is a 38.5% increase over 2024. This increase includes a one-time supplementary increase in transfer to Capital Reserve fund to fund 2025 Capital Plan requirements.

Debt Servicing

Current debt servicing costs relate to borrowing under Loan Authorization Bylaw No. 4515 for funding to complete the planned infrastructure and improvements in the 2023-2027 capital plan. The authorized $11.7 million in borrowing was issued under two separate loan issues, which are all set to expire between April and October 2039. Annual interest and principal payments under this bylaw are $1.23 million per year. The total 2025 budgeted debt servicing costs include the above-mentioned interest and principal payments, as well as an additional $0.79 million of new debt servicing costs associated with Cell 5 Liner Construction and Cell 1, 2 and 3 Transition Liner projects. Details can be found in Appendix A – Operating Budget.

Operating budget revenues are budgeted to increase by a total of $15.5 million, as follows:
- Diversion Services ($2.7 million) – Blue Box revenue increase from Recycle BC
- Landfilling Services ($4.2 million) – revenue from material stream diversion policy changes
- Energy Recovery Services ($8.4 million) – revenue from new RNG facility, Q1 start-up

Table 1: 2025 Year Over Year Budget Comparison

Expenditure Type	2025 Financial Plan	2024 Financial Plan	Change	% Change
Operations	$47,880,452	$36,632,697	$11,247,755	30.7%
Debt Servicing	$2,026,178	$1,229,666	$796,512	64.7%
Transfers to Capital / Reserves	$5,467,701	$2,118,387	$3,349,314	158.1%
Total	**$55,374,331**	**$39,980,750**	**$15,393,581**	**38.5%**

2025 Capital Budget

Capital Plan

The Hartland Landfill five-year capital plan is made up of 30 projects totalling $40 million. These projects can be grouped into five categories:

- **Sustaining Capital:** This group includes projects that are required to support ongoing daily operations. There are 15 projects that cover items such as computer and vehicle replacements, aggregate production, gas and leachate piping purchase and installation. It also includes projects required to maintain regular operations such as landfill gas capture, Operating Certificate renewal, access improvements and electrical infrastructure upgrades. The estimated cost for this group of projects for 2025 is $3.5 million, with an estimated five-year total cost of $12.1 million.

- **Progressive Closure of the Landfill:** There are three projects over five years totalling $11.3 million ($750,000 for 2025), which include projects such as final closure of external faces, interim closure of various internal faces and aggregate stockpile covers.

- **Cell 4, 5 and 6 Preparation and North End Commercial Access Improvements:** There are 9 projects over five years totalling $12.7 million ($9.7 million in 2025), which include design and installation of complete liner systems for Cells 4, 5 and 6, relocating the contractor mobile equipment maintenance shop, a truck wheel wash system and relining of the stormwater sedimentation pond.
- **Renewable Natural Gas:** There are two RNG projects over five years totalling $2.8 million ($1.8 million in 2025) to optimize and take advantage of excess biogas from the Residuals Treatment Facility, such that all gas captured at the landfill is processed and injected into the Fortis BC natural gas distribution system, while ensuring all environmental requirements are met**.**

- **Solid Waste Management Plan Diversion and Beneficial Use Targets:** There is one project in 2026 totalling $1 million to acquire land/depot asset to further diversion initiatives in the region.

Capital Funding

There are two primary elements to the capital program funding, reserve funds and debt servicing. The reserve funds are established through annual contributions to allow accumulation of funds for future expenditure. Debt servicing costs (principal and interest payments) are associated with long-term capital infrastructure financing.

Debt: New financing under the $36 million loan authorization was approved in 2022 for the purpose of financing the solid waste facility five-year capital plan. In summary, the future capital funding will be a combination of reserves and debt financing.

Reserves: There are currently three reserve funds established for this service (2024 estimated year-end balances):

- **Operating Reserve ($8.6 million):** This fund was established by Bylaw No. 3867 for mitigating fluctuations in tipping fee revenue and for covering operational expenditures, as required, including debt servicing. The plan is for the reserve balance to be reduced to its $5 million target balance and then maintained.

- **Equipment Replacement Reserve ($2.1 million):** This fund was established by Bylaw No. 945 to fund replacement of computer equipment and for Priority Equipment Replacement equipment that lasts less than 15 years. The 2025 equipment replacement reserve fund contributions are set at $204,000.

- **Capital Reserve ($23.5 million):** This fund was established by Bylaw No. 2164 to fund major equipment and infrastructure replacement that has a service life of 5 to 25 years or more, such as landfill facilities, roads and improvements at the Hartland Landfill site, construction of remote transfer stations, composting facilities, watershed management, closure of Phase 2 and post closure maintenance, and all related ancillary works and equipment necessary for landfill and operations. The 2025 capital reserve fund will be used to fund $4.2 million of the 2025 capital plan.

2025 Budget Context

The following tables summarize the total 2025 ERM expenditures and revenues. The totals are also summarized in Appendix A, along with the 2024 year-end estimated actuals and the 2026-2029 future projections.

Table 2: 2025 Budgeted Expenses

Budget Component	2025 Budget	% of Total
Consultant and Contract for Services	$21,242,140	38.4%
Internal Allocations	$11,595,894	20.9%
Program Expenses	$4,533,283	8.2%
Salaries and Wages	$4,424,768	8.0%
Capital/Reserve Transfers	$5,467,700	9.9%
Repairs and Maintenance Costs	$2,523,000	4.6%
Debt Servicing	$2,026,178	3.7%
Operating Cost - Other	$1,896,100	3.4%
Utilities Costs	$1,087,898	1.9%
Third Party Payments	$290,000	0.5%
Operating Supplies	$212,600	0.4%
Insurance Cost	$74,770	0.1%
Total	**$55,374,331**	**100%**

Table 3: 2025 Budgeted Revenue

Budget Component	2025 Budget	% of Total
Hartland Tipping Fees	$28,209,000	50.9%
Recovery - Other	$9,786,519	17.7%
Sale of Goods and Services	$9,114,250	16.5%
Reserve Transfers	$4,444,562	8.0%
Hartland Tipping Fees - Recycling	$2,020,000	3.6%
Compost Tipping Fees	$1,800,000	3.3%
Total	**$55,374,331**	**100%**

ALTERNATIVES

Alternative 1
The Environmental Services Committee recommends the Committee of the Whole recommend to the Capital Regional District Board:
That Appendix A, 2025 Operating and Capital Budget – Environmental Resource Management be approved as presented and form the basis of the Provisional 2025-2029 Financial Plan.

Alternative 2
The Environmental Services Committee recommends the Committee of the Whole recommend to the Capital Regional District Board:
That Appendix A, 2025 Operating and Capital Budget – Environmental Resource Management be approved as amended and form the basis of the Final 2025-2029 Financial Plan.

IMPLICATIONS

If the proposed budget is amended, the implications will vary depending on how the amendment impacts specific initiatives, ongoing operations, or the capital work program.

CONCLUSION

The draft 2025 Environmental Resource Management budget has been prepared for consideration by the Environmental Services Committee, with a primary focus on implementing the new Solid Waste Management Plan, with a goal of diverting waste and extending the life of Hartland Landfill. While the budget was prepared considering the Capital Regional District Board's 2025 service planning and financial expectations, the 2025 budget proposes significant operating and capital budget increases, with no requisition requirement, that will assist the community in achieving the goals set out in the new Solid Waste Management Plan.

RECOMMENDATION

The Environmental Services Committee recommends the Committee of the Whole recommend to the Capital Regional District Board:
That Appendix A, 2025 Operating and Capital Budget – Environmental Resource Management be approved as presented and form the basis of the Provisional 2025-2029 Financial Plan.

Submitted by:	Russ Smith, Senior Manager, Environmental Resource Management
Concurrence:	Luisa Jones, MBA, General Manager, Parks, Recreation & Environmental Services
Concurrence:	Nelson Chan, MBA, FCPA, FCMA, Chief Financial Officer, GM Finance & IT
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENT

Appendix A: 2025 Environmental Resource Management Budget

CAPITAL REGIONAL DISTRICT

2025 BUDGET

Environmental Resource Management

ENVIRONMENTAL SERVICES COMMITTEE REVIEW

September 2024

Service: 1.521 Environmental Resource Management **Committee: Environmental Services**

PARTICIPATION:

All costs recovered through tipping fees & Sale of Goods and Services.

MAXIMUM LEVY:

No requisition

MAXIMUM CAPITAL DEBT:

Authorized:	LA Bylaw 3518	12,270,000	Authorized:	LA Bylaw 4515	36,000,000
Borrowed:	SI Bylaw 3547	(2,000,000)	Borrowed:	SI Bylaw 4562	(7,450,000)
	SI Bylaw 3677	(2,500,000)		SI Bylaw 4597	(4,300,000)
	SI Bylaw 3769	(2,200,000)			
Remaining:	Expired May 14, 2013	$5,570,000	Remaining:		$24,250,000

Total debt outstanding (LA3518) at Dec 31, 2023 $546,598
Final debt payments (LA3518) in 2026.

Total debt outstanding (LA4515) at Dec 31, 2023 $7,450,000
Final debt payments (LA4515) in 2038.

COMMISSION:

OPERATING COSTS - REFUSE DISPOSAL:

To be recovered through user fees & sale of goods and services

RESERVE FUND:

Solid Waste Refuse Disposal Reserve Fund, Bylaw No. 2164 (Sept. 8, 1993).
Waste Reduction Sustainability Operating Reserve Fund Bylaw No. 3867 (Nov 14, 2012).

1.521 & 1.525 - ERM	2024 BOARD BUDGET	2024 ESTIMATED ACTUAL	BUDGET REQUEST 2025 CORE BUDGET	2025 ONGOING	2025 ONE-TIME	2025 TOTAL	2026 TOTAL	2027 TOTAL	2028 TOTAL	2029 TOTAL
GENERAL PROGRAM EXPENDITURES:										
Diversion Services	22,718,789	20,950,656	28,130,424	329,200	213,750	28,673,374	26,763,711	26,920,510	27,274,712	27,635,787
Landfilling Services	12,345,185	11,595,904	13,163,957	102,123	1,723,639	14,989,719	13,881,968	13,958,954	14,290,573	14,580,314
Energy Recovery Services	1,568,723	1,229,728	1,408,309	2,809,050	-	4,217,359	4,331,215	4,381,344	4,473,018	4,566,593
TOTAL OPERATING COSTS	36,632,697	33,776,288	42,702,690	3,240,373	1,937,389	47,880,452	44,976,894	45,260,809	46,038,303	46,782,694
*Percentage Increase over prior year		-7.8%	16.6%	8.8%	5.3%	30.7%	-6.1%	0.6%	1.7%	1.6%
CAPITAL / RESERVE										
Transfer to Equipment Replacement Fund	200,000	200,000	204,000	-	-	204,000	204,000	204,000	204,000	204,000
Transfer to Operating Reserve Fund	356,635	356,635	1,011,772		-	1,011,772	1,224,040	-	-	-
Transfer to General Capital Reserve Fund	1,100,370	2,454,950	3,783,990	-	-	3,783,990	474,000	474,000	474,000	474,000
Transfer to Landfill Closure Capital Reserve Fund	455,120	455,120	464,222	-	-	464,222	473,507	482,977	492,637	502,489
Transfer to Millstream Remediation Debt	6,262	6,262	3,717	-	-	3,717	-	-	-	-
TOTAL CAPITAL / RESERVES	2,118,387	3,472,967	5,467,701	-	-	5,467,701	2,375,547	1,160,977	1,170,637	1,180,489
Debt Expenditures	1,229,666	1,135,336	2,026,178	-	-	2,026,178	2,718,145	2,764,022	2,770,731	2,797,561
TOTAL COSTS	39,980,750	38,384,591	50,196,569	3,240,373	1,937,389	55,374,331	50,070,586	49,185,808	49,979,670	50,760,744
*Percentage Increase over prior year		-4.0%	25.6%	8.1%	4.8%	38.5%	-9.6%	-1.8%	1.6%	1.6%
Allocation Recovery				(202,000)		(202,000)	(207,000)	(211,500)	(216,000)	(220,500)
OPERATING COSTS LESS INTERNAL RECOVERIES	39,980,750	38,384,591	50,196,569	3,038,373	1,937,389	55,172,331	49,863,586	48,974,308	49,763,670	50,540,244
FUNDING SOURCES (REVENUE)										
Surplus / (Deficit)										
Balance C/F from Prior to Current year										
Sale of Renewable Natural Gas	(495,000)	-	(8,889,250)	-	-	(8,889,250)	(8,810,066)	(8,746,722)	(8,693,936)	(8,651,707)
Revenue - Other	(10,254,750)	(10,238,922)	(13,300,320)	(329,200)	-	(13,629,520)	(13,664,520)	(13,664,520)	(13,664,520)	(13,664,520)
Transfer from Operating Reserve	(2,740,000)			(2,507,173)	(1,937,389)	(4,444,562)	-	(94,565)	(1,557,215)	(2,146,517)
TOTAL REVENUE	(13,489,750)	(10,238,922)	(22,189,570)	(2,836,373)	(1,937,389)	(26,963,332)	(22,474,586)	(22,505,807)	(23,915,671)	(24,462,744)
TIPPING FEE (based on inflation)	**(26,491,000)**	**(28,145,670)**	**(28,007,000)**	**(202,000)**	**-**	**(28,209,000)**	**(27,389,001)**	**(26,468,501)**	**(25,848,000)**	**(26,077,500)**
PROJECTED TONNAGE (General Refuse)	160,000	165,516	155,000			155,000	145,000	135,000	125,000	125,000
*Percentage Increase over prior year		6.2%	5.7%	0.8%	0.0%	6.5%	-2.9%	-3.4%	-2.3%	0.9%
AUTHORIZED POSITIONS:										
On-going	28.70	28.70	34.20			34.20	34.70	34.70	34.70	34.70
Term	1.00	1.00	1.00			1.00	1.00			

Change in Budget 2024 to 2025 Service: 1.521 & 1.525 ERM	Total Expenditure	Comments
2024 Budget	**39,980,750**	
Change in Salaries:		
Base salary and benefit change	81,744	Inclusive of estimated collective agreement changes
Step increase/paygrade change	(203,889)	
Other (explain as necessary)	(8,000)	
3.0 FTE Environmental Analyst & Attendant	304,011	2025 IBC 3a-1.3 Hartland 2100
2.0 FTE Managers	419,062	2025 IBC 1b-4.2 Innovative Projects Work Unit 2025
Reduction in auxiliary wages	(100,000)	
Total Change in Salaries	492,928	
Other Changes:		
Trf to Capital Reserve Fund	2,683,620	To fund 2025 Capital Plan requirements
Contract for Services		
-Waste Diversion	1,220,000	Additional costs related to processing of materials contract (2024 IBC 3a-1.1 Hartland 2100)
	329,200	Additional costs related to kitchen scraps contract
	255,000	Additional costs related to curbside collection contract
	213,750	To provide the waste flow management consultant support (2025 IBC 3a-1.3 Hartland 2100)
-RNG Project	1,417,390	To fund for Annual O&M contract for the RNG Project
-Landfilling	1,700,000	To reflect the anticipated costs related to heavy equipment services and landfilling of standard refuse and controlled waste
Program Development	1,725,000	To fund for the Material Stream Diversion - Hauler incentive
	1,000,000	To fund for Solid Waste Management Plan - implement new programming
Electricity Costs	972,598	To fund for the electricity cost for the RNG Project
Standard Overhead Allocation	1,644,428	Increase in 2024 operating costs
Bylaw Allocation	86,778	2025 IBC 3a-1.3 Hartland 2100
Human Resources Allocation	25,987	Increase in 2024 salary budget; corporate safety resourcing
Insurance costs	16,850	Recognize growing insurance premiums
Building Occupancy	13,867	
Debt Expenditures	796,512	To fund 2025 Capital Plan requirements
Trf to Operating Reserve Fund	655,136	To mitigate fluctuations in tipping fee revenue
Other Costs	144,537	
Total Other Changes	14,900,653	
2025 Budget	**55,374,331**	

Summary of % Expense Increase	
2025 Base salary and benefit change	0.2%
2025 IBC Expense	5.6%
Waste Diversion	11.3%
RNG Project	6.0%
Capital Transfers	6.7%
Landfilling	4.3%
Standard Overhead Allocation	4.1%
Balance of increase	0.3%
% expense increase from 2024:	***38.5%***
% Requisition increase from 2024 (if applicable):	***%***

Requisition funding is (x)% of service revenue

Overall 2024 Budget Performance
(expected variance to budget and surplus treatment)

'Overall Solid Waste Tipping Revenue for 2024 is forecasted to be higher than budget by $1.6 million. Tipping fee revenues higher due to an increased quantity of solid waste being received. Recycling revenue for scrap metal (price fluctuates with the global commodity markets) is also higher than budgeted. Landfill Operations/Diversion Services/Energy Recovery services expenses are forecasted to be lower than budget for 2024 by $2.8 million. The estimated surplus will be transferred for the Capital Reserve Fund.

CAPITAL REGIONAL DISTRICT

FIVE YEAR CAPITAL EXPENDITURE PLAN SUMMARY - 2024 to 2029

Service No. 1.521 Environmental Resource Management	Carry Forward from 2024	2025	2026	2027	2028	2029	TOTAL
EXPENDITURE							
Buildings	$0	$0	$0	$0	$0	$0	$0
Equipment	$0	$455,000	$385,000	$385,000	$385,000	$385,000	$1,995,000
Land	$0	$0	$1,000,000	$0	$0	$0	$1,000,000
Engineered Structures	$3,100,000	$15,306,000	$11,125,000	$6,600,000	$2,350,000	$1,600,000	$36,981,000
Vehicles	$0	$0	$0	$0	$0	$0	$0
	$3,100,000	**$15,761,000**	**$12,510,000**	**$6,985,000**	**$2,735,000**	**$1,985,000**	**$39,976,000**
SOURCE OF FUNDS							
Capital Funds on Hand	$500,000	$1,406,000	$125,000	$0	$0	$0	$1,531,000
Debenture Debt (New Debt Only)	$1,500,000	$8,650,000	$2,350,000	$0	$350,000	$0	$11,350,000
Equipment Replacement Fund	$250,000	$455,000	$385,000	$385,000	$635,000	$385,000	$2,245,000
Grants (Federal, Provincial)	$0	$0	$0	$0	$0	$0	$0
Donations / Third Party Funding	$0	$0	$0	$0	$0	$0	$0
Reserve Fund	$850,000	$5,250,000	$9,650,000	$6,600,000	$1,750,000	$1,600,000	$24,850,000
	$3,100,000	**$15,761,000**	**$12,510,000**	**$6,985,000**	**$2,735,000**	**$1,985,000**	**$39,976,000**

CAPITAL REGIONAL DISTRICT

5 YEAR CAPITAL PLAN

2024 - 2028

Service #: 1.521

Service Name: Environmental Resource Management

				PROJECT BUDGET & SCHEDULE										
Project Number	Capital Expenditure Type	Capital Project Title	Capital Project Description	Total Project Budget	Asset Class	Funding Source	Carryforward from 2024	2025	2026	2027	2028	2029	5 - Year Total
16-06	Renewal	Replacing of Small Equipments	Replacing of Small Equipments	$ 1,430,000	E	ERF		$ 240,000	$ 270,000	$ 270,000	$ 270,000	$ 270,000	$ 1,320,000
17-01	Renewal	Gas & Leachate Collection Pipe Extension	Gas & Leachate Collection Pipe Extension	$ 2,550,000	S	Res		$ 650,000	$ 500,000	$ 550,000	$ 550,000	$ 550,000	$ 2,800,000
17-02	Renewal	Aggregate Production for Internal Use	Aggregate Production for Internal Use	$ 15,485,000	S	Res		$ 850,000	$ 850,000	$ 850,000	$ 850,000	$ 850,000	$ 4,250,000
17-02	Renewal	Aggregate Production for Internal Use	Aggregate Production for Internal Use	$ -	S	Cap							$ -
17-04	Renewal	Progressive Closure of External Faces	Progressive Closure of External Faces	$ 10,000,000	S	Res		$ -	$ 6,000,000	$ 4,000,000			$ 10,000,000
17-07	Renewal	Computer Equipment	Computer Equipment	$ 71,000	E	ERF		$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 75,000
17-09	Renewal	Vehicle Replacements	Vehicle Replacements	$ 500,000	E	ERF		$ 200,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 600,000
17-12	Renewal	Hartland Environmental Performance Model	Hartland Environmental Performance Model	$ 225,000	S	Cap		$ -		$ -	$ -		$ -
17-14	New	Landfill Gas Utilization	Landfill Gas Utilization	$ 7,213,000	S	Debt							$ -
17-14	New	Landfill Gas Utilization	Landfill Gas Utilization	$ -	S	Cap							$ -
17-14	New	Landfill Gas Utilization	Landfill Gas Utilization	$ 23,718,000	S	Res							$ -
18-01	New	Interim Covers	Interim Covers - West and North Slopes	$ 1,000,000	S	Res				$ 200,000	$ 200,000	$ 200,000	$ 600,000
22-01	Renewal	Sedimentation Pond Relining	NW Sedimentation Pond Relining & Expansion	$ 1,000,000	S	Res			$ 1,000,000				$ 1,000,000
22-07	Study	Recycling Area Upgrades	Recycling Area Upgrades	$ 225,000	S	Res							$ -
22-10	New	Storm Water Sedimentation pond Emergency Repairs	Storm Water Sedimentation pond Emergency Repairs	$ 250,000	E	Res							$ -
23-02	New	Contractor Workshop Relocation	Contractor Workshop Relocation	$ 1,250,000	S	Res	650,000	$ 650,000					$ 650,000
23-02	New	Contractor Workshop Relocation	Contractor Workshop Relocation	$ -	S	Cap	500,000	$ 500,000					$ 500,000
23-04	New	North End Commercial Access Improvements	North End Commercial Access Improvements	$ 700,000	S	Res							$ -
23-05	New	Existing Manual and Commercial Scale Upgrades	Existing Manual and Commercial Scale Upgrades	$ 250,000	S	ERF	250,000				$ 250,000		$ 250,000
24-01	New	Cell 5&6 GRW	Cell 5&6 Gravity Retaining Wall Construction	$ 2,000,000	S	Debt	750,000	$ 750,000	$ 1,250,000				$ 2,000,000
24-02	Study	Hartland North Master Plan	Hartland North Master Plan	$ 150,000	S	Res					$ 150,000		$ 150,000
24-05	New	Cell 5 Liner Construction	Cell 5 Liner Construction	$ 7,900,000	S	Debt		$ 4,900,000					$ 4,900,000
24-06	New	Cell 1, 2 & 3 Transition Liner	Cell 1, 2 & 3 Transition Liner	$ 4,000,000	S	Debt		$ 2,000,000					$ 2,000,000
24-07	New	Relocation of N. Toe Road Sedimentation Pond	Relocation of N. Toe Road Sedimentation Pond	$ 500,000	S	Debt			$ 500,000				$ 500,000
25-01	New	NE & NW Aggregate Stockpile cover	NE & NW Aggregate Stockpile cover	$ 750,000	S	Debt	750,000	$ 750,000					$ 750,000
25-02	Renewal	North End Wheel Wash	North End Wheel Wash	$ 800,000	S	Res	200,000	$ 400,000					$ 400,000
25-03	New	Landfill Gas capture to meet New Federal Regs	Landfill Gas capture to meet New Federal Regs	$ 250,000	S	Res		$ 100,000	$ 150,000				$ 250,000
25-04	New	Hartland Operating Certificate Renewal	Hartland Operating Certificate Renewal	$ 100,000	S	Res		$ 100,000					$ 100,000
25-05	New	Hartland Leachate Pipe Mods for Pigging	Hartland Leachate Pipe Mods for Pigging	$ 150,000	S	Res			$ 150,000				$ 150,000
25-06	New	Quarry Wall liner	Quarry Wall liner	$ 250,000	S	Res		$ 250,000					$ 250,000
25-07	New	Cell 4, 5A & 5B Construction Field QA/QC	Cell 4, 5A & 5B Construction Field QA/QC	$ 500,000	S	Debt		$ 250,000	$ 250,000				$ 500,000
25-08	New	RNG Optimization Projects	RNG Optimization Projects	$ 831,000	S	Cap		$ 831,000					$ 831,000
25-08	New	RNG Optimization Projects	RNG Optimization Projects	$ 1,000,000	S	Res		$ 1,000,000					$ 1,000,000
25-09	New	Hartland North - Willis P Driveway Upgrades	Hartland North - Willis P Driveway Upgrades	$ 500,000	S	Res		$ 500,000					$ 500,000

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Service Name: Environmental Resource Management

PROJECT BUDGET & SCHEDULE													
Project Number	Capital Expenditure Type	Capital Project Title	Capital Project Description	Total Project Budget	Asset Class	Funding Source	Carryforward from 2024	2025	2026	2027	2028	2029	5 - Year Total
25-10	New	Hartland North Electrical	Hartland North Electrical	$ 750,000	S	Res		$ 750,000					$ 750,000
25-11	New	Hartland Environmental Montoring and Containment Projects	Hartland Environmental Montoring and Containment Projects	$ 75,000	S	Cap		$ 75,000					$ 75,000
26-01	New	Cell 4& 5 Bottom Lift Gas Wells / Leachate Drain	Cell 4 Bottom Lift Gas Wells / Leachate Drain	$ 700,000	S	Debt			$ 350,000		$ 350,000		$ 700,000
26-02	New	Hartland 5 year DOCP update	Hartland 5 year DOCP update	$ 125,000	S	Cap			$ 125,000				$ 125,000
26-03	New	ERM Land Acquisition	ERM Land Acquisition	$ 1,000,000	L	Res			$ 1,000,000				$ 1,000,000
26-04	New	RTF Biogas Tie-In to RNG	RTF Biogas Tie-In to RNG	$ 1,000,000	S	Res				$ 1,000,000			$ 1,000,000
													$ -
													$ -
			GRAND TOTAL	**$ 89,198,000**			**$ 3,100,000**	**$ 15,761,000**	**$ 12,510,000**	**$ 6,985,000**	**$ 2,735,000**	**$ 1,985,000**	**$ 39,976,000**

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Project Number	16-06	Capital Project Title	Replacing of Small Equipments	Capital Project Description	Replacing of Small Equipments
Project Rationale	Replacement of small equipments that have reached their end of life				

Project Number	17-01	Capital Project Title	Gas & Leachate Collection Pipe Extension	Capital Project Description	Gas & Leachate Collection Pipe Extension
Project Rationale	To meet BC Ministry of Environment regulations, gas wells and leachate collectors are installed in each lift of refuse and have to be connected to the existing header system to collect methane gas. Well heads, valves, condensation traps, monitoring points, and piping has to be installed to each gas well and leachate collector. The gas is then conveyed to the gas plant, and the leachate is conveyed to the lined storage lagoons and then discharged into the municipal sewer. Cost estimate is derived from historical construction information and includes consulting costs to layout pipe design/headers.				

Project Number	17-02	Capital Project Title	Aggregate Production for Internal Use	Capital Project Description	Aggregate Production for Internal Use
Project Rationale	Producing aggregate annually from shot rock that was quarried to make airspace provides the CRD with a number of benefits including: prolonging the landfill life (creating landfilling airspace), providing aggregate for on-site needs, effective interception of shallow groundwater inflows, cost and space savings by not having to import aggregate, and reduced social and environmental impacts by not having to truck in aggregate. Cost estimate is derived from historical tender data.				

Project Number	17-04	Capital Project Title	Progressive Closure of External Faces	Capital Project Description	Progressive Closure of External Faces
Project Rationale	As specified under the BC Ministry of Environments Landfill Criteria for Municipal Solid Waste, completed landfill areas and slopes must be closed with a progressive closure system on an annual basis. The closure system consists of a clay or synthetic cover placed over a gravel drainage layer This progressive closure system stays in place until economies of scale makes it cost effective to proceed with installation of a final closure system. The completion of Cell 3 in 2025/2026 requires closure of the areas that will not be filled against going forward.				

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Project Number	17-07	**Capital Project Title**	Computer Equipment	**Capital Project Description**	Computer Equipment
Project Rationale	Replacement of computer equipment due to end of life cycle				

Project Number	17-09	**Capital Project Title**	Vehicle Replacements	**Capital Project Description**	Vehicle Replacements
Project Rationale	Replacement of vehicle due to end of life cycle				

Project Number	17-12	**Capital Project Title**	Hartland Environmental Performance Model	**Capital Project Description**	Hartland Environmental Performance Model
Project Rationale	The CRD is interested in developing a site-specific computer model that integrates engineering design with environmental performance for the Hartland Landfill. In 2016 the BC MOE made revisions to the BC Landfill Criteria. Many of Hartland's design and operations are already compliant, however a preliminary review identified additional conformance requirements for Hartland under the status quo. The model will enable the CRD to better demonstrate technical justification and environmental conformance over the lifespan of the landfill.				

Project Number	17-14	**Capital Project Title**	Landfill Gas Utilization	**Capital Project Description**	Landfill Gas Utilization
Project Rationale	The landfill gas is currently utilized as fuel to power a generator system to generate electricity and sold to BC Hydro. The excess landfill gas which is approximately 50% currently generated from the landfill is destructed by burning. ERM and EE have initiated a project to process the landfill gas to a higher quality could be utilized as natural gas. Fortis BC is interested to purchase the processed landfill gas from the CRD. The projected gas revenues from Fortis is significantly higher than the current arrangement with BC Hydro. This project is to carry out the feasibility study, preliminary engineering, and conduct business case and triple-bottom-line analysis, if the project proved to be feasible the detailed design and implementation will be followed.				

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Project Number	Capital Project Title	Capital Project Description
18-01	Interim Covers	Interim Covers - West and North Slopes

Project Rationale Following Golder's Leachate Management Plan, once an active landfilling cell is completed, but hasn't reached future filling contours, tarping is required to shed rainwater and divert to the freshwater collection system to prevent it from entering the leachate collection system and overwhelming the leachate storage ponds. Cost estimate is derived from historical in-house cost data.

Project Number	Capital Project Title	Capital Project Description
22-01	Sedimentation Pond Relining	NW Sedimentation Pond Relining & Expansion

Project Rationale To prevent leakage and fines from migrating off site into the north freshwater drainage area, the sedimentation pond must be relined. In addition the sedimentation pond must be enlarged to meet MOE requirements for retaining 24 hrs of preciptiation from a 100 year storm event. Finally, the sedimentation pond requires inlet valving and piping to permit flows to be diverted to the upper lagoon in the event there is an onsite spill that must be contained and diverted from fresh water courses.

Project Number	Capital Project Title	Capital Project Description
22-07	Recycling Area Upgrades	Recycling Area Upgrades

Project Rationale The project has been set up to conduct a design review of the existing recyling area at Hartland and investigate changes relating to efficent accessibility due to growing public interest in the depot and to include safety considerations such as protection from the sun during hot weather.

Project Number	Capital Project Title	Capital Project Description
22-10	Storm Water Sedimentation pond Emergency Repairs	Storm Water Sedimentation pond Emergency Repairs

Project Rationale Leachate has been detected getting into the fresh water sedimentation pond. This project has been set up to explore sources of contamination and make remedial works to the pond, incoming pipes and outgoing infrastructure as necessary to ensure containment of any contaminants. This project also includes the installation of any new monitoring wells, including consulting fees to locate , prove/commission and report findings/recommendations.

Project Number	Capital Project Title	Capital Project Description
23-02	Contractor Workshop Relocation	Contractor Workshop Relocation

Project Rationale The current contractors workshop is located in the future Cell 5 of the landfill and must be relocated so critical landfill infrastructure can be completed for Cell 4, 5 and 6. This project includes removal of the existing structure and reuse (if economical) in a new location adjacent to future cells so the operations contractor can conduct repairs on large landfill operations equipment (Packer, Bull-Dozer, excavators etc).

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Project Number	Capital Project Title	Capital Project Description
23-04	North End Commercial Access Improvements	North End Commercial Access Improvements

Project Rationale This project includes necessary improvements to ensure the North Entrance and Scales are equipped for fully automated commercial access off Willis Point Road when Cell 4 is ready for filling. Improvements include landscaping, scale house improvements, automated gates, staging lanes, card readers/scanners, RFID systems, scale safety rails, bollards, radio intercoms, sidewalks, signage, etc.

Project Number	Capital Project Title	Capital Project Description
23-05	Existing Manual and Commercial Scale Upgrades	Existing Manual and Commercial Scale Upgrades

Project Rationale The South Entrance Commercial scale approach/exit ramps are in poor condition. This project includes sawcutting and removal of old scale ramps and pouring new concrete with Rebar to eliminate further safety hazards to trucks and employees. The South Entrance Manual Scale deck is in poor condition. It requires replacement and/or major repair. This project accounts for all work that needs to be done after detailed assement to ensure life of the existing manual and commercial scales can continue reliably for the next 20 years.

Project Number	Capital Project Title	Capital Project Description
24-01	Cell 5&6 GRW	Cell 5&6 Gravity Retaining Wall Construction

Project Rationale This project will allow for the construction of a new mounded structural earth berm north of cell 1&2 at 5 corners intersection to serve as the new toe of cells 5 & 6. As part of this berm, the project includes installation of a critical sub-grade landfill leachate containment system (grout wall/curtain) and raising the clay containment berm from 130mAsl to 135mASL to ensure leachate capture from future landfill cells 4, 5 & 6. The project also includes relocation of any existing infrastructure (LFG, Leachate, Water, electrical etc) that currently resides in the future footprint of the MSE berm.

Project Number	Capital Project Title	Capital Project Description
24-02	Hartland North Master Plan	Hartland North Master Plan

Project Rationale With the recent completion of the new Residuals Treatment Facilty and associated access and new scales at Hartland North, this design project will ensure that there is adequate future planning and integration with the existing landfill site

Project Number	Capital Project Title	Capital Project Description
24-05	Cell 5 Liner Construction	Cell 5 Liner Construction

Project Rationale A new drainage and liner system will ensure effective removal of leachate from within the new Cell 5 area and prevent any off site migration. The liner will also include an underdrain which will relieve pore pressure and ensure fresh ground water does not contribute to ongoing leachate collection and processing. Improvements include all temporary and permanent access road and related infrastructure to allow refuse to be deposited in Cell 5.

Project Number	Capital Project Title	Capital Project Description
24-06	Cell 1, 2 & 3 Transition Liner	Cell 1, 2 & 3 Transition Liner

Project Rationale A new drainage and liner system will ensure effective removal of leachate above Cells 1 & 2 from garbage placed ontop of it from cells 4, 5 and 6. This liner provides continuity, separation and acts as a transition between old cells of the landfill and cells 4-6. The liner will also include an underdrain which will relieve pore pressure and ensure leachate from Cell 1, 2 & 3 can properly drain to heal basin or the upper lagoon. Also included is an access road to anchor the transition liner.

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Project Number	Capital Project Title	Capital Project Description
24-07	Relocation of N. Toe Road Sedimentation Pond	Relocation of N. Toe Road Sedimentation Pond

Project Rationale The North Toe Road fresh water sedimentation collection pond sits ontop of Cell 1 garbage. The future Gravity Retaining Wall will be constructed ontop of the pond so it must be relocated.

Project Number	Capital Project Title	Capital Project Description
25-01	NE & NW Aggregate Stockpile cover	NE & NW Aggregate Stockpile cover

Project Rationale This project allows for mitigation measures needed to protect the environment from minerals that may runoff the stockpiles from precipitation. Mitigation includes the deployement of a temporary impermeable membranes overtop the NE and NW, installation of ground/surface monitoring wells, improvement projects intended to intercept and convey impacted ground/surface water to leachate disposal collectors, including any consultant work required to design/direct staff on the mitigation measures.

Project Number	Capital Project Title	Capital Project Description
25-02	North End Wheel Wash	North End Wheel Wash

Project Rationale This project accounts for a new commercial truck wheel wash system to be installed on the North End to ensure trucks don't track mud onto Willis Point Road. Project includes a temporary wheel wash needed until the final Cell 5 access roads are ready to be utilized.

Project Number	Capital Project Title	Capital Project Description
25-03	Landfill Gas capture to meet New Federal Regs	Landfill Gas capture to meet New Federal Regs

Project Rationale Environment & Climate Change Canada has released a proposed Landfill Methane Regulation that is expected to come into force in Q1/Q2 of 2024, with the intent of reducing fugitive landfill emissions across the country. The regulation sets thresholds for surface emissions at landfills emitting more than 10,000 tonnes of CO2e per year (Hartland exceeds this). Based on required monitoring events, any surface methane concentrations that exceed proposed levels require a corrective action plan and mitigation within a specified timeframe. Based on current surface emissions data, it is expected that Hartland will need to implement additional controls, improve gas collection, or repair infrastructure to reduce surface methane concentrations to achieve compliance with these proposed limits.

Project Number	Capital Project Title	Capital Project Description
25-04	Hartland Operating Certificate Renewal	Hartland Operating Certificate Renewal

Project Rationale Hartland's Operating Certificate (OC) has not been modified since January 27, 2010. CRD has committed to updating its OC in light of recent MOE diuscussion and approval of ERM's SWMP. This project covers staff time and consultant/legal fees to assist the CRD in updating the OC with the MOE.

Project Number	Capital Project Title	Capital Project Description
25-05	Hartland Leachate Pipe Mods for Pigging	Hartland Leachate Pipe Mods for Pigging

Project Rationale Leachate design, materials and installation to modify the leachate piping between HB-15 and the new RTF Centrate Line to reinstate pigging of the section of pipe between HB-15 and the Centrate return line).

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Project Number	Capital Project Title	Capital Project Description
25-06	Quarry Wall liner	Quarry Wall liner

Project Rationale A portion of Cell 4 liner could not be installed due to accessibility during construction. The project includes implementing a seal between the bedrock quarry wall bench and the existing liner in Cell 4 in toutle valley. The construction will be conducted when waste filling has reached the elevation of the area to allow safe installation by Contractors. The project includes the supply, installation, QA/QC needed to install the small section of liner.

Project Number	Capital Project Title	Capital Project Description
25-07	Cell 4, 5A & 5B Construction Field QA/QC	Cell 4, 5A & 5B Construction Field QA/QC

Project Rationale Cell 4, 5 and 6 and related incfrastructure construction will occur over multiple years. The project requires that the engineer of record be onsite during critical milestones throughout the construction project to ensure the construction is installer per the design. The original design budget contemplated a 1 year installation of all capital improvements for Cell 4, 5 & 6 projects. However, logistics and filling plans required phasing of the projects over a number of years which stretches the QA/QC budget over a longer period. The funds are to allow all travel, coordination meetings, onsite QA/QC field review, design

Project Number	Capital Project Title	Capital Project Description
25-08	RNG Optimization Projects	RNG Optimization Projects

Project Rationale Scope change to include additional cost and scope that were not originally contemplated in the original RNG project. Improvements include new transformer, Lock Block retaining wall, tie-in and relocation of existing infrastructure that interfere with the new facility and other improvement projects required to enhance the safety, operation and profitability of the facility.

Project Number	Capital Project Title	Capital Project Description
25-09	Hartland North - Willis P Driveway Upgrades	Hartland North - Willis P Driveway Upgrades

Project Rationale The project includes all design and construction work to ensure there is sufficient passing room for large trucks to turn off Willis Point (WP) road onto the Hartland North Driveway and safely pass large trucks leaving the facility at the same time. Improvements include driveway widening, paving, realignment of fencing/gates, culvert extensions, lighting, signage, Overhead electrical improvements (if required), pavement markings, delineators and any other improvements needed to ensure the safety of the public, contractors and employees accessing the site.

Project Number	Capital Project Title	Capital Project Description
25-10	Hartland North Electrical	Hartland North Electrical

Project Rationale The electrical power for the new scale Building at Hartland North is fed from a temporary system from the RTF. Additional loads are required to accommodate the relocation of the contractor shop, new truck wash, kitchen scrap transfer station, thermal pilot plant etc. There is no formal agreement or capacity for the RTF to provide power for the growing power demands at Hartland North. This project entails all electrical design and construction to service the power requirements needed for Hartland North (aformentioned projects), including power poles/lines, transformers and underground conduit/cabling. The scope also includes a backup power generator to ensure business continuity for the scale building during frequent power outages.

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Project Number	Capital Project Title	Capital Project Description
25-11	Hartland Environmental Montoring and Containment Projects	Hartland Environmental Montoring and Containment Projects

Project Rationale To ensure compliance with BC Ministry of Environment regulations, an active review of current and future environmental controls is necessary. This project accounts for consultant studies, contractor environmental mitigation controls required to review and enhance the current environmental monitoring program at the Hartland landfill and ensure compliance with MOE regulations.

Project Number	Capital Project Title	Capital Project Description
26-01	Cell 4& 5 Bottom Lift Gas Wells / Leachate Drain	Cell 4& 5 Bottom Lift Gas Wells / Leachate Drain

Project Rationale To meet BC Ministry of Environment regulations, gas wells and leachate collectors are installed in each lift of refuse and have to be connected to the existing collection systems to collect methane gas. Well heads, valves, condensation traps, monitoring points, and piping has to be installed to each combination gas well and leachate collector. The leachate is then conveyed to the lined storage lagoons and then discharged into the municipal sewer. Estimate is derived from historical costs.

Project Number	Capital Project Title	Capital Project Description
26-02	Hartland 5 year DOCP update	Hartland 5 year DOCP update

Project Rationale Hartland's Operating Certificate (OC) issued by the BC Ministry of Environment requires adherance to the BC Landfilling criteria which requires updates to the Landfill DOCP every 5 years. The last DOCP was finalized and submitted to the MOE on May 2022. A new update is required by May 2027. The project includes the procurement of a consultant to complete the DOCP to meet submission requirement.

Project Number	Capital Project Title	Capital Project Description
26-03	ERM Land Acquisition	ERM Land Acquisition

Project Rationale ERM's long term plan to maximize recycling and diversion opportunities for the region requires the acquisition of land/facilities to accommodate the growing needs of the region. This project includes those activities needed to secure land or facilities for future diversion, recycling or waste management requirements of the region.

Project Number	Capital Project Title	Capital Project Description
26-04	RTF Biogas Tie-In to RNG	RTF Biogas Tie-In to RNG

Project Rationale The Residual Solids Treatment facility currently reuses the biogas produced during operation to minimize energy requirements for the facility. However there remains an excess of biogas that is currently flared and contributes to the CRD's carbon footprint. There is opportunity to divert the unused gas to Hartland's newly constructed Renewal Natural Gas plant for to purify the gas and sell it to Fortis over its 20 year sale agreement with the CRD. This project includes the design, procurement and installation of all infrastructure needed to take advantage of this opportunity.

1.521 Enviromental Resource Management
Capital Reserve Fund Schedule - ERM
2025 - 2029 Financial Plan

Capital Reserve Fund Schedule - ERM

Capital Reserve Fund ERM - Landfill Closure Portion, Capital Reserve Portion, and Recycling Depots Portion

Capital Reserve Fund Schedule

Bylaw 2164 established a Solid Waste Refuse Disposal Reserve Fund for the ERM Service (was called Solid Waste Service). There are three portions in the Reserve Fund: Landfill Closure, restricted funds to cover the liability of closing Phase 2 - 3 and post-closure maintenance. Capital Reserve is working capital and not restricted.

Landfill Closure Portion	**Estimate**	**Budget**				
Fund: 1020 Fund Centre: 101363	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Beginning Balance	13,670,125	14,227,150	14,691,373	9,164,880	5,647,857	6,140,493
Planned Capital Expenditure (Based on Capital Plan)	-		(6,000,000)	(4,000,000)		
Transfer to/from Ops Budget	455,120	464,222	473,507	482,977	492,637	502,489
Interest Income*	101,905	-	-	-	-	-
Ending Balance $	**14,227,150**	**14,691,373**	**9,164,880**	**5,647,857**	**6,140,493**	**6,642,982**

Assumptions/Background:

Liability reserve to fund closure of Phase 2-3 and post closure maintenance.

* Interest should be included in determining the estimated ending balance for the current year. Interest in planning years nets against inflation which is not included.

Capital Reserve Fund Schedule

Capital Reserve Portion Fund: 1020 Fund Centre: 101364	Estimate 2024	Budget 2025	2026	2027	2028	2029
Beginning Balance	12,211,415	9,267,416	8,797,406	5,617,406	3,487,406	2,207,406
Planned Capital Expenditure (Based on Capital Plan)	(5,750,000)	(4,250,000)	(3,650,000)	(2,600,000)	(1,750,000)	(1,600,000)
Transfer to/from Ops Budget	2,450,950	3,779,990	470,000	470,000	470,000	470,000
Interest Income*	355,051	-	-	-	-	-
Ending Balance $	**9,267,416**	**8,797,406**	**5,617,406**	**3,487,406**	**2,207,406**	**1,077,406**

Assumptions/Background:

* Interest should be included in determining the estimated ending balance for the current year. Interest in planning years nets against inflation which is not included.

Capital Reserve Fund Schedule

Recycling Depots/Compost Center Reserve Portion Fund: 1020 Fund Centre: 102102	Estimate 2024	Budget 2025	 2026	 2027	 2028	 2029
Beginning Balance	15,918	19,918	23,918	27,918	31,918	35,918
Planned Capital Expenditure		-	-	-	-	-
Transfer to/from Ops Budget	4,000	4,000	4,000	4,000	4,000	4,000
Ending Balance $	**19,918**	**23,918**	**27,918**	**31,918**	**35,918**	**39,918**

Assumptions/Background:

Reimburse operating budget for capital expenditures spent by Compost Center.

1.521 Enviromental Resource Management
Operating Reserve Summary
2025 - 2029 Financial Plan

Profile

Enviromental Resource Management

Bylaw 3867 - established Operating Reserve for the ERM Service to be used by the service for: mitigating fluctuations in tipping fee revenue and for covering operational expenditures as required, including debt servicing.

Operating Reserve Schedule

Operating Reserve Schedule	Estimate	Budget				
Fund: 1500 Fund Center 105509	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Beginning Balance	22,707,937	8,669,820	8,893,860	8,799,295	7,242,080	5,095,563
Planned Purchase - RNG project	(12,381,000)	(1,000,000)				
Planned Capital Expenditure (Based on Capital Plan)	(3,500,000)					
Transfer to/from Ops Budget	1,011,772	1,224,040	(94,565)	(1,557,215)	(2,146,517)	-
Interest Income*	831,111			-	-	-
Total projected year end balance	**8,669,820**	**8,893,860**	**8,799,295**	**7,242,080**	**5,095,563**	**5,095,563**

Assumptions/Background:
Reserve for rate stabilization

* Interest should be included in determining the estimated ending balance for the current year. Interest in planning years nets against inflation which is not included.

1.521 Enviromental Resource Management
ERF Reserve Fund Schedule
2025 - 2029 Financial Plan

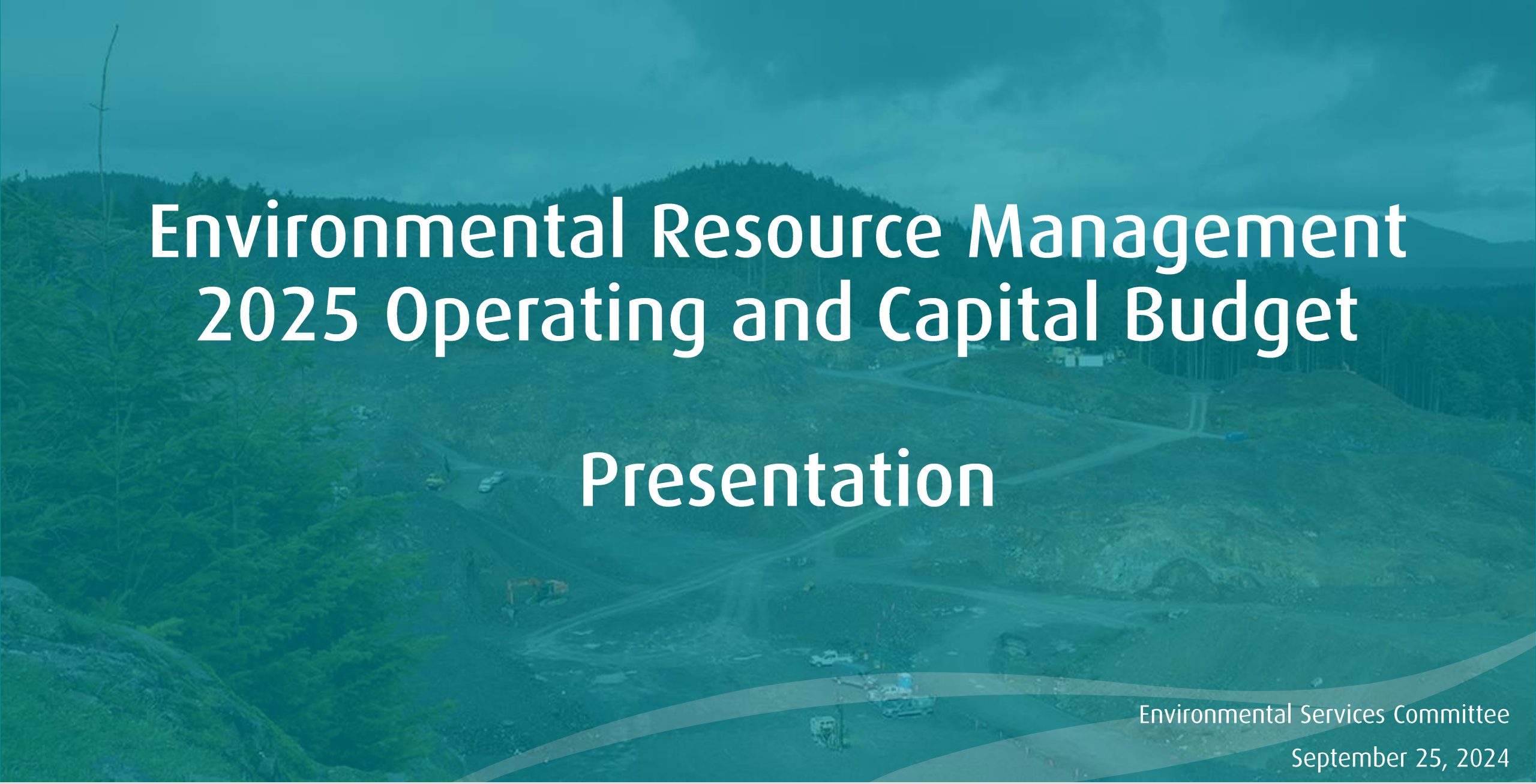
ERF Reserve Fund Schedule

ERF: ERM ERF or PERS Fund for Equipment

Equipment Replacement Fund Fund: 1022 Fund Centre: 101447	Estimate 2024	Budget 2025	 2026	 2027	 2028	 2029
Beginning Balance	2,285,782	2,115,744	1,864,744	1,683,744	1,502,744	1,071,744
Planned Purchase (Based on Capital Plan)	(285,166)	(455,000)	(385,000)	(385,000)	(635,000)	(385,000)
Transfer to/from Ops Budget	115,128	204,000	204,000	204,000	204,000	204,000
		-	-	-	-	-
Interest Income*		-	-	-	-	-
Ending Balance $	**2,115,744**	**1,864,744**	**1,683,744**	**1,502,744**	**1,071,744**	**890,744**

Assumptions/Background:
ERF Reserve to fund replacement of computer equipment and for PERS (Prority Equipment Replacement) type equipment that lasts less than 15 years

* Interest should be included in determining the estimated ending balance for the current year. Interest in planning years nets against inflation which is not included.



Environmental Resource Management 2025 Operating and Capital Budget

Presentation

Environmental Services Committee

September 25, 2024

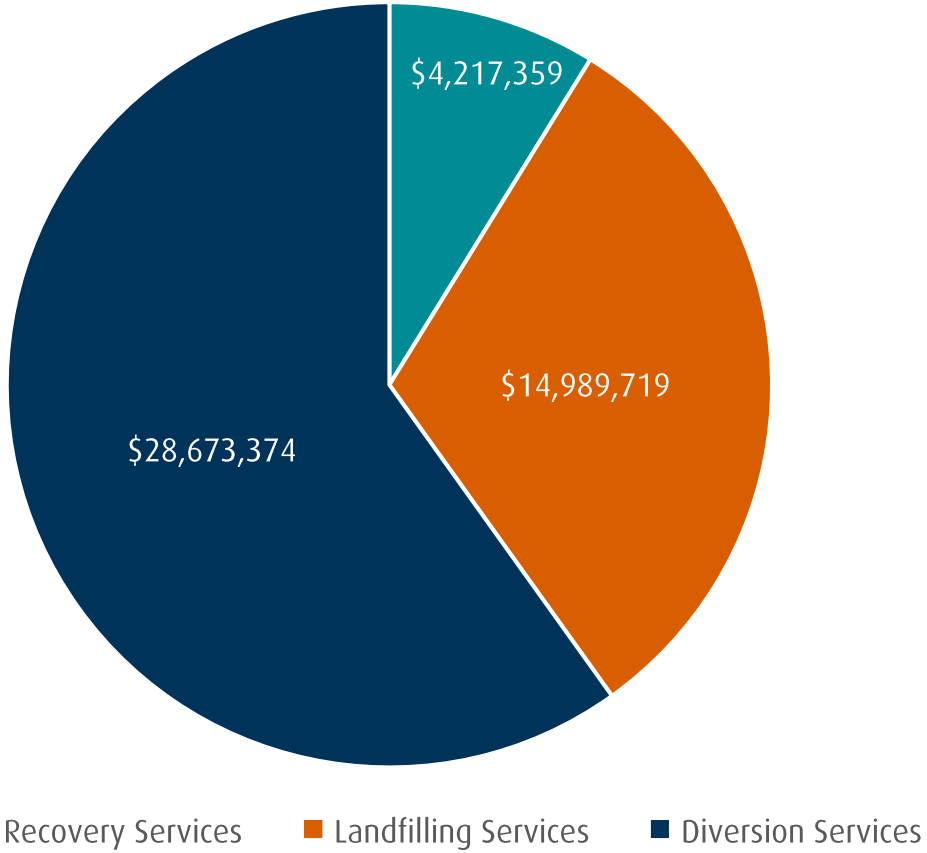
Environmental Resource Management Service Areas

Waste Diversion

Landfilling

Energy Recovery

2025 Operating Budget Expenses
$47,880,452



Environmental Resource Management Service Areas

2025 Operating Budget

Waste Diversion ($28.6 million)

- Solid Waste Planning $1.7 million
- Community Support Programs $1.4 million
- Hartland Diversion Programs $12.8 million
- Curbside Recycling $11.7 million
- Electoral Area Recycling $1.2 million

Landfilling ($15 million)

- Heavy Equipment Contract $5.3 million
- CRD Enviro Programs $1 million
- CRD Engineering $700 K
- Corp Allocation $3 million
- Solid Waste Admin $1.1 million
- Education $500 K
- Leachate $1 million

Energy Recovery ($4.2 million)

- Contract for Services $1.4 million
- Electricity $1 million
- Environmental Resource Management Overhead - $1.5 million
- CRD Enviro $100 K

2025 Operating Budget Expenses - $47.9 million

- $11.2 million (31%) increase over 2024 Operating Budget

- Waste Diversion increased $6 million
- Landfilling increased $2.6 million
- Energy Recovery increased $2.7 million

2024/2025 Operating Budget – Significant Changes

Waste Diversion (+$6 million)

- Material Stream Diversion expenses ($2.7 million)
- Solid Waste Management Plan – increase in programming ($700,000)
- New Curbside Blue Box 2024 contract ($2.4 million)
- Healthy Waters – Tod Creek sampling ($200,000)

2024/2025 Operating Budget - Significant Changes

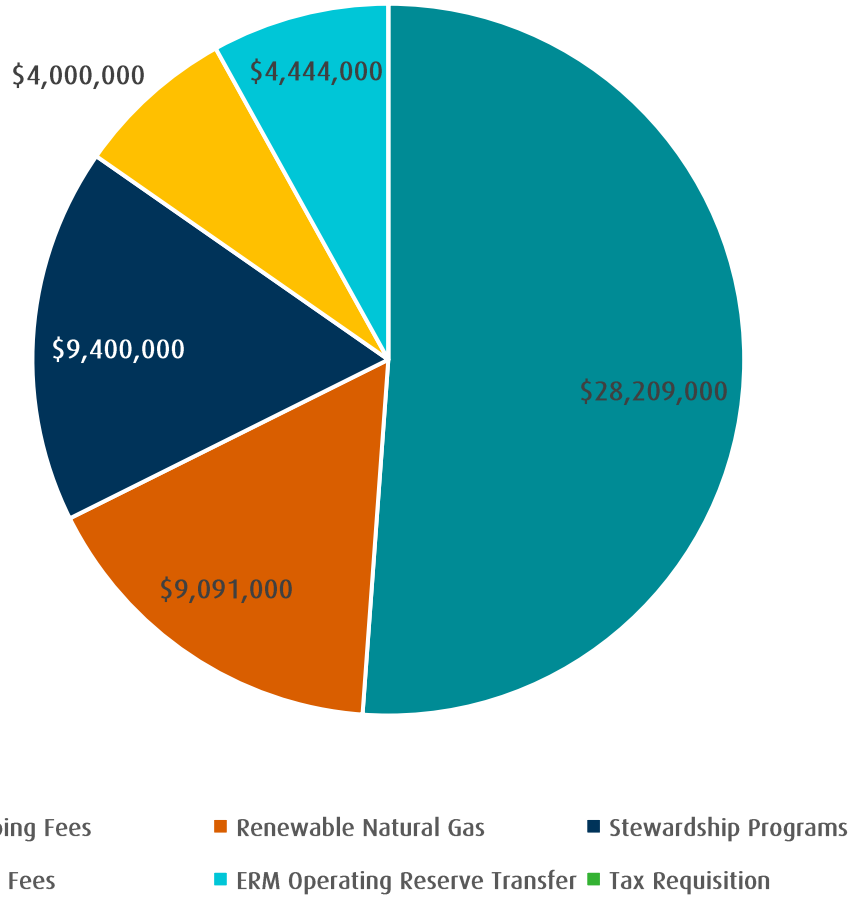
Landfilling (+$2.6 million)

- Heavy equipment contract increase - volume / operating costs ($1.5 million)
- Corporate overhead ($1 million)

Energy Recovery Services (+$2.7 million)

- HRRG Operating Contract ($1.4 million)
- Renewable Natural Gas Plant – Electricity ($1 million)

2025 Operating Budget Revenues
$55 million



2024/2025 Operating Budget Revenues

+$15.5 million - before reserve transfers ($3.4 million) and debt ($.08 million) increases

Waste Diversion (+$2.75 million)

- Blue box revenue increase from Recycle BC ($2.75 million)

Landfilling (+$4.25 million)

- Revenue from Material Stream Diversion policy changes

Energy Recovery (+$8.5 million)

- Revenue from new Renewable Natural Gas facility, Q1 start-up

2025 – Capital Budget
$15.7million

Ongoing capital ($4.23 million)

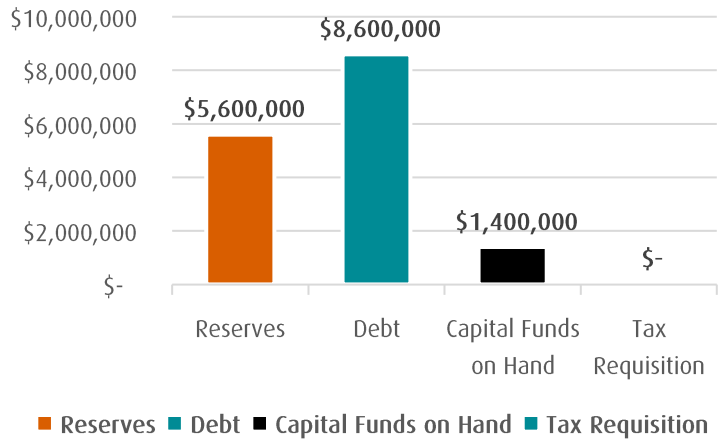
- Aggregate production, progressive closure, electrical, Operating Certificate

Preparing Cells 4, 5, 6 ($9.7 million)

- Design / install new liner, truck wheel wash, relocate shop…

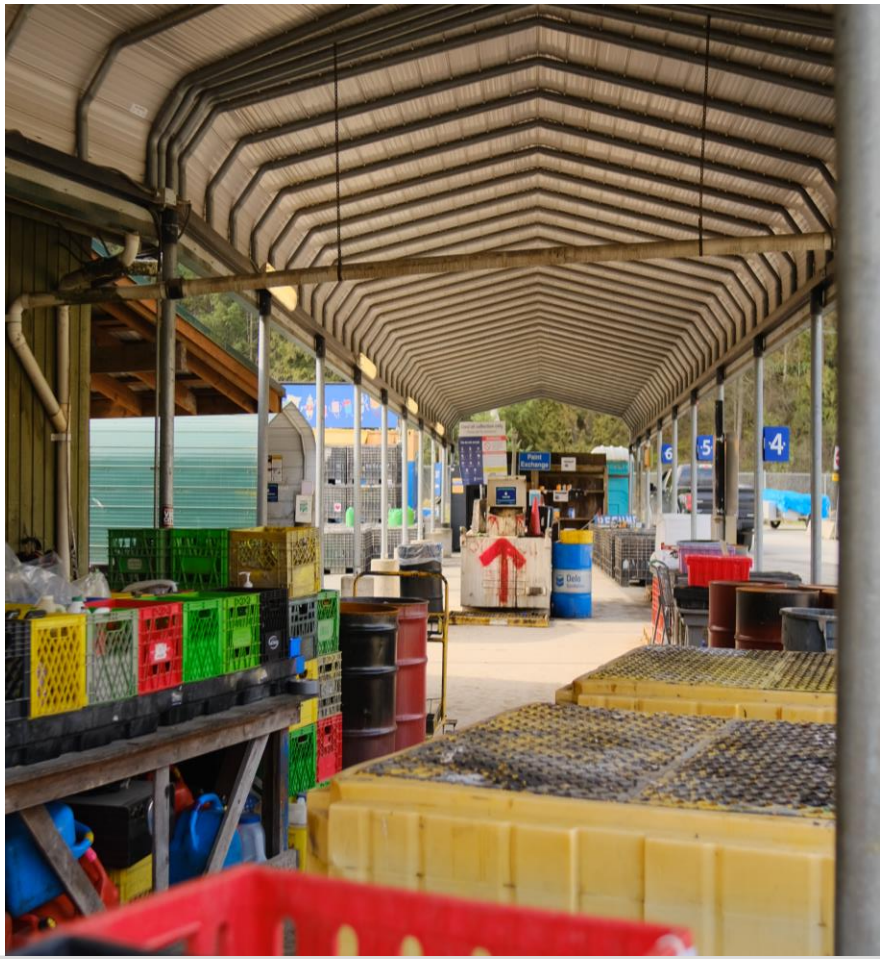
Renewable Natural Gas ($1.83 million)

- Completion of Renewable Natural Gas capital project



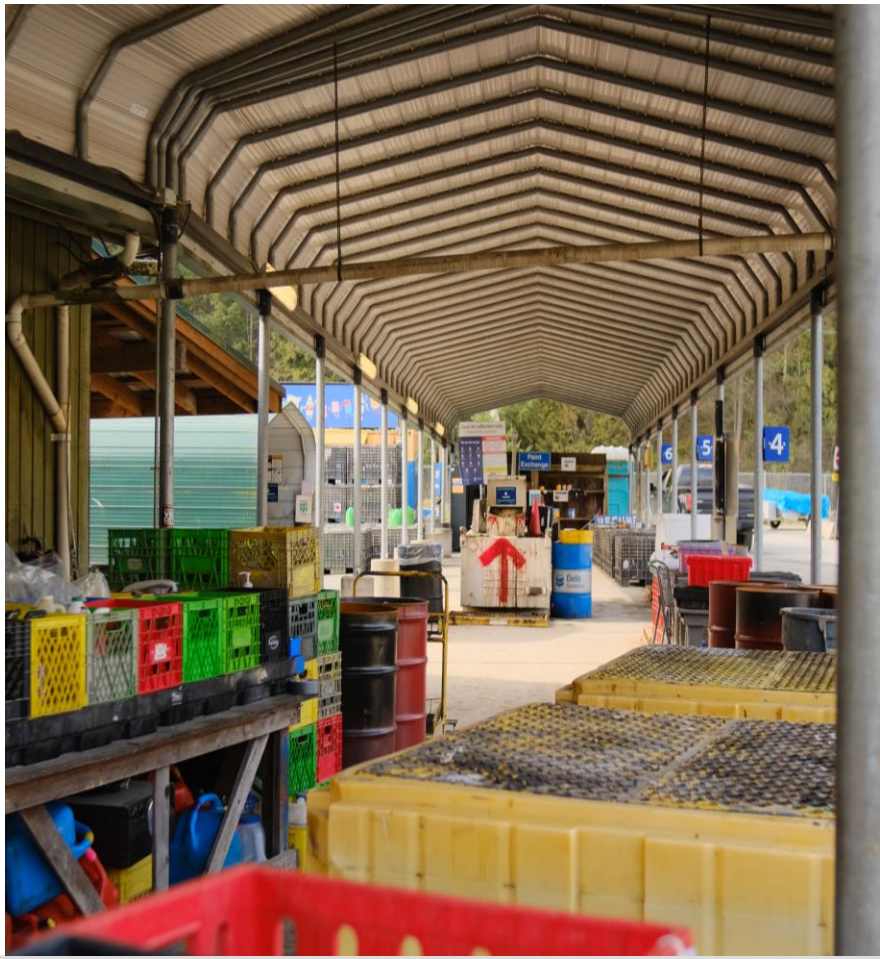
2025 Environmental Resource Management Operating & Capital Budget Summary

- 2024/25 Operating expenses +$11.2 million
- 2024/25 ERM Revenues +$15.5 million
- 2025 Capital Budget ($15.7 million)
- 2025 Capital Funding with ERM Reserves and Debt
- No tax requisition required to fund ERM budget



2025 Environmental Resource Management Funding Summary – new FTEs

- 4.5 new FTEs funded by ERM (2025)
  - 1.0 Landfill Attendant (term to FTE)
  - 1.0 Landfill Maintenance Worker
  - 1.0 Solid Waste Analyst
  - 0.5 Bylaw Administration (Planning & Protective Services)
  - 1.0 Manager, Innovative Projects (new CRD work unit)



Thank you

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Capital Regional District

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ERM 24-48

REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, SEPTEMBER 25, 2024

SUBJECT **New Hartland Policies – Quarterly Update**

ISSUE SUMMARY

To provide an update on the implementation of Hartland Landfill policy changes approved by the Capital Regional District (CRD) Board in December 2023 and on the award of contract for construction and operation of a Material Diversion Transfer Station (MDTS). Next steps include continued tracking of diversion rates, consultation to determine policy options for keeping general refuse within the region so that it can be managed responsibly, and communication of upcoming policy changes in anticipation of Phase 3.

BACKGROUND

In alignment with the CRD's Solid Waste Management Plan, the CRD Board passed a motion in December 2023 to adopt bylaw amendments that came into effect in 2024, to divert materials from disposal at Hartland Landfill.

Phase 1 of the Hartland policy changes was successfully implemented beginning January 1, 2024, including:

- a ban on clean wood waste
- a tipping fee of $80/tonne for clean wood
- increased fine and general refuse rates
- reduced fines for early payment
- the introduction of an education and warning program
- the introduction of the Waste Stream Collector Incentive (WSCI) program

Nineteen commercial haulers are active WSCI program participants, and combined they haul approximately 70% of the tonnage of general refuse brought to Hartland by commercial haulers. From January through June, staff issued 60 warning tickets and fines regarding the clean wood ban and a total of 538 tonnes of clean wood was diverted from landfilling for recycling and energy recovery.

To support the execution of Phase 2 of the material diversion strategy, a Request for Proposals for proponents to construct and operate an MDTS at Hartland to manage the processing, utilization, on-site operations and transportation of source-separated clean wood, treated wood, and asphalt shingles from Hartland Landfill was issued in September 2023 and closed January 2024. Staff evaluated the MDTS proposals on technical and financial merit and conducted negotiations with DL's Bins, the preferred proponent. At its April 10, 2024 meeting, the CRD Board directed staff to finalize negotiations with DL's Bins to enter into a two-year operating and construction contract, for a combined value not to exceed $12,500,000 (excluding GST) for the construction and operation of an MDTS. The contract was fully executed on July 5, 2024, and the construction of the MDTS is underway and scheduled to be completed by the end of September. In early July, DL's Bins began managing the processing, utilization, on-site operations and transportation of source-separated treated wood and asphalt shingles at interim sites at Hartland Landfill.

Phase 2 of the Hartland policy changes were successfully implemented on July 1, 2024, including a ban on treated wood and asphalt shingles from general refuse, a reduced tipping fee of $110/tonne for source-separated treated wood and asphalt shingles, and the issuance of warnings and fines to support the implementation of the new bylaws. In the first month of Phase 2, staff issued 4 warnings and fines, and 177 tonnes of clean wood, 1,227 tonnes of treated wood and 607 tonnes of asphalt shingles were diverted from refuse. In July, the material that was diverted due to the policy changes represented approximately 15% of the total general refuse collected at Hartland. The ban on carpet and underlay, and salvageable wood, as well as the $300/tonne unsorted load rate, is scheduled to begin in Phase 3, starting on January 1, 2026.

The solid waste industry's response in Phase 1 suggested that the proposed $300/tonne rate for unsorted loads containing wood and shingles is likely to incent customers to transport waste out of the region where inexpensive disposal options exist. Exporting waste out of the region would be counter to the CRD's Solid Waste Management Plan, would preclude the CRD's ability to manage the materials according to the Ministry of Environment & Climate Change Strategy's 5R pollution prevention hierarchy, and would decrease revenue and increase costs for other users of the landfill. At its April 10, 2024 meeting, the CRD Board approved a motion that consultation on policies to restrict the flow of general refuse outside of the region should be initiated. This consultation will begin in 2025, and once the options for policies are outlined, they will be subject to consideration by the CRD Board and could be implemented as part of Phase 3. Additional material bans, including carpet and underlay and rigid plastics, could also be considered as part of Phase 3.

CONCLUSION

In alignment with the CRD's Solid Waste Management Plan, bylaw amendments came into effect in 2024 that have diverted 2,878 tonnes of wood and shingles from Hartland Landfill between January 1 and July 31, 2024. Data from the first month of the implementation of the wood and asphalt shingles bans from general refuse suggest that this new policy will significantly impact diversion rates. Next steps include continued tracking of diversion rates, consultation to determine policy options for keeping general refuse within the region so that it can be managed responsibly, and communication of upcoming policy changes in anticipation of Phase 3.

RECOMMENDATION

There is no recommendation. This report is for information only.

Submitted by:	Russ Smith, Senior Manager, Environmental Resource Management
Concurrence:	Luisa Jones, MBA, General Manager, Parks, Recreation & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

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ECA 24-50

REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, SEPTEMBER 25, 2024

SUBJECT **Update on Corporate Greenhouse Gas Emissions Targets**

ISSUE SUMMARY

To provide an update on planned actions to reduce corporate transportation and building emissions to meet the Capital Regional District's (CRD) 2030 target, and to outline further emission reduction options, including those for Capital Region Housing Corporation (CRHC) buildings.

BACKGROUND

In 2021, the CRD Board approved a renewed Climate Action Strategy (CAS) and Five-Year Action Plan. The CAS guides the CRD in demonstrating climate leadership within its operations and community services and sets a corporate goal to reduce greenhouse gas (GHG) emissions by 45% by 2030 from 2007 levels and to achieve net-zero emissions before 2050. The CRD provides annual updates on progress and conducts a corporate emissions inventory.

Following the 2023 Climate Action Progress Report in May 2024, the Board directed staff to explore options for reducing corporate transportation and building emissions, including those from Capital Region Housing Corporation (CRHC) buildings. This report provides an update on planned actions to reduce CRD emissions to meet the 2030 target and outlines additional reduction strategies, along with the CRHC's efforts to assess energy use and emissions.

The Board has also issued additional climate-related directives. To integrate these into existing work plans and coordinate responses, staff plan to expedite the renewal of the Climate Action Strategy, originally set for 2026, beginning the process in late 2024 with completion by 2025. This renewal will incorporate current Board directives, ongoing activities, and initiatives under the future Regional Transportation Service, to guide priorities in the updated Strategy. For details on planned work and timelines, see Appendix A.

Corporate Emissions

In 2023, CRD operations generated 2,956 tonnes of CO2e, a 1.6% decrease from 2007 levels. Despite a recent upward trend in emissions due to increased service levels, significant GHG reductions are expected from 2026 onwards, as projects transition from planning to implementation, and more electric vehicles are introduced.

Note: Emissions from the Capital Region Housing Corporation, Hartland Landfill and Capital Region Hospital District are excluded from the CRD's annual corporate GHG inventory due to provincial reporting guidelines.

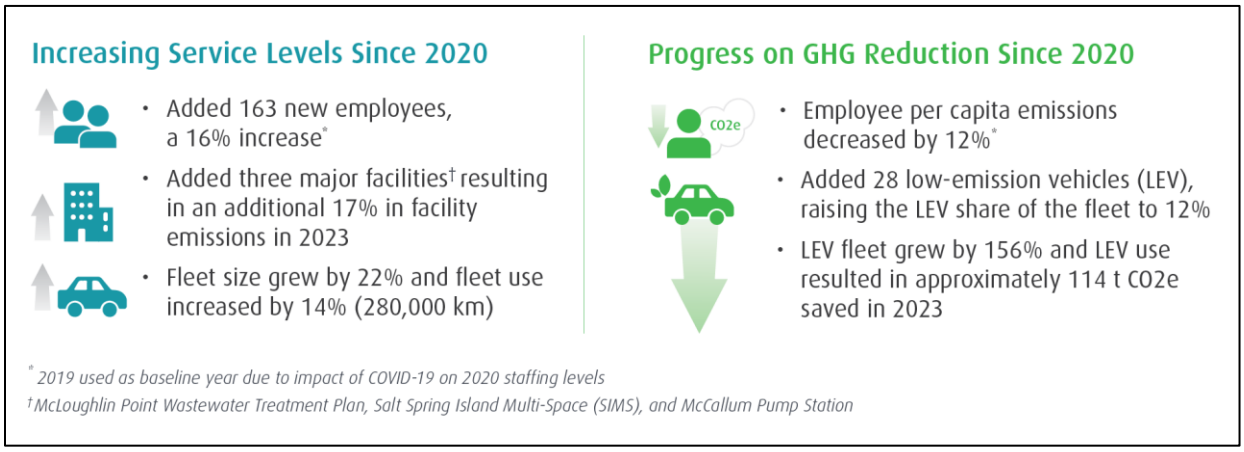


Figure 1: *Statistics indicating increasing CRD service levels and greenhouse gas reduction progress.*

Updated GHG Reduction Pathway and Status of Planned Actions

In 2021, the CAS identified key emissions reduction projects and a pathway to achieving the 2030 corporate target. Since 2021, staff have completed additional studies and progressed these projects, resulting in updated information on GHG impacts, costs and timelines. Figure 2 shows an updated GHG reduction pathway based on the latest information, showing how the CRD may meet and exceed the 2030 target. This updated pathway is based on "planned actions" that are scheduled for implementation between now and 2030 and included in current five-year capital plans, with some conditions.

Actions addressing the largest GHG emitters in the CRD portfolio and scheduled equipment replacements were prioritized. The pathway assumes the current electrification rate of light-duty vehicles, implementation of four building electrification projects, and that BC Hydro will achieve its target of 100% clean electricity by 2030. For more information about each action, see Appendix B.

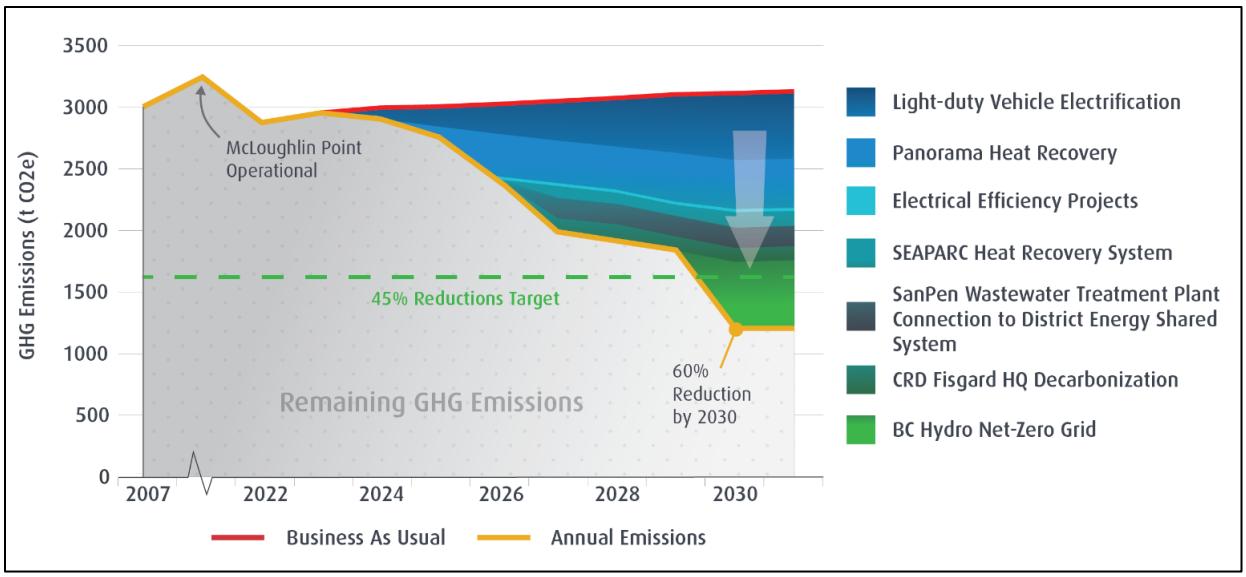


Figure 2: *Updated CRD corporate greenhouse gas emissions reduction pathway based on planned actions by 2030.*

Table 1 below details the GHG impact, cost, cost per tonne saved, and estimated timeline for each planned action and other key assumptions that will have material impacts on CRD corporate emissions.

Key costing considerations:

- Incentives and grants available to assist with GHG mitigation projects are not reflected.
- Many projects leverage end-of-life equipment replacements; costs shown are absolute, not incremental.
- Cost estimate confidence varies by project stage and will be refined as projects progress through study, design, and implementation phases.
- Preliminary lifetime cost per t CO2e categories:
  - Low: < $500
  - Medium: $500 - $1,000
  - High: > $1,000

(see next page for Table 1)

Table 1: Estimated corporate greenhouse gas emissions reduction by 2030 based on planned actions

					REDUCTION FROM BASELINE (%)	ANNUAL EMISSIONS (t CO2e)
				2007 Baseline Emissions (Actual)	-	3,005
				2023 Emissions (Actual)	1.6%	2,956
				2030 Target (45% reduction from 2007 baseline)	**45.0%**	**1,653**
PLANNED ACTIONS	**ANNUAL EMISSION REDUCTION** (t CO2e)	**CAPITAL COST**[1]	**LIFETIME COST PER t CO2e**	**ESTIMATED COMPLETION YEAR**		
Light-duty Vehicle Electrification *66% by 2030*	-533	$2.35M[2,3] (incremental)	Low	2030	17.7%	
Panorama Recreation Centre Heat Recovery *Phase 1 – Dehumidifier electrification* *Phase 2 – Heat recovery loop* *Phase 3 – Remaining HVAC units*	-408	$2.85M[4]	Low	2027 *(Phase 1: 2024, Phase 2: 2025, Phase 3: 2027)*	13.6%	
Saanich Peninsula Wastewater Treatment Plant Connection (SPWWTP) to the District Energy Shared System	-170	$1.2M[4]	Low	2027	5.7%	
SEAPARC Heat Recovery System *Phase 1 – Heat recovery loop* *Phase 2 – Dehumidifier electrification*	-120	$2.2M[3]	High	2030 *(Phase 1: 2026, Phase 2: 2030)*	4.0%	
CRD Fisgard HQ HVAC Fuel-Switch	-110	$2.1M[3]	Medium	2027	3.7%	
Electrical Efficiency Projects	-15	Variable	Low-Medium	2030	0.5%	
OTHER ASSUMPTIONS						
BC Hydro Net-Zero Grid	-539	N/A	-	2030	17.9%	
Energy Increase from CRD Growth in the 2030 year	98	N/A	-	Ongoing	-3.3%	
				TOTALS IN 2030[5]	**59.8%** reduction from baseline	**1,159** annual emissions

[1] High-level estimate of implementing all planned actions by 2030 is approximately $10.7M.
[2] Estimated cost includes charging infrastructure.
[3] Class D estimate
[4] Class C estimate
[5] 494 t CO2e or 14.8% additional reduction compared to 2030 target

Additional Actions

As staff have completed studies and projects identified in the 2021 CAS, additional opportunities for GHG reduction have emerged. These "additional actions" can either accelerate GHG reductions or be used as substitutes for delayed projects. In most cases, these projects have been identified because of equipment nearing the end of service life. This allows the opportunity to either fuel-switch or increase system efficiency, while leveraging existing equipment replacement funds, in accordance with the CRD's Green Building Policy.

Additional actions:
- decarbonization of HVAC systems at Integrated Water Services HQ, Parks HQ and Salt Spring Island Multi-Space
- accelerated light-duty vehicle electrification
- electrification of medium- and heavy-duty vehicles

These actions are not yet included in capital plans; further studies and engagement are needed to determine timelines. These additional actions will be required to achieve net-zero targets beyond 2030. For details, see Appendix B.

Capital Region Housing Corporation Update

Although emissions data for the Capital Region Housing Corporation (CRHC) portfolio is not yet available, CRHC is actively working to incorporate energy efficiency and low-carbon buildings into their portfolio. Newly-constructed CRHC buildings meet or exceed performance, energy efficiency and GHG requirements of local governments and BC Housing funding requirements. However, retrofitting existing buildings is limited by available capital resources. In 2024, CRHC is advancing two key initiatives with support from the BC Non-Profit Housing Providers Association:

- Portfolio-Wide Building Condition Assessment
  - **Goal:** Review all CRHC properties to assess asset condition, detail deficiencies, estimate replacement costs, and provide a high-level schedule.
  - **Benefits:** Enhance capital planning, better incorporate energy-efficient measures into asset planning, and understand equipment lifespans.
  - **Timeline:** Complete late 2024.

- Portfolio-Wide Energy Benchmarking
  - **Goal:** Document energy consumption across CRHC buildings.
  - **Benefits:** Understand consumption trends, detect utility anomalies, and prioritize buildings for energy audits to identify opportunities to reduce energy use and emissions.
  - **Timeline:** Discussions ongoing with BC Non-Profit Housing Providers Association; project to begin late 2024.

The CRHC portfolio includes 52 properties with buildings of various ages and conditions, with about half using fossil fuels. The Building Condition Assessment and Energy Benchmarking initiatives further detail the condition and type of system in each of the buildings. Results will be reported to the CRHC Board. Following these projects, Climate Action can support CRHC in further understanding pathways to further reduce carbon emissions in CRHC buildings.

IMPLICATIONS

Climate Implications

The planned actions and updated GHG emissions reduction pathway will enable the CRD to meet its 2030 corporate emissions reduction target. Potential risks to not meeting these targets include project delays due to funding challenges, acquisition of new facilities energized by fossil fuels, or BC Hydro not meeting its 100% clean electricity goal by 2030. If major projects face delays or scope reductions, the CRD could consider using renewable natural gas (RNG) as a transitional fuel. RNG is best reserved for processes that are hard to electrify or for backup systems.

Further analysis is needed to define the future impact of CRHC emissions.

Financial Implications

Corporate GHG reductions

The CRD's corporate climate reserve fund supports energy audits, feasibility and pre-design studies for key climate initiatives. Each service is responsible for implementing retrofits, with funding allocated in their five-year capital plans. The SEAPARC Recreation Centre and Saanich Peninsula Wastewater Treatment Plant's District Energy Shared Systems depend on grant funding and/or debt servicing. As projects near implementation, cost details will be refined and reported.

If RNG becomes necessary to meet GHG targets, operating budgets may need to account for its higher cost. Beyond 2030, ongoing investment in fleet transition, energy efficiency and fuel-switching will be necessary and should be included in future capital plans.

CRHC GHG reductions

Significant investment will be required to reduce GHG emissions in CRHC buildings. According to a Pembina Institute study supported by BC Housing, the median cost for deep energy retrofits (DERs) in social housing is approximately $138,000 per unit (2024 dollars), potentially reducing GHG emissions by around 80%. The Canada Greener Affordable Housing - Retrofit Funding program offers up to $170,000 per unit for DERs.

If CRHC were to solely opt for equipment replacements to reduce GHGs, a 2023 study by BC Hydro and LandlordBC estimates the cost to fully electrify at $13,600 to $22,560 per unit (adjusted to 2024 dollars). Assuming 50% of CRHC's 2,028 units rely on fossil fuels, the estimated cost for DERs could reach $280M, and electrification up to $23M.

Alignment with Board & Corporate Priorities

Reducing GHG emissions is embedded in the Climate Action & Environment Board and Corporate Priorities.

Alignment with Existing Plans & Strategies

The planned actions, except for the Saanich Peninsula Wastewater Treatment Plant Connection to the District Energy Shared System, align with the critical actions listed to be implemented by 2030 in the 2021 Climate Action Strategy.

While monitoring emissions of CRHC buildings is not a specific action in the Strategy and is out of scope for the CRD's corporate annual GHG emissions inventory, actions to reduce emissions from CRHC buildings align with action *4-5: Pursue climate-friendly development and retrofits for CRHC and CRHD facilities.*

CONCLUSION

The CRD is advancing many key projects to meet its corporate greenhouse gas (GHG) emissions target of 45% reduction from 2007 levels by 2030. Additional opportunities for GHG reductions have been identified that could contribute to meeting the target or accelerate reductions. The expedited renewal of the Climate Action Strategy in 2025 will incorporate these insights, ensuring the renewed Strategy outlines a pathway to achieve the 2030 target and the net-zero emissions goal by 2050. New buildings within the Capital Regional Housing Corporation (CRHC) portfolio are low carbon and retrofits of existing buildings would require significant investment. The CRHC is progressing on two initiatives to support energy and emissions planning. Results will be provided to the CRHC Board.

RECOMMENDATION

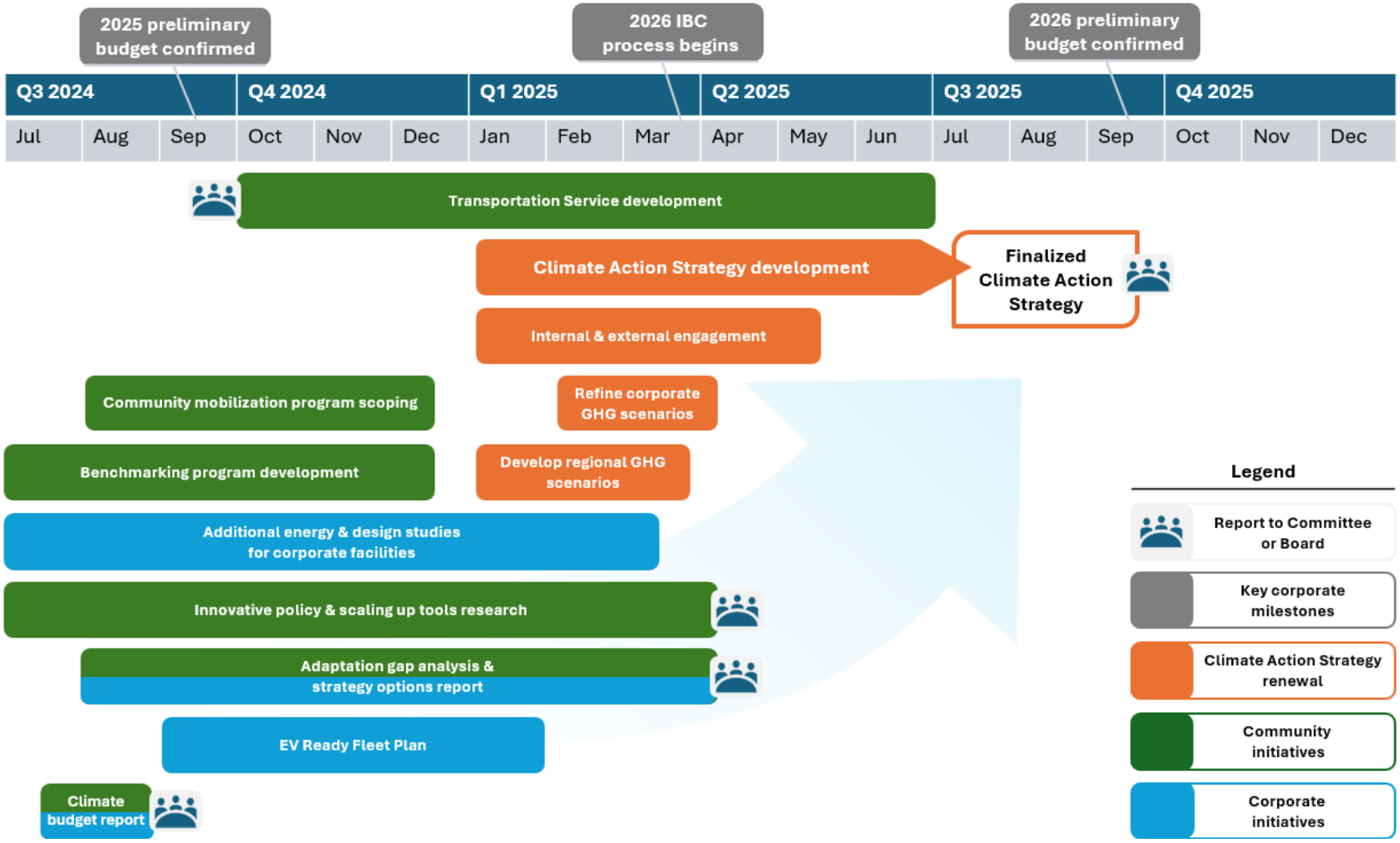
There is no recommendation. This report is for information only.

Submitted by:	Nikki Elliott, MPA, Manager, Climate Action Programs
Concurrence:	Luisa Jones, MBA, General Manager, Parks, Recreation & Environmental Services
Concurrence:	Kevin Lorette, P.Eng., MBA, General Manager, Planning & Protective Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENTS

Appendix A: Timeline of Work – Recent CRD Board Directives & Climate Action Strategy Renewal
Appendix B: Planned and Additional Action Details – CRD Corporate Greenhouse Gas Reduction Projects

Timeline of Work – Recent Capital Regional District Board Directives & Climate Action Strategy Renewal



This graphic features anticipated timelines for additional work stemming from recent Board motions and the expedited renewal of the Climate Action Strategy. For more information on ongoing and previously planned initiatives, refer to the 2023 Climate Action Progress Report.

PLANNED AND ADDITIONAL ACTION DETAILS
CRD CORPORATE GREENHOUSE GAS REDUCTION PROJECTS

See below for more details about the planned actions and additional actions staff have identified to reduce CRD corporate greenhouse gas (GHG) emissions.

Planned Actions

"Planned actions" are key emissions reduction projects that will allow CRD to achieve the 2030 corporate GHG reduction target. Planned actions are scheduled for implementation between now and 2030 and are included in current five-year capital plans.

Light-duty Vehicle (LDV) Electrification

- In progress.
- As of June 2024, 24% of the 247 LDVs fleet has been electrified.
- The current electrification rate of replacement vehicles is approximately 66%, which puts the CRD on track for achieving 100% LDV electrification by 2040 (as per Climate Action Strategy).

Panorama Recreation Centre Heat Recovery System

- In progress, split into a three-phase project:
  - Phase 1: Arena dehumidifier electrification: Currently in implementation.
  - Phase 2: Main heat recovery loop for pool, domestic hot water, tennis building HVAC, and arena dehumidifier: Currently in detailed design phase with implementation planned for summer 2025.
  - Phase 3: HVAC replacement and remaining connections to heat recovery loop: Start study in 2026 with implementation planned for 2027.

Saanich Peninsula Wastewater Treatment Plant Connection to the District Energy Shared System

- HVAC system is not at end of life; however, the project will retrofit existing units. Feasibility study is complete.
- Requires ongoing commitment to District Energy Shared System. Implementation planned for 2027.
- Requires grant funding.

SEAPARC Heat Recovery System

- In progress, split into a two-phase project:
  - Phase 1: Heat recovery loop, integration of pool and refrigeration systems, domestic hot water and HVAC. Currently in conceptual design phase, with implementation planned for 2026.
  - Phase 2: Arena dehumidifier integration into heat recovery, with study to begin in 2028 and implementation planned for 2030.
  - Requires Alternative Approvals Process for next step and clarity of timelines.

CRD Fisgard Headquarters HVAC Electrification

- HVAC system and components are at or nearing end of life.
- Preliminary study complete: detailed study planned 2026 with implementation planned for 2027.

Annual 5% Improvement in Electricity Efficiency

- In progress.
- Being achieved through major capital upgrades, energy audit implementation projects, lighting upgrades and other measures identified by Climate Action and Facilities Management.

Additional Actions

"Additional actions" are more recently identified opportunities for GHG reduction that can either accelerate reductions or be used as substitutes for planned actions should those be delayed. Additional actions are not yet included in capital plans and further studies and engagement are needed to determine timelines.

IWS HQ Decarbonize HVAC System

- HVAC system is nearing end of life. Study starting in Q3 2024.

Parks HQ Decarbonize System

- HVAC system is nearing end of life. Study starting in Q3 2024.

Salt Spring Island Multispace (SIMS) Decarbonization

- HVAC system is nearing end of its life. Study starting in Q3 2024.

Accelerated Light-duty Vehicle Electrification

- Current and planned efforts to support electrification of the LDV fleet include:
  - Updates to the Green Fleet Policy and related procedures.
  - Development of EV Ready Fleet Plan to support phase 2 of LDV fleet electrification due for completion end of 2024.

Medium- and heavy-duty vehicle Fleet Electrification

- Heavy-duty and off-road vehicle electrification and renewable fuel use is identified as a critical action from 2030-2050 in the Climate Action Strategy.
- The forthcoming EV Ready Fleet Plan will provide mid- to long-term considerations for defining and achieving this goal.
- Market availability and proven readiness of zero-emission Medium- and Heavy-duty Vehicles is limited at this time; however, pilot program opportunities exist and are being actively considered where options exist.

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REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, SEPTEMBER 25, 2024

SUBJECT **Climate Budgeting Update**

ISSUE SUMMARY

To summarize what staff heard at the June 26, 2023 workshop on Carbon/Climate Budgeting and to seek direction on recommended next steps.

BACKGROUND

In November 2022, the District of Central Saanich submitted a letter to the Capital Regional District (CRD) Board requesting "that the CRD adopt a policy of carbon budgeting as part of its budget cycle, intending to provide CRD member local governments with their estimated annual carbon budgets." As recommended by the Board on April 12, 2023, CRD staff hosted a workshop for both local government staff and elected officials on the topic of Carbon/Climate Budgets.

This report was initially presented to the Environmental Services Committee on January 17, 2024 and was deferred by request to allow the City of Victoria time to consider a related item.

Terminology Clarification

CRD staff have previously reported to the Board on the concept of a "carbon budget", which refers to a calculation of the total remaining carbon pollution the global community can emit before the chance of exceeding a global warming target is beyond risk thresholds. In the Canadian local government discourse, the term "carbon budget" has been used synonymously with the term "climate budget", causing confusion in relation to the national and international use of the terms. Climate budget can be defined as a system that integrates climate considerations into the financial budget and creates transparency and accountability for climate action. In summary, the term "climate budget" is used to describe the governance mechanism, and the term "carbon budget" refers to a calculated pollution risk threshold.

Workshop Summary and Results

At the April 2023 workshop, participants heard from national and international practitioners who work on the topic of Climate Budgets, and also from a climate communications expert – to help the group better understand what Climate Budgeting could mean for the region. Seven overarching themes were observed, and the synthesis of the discussions amongst participants revealed differing views associated with Climate Budgeting. The following opportunities and challenges are summarized:

- Climate Budgeting would support mainstreaming climate action and potential cross/extra-jurisdictional work if the CRD took on the work, but it may also have the unintended consequence of slowing down climate action by focusing staff capacity on data analysis and reporting.

- Similarly, while Climate Budgets would support more transparency, the technical nature of the work presents challenges with effectively communicating the complex results to the public.
- Staff also identified tensions associated with evaluating resiliency projects via Climate Budgeting and the difficulty of producing quantitative evaluation of project greenhouse gas impacts fast enough to impact decision-making.

For more detail on the themes observed, as well as the challenges and opportunities, refer to Appendix A.

Further discussions with both the CRD's Climate Action Inter-Municipal Working Group (staff) and Task Force (elected officials) indicated limited appetite for implementing a region-wide Carbon Budget or Climate Budget. Some staff indicated that they may be interested in utilizing certain elements of the Climate Budgeting framework in the near term, while others noted that they are not currently prepared to embed this in municipal processes. Overall, the focus of the Task Force has been on determining how the CRD can support greater community-wide climate action capacity building and education initiatives.

City of Victoria Update

City of Victoria staff were directed by Council to consider Climate Budgeting and reported back in April 2024. The City of Victoria has now committed to embedding high level climate budgeting considerations into the City's financial planning processes moving forward by highlighting key climate initiatives and integrating an emissions reduction potential and funding approach for each.

The CRD's Proposed Approach

Historically, no local government in the region utilized a Climate Budgeting framework, but many have a history of similar work. The CRD, for example, worked to establish a "climate lens" on capital projects over $100,000 as an outcome of the 2018 Corporate Climate Action Plan. This initiative ultimately failed to achieve its objective, in part because it was not fully integrated into the CRD's existing governance systems. The CRD now employs three corporate policies that are fully integrated into those systems (i.e., Green Fleet Policy, Carbon Price Policy and Green Building Policy). These policies are the outcome of years of learning, internal engagement and Board direction, as highlighted in the 2021 CRD Climate Action Strategy and recent Board priorities. The efficacy of these policies will be measured over the next several years. For example, the Green Fleet Policy, adopted in 2023, resulted in the purchase of more than 36 electric vehicles last year and the emission reduction from those vehicles will be accumulated as they are used this year (2024) and in future years.

Global non-profit, C40 Cities, which has been working to promote the adoption of Climate Budgets, established seven principles for developing a Climate Budget (Appendix B). These principles have been used by global leaders, such as New York City, to develop a Climate Budget, and are broadly applicable to the CRD's climate lens work. Staff intend to utilize those principles to develop a modified Climate Budgeting approach that uses the learnings from Climate Budgeting efforts among municipal colleagues across the country as the CRD moves toward full integration of the climate lens into corporate decisions. These learnings will be shared through the CRD's regional inter-municipal network.

While it is not possible to implement full Climate Budgeting in this planning cycle (i.e., prior to the intended end of the current Climate Action Strategy), the CRD climate lens work will form the first steps toward the development of a modified Climate Budget, which is proposed to be built into the next Climate Action Strategy.

ALTERNATIVES

Alternative 1
The Environmental Services Committee recommends to the Capital Regional District Board:
That staff be directed to:

1. Work internally on the elements of Climate Budgeting to understand what new governance mechanisms would look like in practice.
2. Develop public communications materials, based on the latest greenhouse gas inventory data, for use by the CRD and local governments that more clearly communicate the urgency of this policy issue; and
3. Utilize Climate Budgeting approaches in the CRD's next climate action strategy planning cycle.

Alternative 2
That this report be referred back to staff for additional information.

IMPLICATIONS

Alignment with Board & Corporate Priorities

The recommendations are broadly in line with the Board's priority Governance initiative 5b to strengthen Board decision-making frameworks to include a climate action lens.

Alignment with Existing Plans & Strategies

The recommendations align with Goal 1 of the CRD Climate Action Strategy to integrate climate action priorities into decision-making across the organization and actions related to regional education and outreach. Implementing a Climate or Carbon budget is not specifically noted within the Strategy's current five-year action plan.

Environmental & Climate Action

The recommendation would enable staff to continue to embed a climate lens within corporate decision-making processes, while working through some challenges identified with Climate Budgeting. Staff would properly evaluate the emerging governance framework in the creation of the CRD's next Climate Action Strategy.

Service Delivery Implications

Staff have capacity within existing workplans to pursue the recommendation, as proposed, while continuing to implement existing commitments within the CRD's Climate Action Strategy.

CONCLUSION

Staff hosted a workshop where local government participants heard from national and international practitioners who work on the topic of Climate Budgets, and also from a climate communications expert – to help the group better understand what Climate Budgeting could mean for the region. The synthesis of the discussions and input collected revealed differing views across the region's local governments. In the near term, staff propose adopting elements of climate budgeting within the CRD's decision-making processes, in line with climate lens related goals within the 2021 CRD Climate Action Strategy and current Board priorities. Learnings will continue to be shared with municipal partners through existing inter-municipal networks and be utilized as the CRD renews its Climate Action Strategy in 2025.

RECOMMENDATION

The Environmental Services Committee recommends to the Capital Regional District Board:
That staff be directed to:

1. Work internally on the elements of Climate Budgeting to understand what new governance mechanisms would look like in practice.
2. Develop public communications materials, based on the latest greenhouse gas inventory data, for use by the CRD and local governments that more clearly communicate the urgency of this policy issue; and
3. Utilize Climate Budgeting approaches in the CRD's next climate action strategy planning cycle.

Submitted by:	Nikki Elliott, MPA, Manager, Climate Action Programs
Concurrence:	Luisa Jones, MBA, General Manager, Parks, Recreation & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENTS

Appendix A: What We Heard Summary Report – Climate/Carbon Budgeting Workshop (December 2023)
Appendix B: Climate Budgeting: Transforming Governance to Mainstream Climate Action – C40 Cities and Arup

APPENDIX A

Capital Regional District

What We Heard Summary Report:

Climate/Carbon Budgeting Workshop

Capital Regional District | December 2023

The following provides a summary "What We Heard" report from the CRD's Carbon and Climate Budgeting Workshop held on Monday, June 26, 2023, and follow-up sessions with the CRD's inter-municipal climate committees in September 2023.

Table of Contents

Introduction

The Capital Regional District's (CRD) Climate/Carbon Budgeting Workshop held on June 26, 2023, brought together municipal staff and council members to explore the opportunity to implement a Climate or Carbon Budget among local governments in the capital region.

Whereas a *Carbon Budget* sets limits for how much total carbon dioxide (CO_2) emissions may be permitted by human activities within a geographical or political boundary, a *Climate Budget* is a governance system that integrates climate considerations into local government decision-making, creating transparency and accountability for climate action.

CARBON Budgeting	**CLIMATE Budgeting**
A carbon budget is the cumulative amount of carbon dioxide (CO_2) emissions that is permitted to limit global warming to within a specified temperature threshold (i.e., 1.5°C or 2°C above pre-industrial levels). Most often, this refers to the total net amount of CO_2 that can be emitted by human activities within a geographical or political boundary.	A climate budget is a governance system that integrates climate considerations into the financial budget and creates transparency and accountability for climate action. To the extent possible, actions are linked to an estimated emissions reduction and funding approach to illustrate the costs required to achieve the targeted emissions reductions.

(Adapted from C40 Cities, 2022)

In practice, the terms Carbon Budget and Climate Budget have been used to describe overlapping bodies of work. We use the term "Climate/Carbon Budget" throughout this document to refer to a process or governance system used to reduce regional CO_2 emissions.

The Carbon/Climate Budgeting Workshop aimed to meet the following goals:

Goal 1 Share information: Hear from practitioners developing and implementing Carbon and Climate budgets.

Goal 2 Build staff and elected official capacity on regional climate action communication and implementation.

Goal 3 Gather participant input to better understand the potential costs and benefits of Carbon and Climate budgets for the region.

To establish a Climate/Carbon Budget, local governments must consider a variety of budget parameters, including its scope (i.e., corporate versus community emissions), what can be sufficiently quantified to support decision-making, staff capacity and the target audience.

After hearing from 11 climate action practitioners from nine different communities on the development and implementation of Carbon and Climate Budgets (Appendix A), almost 30 local government staff and council members gathered to discuss the parameters around a Climate/Carbon Budget, as well as the potential costs and benefits of implementing this practice in the capital region.

This report highlights seven themes that emerged from the workshop on June 26, 2023, and follow-up discussions with the CRD Climate Action Inter-Municipal Working Group and CRD Climate Action Inter-Municipal Task Force in fall 2023. Opportunities and challenges associated with implementing a Climate/Carbon Budget in the region are articulated to inform staff recommendations for next steps.

Overarching Themes

Theme 1: Mainstreaming

The first theme from the workshop discussion highlights the need to mainstream climate action across organizations. While Climate/Carbon Budgeting was seen as an opportunity to mainstream climate action, feedback suggested that creating this consistency across organizations is necessary regardless of a specified emissions target or budget. Ideas to mainstream climate action included embedding sustainability staff in other departments, providing training for staff on climate topics, developing/adjusting decision-making frameworks, and building governance processes for more effective climate action.

> "How does sustainability best get integrated into our local government processes? How do we all (staff across departments) get aligned?"
>
> "Need to be able to build upon existing tools to be relevant to municipalities."
>
> "Climate budgeting seems like a good way to integrate climate action into Budget/Strategic Planning."

Theme 2: More & Faster!

Much of the feedback highlighted an urgency to act now and do more. This feedback suggested adopting a paradigm shift where we increase budgets and spend what it takes to reduce emissions

effectively. Others urged for earlier investment in climate action, and that granting bodies should act faster and provide more money to support these efforts.

> "Our budgets are decided based on what we are used to spending on a normal day, we need to change that paradigm and increase budgets."
>
> "More action means less reaction."

Theme 3: Cross/Extra Jurisdictional Work

The third theme suggests a need for increased collaboration across jurisdictions, both regionally and beyond. Some feedback highlighted the critical role of the provincial and federal governments in phasing out oil and gas production by developing a more progressive tax system and providing more funding. Others emphasized the role of the CRD in supporting a regional Climate/Carbon budget by providing capacity building and tools to integrate climate-focused decision-making.

> "The benefit of doing this together [is] to be able to compare regionally. We need time during roundtables at committee [to discuss this]."
>
> "CRD a source of capacity building."
>
> "We may see increased GHG emissions in Victoria if all the densification happens at the core. How does per capita fit in?"

Theme 4: Transparency

The fourth theme centered on a need to be open and honest with the public (and with ourselves). In general, many attendees noted the importance of being transparent on emissions reductions progress or being transparent on the implications of local government decisions on climate goals, either through climate/carbon budgeting or other decision-making processes. They also noted that through simple and direct messaging, this transparency could empower the public and increase political will for climate action. To do so, we must also increase our awareness of the conflicting messages that are visible to the public (i.e., those that are provided by fossil fuel providers).

> "We need to regularly show the public where we are failing to hit targets."
>
> "Budgeting is a way of telling the truth to ourselves and to the public."

Theme 5: Public Communication

Reflecting on Cara Pike from Re.Climate's presentation on 'Climate Change Public Opinion and Engagement', many comments noted the importance of using plain language for communications and highlighting positive and hopeful messaging through real-world success stories. Climate/Carbon budgeting was seen as a tool to engage with the public and highlight the urgency of climate change; however, some noted that the language around carbon budgets is often too technical for the public and there is risk of getting caught up in the details.

> "Carbon budgets are often too technical for the public. [There is] risk of getting lost in the weeds."
>
> "[It is] leadership's responsibility to push transformation using easy to understand language."

Theme 6: Unintended Consequences

The discussion highlighted various unintended consequences of implementing Climate/Carbon Budgeting. For instance, some showed concern for the financial barriers to reducing carbon emissions, which could cause individuals with lower financial means to bear the brunt of the impacts. Others saw risk in the big picture benefits getting lost in the budgeting process, and that this would be highly resource intensive.

> "The speakers noted that current work has not influenced decision-making (GHG-lagging indicator)."
>
> "There are real immediate financial barriers and there is a danger of leaving those people behind. The poor bear the brunt of the impacts."

Theme 7: Staff Capacity / Opportunity Costs

The final theme that emerged during the workshop discussion was a concern that there would not be enough staff capacity available to complete this work or that it would take away from implementation of actions. Feedback noted that there is varying staff capacity across the region (i.e., based on rural versus urban regionality and budget size) and that this may impact the effectiveness of a regional Climate/Carbon Budget. We heard from other practitioners already engaging in this work that the process was resource intensive, especially because it was a new area of work.

> "Carbon budgeting consumes staff resources through lost action and reporting opportunities. Is there a net benefit?"
>
> "There is different capacity of staff across the region. It's important to have staff understand these concepts to present policy options."
>
> "Concerned that the cost of the plan and the time to make it may 'eat into' time we have left."

Additional Engagement – September 2023

At the September meetings, the CRD Climate Action Inter-Municipal Working Group (IMWG) (i.e., staff) and CRD Climate Action Inter-Municipal Task Force (Task Force) (i.e., elected officials) were presented with the summary themes from this report and implications were further discussed.

At the IMWG meeting on September 20, 2023, staff reiterated concerns around capacity and the potential for this work to detract from other workplan priorities. The City of Victoria has been directed by Council to consider Climate/Carbon budgeting and intends to report back shortly. Some members noted that Climate/Carbon budgeting is much more appropriate for corporate-focused decision making versus community-wide. Some staff indicated that they may be interested in utilizing certain elements of the climate budgeting framework in the near term, and others noted that they are not prepared to embed this in municipal processes at this time but may consider it in the future. Regarding greenhouse gas accounting, some members noted that it is important to focus on the big moves rather than become stuck in the minutia. Further, some members noted if additional resources are available, they should be directed at adaptation programming, as this remains a gap in many local/regional programs.

At the Task Force Meeting on September 29, 2023, members of the Task Force who attended the workshop shared their perspectives and expressed concern about the utility of Climate/Carbon Budgeting, especially when considering the current state of global emissions. The use of Climate/Carbon Budgeting frameworks as a public engagement tool was contrasted with existing tools, such as the forthcoming Extreme Heat Vulnerability dashboard, Saanich Carbon Calculator, the Oak Bay Coolkit program, the Climate Action to-go Kits and outreach specific to the Home Energy Navigator and its home decarbonization focus.

Opportunities and Challenges

There is a clear desire among workshop attendees for local governments to continue to take accelerated action to reduce carbon pollution. We heard from workshop participants that Climate/Carbon Budgeting offers a unique opportunity to support a low carbon future by focusing attention on a calculated pathway to reduce regional CO_2 emissions. It also focuses attention on important areas, such as spheres of influence and inter-jurisdictional governance. However, the pathway to implementing a Carbon/Climate Budget is difficult and the resulting governance system is somewhat unclear. Below we outline the opportunities and challenges associated with engaging in this work.

Projects that are difficult to quantify

One of the challenges relates to projects that are difficult to quantify, including those pertaining to resilience in the face of changing climate. The CRD has successfully created several tools (e.g., regional/local government greenhouse gas inventories, 2017 Climate Projections for the Capital Region report, 2020 Coastal Flood Inundation Report, etc.) that have been utilized by local governments in the region as a launching point to leverage further work. In some cases, the scale or scope of this type of work is difficult to quantify and is challenging to fit into a Climate Budgeting framework. In other cases, results do not always directly correlate to emission reductions *per se.* Consequently, the methodology would need to build in difficult-to-quantify projects.

Qualification versus quantification

While mainstreaming climate action is a major outcome of Climate/Carbon Budgeting, qualitative evaluation was observed by some Canadian practitioners as the primary means for achieving mainstream impacts on project decisions. At the same time, the C40 Cities expert in Climate Budgeting reminded the audience that quantitative evaluations of projects are crucial to the Climate/Carbon Budgeting process as they inform further decisions about the number and scale of projects needed to meet emissions targets, yet many quantitative evaluations are time-consuming and may not be timely enough to impact annual budget decisions.

Transparency that people understand

There is a need to balance transparency and plain language communications. The climate communications research described by Cara Pike from Re.Climate, and participants' reflections, indicate that local governments need to communicate their efforts in plain language. The more technical and jargon-filled our work becomes, the more challenging the issue of communicating the relevance of climate action is. Local governments would need to more thoroughly consider how we communicate this work.

Inter-jurisdictional buy-in and harmonization

Inter-jurisdictionally, local governments need to agree to implement a Climate Budget, or an analogous project. The CRD has no jurisdictional authority to mandate the internal processes of individual municipalities. Individual local governments would need to commit internal resources and potentially create a mandate to implement this work.

Local Climate Budgets would need to be balanced against the granting requirements of higher levels of government. Because so much of municipal infrastructure funding is obtained through grants, or other cooperative funding processes, effort would need to be made to align the project with the direction of senior levels of government. Process development would need to balance individual municipal needs and inter-jurisdictional harmonization.

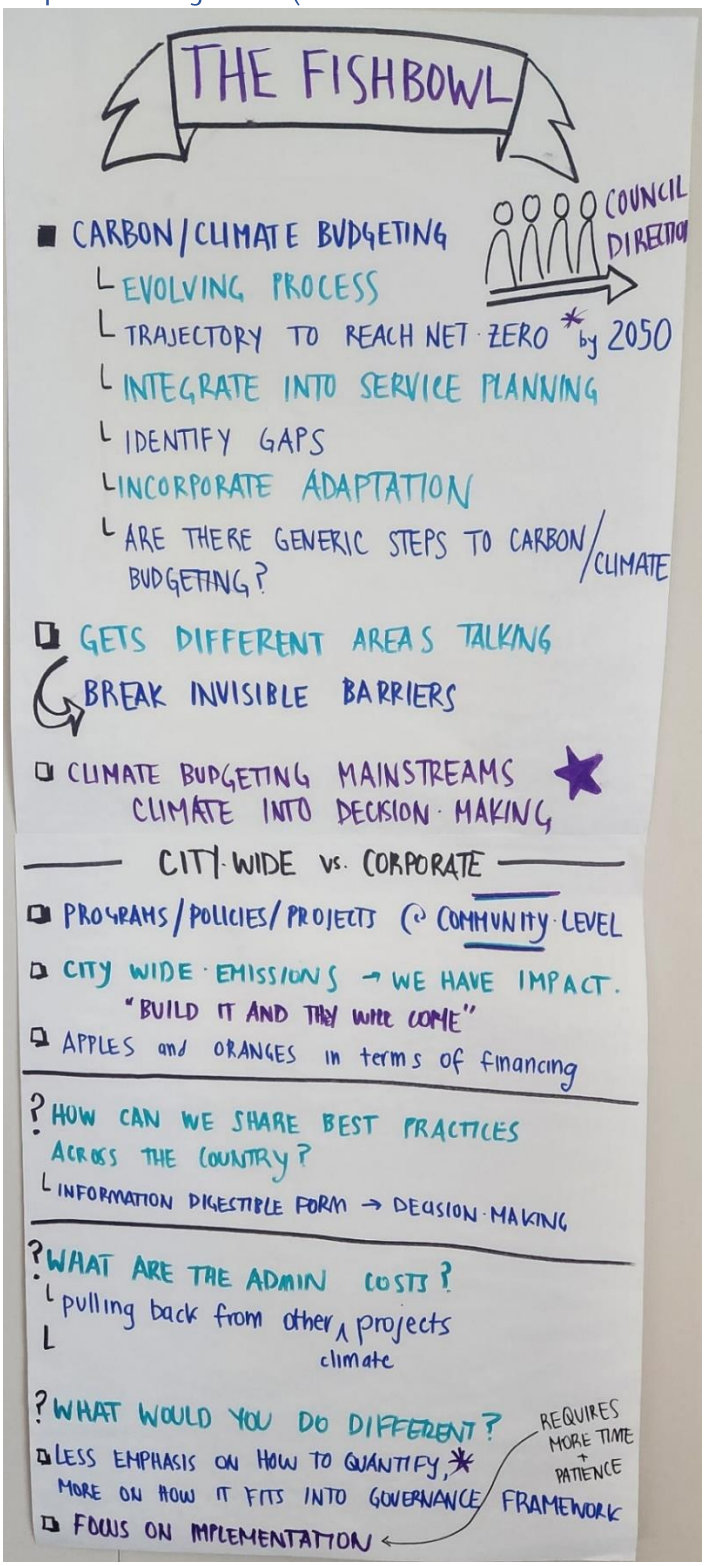
Appendix A – Agenda and Speakers

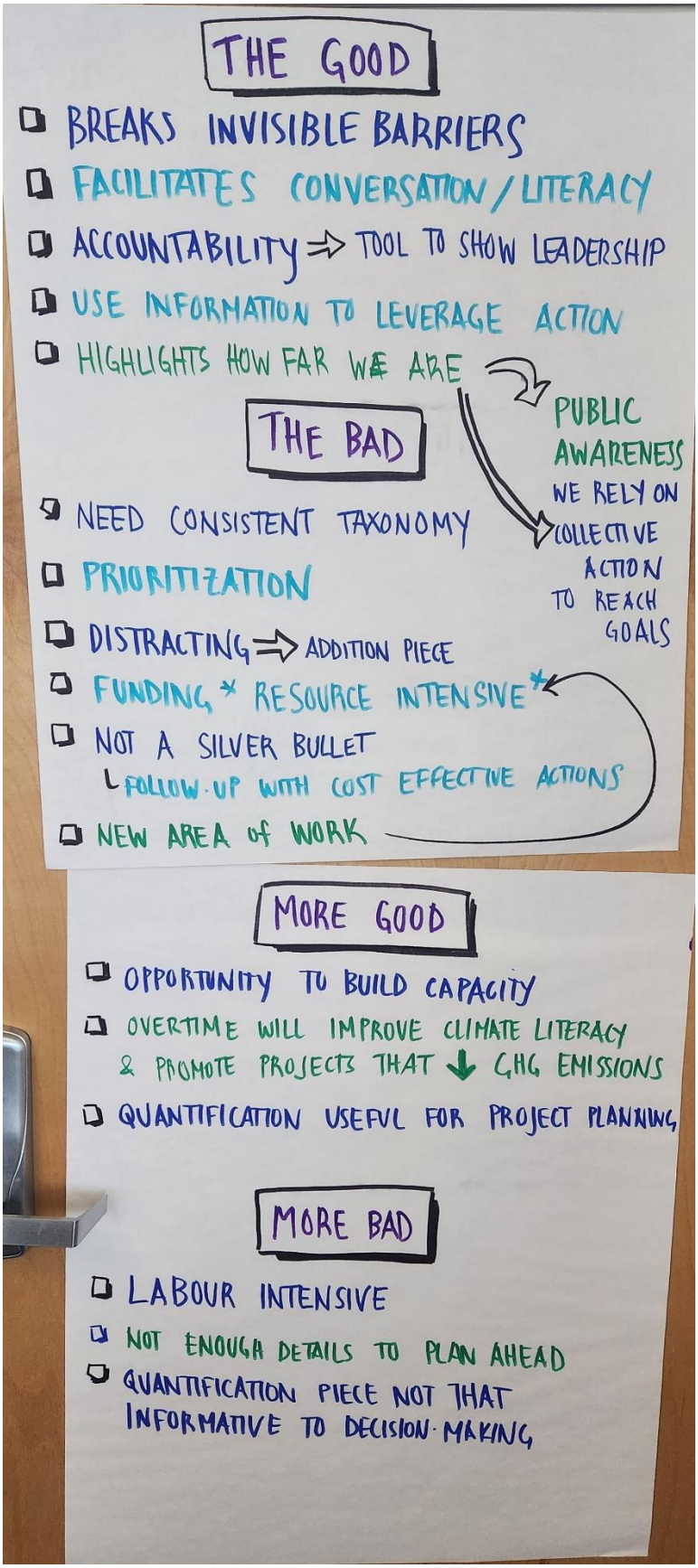
Agenda:

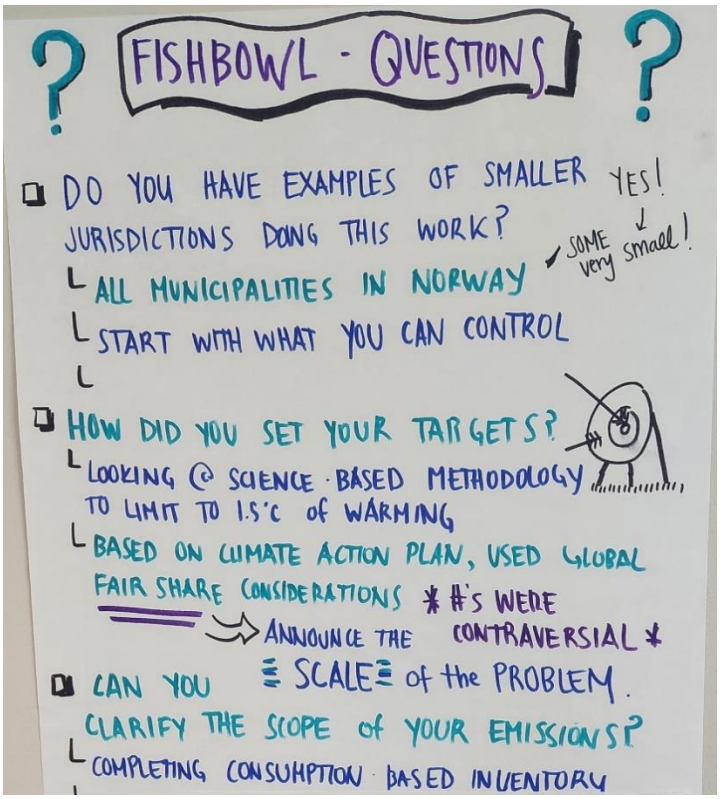
- Carbon and Climate Budget user experience fishbowl with...
    - Marc-Oliver Pepin: *Villa De Montrèal*
    - Amber Weckworth: *City of Saskatoon*
    - Nancy Chow: *City of Edmonton*
    - Catrin Robertsen: *C40 Cities*
    - Merdeces Broda: *City of Calgary*
    - Claire Beckstead: *City of Calgary*
    - Brad Badelt: *City of Vancouver*
- Local Government Context with...
    - Rebecca Newlove: *District of Saanich*
    - Kira Gill-Maher: *Town of Sidney*
    - Nikki Elliott: *Capital Regional District*
- Climate Change Public Opinion and Engagement with Cara Pike: *Climate Access* and *RE: Climate*
- Workshop: Putting the Pieces Together with all attendees!

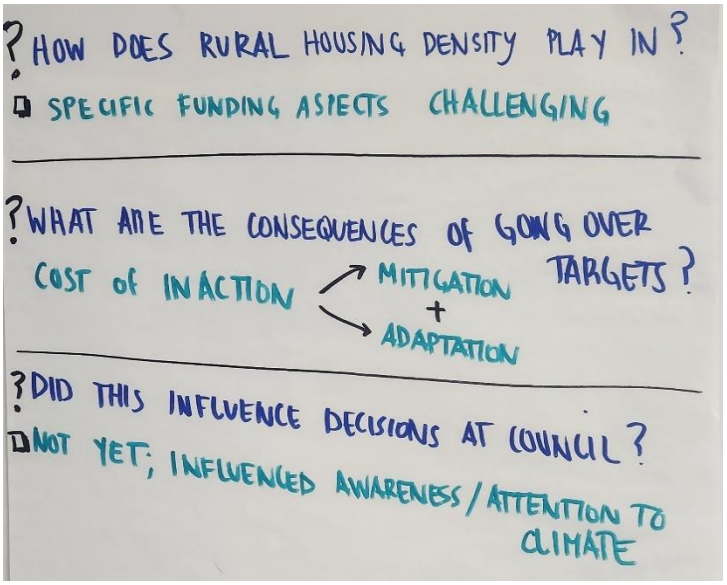
Appendix B – June 26, 2023 Meeting Notes

Graphic Meeting Notes (Fishbowl and Local Government Context)

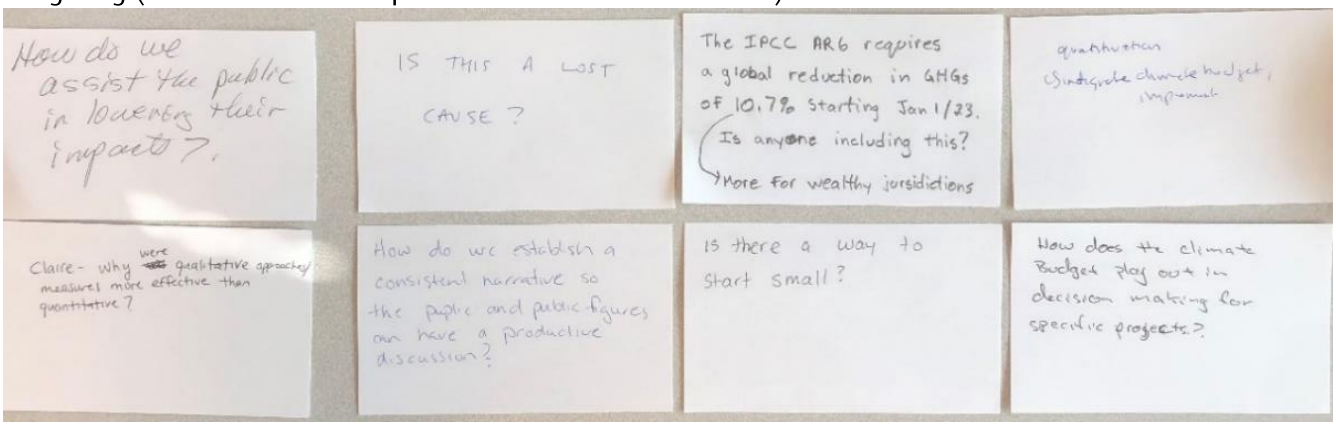


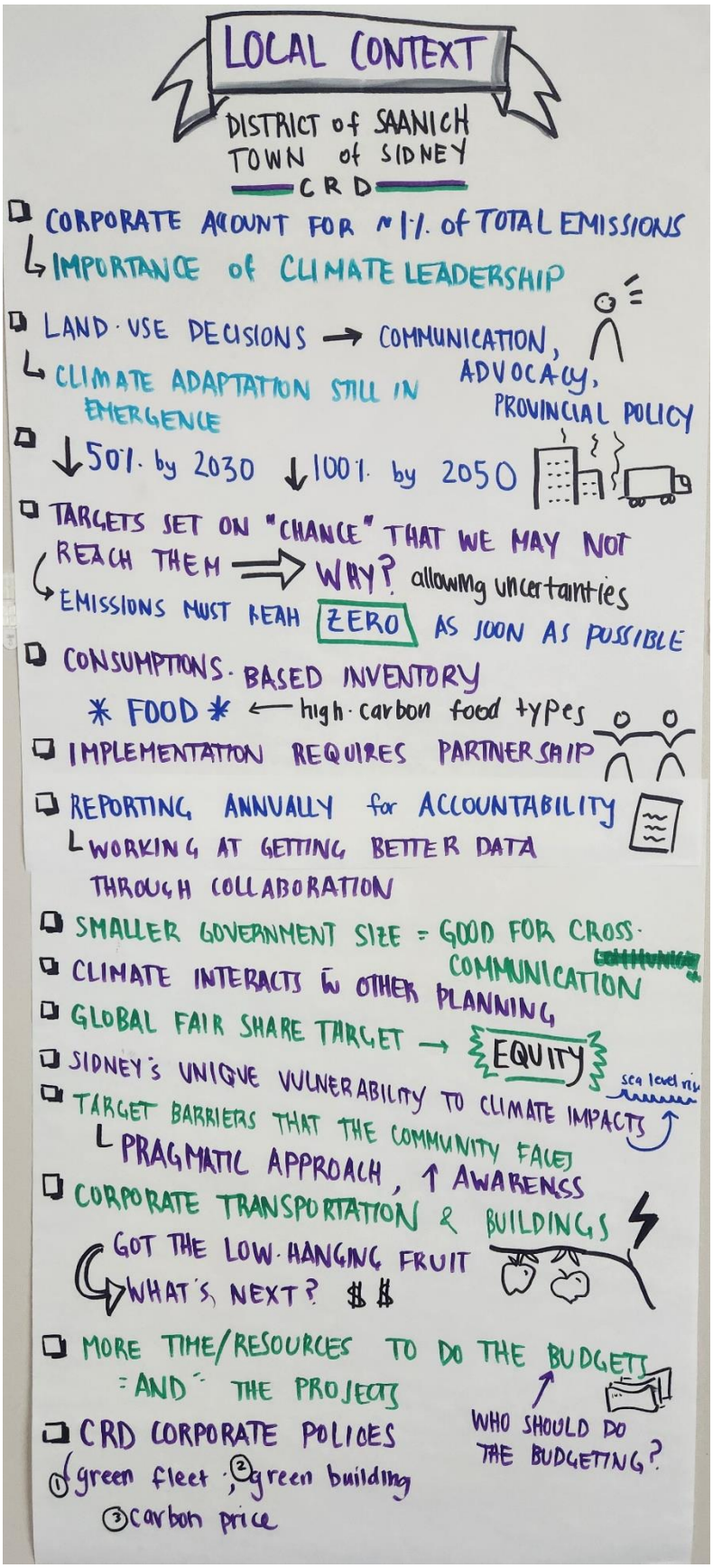

THE GOOD
BREAKS INVISIBLE BARRIERS
FACILITATES CONVERSATION / LITERACY
ACCOUNTABILITY ⇒ TOOL TO SHOW LEADERSHIP
USE INFORMATION TO LEVERAGE ACTION
HIGHLIGHTS HOW FAR WE ARE
PUBLIC AWARENESS WE RELY ON COLLECTIVE ACTION TO REACH GOALS
THE BAD
NEED CONSISTENT TAXONOMY
PRIORITIZATION
DISTRACTING ⇒ ADDITION PIECE
FUNDING * RESOURCE INTENSIVE *
NOT A SILVER BULLET
FOLLOW-UP WITH COST EFFECTIVE ACTIONS
NEW AREA of WORK
MORE GOOD
OPPORTUNITY TO BUILD CAPACITY
OVERTIME WILL IMPROVE CLIMATE LITERACY & PROMOTE PROJECTS THAT ↓ GHG EMISSIONS
QUANTIFICATION USEFUL FOR PROJECT PLANNING
MORE BAD
LABOUR INTENSIVE
NOT ENOUGH DETAILS TO PLAN AHEAD
QUANTIFICATION PIECE NOT THAT INFORMATIVE TO DECISION-MAKING


FISHBOWL - QUESTIONS
DO YOU HAVE EXAMPLES OF SMALLER JURISDICTIONS DOING THIS WORK?
YES!
SOME very small!
ALL MUNICIPALITIES IN NORWAY
START WITH WHAT YOU CAN CONTROL
HOW DID YOU SET YOUR TARGETS?
LOOKING @ SCIENCE-BASED METHODOLOGY TO LIMIT TO 1.5°C of WARMING
BASED ON CLIMATE ACTION PLAN, USED GLOBAL FAIR SHARE CONSIDERATIONS * #'S WERE CONTRAVERSIAL *
ANNOUNCE THE SCALE of the PROBLEM.
CAN YOU CLARIFY THE SCOPE of YOUR EMISSIONS?
COMPLETING CONSUMPTION BASED INVENTORY

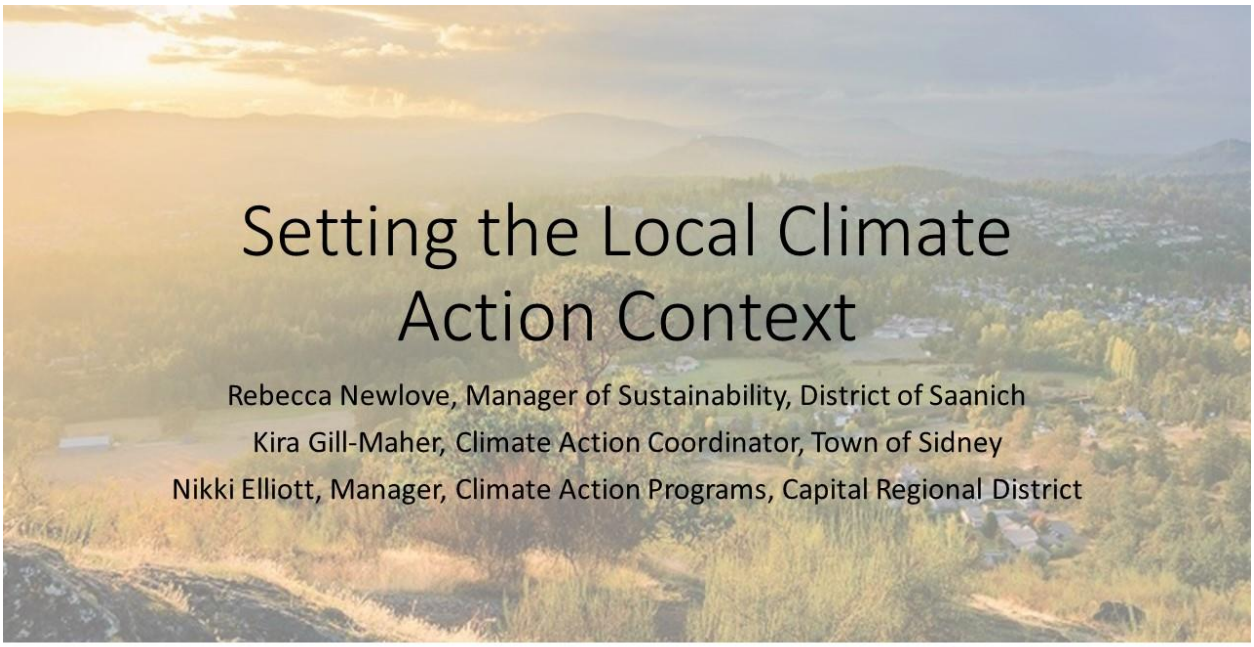

HOW DOES RURAL HOUSING DENSITY PLAY IN?
SPECIFIC FUNDING ASPECTS CHALLENGING
WHAT ARE THE CONSEQUENCES OF GOING OVER TARGETS?
COST of INACTION
MITIGATION + ADAPTATION
DID THIS INFLUENCE DECISIONS AT COUNCIL?
NOT YET; INFLUENCED AWARENESS / ATTENTION TO CLIMATE

Unanswered questions: To be noted as part of the ongoing conversation about carbon/climate budgeting (at least two online questions were lost in the ether).



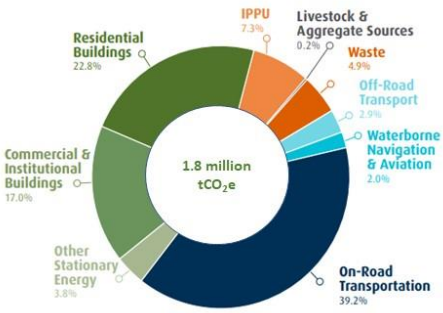

LOCAL CONTEXT
DISTRICT of SAANICH
TOWN of SIDNEY
CRD
CORPORATE ACCOUNT FOR ~1% of TOTAL EMISSIONS
IMPORTANCE of CLIMATE LEADERSHIP
LAND-USE DECISIONS → COMMUNICATION, ADVOCACY, PROVINCIAL POLICY
CLIMATE ADAPTATION STILL IN EMERGENCE
↓50% by 2030 ↓100% by 2050
TARGETS SET ON "CHANCE" THAT WE MAY NOT REACH THEM ⇒ WHY? allowing uncertainties
EMISSIONS MUST REAH ZERO AS SOON AS POSSIBLE
CONSUMPTIONS-BASED INVENTORY
* FOOD * ← high-carbon food types
IMPLEMENTATION REQUIRES PARTNERSHIP
REPORTING ANNUALLY for ACCOUNTABILITY
WORKING AT GETTING BETTER DATA THROUGH COLLABORATION
SMALLER GOVERNMENT SIZE = GOOD FOR CROSS-COMMUNICATION
CLIMATE INTERACTS W OTHER PLANNING
GLOBAL FAIR SHARE TARGET → EQUITY
SIDNEY'S UNIQUE VULNERABILITY TO CLIMATE IMPACTS
sea level ris
TARGET BARRIERS THAT THE COMMUNITY FACES
PRAGMATIC APPROACH, ↑ AWARENESS
CORPORATE TRANSPORTATION & BUILDINGS
GOT THE LOW-HANGING FRUIT
WHAT'S NEXT? $$
MORE TIME/RESOURCES TO DO THE BUDGETS = AND = THE PROJECTS
WHO SHOULD DO THE BUDGETING?
CRD CORPORATE POLICIES
① green fleet ; ② green building
③ carbon price

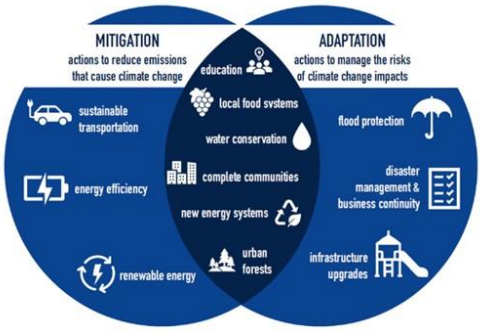
Presentation Slides: Setting the Local Context



Considerations

2020 Capital Region Community Energy Emissions





Local Government Relative Influence of GHG Emissions

High ⟵ ⟶ Low

Municipal infrastructure, buildings and fleet.	Transportation network Land use patterns Solid waste Building efficiency standards	Transportation mode share Residential and business energy efficiency Food security	Air travel Industrial energy efficiency Vehicle standards Energy utilities

Climate Action Implementation

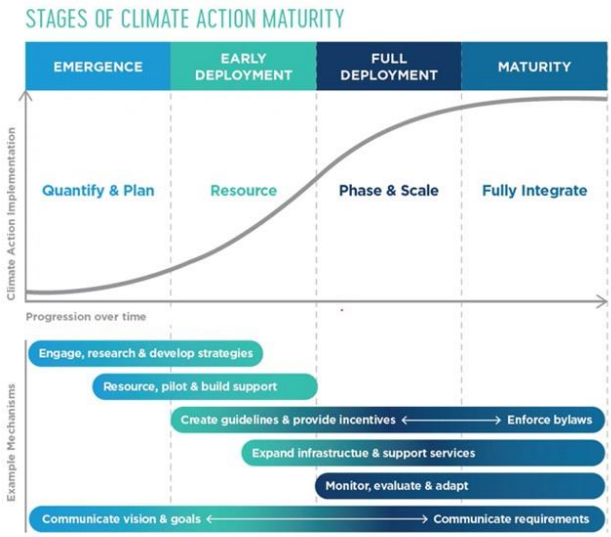
Infrastructure Investments

Policy and Regulation

Advocacy and input to Provincial & Federal policy, regulations & programs

Outreach

Community Programs & Incentives



City of Victoria, 2022

District of Saanich – Implementing our Big Climate Plan Moves

District of Saanich Climate Goals/Targets

Community-wide Targets

Corporate Targets

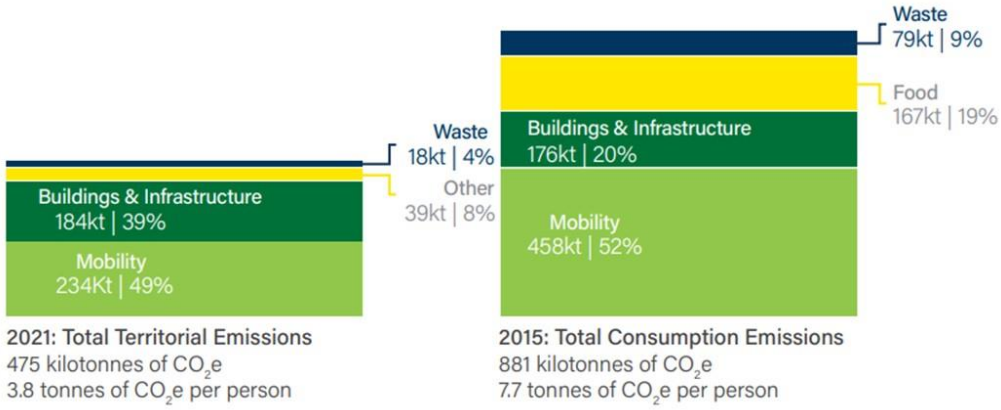
Establishing Climate Goals/Targets

- A carbon budget is distinct but related to setting GHG targets
- 2018 IPCC Special Report (SR15) - provided multiple estimates for the remaining global carbon budget
- Dependent upon different scenarios for limiting global warming to 1.5^{O}C
  - 66.6% chance = 420 $GtCO_2$ remaining (as of 2018)
  - 50% chance = 580 $GtCO_2$ remaining (as of 2018)
- Basis for our climate targets
  - Estimated a 45% reduction in global emissions needed by 2030 (from 2010 levels); and
  - Zero carbon by 2050

Assumptions & Uncertainties

- Permafrost thawing, methane release from wetlands = 100 $GtCO_2$
- Transient Climate Response to Cumulative Carbon Emissions = ±400 $GtCO_2$
- Uncertainties in levels of historic warming = ±250 $GtCO_2$
- Non-CO2 mitigation strategies = ±250 $GtCO_2$

Saanich GHG Emissions Inventory



2021: Total Territorial Emissions
475 kilotonnes of CO_2e
3.8 tonnes of CO_2e per person

2015: Total Consumption Emissions
881 kilotonnes of CO_2e
7.7 tonnes of CO_2e per person

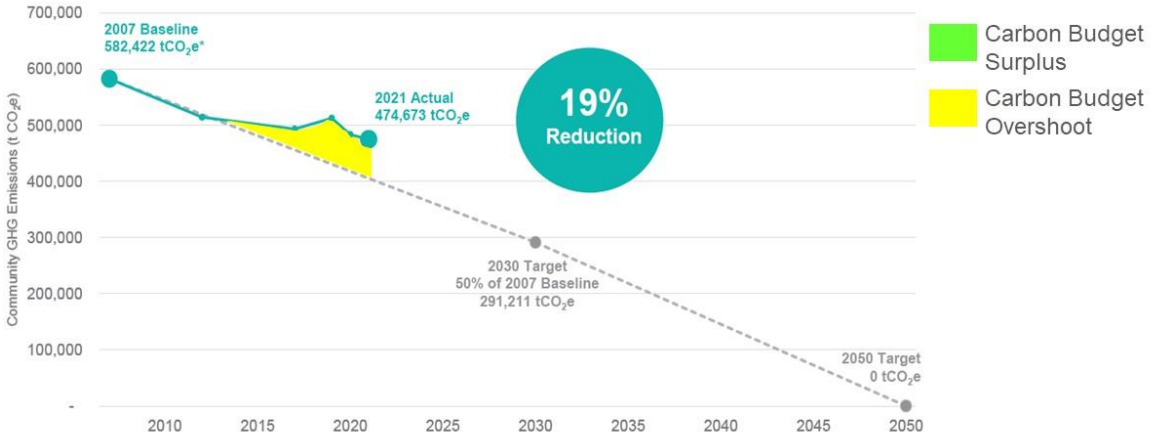
Saanich Climate Plan Focus Areas

Focus Area Content

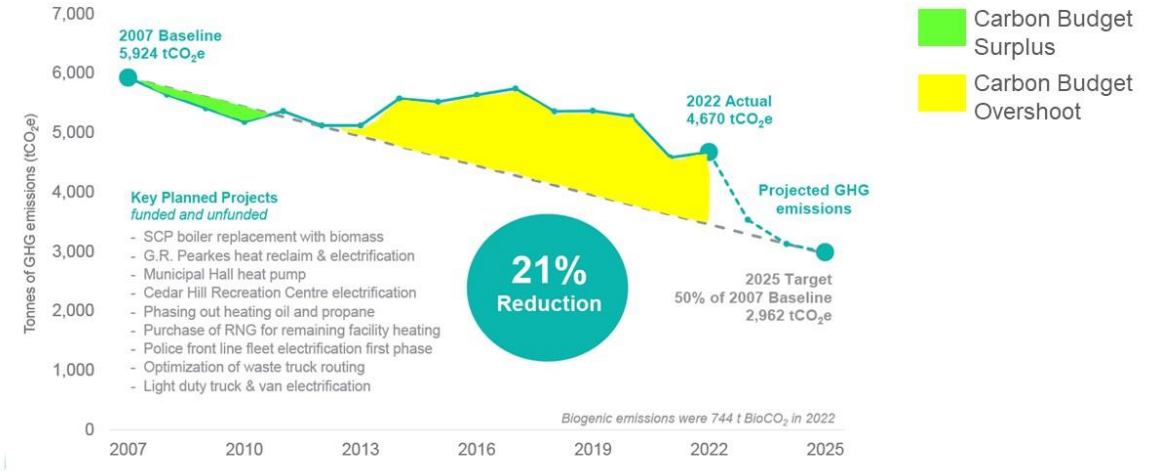
- Vision
- Metrics (Objectives) – indicators and targets
- Overarching Strategies
- Actions (total of 131 actions)

Saanich Climate Plan - Implementation

Progress on 2021 Community Emissions

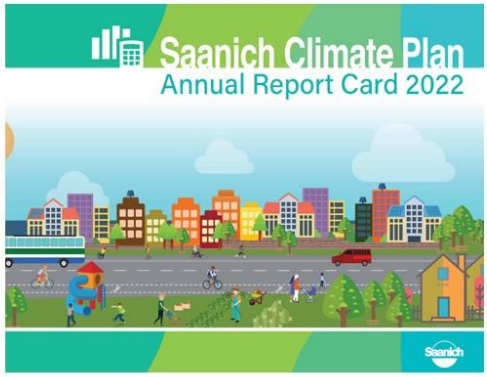


Progress on 2022 Corporate Emissions



Reporting, Transparency & Accountability

- Annual GHG Inventories & sub-metric measurement and monitoring
- Annual Climate Plan Report Card
  - Climate Action Working Group
  - Climate Plan Monitoring & Reporting Framework
  - Clearly assigned responsibilities
- Globally
  - CDP (Carbon Disclosure Project) & Global Covenant of Mayors
- Provincially
  - LGCAP (Local Government Climate Action Program)
- Financial – Task Force on Climate-Related Financial Disclosures



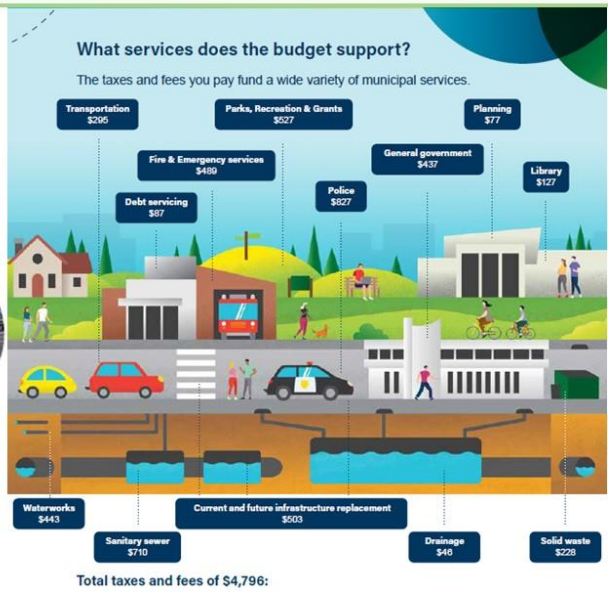
Climate Budgeting & Decision Making

- Carbon Budget - distinct from Climate Budgeting
- Key Budget Focus Areas – aligned with Climate & Sustainability

Key 2023 projects

- Shelbourne Street Improvement Project Phase 2 – $22.8M
- Sidewalk and cycling Installation Program – $3.6M
- Fleet, IT & other capital replacement for protective services – $1.6M
- Lochside/Fowler Park Renewal Phase 2 – $850K
- Pearkes HVAC upgrades – $3.1M
- Tree and Trails Programs – $1.3M

For detail on more capital projects go to the Capital Projects Guide 2023



Climate Budgeting & Decision Making

- Saanich Financial Plan & Budget
  - Provides funding for planned and ongoing activities that deliver on the Strategic Plan
- Strategic Plan
  - Aligns with OCP 'Sustainable Saanich"
  - Informed by Strategic Plans & Policies e.g. ATP, Climate Plan, Housing Strategy, Facilities Masterplan

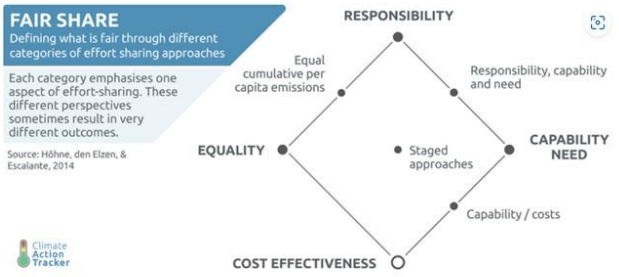
Examples of Evaluating GHG Emissions to support Budget

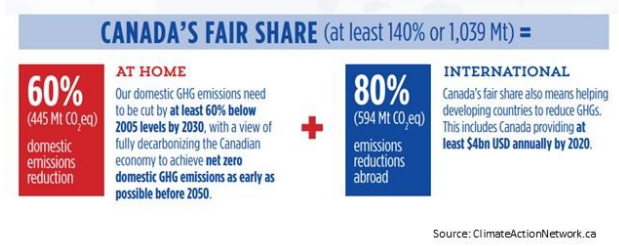
- Building Retrofit Strategy actions e.g. Oil to Heat Pump Financing Program, Revitalization Tax Exemption
- E-Mobility Strategy actions e.g. EV Ready Plan and E-Bike incentives
- Corporate facility upgrade projects e.g. Pearkes, Cedar Hill Rec Centre
- Grant applications - Rutledge Park Splash Park and Shelbourne Street Improvements Project Phase 2

Saanich Climate Plan Next Steps

CDP CITIES A LIST 2022

- Updated Climate Plan – 2025
- CDP A-List City & Race to Zero Cities commitment - Global Fair Share Target
- Global Fair Share Target
  - Allocates remaining budget to different regions based on historic responsibility, financial capacity to respond etc.
  - Several methodologies available
- Reach net zero as soon as possible
- While also addressing Climate Adaptation and Sustainability Values
  - Cost of Doing Nothing
  - Innovative and new funding opportunities

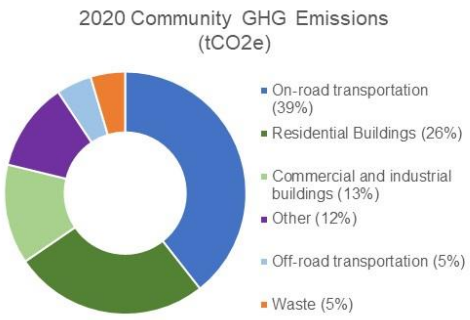


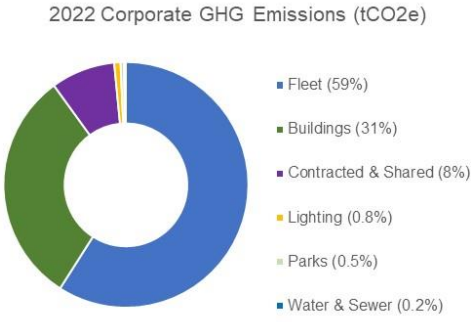


Town of Sidney– Implementing our Big Moves - a Small(er) Community Perspective

Sidney and Climate Change

What are the biggest GHG emissions sources?





What are the community's Climate Risks?

Less Predictable Precipitation

Increasing Temperatures

Sea Level Rise

Sidney and Climate Action

How is Sidney advancing climate action?

Following the updated Climate Action Plan (2022)
Interdepartmental and intergovernmental collaboration

Prioritizing actions in high emissions sources categories
- **Community**: Transportation (44%), buildings (39%)
- **Corporate**: Transportation (59%), buildings (31%)

Prioritizing actions that respond to Sidney's local climate risks
- **Ongoing**: Integrating climate change risk information into decision-making
- **Project-based**: Sea level rise adaptation project
- Emergency management planning

How does Sidney track and report?

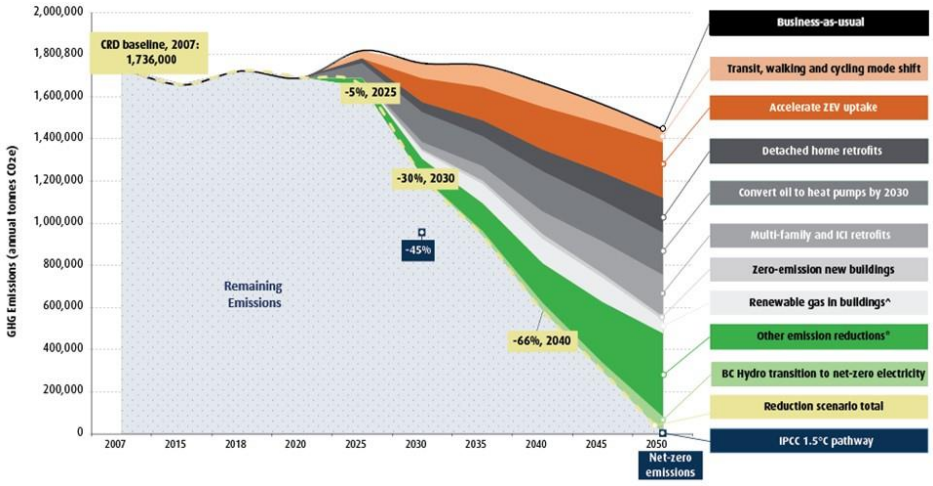
Tracking internally
- Action tracking spreadsheet

Reporting externally
- Town Annual Report (starting 2023)
- Provincial reporting: LGCAP (previously CARIP)

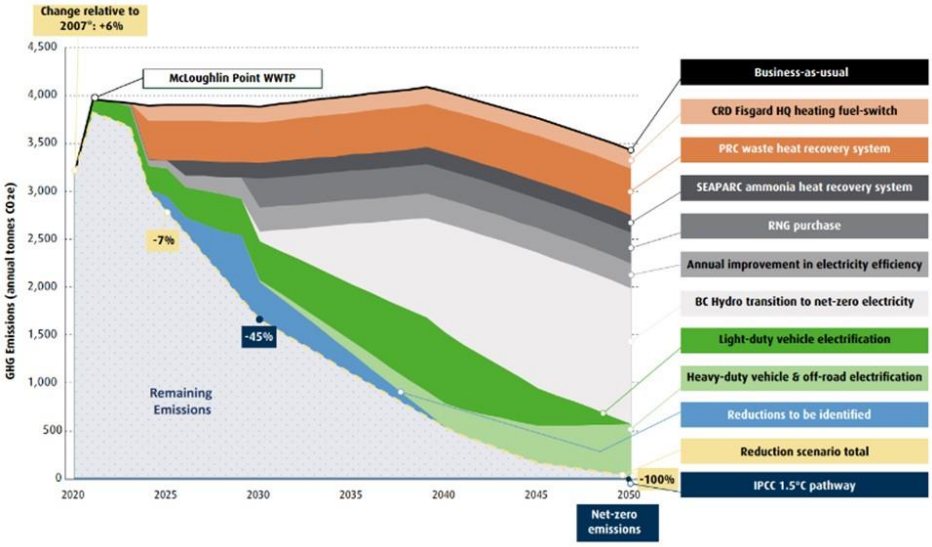
Leveraging regional tracking & reporting
- Community emissions inventory (Released biannually by CRD)
- Regional climate risks assessed by CRD & Province

Capital Regional District– Implementing our Big Moves

Community Emissions Reduction Plan



CRD Corporate Emissions Reduction Plan



Climate Action Strategy


Climate Focused Decision Making


Low-carbon and resilient buildings and infrastructure


Sustainable land use, planning and preparedness

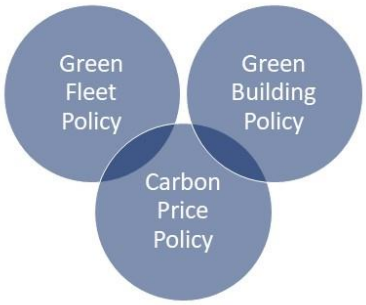

Resilient and abundant nature, ecosystems and food systems


Low-carbon mobility


Minimized waste

Climate Focused Decision Making

- Data and research
  - Corporate and community GHG tracking
  - Climate impacts
- Corporate policies and procedures
  - Service planning
  - Procurement (various)
  - Asset management
  - Risk
  - Etc.
- Capacity building and education
- Staff report implications
- Annual progress reporting



Remaining Goal Areas

- Monitoring of various regional indicators (land use, transportation, GHGs)
- Administer various inter-municipal/inter-agency committees (climate, planning, transportation, emergency management, invasive species, etc.)
- Emergency management in EAs

- Managing and expanding regional trail system
- EV infrastructure planning and investments
- Board transportation priorities (active transportation) and governance discussion

- Retrofit programming
- Step Code policy support
- Climate impact data procurement and training

- Regional parks management and acquisition
- Drinking water supply
- Watershed protection and invasive species programming

- Solid Waste Management Plan implementation
- Landfill gas capture and use

Presentation Slides: Cara Pike, Re.Climate Communicating for Change

Re.Climate is Canada's new centre for training, research and strategy on climate change communication and engagement at Carleton University.

Re.Climate

Carleton University | Centre for Climate Communication and Engagement

Welcome!

WHAT DO CANADIANS REALLY THINK ABOUT CLIMATE CHANGE?

A Summary of Public Opinion Research and Tips for Communicators
2023

Concern about climate change

"Canadians have a view about where 'the puck is going' and believe that the investments will flow to lower carbon innovations wherever possible. They both have confidence that we can succeed in this evolving global economy and want policy that helps Canada adapt and benefit from these trends, rather than avoid or ignore the trends."

BRUCE ANDERSON
Chairman, Abacus Data

Extreme weather

Climate change is making extreme weather events worse

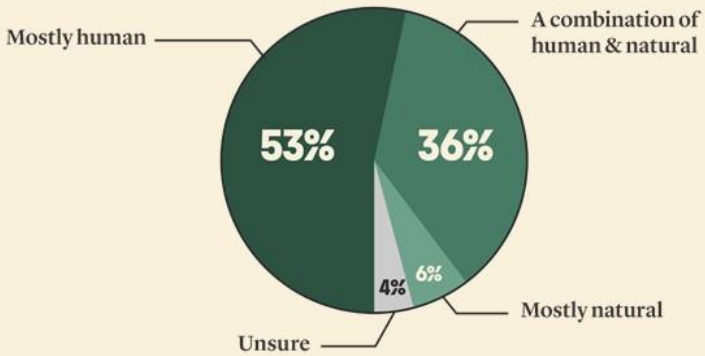
Report experiencing extreme weather-related events in the past year

Think extreme weather events will occur more often

Is it us?

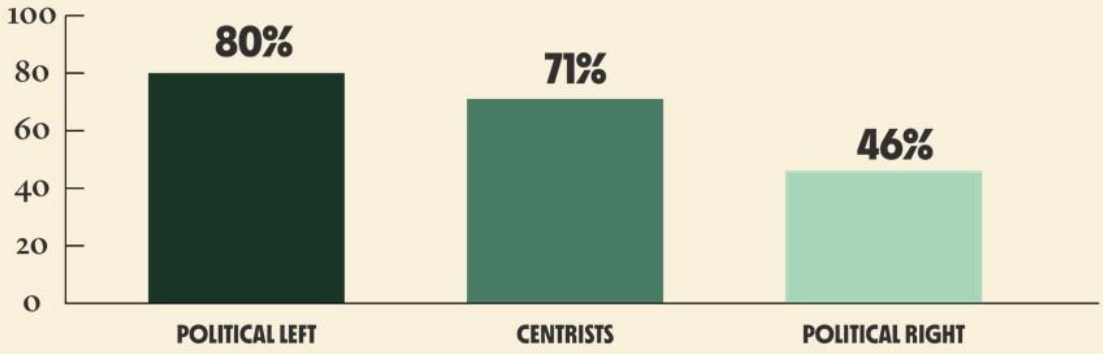
"Is the Earth getting warming because of human activity?"

Source: Lachapelle & EcoAnalytics Research Initiative 2022



A political divide

"Climate change is a major threat."



Source: Pew 2022

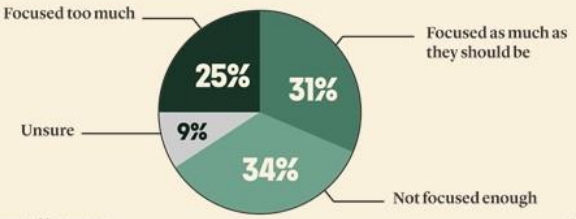
Demand for action

"The government should be doing a lot more or somewhat more to address climate change"

Source: Lachapelle & EcoAnalytics Research Initiative 2022

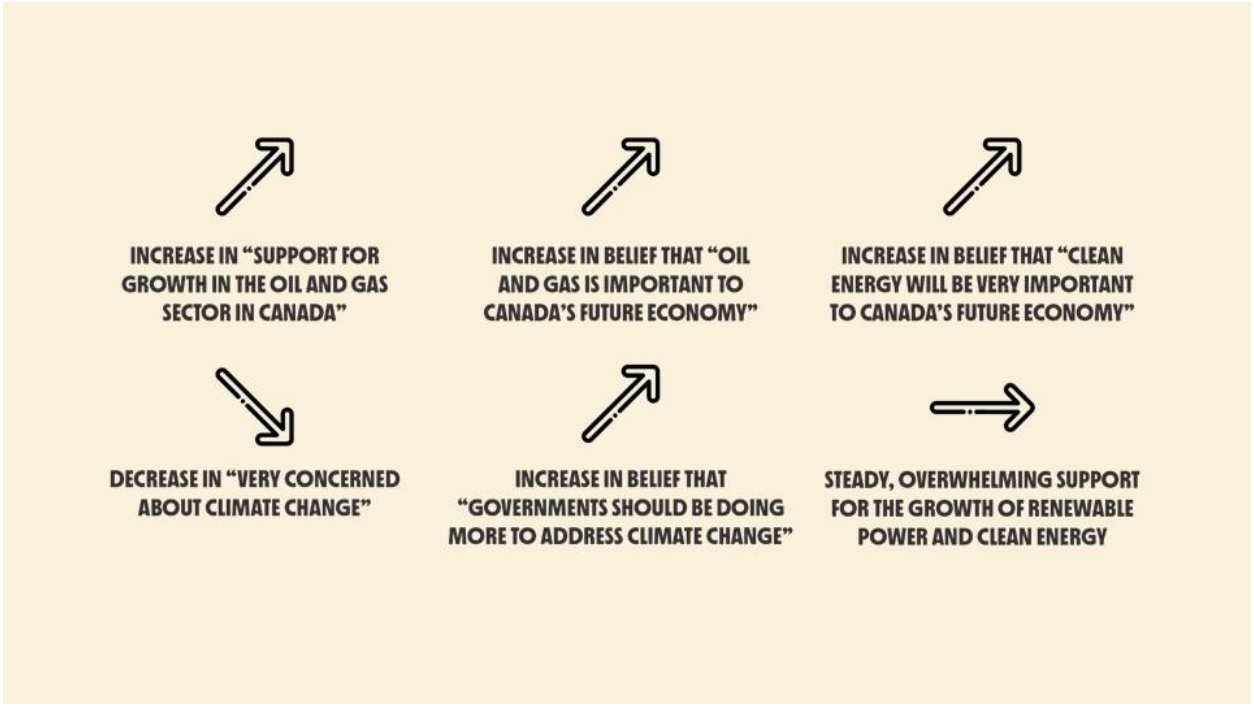
Satisfaction

Q: "To what extent are Justin Trudeau and the federal government genuinely focused and working hard to deal with climate change?"



Due to rounding, total may not add up to 100%

Source: Abacus 2023

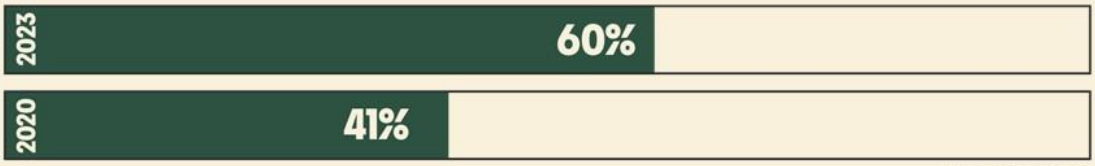


ENERGY TRANSITION

Charge in all directions

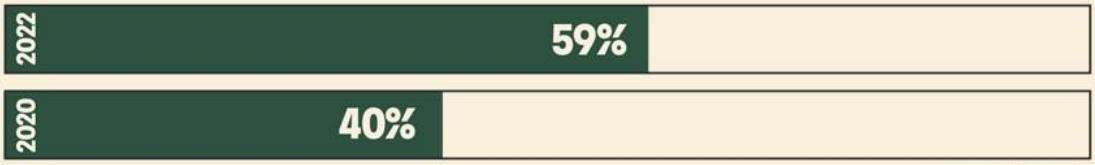
Clean energy and fossil fuels

Oil and gas will be important to Canada's future economy



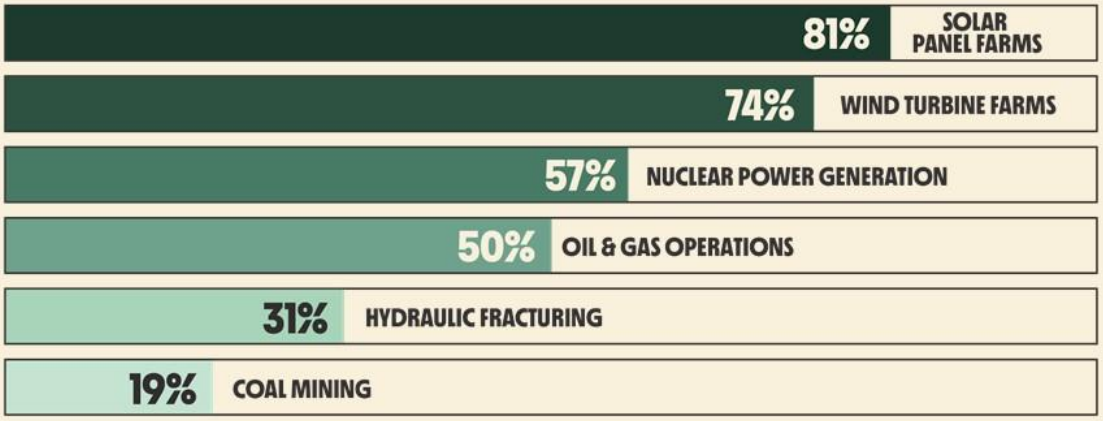
Source: Nanos 2023

Clean energy will be very important to Canada's future economy



Source: Abacus 2022

Canadians' support for different types of energy

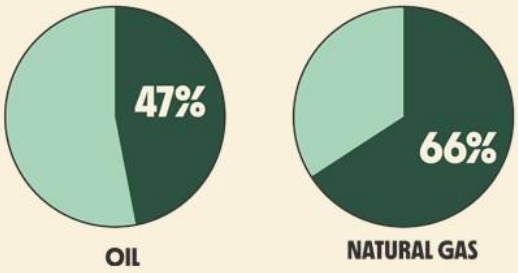


Source: Angus Reid 2023

Gas vs. oil

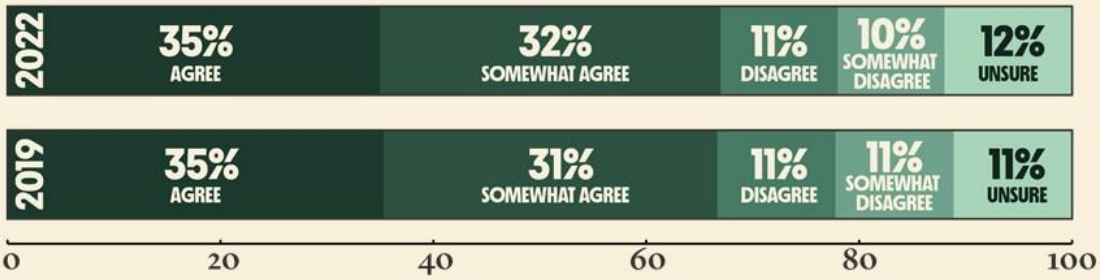
"Canadian public policy should put a priority on making sure we are highly competitive in this sector."

Source: Abacus 2022



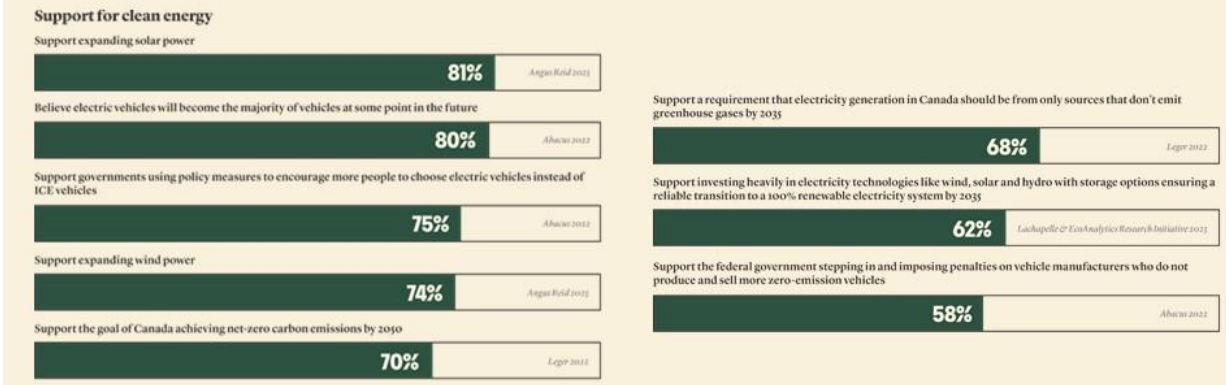
Can exports from oil and gas combat climate change?

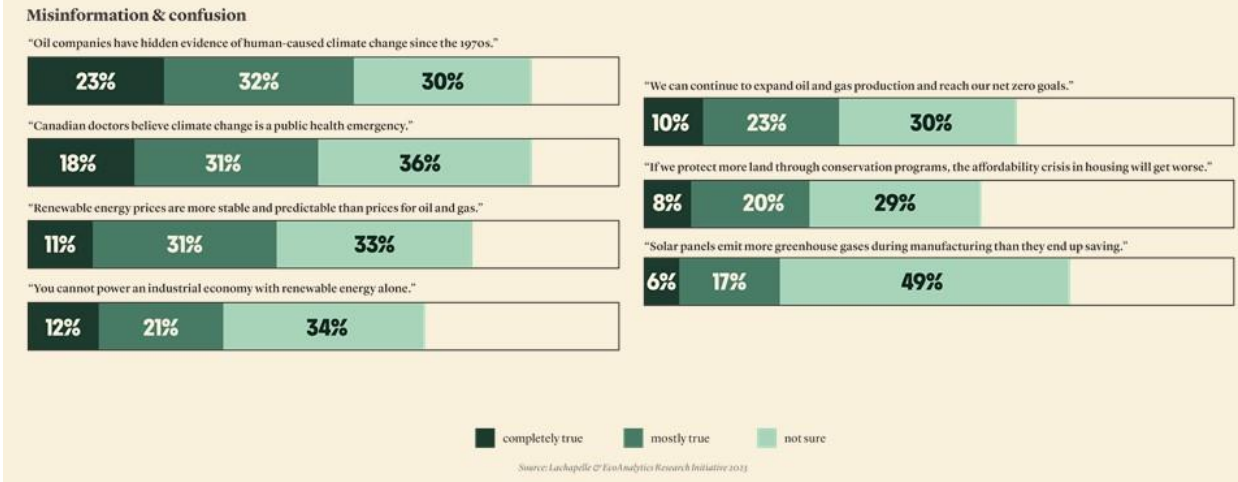
Do you agree, somewhat disagree or disagree that exports from Canada's Oil and Gas sector can contribute to combatting global climate change if our exports displace energy sources in other countries that are more damaging to climate?



Due to rounding, total may not add up to 100%

Source: Nanos 2022


Support for clean energy
Support expanding solar power
81%
Angus Reid 2023
Believe electric vehicles will become the majority of vehicles at some point in the future
80%
Abacus 2022
Support governments using policy measures to encourage more people to choose electric vehicles instead of ICE vehicles
75%
Abacus 2022
Support expanding wind power
74%
Angus Reid 2023
Support the goal of Canada achieving net-zero carbon emissions by 2050
70%
Leger 2022
Support a requirement that electricity generation in Canada should be from only sources that don't emit greenhouse gases by 2035
68%
Leger 2022
Support investing heavily in electricity technologies like wind, solar and hydro with storage options ensuring a reliable transition to a 100% renewable electricity system by 2035
62%
Lachapelle & EcoAnalytics Research Initiative 2023
Support the federal government stepping in and imposing penalties on vehicle manufacturers who do not produce and sell more zero-emission vehicles
58%
Abacus 2022


Misinformation & confusion
"Oil companies have hidden evidence of human-caused climate change since the 1970s."
23%
32%
30%
"Canadian doctors believe climate change is a public health emergency."
18%
31%
36%
"Renewable energy prices are more stable and predictable than prices for oil and gas."
11%
31%
33%
"You cannot power an industrial economy with renewable energy alone."
12%
21%
34%
"We can continue to expand oil and gas production and reach our net zero goals."
10%
23%
30%
"If we protect more land through conservation programs, the affordability crisis in housing will get worse."
8%
20%
29%
"Solar panels emit more greenhouse gases during manufacturing than they end up saving."
6%
17%
49%
completely true
mostly true
not sure
Source: Lachapelle & EcoAnalytics Research Initiative 2023

"This kind of confusion, and the misinformation that feeds it, is a vulnerability for the social acceptability of a clean energy transition."

ERICK LACHAPELLE
Professor of Political Science, Université de Montréal

CHALLENGE

What are the problems we're facing and the context they're happening in?

Example: Climate impacts are already causing harm and are on pace to continue.

CHOICE

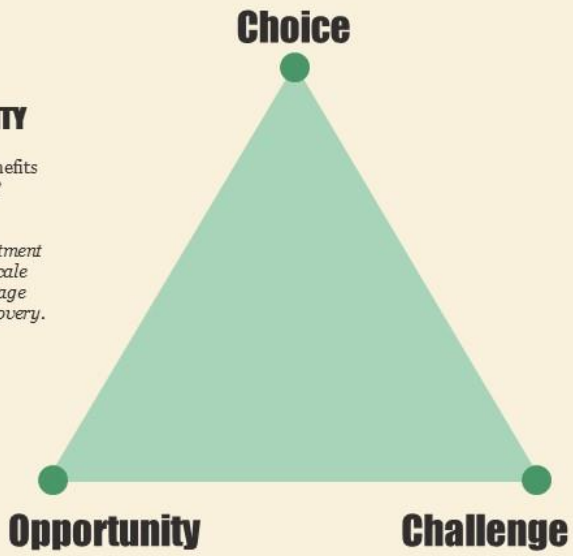
What action must be taken and why now?

Example: Motivate support for policies that emphasize safety and protection.

OPPORTUNITY

What are the benefits of taking action?

Example: Investment at community scale means less damage and quicker recovery.



NARRATIVE STRUCTURE

CHALLENGE

What are the problems we're facing and the context they're happening in?

Example: Rising energy poverty

CHOICE

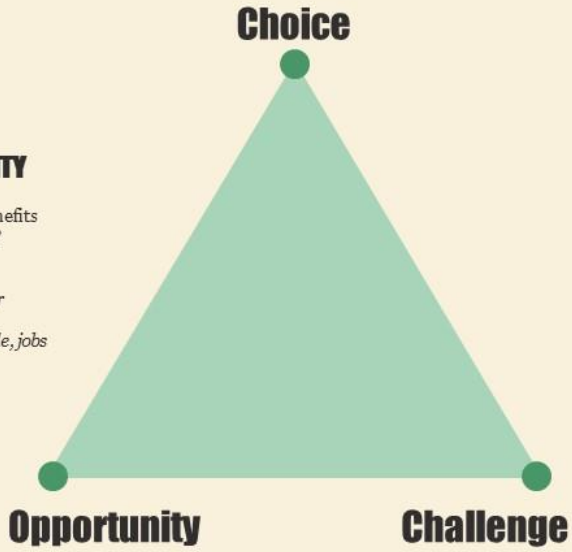
What action must be taken and why now?

Example: Small-scale community energy projects affordable through cooperative or subsidies

OPPORTUNITY

What are the benefits of taking action?

Example: Lower energy bills, community pride, jobs



Entry Points for Centre and Centre-Right

1

Preparation, protection, safety to deal with wildfires, flooding, heat-stress, infection disease.

2

Health and air pollution – indoor and outdoor.

3

Nature protection, restoration.

4

Affordability and clean energy.

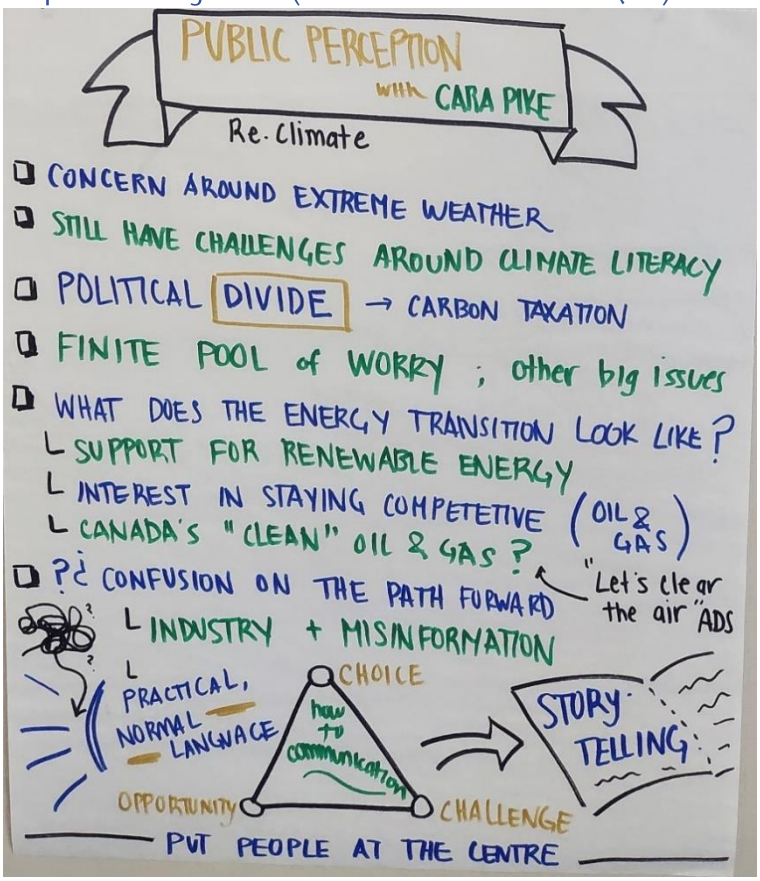
Less waste and retrofits.

Economy and jobs.
Mental health.
Food and water security.

Powerful (Plain) Language

INSTEAD OF...		CONSIDER...
Economic benefits	→	Good, stable jobs, new businesses
Just transition, equity + inclusion	→	Putting people at the heart, fairness, accessible for all
Social	→	Communities, neighborhoods, families
Environment	→	Nature, forests, animals, rivers, oceans, food, clean water
Low-carbon	→	Pollution-free, modern, clean
Mitigation + emissions	→	Pollution, heat-trapping blanket
Adaptation	→	Actions to reduce risk and vulnerability of damage

Graphic Meeting Notes (Cara Pike Presentation & Q&A)



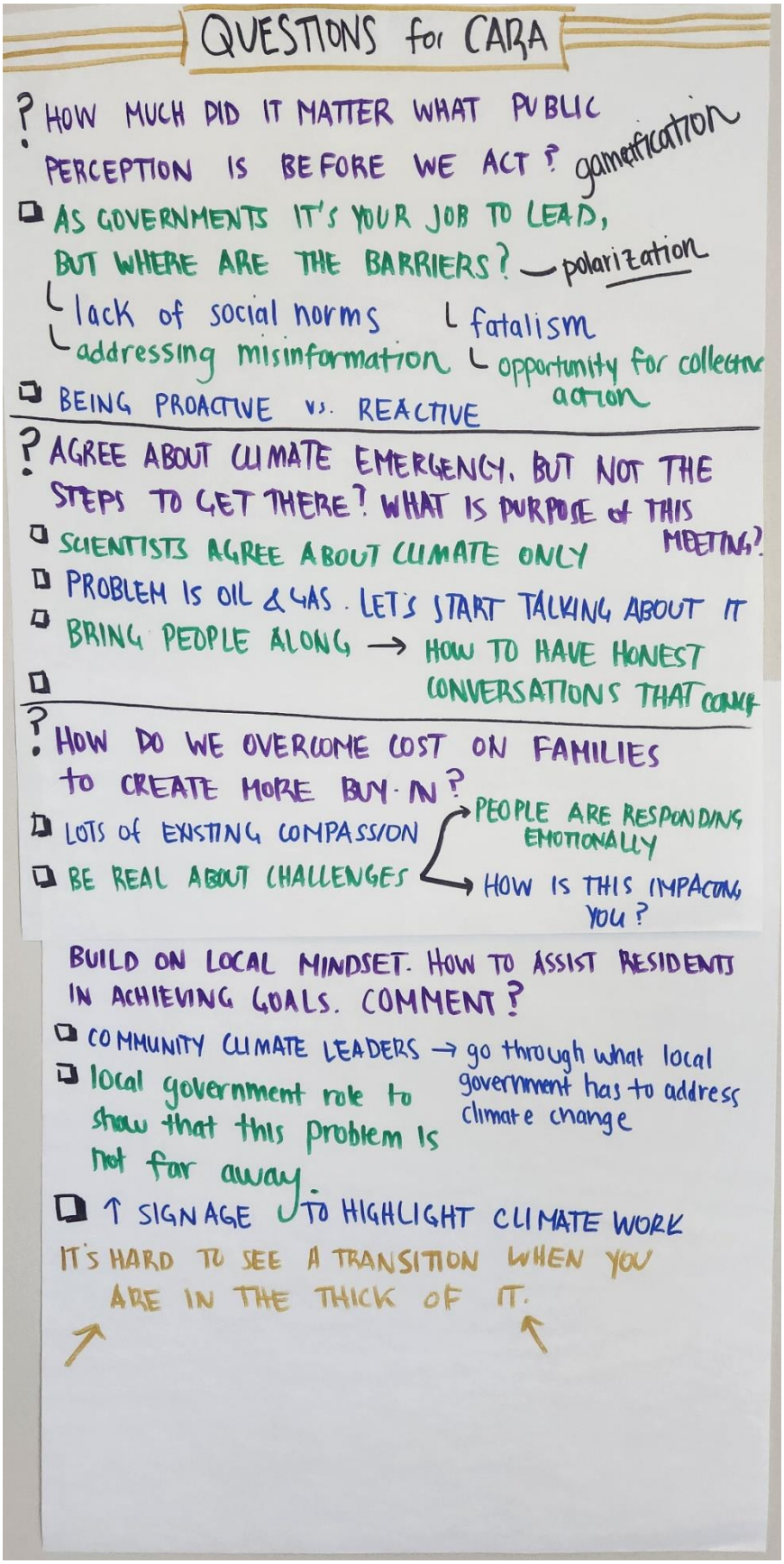
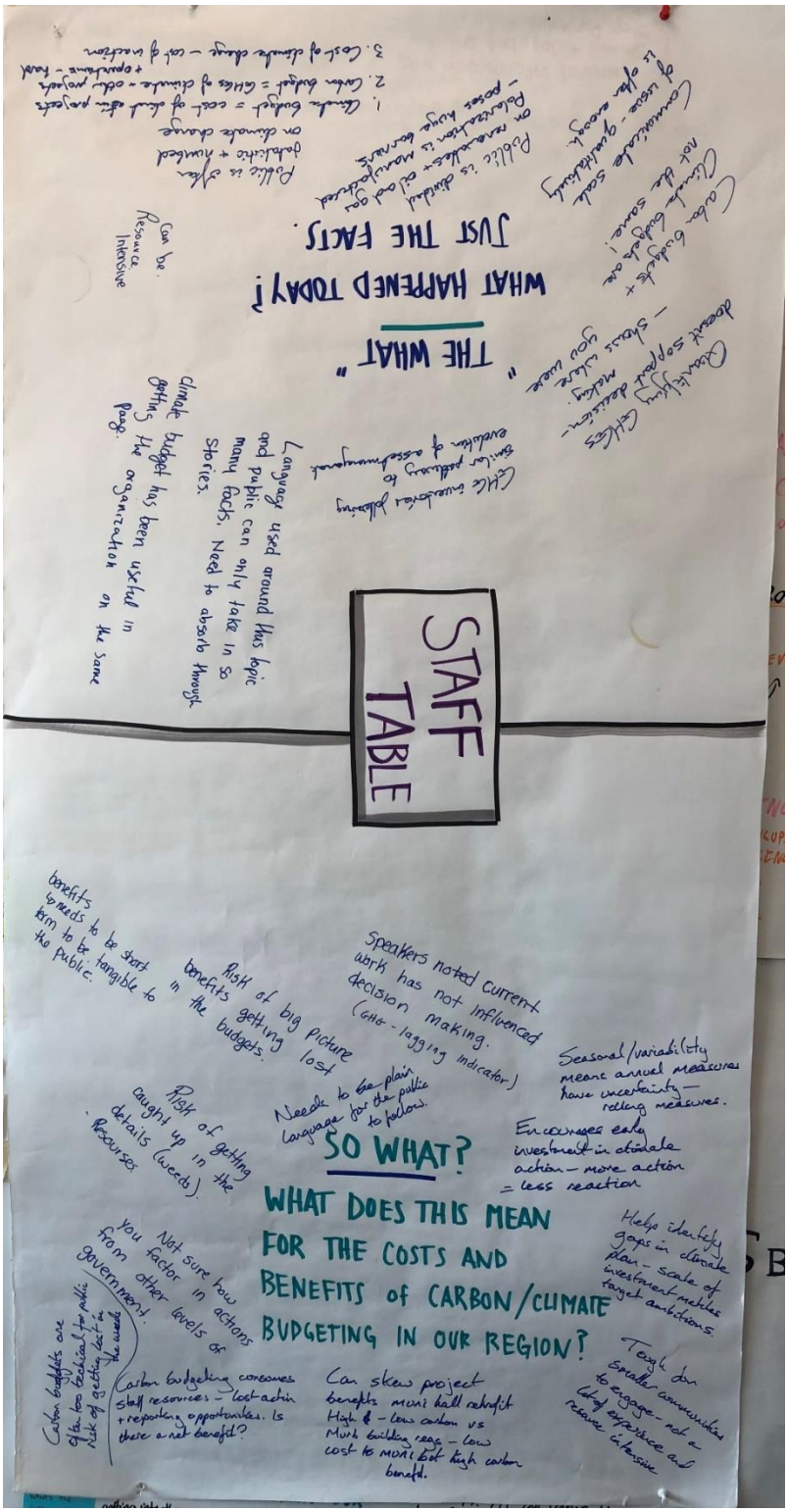
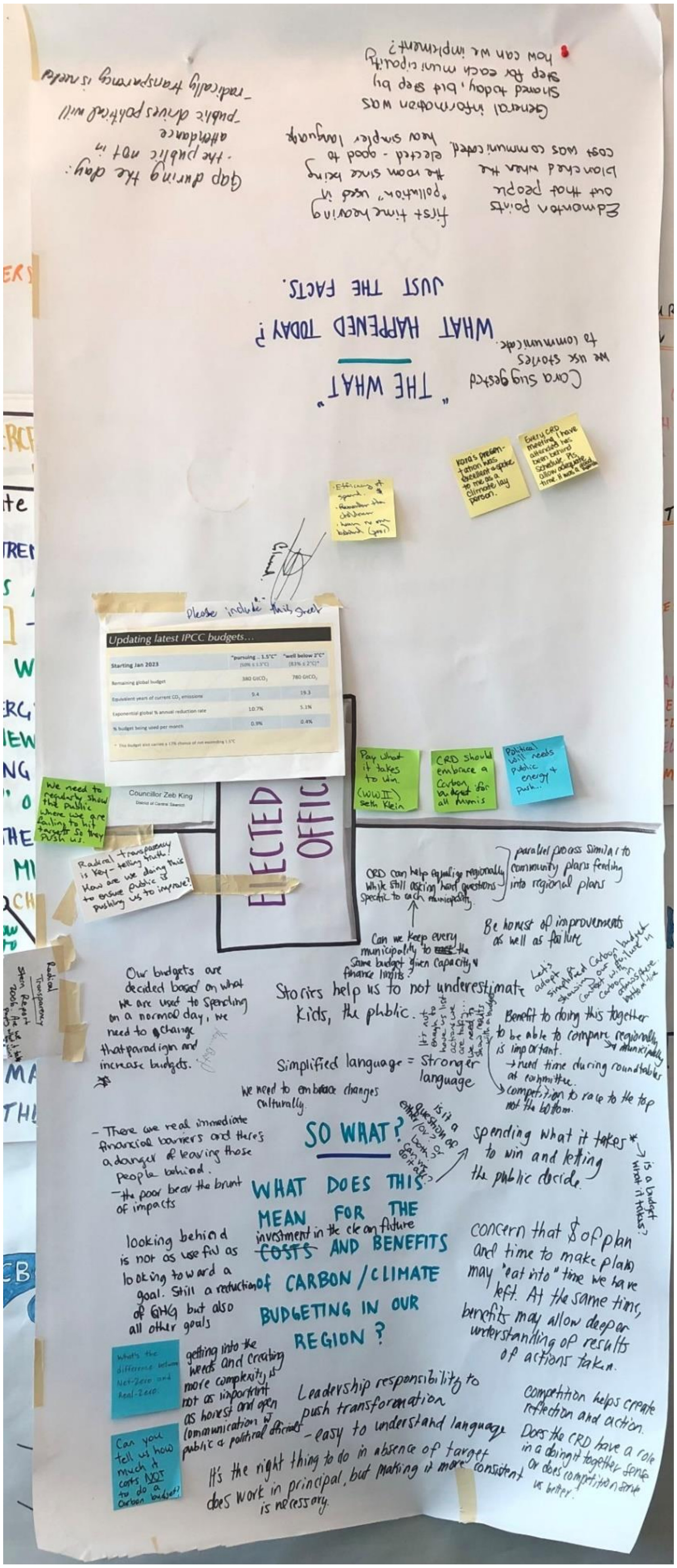
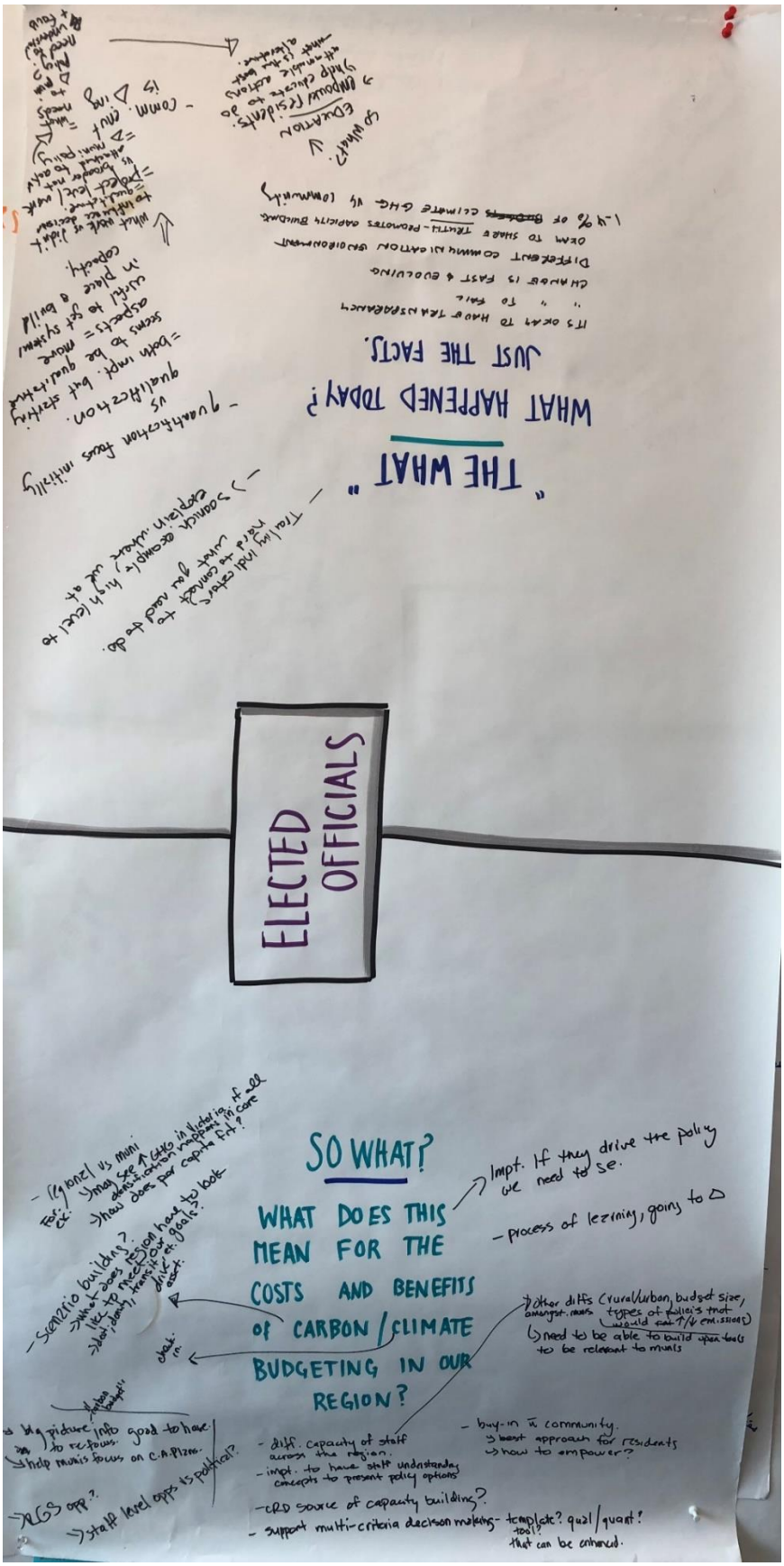
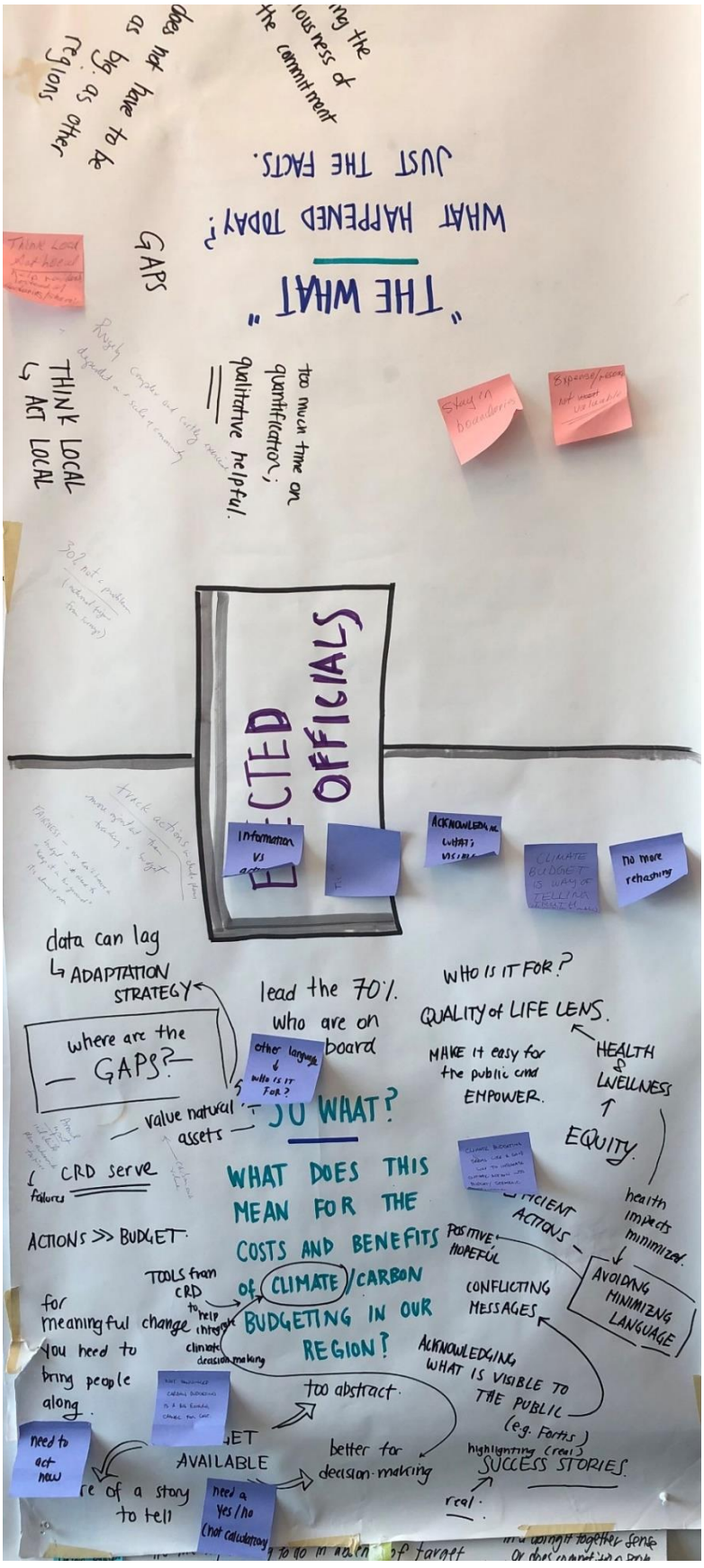

QUESTIONS for CARA
? HOW MUCH DID IT MATTER WHAT PUBLIC PERCEPTION IS BEFORE WE ACT? gamification
AS GOVERNMENTS IT'S YOUR JOB TO LEAD, BUT WHERE ARE THE BARRIERS? polarization
lack of social norms
addressing misinformation
fatalism
opportunity for collective action
BEING PROACTIVE vs. REACTIVE
? AGREE ABOUT CLIMATE EMERGENCY, BUT NOT THE STEPS TO GET THERE? WHAT IS PURPOSE of THIS MEETING?
SCIENTISTS AGREE ABOUT CLIMATE ONLY
PROBLEM IS OIL & GAS. LET'S START TALKING ABOUT IT
BRING PEOPLE ALONG → HOW TO HAVE HONEST CONVERSATIONS THAT COUNT
? HOW DO WE OVERCOME COST ON FAMILIES to CREATE MORE BUY-IN?
LOTS of EXISTING COMPASSION
BE REAL ABOUT CHALLENGES
PEOPLE ARE RESPONDING EMOTIONALLY
HOW IS THIS IMPACTING YOU?
BUILD ON LOCAL MINDSET. HOW TO ASSIST RESIDENTS IN ACHIEVING GOALS. COMMENT?
COMMUNITY CLIMATE LEADERS → go through what local government has to address climate change
local government role to show that this problem is not far away.
↑ SIGNAGE TO HIGHLIGHT CLIMATE WORK
IT'S HARD TO SEE A TRANSITION WHEN YOU ARE IN THE THICK OF IT.

Table Workshop Notes and Transcriptions




Gap during the day:
- the public not in attendance
- public drives political will
- radically transparency is needed
Edmonton points out that people blanched when the cost was communicated.
first time having "pollution" used in the room since being elected - good to hear simpler language
General information was shared today, but step by step for each municipality how can we implement?
"THE WHAT"
Cara suggested we use stories to communicate.
WHAT HAPPENED TODAY?
JUST THE FACTS.
Please include this sheet
Updating latest IPCC budgets…
Councillor Zeb King
ELECTED OFFIC
We need to regularly show the public where we are failing to hit targets so they push us.
Radical transparency is key - telling truth! How are we doing this to ensure public is pushing us to improve?
Pay what it takes to win. (WW II) Seth Klein
CRD should embrace a Carbon budget for all Munis
Political will needs public energy + push…
CRD can help equalize regionally while still asking hard questions specific to each municipality
parallel process similar to community plans feeding into regional plans
Can we keep every municipality to the same budget given capacity + finance limits?
Be honest of improvements as well as failure
Our budgets are decided based on what we are used to spending on a normal day, we need to change that paradigm and increase budgets.
Stories help us to not underestimate Kids, the public.
Simplified language = Stronger language
We need to embrace changes culturally.
Benefit to doing this together to be able to compare regionally is important.
competition to race to the top not the bottom.
- There are real immediate financial barriers and there's a danger of leaving those people behind.
- the poor bear the brunt of impacts
SO WHAT?
WHAT DOES THIS MEAN FOR THE investment in the clean future COSTS AND BENEFITS OF CARBON / CLIMATE BUDGETING IN OUR REGION?
spending what it takes to win and letting the public decide.
looking behind is not as useful as looking toward a goal. Still a reduction of GHG but also all other goals
concern that $ of plan and time to make plans may "eat into" time we have left. At the same time, benefits may allow deeper understanding of results of actions taken.
getting into the weeds and creating more complexity is not as important as honest and open communication w/ public & political officials
Leadership responsibility to push transformation
- easy to understand language
Competition helps create reflection and action.
Does the CRD have a role in a doing it together sense or does competition make us better.
Can you tell us how much it costs NOT to do a Carbon budget?
It's the right thing to do in absence of target does work in principal, but making it more consistent is necessary.


"THE WHAT"
WHAT HAPPENED TODAY?
JUST THE FACTS.
ELECTED OFFICIALS
SO WHAT?
WHAT DOES THIS MEAN FOR THE COSTS AND BENEFITS of CARBON/CLIMATE BUDGETING IN OUR REGION?
Impt. if they drive the policy we need to se.
process of learning, going to
buy-in in community.
diff. capacity of staff across the region.
impt. to have staff understand concepts to present policy options
CRD source of capacity building?
support multi-criteria decision making- template? qual/quant? tool?
that can be enhanced.


"THE WHAT"
WHAT HAPPENED TODAY?
JUST THE FACTS.
GAPS
THINK LOCAL
ACT LOCAL
too much time on quantification; qualitative helpful!
ELECTED OFFICIALS
Information vs
data can lag
ADAPTATION STRATEGY
where are the GAPS?
lead the 70% who are on board
other language
who is it for?
SO WHAT?
value natural assets
CRD serve
failures
ACTIONS >> BUDGET.
WHAT DOES THIS MEAN FOR THE COSTS AND BENEFITS OF CLIMATE/CARBON BUDGETING IN OUR REGION?
TOOLS from CRD to help integrate climate decision-making
for meaningful change
You need to bring people along.
too abstract.
better for decision-making
need to act now
need a Yes/No
AVAILABLE
WHO IS IT FOR?
QUALITY of LIFE LENS.
MAKE it easy for the public and EMPOWER.
HEALTH
WELLNESS
EQUITY
health impacts minimized.
POSITIVE/HOPEFUL
CONFLICTING MESSAGES
AVOIDING MINIMIZING LANGUAGE
ACKNOWLEDGING WHAT IS VISIBLE TO THE PUBLIC (e.g. Fortis)
highlighting (real) SUCCESS STORIES
real.
CLIMATE BUDGET IS WAY of TELLING
No more rehashing
Stay in boundaries

"What" section transcription:

So much misinformation driven by fossil fuel companies.

Climate action is already embedded in local CRD municipal processes (OCP, Strategic Plans, Etc.).

In other provinces big municipalities did climate budgeting but it didn't impact decisions made by council.

We need to normalize solutions.

Get to near zero ASAP.

People are worried about climate change but confused about solutions.

Make it easy for people to adopt climate solutions.

We need more money!!!

Carbon budgeting account needs more staff to help lead this work.

Plain language is important to use when communicating to the public.

Quantification of GHGs might not be the first thing to do or focus on.

Ensure a climate lens is applied to projects to bring climate into day-to-day work—spend time ensuring this rather than doing a climate budget + GHG accounting.

Limited capacity – Financial, Staff capacity/time.

Cara suggested we use stories to communicate.

Efficiency of spend $.

Remember the children.

Leave no one behind.

Edmonton points out that people blanched when the cost was communicated.

First time heating "pollutions" used in the room since being elected – good to hear similar language.

Gap during the day: The public was not in attendance, public drive political will, radically transparency is needed.

General information shared today but step by step for each municipality how can we implement?

It's OK to have transparency to fail.

Change is fast and evolving.

Different communication environment – It's OK to share the TRUTH – promotes capacity building.

1-4% of GHGs are corporate versus community.

Tracking indicators is hard to connect to what you need to do (Saanich example, high level to explain where we are at)

Quantification focus initially versus qualification. Both are important but starting seems to be that qualitative aspects are more useful to get systems in a place to build capacity.

What works versus didn't work to influence decisions: qualitative, project level work vs. broader not attached to action?

Need to understand focus to know what's needed to change municipality policy.

Education → Empower residents, help educate on how to do attainable actions – what is the best alternative.

Language used around this topic and public can only take in so many facts. Need to absorb through stories.

Climate budget has been useful in getting the organization on the same page.

Can be resource intensive.

Public is often fatalistic and numbed to climate change.

Climate budget = cost of climate action projects.

Carbon budget = GHGs of climate + other projects + operations → Hard.

Cost of climate change → cost of inaction.

Public is divided on renewables and oil/gas; polarization is manufactured and poses huge barriers.

Communicate the scale of the issue → qualitatively is often enough.

Carbon budgets and climate budgets are not the same!

Quantifying GHGs doesn't support decision-making. It shows where you were.

GHG inventories are following similar pathway to evolution of asset management.

Does not have to be as big as other regions.

Think local act local | help residents instead of lecturing/shaming.

Pushing the seriousness of the commitment.

Too much time on quantification; qualification helpful.

Stay in boundaries.

Expense/resource not valuable.

Highly complex and costly exercise.

Dependent on scale of community.

30% not a problem (national figure from surveys).

"So What" section transcription

Focus on building governance processes/systems and effective actions.

Granting bodies need to be faster and give more money to more people to help with climate action.

How does sustainability best get integrated into our local government processes? How do we all (staff across all departments) get aligned?

We have less carbon budget left than I originally thought. Have to get to net zero faster!

Embed sustainability staff in other departments.

Need a BC MURB heat pump rebate program.

Provide training for staff on climate topics (solar PV for electricians, etc.)

Need more jurisdictional powers or aligned BC +Fed action to phase out gas+oil productions.

Need more progressive tax system.

Get $$ from provincial + federal governments—they can raise taxes in a less flat way.

Radical transparency is key- tell truth! How are we doing this to ensure public is push us to improve?

Can we keep every municipality to the same budget given capacity v financial limits→CRD can help equalize regionally while still asking hard questions specific to each municipality?

Parallel process similar to community plans feeding into regional plans.

Be honest of improvements as well as failure.

Our budgets are decided based on what we are used to spending on a normal day, we need to change that paradigm and increase budgets → yes but…

Stories help us to not underestimate kids, the public.

Let's adopt a simplified carbon budget showing our failure in context with carbon in atmosphere. Bottom line.

Simplified language=stronger language.

It is not enough to have us list actions we are taking … we need to show results with a budget→Competition to race to the top not the bottom.

Benefit to doing this together to be able to compare regionally is important.--> need time during roundtables at committee.

Spending what it takes to win and letting the public decide (Seth Klein) → is a budget what it takes?--> is it a question of either/or both? Can we do it all?

There are real immediate financial barriers and there's a danger of leaving those people behind. The poor bear the brunt of the impacts.

Looking behind is not as useful as looking toward a goal. Stull a reduction of GHG but also all other goals.

WE need to regularly show the public where we are failing to hit targets so they push us.

CRD should embrace a carbon budget for all municipalities.

Concern that $ of plan and time to make plan may "eat into" time we have left. At the same time, benefits may allow deeper understanding of results of actions taken.

Getting into the weeds and creating more complexity is not as important as honest and open communication with the public and political officials.

Political will needs public energy & push.

Leadership responsibility to push transformation-easy to understand language.

It's the right thing to do in absence of target does work in principle but making it more consistent is necessary.

Competition helps create reflection and action.

Does the CRD have a role in a doing it together sense or does competition serve use better?

Regional vs. municipal. For example, may see increased GHG emissions in Victoria if all the densification happens at the core. How does per capita fit in?

Scenario building for carbon budgeting? What does the region have to look like to meet our goals? (density, transit, drive, asset, etc.).

Big picture "carbon budget" information good to have to re-focus and help municipalities focus on Climate Action Plans.

RGS opposition? Staff level opposition versus political?

There is different capacity of staff across the region. Important to have staff understand concepts to present policy options.

Different capacities across municipalities based on rural/urban, budget size, types of policies that would increase/decrease emissions.

Need to be able to build upon existing tools to be relevant to municipalities.

CRD a source of capacity building?

Support multi-criteria decision-making template? Qual/quant? Tool? That can be enhanced.

Buy-in with community. Best approach for residents – how to empower?

Process of learning, going to change.

Carbon/climate budgeting is important if they drive the policy we need to see.

Benefits need to be short term to be tangible to the public.

Risk of big picture benefits getting lost in the budgets

Need to be plain language for the public to follow.

Speakers noted current work has not influenced decision-making (GHG-lagging indicator)

Seasonal/variability means annual measures have uncertainty – rolling measures.

Encourages early investment in climate action – more action = less reaction.

Helps identify gaps in climate plan – scale of investment matches target ambitions.

Tough for smaller communities to engage – not a lot of experience and resource intensive.

Can skew project benefits: municipal hall retrofit is high $$$, low carbon VS. municipal building regulations is low $ to municipality and high carbon benefit.

Carbon budgeting consumes staff resources through lost action and reporting opportunities. Is there a net benefit?

Not sure how you factor in actions from other levels of government.

Carbon budgets are often too technical for public risk of getting lost in the weeds.

Risk of getting caught up in the details (weeds).

Track actions in Climate plan

More input at making a budget.

Fairness- we don't have a budget "we need to keep it in the ground' it's almost over.

Lead the 70% who are on board.

Data can lag→ adaptation strategy←value natural assets → cash in on value.

Annual report includes climate action plan achievements fairer→failures.

Who is it for?

Quality of life lens←health and liveness←equity health impacts minimized→avoid minimizing language→efficient actions positive and hopeful.

Climate budgeting seems like a good way to integrate climate action into Budget/Strategic Planning.

Climate Budgeting is a way of telling the truth to (ourselves and the public).

Tools from the CRD to help integrate climate decision making.

Acknowledge what is visible.

Information vs action.

Need to act now.

No budget available→ more of a story to tell to abstract better decision making.

Acknowledge what is visible to the public (e.g., Fortis)→ conflicting messages.

Highlighting success stories (real).

Make it easy for the public and empower.

Need a yes/no (not calculation).

Feedback Stickies:

Every CRD meeting I have attended is behind schedule. Pls allow adequate time. It was a good agenda.

Kara's presentation was excellent and spoke to me as a climate lay person.

Thought provoking! Lots to learn, lots of thoughts and great presentations.

This was great! Lessons learned was great.

APPENDIX B

CLIMATE BUDGETING:

Transforming governance to mainstream climate action

Acknowledgements

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C40

C40 is a network of nearly 100 mayors of the world's leading cities who are working to deliver the urgent action needed to confront the climate crisis and create a future where everyone, everywhere can thrive. Representing 582+ million people and one-fifth of the global economy, mayors of C40 cities are committed to using a science-based and collaborative approach to help the world limit global heating to 1.5°C, and build healthy, equitable and resilient communities.

Arup

Arup is the creative force at the heart of many of the worlds most prominent projects in the built environment and across industry. Working in more than 140 countries the firm's designers, engineers, architects, planners, consultants and technical specialists work with clients on innovative projects of the highest quality and impact.

Arup has worked with C40 since 2009 to develop strategic analysis and research that is central to progressing the understanding of how cities contribute to climate change mitigation and adaption. The partnership supports a strong analytical research agenda while helping city actors to identify opportunities, collaborate and develop deliverable solutions to accelerate and expand action on climate change.

@c40cities @Arup

EXECUTIVE SUMMARY

Cities have made progress on greenhouse gas (GHG) reductions but require a new approach to mainstream climate considerations and move from planning to implementation.

The climate science is clear: cities are not on track with commitments and must urgently increase efforts to reduce emissions. City leadership is critical and essential to deliver ambitious climate goals. Climate budgeting is an effective governance system that cities can use to mainstream climate considerations and accelerate near-term climate action to deliver long-term targets.

This report demonstrates how climate budgets can improve governance and summarises research with cities on the factors that have supported them in implementing a climate budget to-date.

Climate budgets integrate emission targets into existing governance processes to deliver the required

reductions through funded measures and policy, at the scale necessary to achieve meaningful climate outcomes and wider city goals.

Current climate action is typically concentrated in a single department with limited scope and powers. Climate budgets facilitate cross-departmental collaboration to move from ad-hoc to systemic implementation, and provide greater transparency, ownership, and accountability for delivery.

To effectively set up a climate budget to drive coordinated transformational change, cities should:

- **Secure political willingness and commitment** to position climate budgeting as a key system to support delivery of the city's climate action plan (CAP) and generate momentum to overcome technical and institutional challenges.
- **Integrate climate budgeting into existing governance processes and systems** to move from a CAP to immediate, science-based action, and to track progress of emission reductions with each budget cycle.
- **Ensure technical competence and institutional capacity** to build climate literacy and expertise, normalise climate priorities, and distribute responsibility across the administration.
- **Start by targeting high emission sources within the city's direct control** and plan to align with the city-wide scope of the CAP year-on-year.
- **Customise the climate budget to local priorities** through an iterative and dynamic process that considers the city's key climate concerns and scope of power in the context of strategic priorities.
- **Encourage co-ownership and early involvement of key stakeholders** to leverage the collective capability of finance and climate departments, as well as create a culture of shared accountability for achieving emission targets across the administration.
- **Maintain access and engagement of leadership** to legitimise and endorse the climate budget, and ensure data is used systematically to inform science-based decision-making at all governance levels.
- **Embrace external stakeholders and participate in knowledge-sharing** to influence businesses and civil society in areas outside the administration's direct control, to drive system-level transformation.

Robust governance structures and processes are crucial for cities to respond to the climate crisis and deliver on their targets. By mainstreaming emission reductions through the whole of city government, climate budgets are an effective, powerful, and systemic way for cities to deliver on their climate goals.

INTRODUCTION

Cities are taking ambitious, collaborative and urgent climate action to tackle the climate crisis. C40 cities have committed to reduce their contribution to climate change and prepare their cities for climate risks. However, global emissions are still rising, which means cities need to accelerate their climate action to limit global heating to 1.5°C and build healthy, equitable and resilient communities. While technology and knowledge is available, robust city governance structures and action-implementation processes are crucial to enable cities to create change.

Despite the important role of cities in reducing emissions and tackling climate change, the share of responsibility for achieving climate targets often lies overwhelmingly on the climate departments of city administrations. City departments are often siloed and focused on delivering their distinct priorities, and therefore, do not always contribute to accomplishing the city's climate objectives. Similarly, it is often the case that climate change-related expenditure is separated from the rest of the city's budget. As such, the climate impact of the city's finances, important though it is, is not always well understood and appropriately addressed.

A climate budget integrates GHG emission targets and considerations into the city's management processes and financial budgeting, providing a central and comprehensive governance system for implementing emission reductions. Enabling all departments to work on climate action mainstreams climate targets into whole-of-government decision-making and policies.

Climate action is not just about reducing emissions or adapting to climate change. It is also about creating a clean environment, promoting sustainable economic development and prosperity, and providing a better quality of life for all.

CONTENTS

CLIMATE BUDGETING

What is a climate budget?

Having made commitments to reduce GHG emissions and avert climate breakdown, cities then face a challenge to translate these into funded and measurable actions across city government.

The budget is the governance process city leaders use to articulate a clear vision, identify community and department targets, and undertake a strategic plan to help mitigate conflicting goals.

The preparation and approval of a budget is one of the most important duties of administrative officials as it determines what services will be put forward, to what extent they will be provided, and how they will be funded.

A climate budget presents the city's measures to reduce emissions along with their calculated effect and cost, while assigning responsibility for monitoring and delivering emission-reductions.

This helps cities maintain financial accountability, report annual progress towards delivering their CAP, and demonstrate how the city will implement plans for its future.

CARBON Budgeting	**CLIMATE** Budgeting
A carbon budget is the cumulative amount of carbon dioxide (CO_2) emissions permitted over a period to keep within a certain temperature threshold. There are several types of carbon budgets. Most often, the term refers to the total net amount of CO_2 that can still be emitted by human activities within a geographical or political boundary while limiting global warming to a specified level (e.g., 1.5°C or 2°C above pre-industrial levels).	A climate budget is a governance system that integrates climate considerations into the financial budget and creates transparency and accountability for climate action. To the extent possible, each action should be linked to an estimated emissions reduction and funding approach. This illustrates the costs required to achieve the targeted emission reductions.

Climate budgets are emerging as an efficient way to mainstream climate considerations into city-level decision-making, to translate medium- and long-term climate targets into delivery plans that are reviewed and improved annually.

Participating Cities

Within the C40 network there are 12 pioneering cities, led by Oslo, taking part in a dedicated pilot programme to develop, implement, and improve the use of a climate budget. These cities face distinct challenges and are at different stages of mainstreaming emission reduction targets into their governance systems.

Information presented is a pre-COVID projection, using data from city GPC inventories and Oxford Economics' Global Cities Dataset.

Report Methodology

This report focuses on climate budgeting as a process that integrates climate action into ordinary governance systems. The purpose is to capture the current state of climate budgeting as an approach to translate climate targets into funded actions, as well as the factors that enable its implementation.

Activities informing this report include:

- Literature review
- Interviews with representatives from cities looking to adopt or in the process of implementing a climate budget
- Discussions with C40
- Input from Arup subject-matter experts in cities and sustainability

Barcelona, SPAIN

POPULATION: 1.6 million

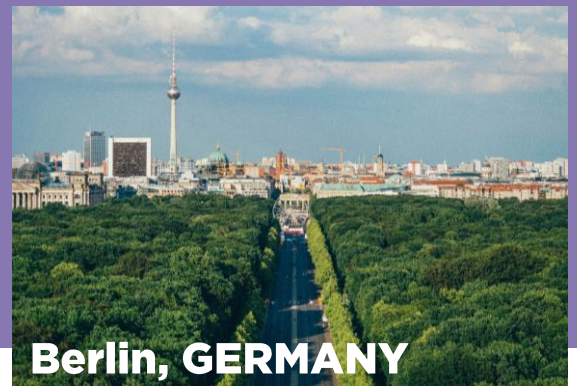
AREA: 101 km^2

GDP: $81 billion

GPC BASIC EMISSIONS (tCO_2e):
2,250,000
Inventory year: 2020

INTERIM GHG TARGET:
50% by 2030 compared to 1992 levels

LONG-TERM GHG TARGET:
100% reduction by 2050



Berlin, GERMANY

POPULATION: 3.8 million

AREA: 891 km^2

GDP: $183.1billion

GPC BASIC EMISSIONS (tCO_2e):
17,400,000
Inventory year: 2018

INTERIM GHG TARGET:
70% by 2030 compared to 1990 levels

LONG-TERM GHG TARGET:
90% by 2040, 95% by 2045, compared to 1990 levels

London, UK

POPULATION: 9 million

AREA: 1,595.2 km^2

GDP: $682.1 billion

GPC BASIC EMISSIONS (tCO_2e):
28,800,000
INVENTORY YEAR: 2019

INTERIM GHG TARGET:
Net zero by 2030

LONG-TERM GHG TARGET:
Not needed

Los Angeles, USA

POPULATION: 4 million

AREA: 1,362 km^2

GDP: $353.5 billion

GPC BASIC Emissions (tCO_2e):
21,000,000
INVENTORY YEAR: 2020

INTERIM GHG TARGET:
50% by 2025, 73% by 2035, compared to 1990

LONG-TERM GHG TARGET:
100% reduction by 2050

Milan, ITALY

POPULATION: 1.4 million

AREA: 182 km^2

GDP: $87.7 billion

GPC BASIC EMISSIONS (tCO_2e): 4,390,000
INVENTORY YEAR: 2020

INTERIM GHG TARGET: 45% by 2030 compared to 2005 levels

LONG-TERM GHG TARGET: 100% reduction by 2050

Montréal, CANADA

POPULATION: 2.1 million

AREA: 443 km^2

GDP: $93.2 billion

GPC BASIC EMISSIONS (tCO_2e): 9,400,000
INVENTORY YEAR: 2018

INTERIM GHG TARGET: 55% by 2030 compared to 1990 levels

LONG-TERM GHG TARGET: 100% reduction by 2050

Mumbai, INDIA

POPULATION: 13.3 million

AREA: 458 km^2

GDP: $301.4 billion

GPC BASIC EMISSIONS (tCO_2e): 25,100,000
INVENTORY YEAR: 2019

INTERIM GHG TARGET: 30% by 2030 compared to 2019 levels

LONG-TERM GHG TARGET: 100% reduction by 2050

New York City, USA

POPULATION: 8.6 million

AREA: 1,215 km^2

GDP: $837.6 billion

GPC BASIC EMISSIONS (tCO_2e): 48,400,000
Inventory year: 2020

INTERIM GHG TARGET: 50% by 2030

LONG-TERM GHG TARGET: Carbon neutral by 2050

Oslo, NORWAY

POPULATION: 685,124 million

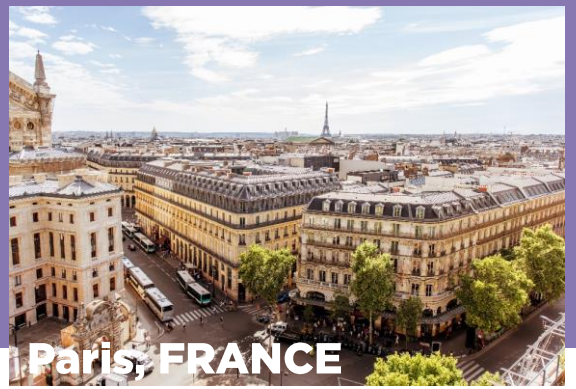
AREA: 481 km^2

GDP: $57.5 billion

GPC BASIC EMISSIONS (tCO_2e):
1,410,000
INVENTORY YEAR: 2019

INTERIM GHG TARGET:
95% by 2030 compared to 1990 levels

LONG-TERM GHG TARGET:
Not needed



Paris, FRANCE

POPULATION: 2.2 million

AREA: 105 km^2

GDP: $167.9 billion

GPC BASIC EMISSIONS (tCO_2e):
5,400,000
INVENTORY YEAR: 2019

INTERIM GHG TARGET:
50% by 2030 compared to 2004 levels

LONG-TERM GHG TARGET:
100% reduction by 2050

Rio de Janeiro, BRAZIL

POPULATION: 6.6 million

AREA: 1,202 km^2

GDP: $145.1 billion

GPC BASIC EMISSIONS (tCO_2e):
15,000,000
INVENTORY YEAR: 2017

INTERIM GHG TARGET:
20% by 2030 compared to 2017 levels

LONG-TERM GHG TARGET:
100% reduction by 2050

Stockholm, SWEDEN

POPULATION: 978,113 million

AREA: 216 km^2

GDP: $72.3 billion

GPC BASIC EMISSIONS (tCO_2e):
1,480,000
INVENTORY YEAR: 2019

INTERIM GHG TARGET:
1.5tco_2e per capita by 2023

LONG-TERM GHG TARGET:
100% reduction by 2040

Tshwane, SOUTH AFRICA

POPULATION: 3.6 million

AREA: 6,345 km^2

GDP: $65.5 billion

GPC BASIC EMISSIONS (tCO_2e):
19,500,000
Inventory year: 2015

INTERIM GHG TARGET:
10% by 2030 compared to 2015 levels

LONG-TERM GHG TARGET:
100% reduction by 2050

WHY CLIMATE BUDGETING?

Accelerate climate action through strong leadership

Political leaders are taking climate action because it is critical for the long-term success and survival of cities. Climate budgeting mobilises and empowers all city departments to take ownership and plan how they will deliver on climate targets.

Leadership is essential to the pursuit of increasingly ambitious climate policies - particularly in the face of heightened scrutiny and demands to demonstrate progress in responding to climate change. In addition to climate action, cities are working to deliver on a range of other goals, including economic prosperity, poverty reduction, and health and wellbeing. Elevating the climate agenda does not need to be at the expense of these.

Pursuing goals simultaneously, is a demonstration of responsible leadership towards sustainable development.

Climate budgeting is also a process to alleviate the institutional and financial barriers to emissions reduction. It is a way to strategically mainstream sustainability into city operations. By incorporating climate considerations into the annual budget process, climate budgeting makes action relevant to all politicians, elected officials and administrators. Through it, city leaders can ensure there is a sound implementation plan with the necessary funding to deliver on their CAP and emission reduction priorities.

Mainstream climate targets and considerations

Climate budgeting provides an opportunity to create a collaborative cross- departmental process where the finance and climate team come together to integrate climate action into the budget process. This collaboration establishes the city's budget as the primary document and central governance process for implementing measures to achieve climate targets.

The climate budget is cross-disciplinary and allows climate and finance teams to create a shared language to discuss the city's strategic priorities. Finance is a key lever to influence sustainable outcomes, and green finance is increasingly available. Working on a climate budget is a crucial first step to demonstrate that climate action, financial decisions, and policymaking are complimentary.

For an environmental team, climate budgeting is an opportunity to socialise technical data and concerns through a process that departments are familiar with and receptive to. Actively approaching colleagues from this perspective will also encourage further conversations around a wider remit of climate priorities.

A climate budget is integrated into an existing management system that encourages shared ownership and accountability for climate action. Ideally, the Chief Financial Officer will take a leadership role in bringing climate and finance teams together to prepare guidance and set the support mechanisms for the climate budgeting process. This is especially useful in contexts where there are limited central climate resources. The aim is that each department across the administration has ownership for collecting, processing, and reporting climate data. In this sense, climate budgeting relieves environmental teams of exclusive responsibility for the city's emissions. Instead, all departments are held accountable for their projects and programmes, as they are in the ordinary budget process. By linking climate action to one of the most important processes in the administrative cycle, climate budgeting is an opportunity to mainstream and formalise climate considerations, while offering a flexible approach that allows for projects to be continually assessed and re-focused during reporting processes.

This system of ownership and accountability is a city-wide approach to elevate climate to the level of other strategic priorities, including jobs, transport, and housing. It places responsibility on all departments to ensure their budget proposals align with climate goals.

Systematically use data to inform decision-making

The climate budget makes it possible to integrate GHG emissions data into policy decision-making and financial reporting. Climate budgeting provides a science-based approach for cities to track and disclose their emission-reduction progress, course correct, and strengthen with new actions on an annual basis.

Climate budgeting allows cities to report and communicate where they are, where they need to be, and how they plan to get there. Data collection and management supports cities to estimate the emissions-reductions expected from a climate action.

Developing costings for climate actions, as part of the city's financial conversations, helps to inform and prioritise the allocation of finance and other resources between measures. This makes the management of direct emissions (e.g., Scope 1 and 2) tangible and actionable across all departments. Furthermore, it is a transparent way for cities to demonstrate responsible use of public funds. As such, the process creates a system of accountability, and can improve communication within the administration and the wider public on climate issues.

In most cities, the administration's emissions account for a small proportion of the city's carbon footprint. Using data to identify key sources of negative climate impact, climate budgeting helps departments track emissions, identify specific issues outside their direct control, and engage external stakeholders to help achieve the city's emissions reduction targets.

The climate budget process is an opportunity to consider how to continually influence the decisions and investments of all city stakeholders.

CASE STUDY:

London

London is following a phase-based approach to implementing a climate budget. In July 2022, the Greater London Authority (GLA) included climate budgeting in their ordinary budget guidance. They also prepared specific guidance for the departments on producing a climate budget and assessing climate impacts. In Year 1 they are reviewing the emissions of the GLA organisations (e.g., emissions and fleet). In Year 2, they would like to incorporate emissions for the whole of London (including areas they are not directly responsibility for). By Year 3, London hopes to have an approach that covers embodied emissions for all supply chains too.

KEY CONSIDERATIONS

Political willingness and commitment

Political leadership is the single most important factor to facilitate establishing a climate budget. This leadership can come in the form of a clear mandate by the city's political leader. In addition, the city's administrative leaders can position climate budgeting as a key system to support emission reductions and delivery of the city's CAP, as well as the alignment of climate with other objectives.

Where political leadership sets an explicit expectation that climate targets, measures and considerations are part of all decision-making processes (e.g., budget, policymaking, legislation), the task of setting a climate budget becomes an easier process for the administration.

Political support is essential for creating momentum to break through technical and institutional challenges that come with developing a climate budget. A direct political mandate can help the staff leading climate budgeting access data and collate the necessary information to start the process. Data may indicate that the current spending allocation is insufficient to deliver on targets and in this case political leadership and senior departmental buy-in is crucial to continually align financial priorities and GHG emission targets.

Political buy-in can also support staff engagement across city departments. Designing and implementing uniform ways of working that mainstream climate budgeting across the administration become easier tasks with clear direction from political leaders. Having top-down support can also help break down barriers in other parts of the administration to facilitate climate budget implementation.

In addition, senior political and administrative buy-in can encourage participation in knowledge exchange platforms and programmes. Knowledge exchange forums can help the administration learn from international best practice and foster mutual trust between different cities going through the same process. These fora also provide a space for collaboration at an early stage of planning and programming by allowing engagement with international experts building the knowledge, capability, and confidence within the city.

CASE STUDY:

Tshwane

Taking action to address climate change is embedded in the City of Tshwane's sustainability journey. Having a specialist City Sustainability Unit in the Office of the Executive Mayor anchors this intent in a profound political commitment to elevate sustainability at an institutional level. Since 2013 this unit has undertaken the task of mainstreaming climate change in Tshwane. This commitment has remained unaffected by the political vagaries that have and may continue to characterise the political landscape. Tshwane's vision is to remain singularly committed to climate action as a key priority, not just a nice-to-have, irrespective of change in city leadership. Climate budgeting will build on Tshwane's determination to integrate their CAP into the city's management systems – to reduce the city's vulnerability to climate change while enabling sustained economic growth and development. Tshwane's dedicated climate action makes it a trailblazer inspiring other cities in South Africa and beyond.

Integrate climate budgeting in to existing governance processes and systems

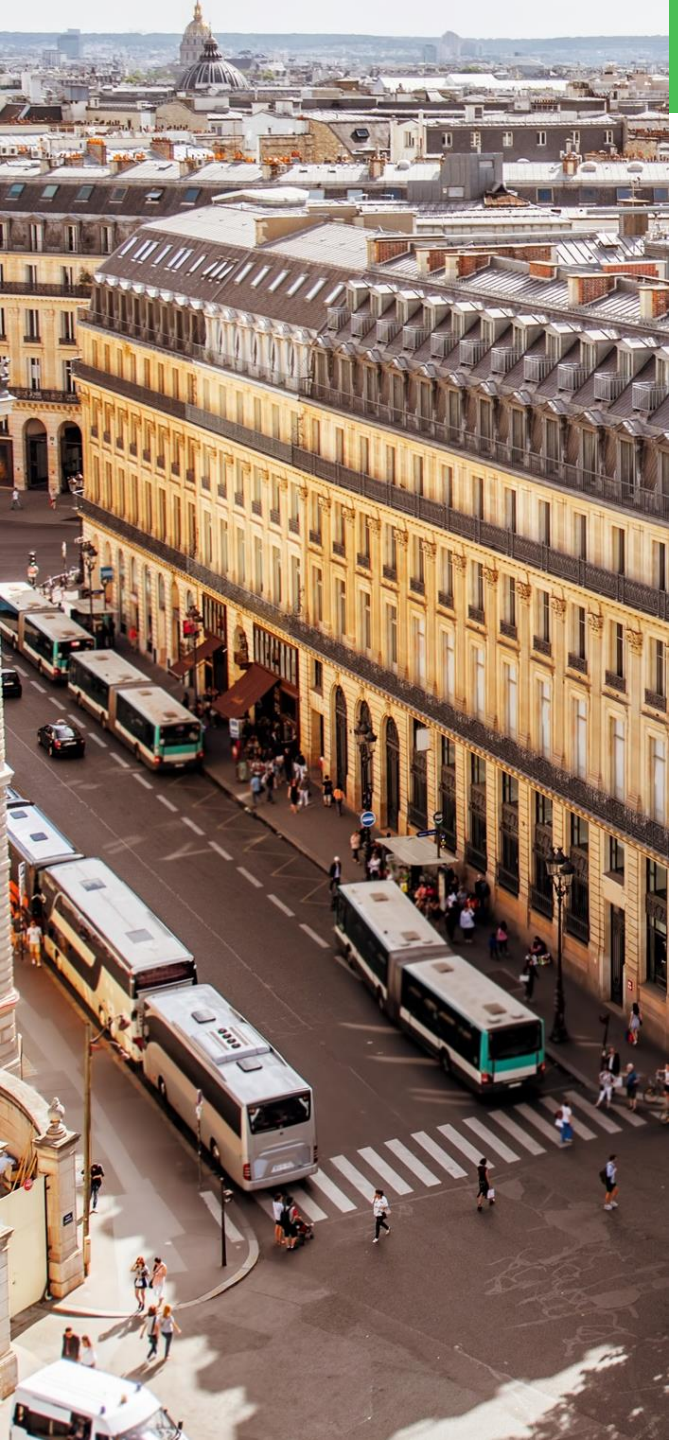
Climate budgeting is an opportunity to mainstream climate throughout the city administration, by augmenting existing processes and policies and delivering emission reductions without introducing new governance structures.

Across the administration, there will be officials who instinctively understand how to engage with the city's climate targets and others who find the topic overwhelming and confusing. It is important, therefore, that cities integrate the climate budget into familiar systems, such as yearly planning activities and the ordinary city budget.

Using existing mechanisms is an effective way to reach and engage other departments, encourage mindset shifts, and elevate climate priorities across the city.

This means cities can monitor, deliver, and report on climate action in the same cycles as other strategic priorities. In turn, decision-makers can determine whether resources are being applied as intended and take corrective action if needed.

Standardising these processes enables cities to track the implementation progress of their CAPs and facilitate better-informed decisions year-on-year.



Technical competence and institutional capacity

The city's ability to draw upon knowledge and expertise of internal departmental teams and external partners is key to promoting positive solution-driven approaches to combat climate change. Every city has a unique set of stakeholders, resources, and processes.

Building on existing skills can help cities make progress on climate budgeting. This entails building on experience of how the city administration operates and distributing ownership and accountability to those responsible for the transformation. Fostering inter-departmental collaboration through cross-disciplinary teams can accelerate climate action across the city.

It makes environmental policymakers more finance-savvy and financial policymakers more climate-literate in proposing climate change initiatives.

Cities need to consider their technical capability and determine if there is a need to develop this internally or augment through external consultants in the interim. If the early climate budgeting team is not part of the city administration, it is important they have good knowledge of the local context, speak the local language, and understand the culture.

Where cities require additional support they should plan for how external resources can help build the institutional knowledge and capacity necessary to sustain the process in the long term. An enabling environment must also feature psychological resources, such as a shared determination and positive attitude.

Cultural and behavioural change will be required across various departments. Not every climate budget decision will be popular and finding sustainable finance to drive transformational change can be a challenge. Investing time to strengthen collaboration between the layers of city administration and advocating for improved fiscal conditions will support the prioritisation of climate-smart investments and policymaking.

Where there is wider buy-in from across city departments, climate action tends to be faster and more successful. Contextualising other priorities in terms of the environment and visualising these as part of the city's 'bigger picture' strategy can facilitate this buy-in.

Get started: identify where the city is and where it wants to go

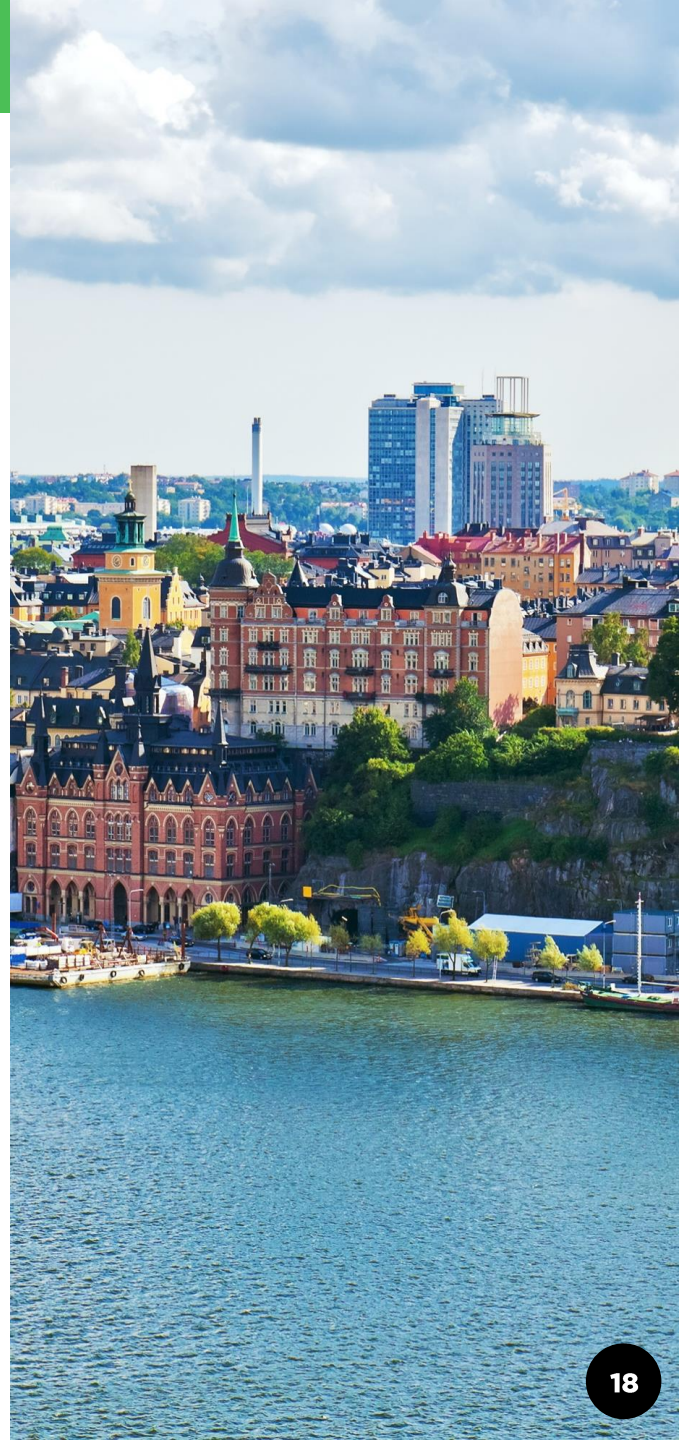
Climate budgeting is an innovative governance system which allows cities to think big and embrace city-wide transformative actions. Cities adopting this approach should consider starting in phases according to two fundamental guidelines. First, focus on emissions and measures within the administration's control. Second, target the biggest emissions sectors and sources in the local context.

A phased approach allows cities to connect the climate budget process with other activity in the city's pipeline. This includes considering the scope of the administration's direct authority and immediate emissions reductions achievable. Cities should plan to gradually expand the budget to align with the breadth of their CAP and the city-wide emissions targets.

It is important to link the climate budget to the city's emissions reporting. Access to the necessary data from departments (e.g., in terms of quantity and validity) and creating a methodology connecting funding to action (e.g., an emissions impact-based cost evaluation) can accelerate the budgeting process. Emissions or cost data can substantiate investment decisions, however precise data does not need to be immediately available. Additional data needs may become apparent when implementing the climate budget.

Cities can consider reviewing historic budget records as a first step. This information is factual, and finances are already calculated. Reviewing the budget items of key departments for features such as climate relevance (has direct impact on, or is impacted by, climate) and the nature of any impact (positive or negative) can offer a baseline understanding of the operational budget and investment cost of the CAP. It can also strengthen awareness of the environmental impact of the city's existing projects and where to prioritise intervention, to guide better future decision-making.

However, developing a baseline is not an essential requirement for climate budgeting. Instead, cities can use graphs of historical emissions and an understanding of emission limits to start the climate budgeting process.



Customisable to local priorities

A key enabler for climate budgeting is the ability to adapt the climate budget to the local context and towards solving challenges where the effect of climate change is experienced locally. By assessing the current policy and financial commitments, the annual climate budget is an iterative and dynamic process that allows cities to determine short-term practical action to combat climate concerns. This ensures decision-making remains cognisant of long-term emission-reduction targets. Providing annual climate budget guidance ensures each department considers climate in the formulation of plans, programmes, and budget proposals.

While cities can take responsibility for direct emissions across the administration, CAPs demonstrate the need to engage with the wider local community to meet city-wide climate targets.

Many city leaders recognise that collaboration and reconciliation of different powers, system boundaries, and budgets is necessary to take meaningful and scalable climate action. Climate budgeting is an opportunity for the city to demonstrate to external stakeholders the city's priority towards climate and how it is implementing action plans.

Co-ownership and early involvement of key stakeholders

Climate budgeting connects a city's climate and finance departments, and involves coordination with other specialists including planning, data-reporting, and policymaking. The effectiveness of a climate budget depends on the collaboration among these elements, and the approach is an opportunity to break down departmental silos and improve general collaboration across the administration to improve performance in areas beyond climate action.

It is important that the Chief Financial Officer takes a leading role in the climate budgeting process to demonstrate commitment and facilitate resource allocation. This engages departmental heads and their environmental and financial representatives from the outset.

Leveraging existing networks and structures within the city, as well as other alliances across the administration, is a way to expedite the climate budgeting process.

These key stakeholders should discuss what is reasonable across the phases of climate budget integration and contribute to shaping the process for the city. The climate budgeting team can develop guidance that articulates the technical data they expect, the supporting resources available, the financial context, and the accountability and ownership of the process moving forward. Cities should consider formalising the necessary ways of working by establishing cross-departmental working groups to help maintain clear roles and responsibilities within the climate budget process long-term.

City-wide administrative engagement is an opportunity to better understand priorities across the city and create a structure to manage how they are delivered. Early involvement means that officers can bring in colleagues across their teams as appropriate, to create continual buy-in, expand the network for better change resilience, and socialise the climate budgeting process more widely.

CASE STUDY:

Paris

In Paris, the climate budgeting team used existing finance and sustainability networks to engage departments and identify key points of reference across the administration. The team established a working group to share a common language and awareness of how the programme can enable the implementation of the range of measures required to reach the city's climate targets. The team worked with departmental representatives for a retrospective line-by-line climate assessment of their respective 2019 budgets. The climate-finance team used their subject matter expertise to first review each department's budget and qualitatively identify their respective carbon impacts. They then re-engaged the departmental stakeholders to better incorporate fiscal and operational considerations relating to emission reductions. Adopting this approach encouraged richer discussion across the city, as well as more expansive thinking around policy and budget proposal.

Ongoing access and engagement of leadership

Top-down support helps to sustain focus on supporting the climate budget process. Political support provides the space, resources, and authority for the leading departments to take ownership and encourage the development of the climate budget. The distribution of authority from administrative leaders provides legitimacy and endorsement, helping to facilitate the necessary conversations between the departments.

Climate budgeting works best when leaders remain actively engaged in the process. By respecting political dynamics and internal reporting structures, the climate budgeting team builds trust-based relationships with key decision-makers. Providing progress reports to leaders throughout the administration allows for informed decision-making across different governance levels. Through the effective use of established governance processes, teams can follow up with and call on their leaders to steer activity.

CASE STUDY:

London

In London, sponsorship and direction from the Deputy Mayor for the Environment and the Mayor's Chief of Staff was critical to enable senior officials across both the climate team and financial team to lead the climate budgeting work. Having the programme driven by high-ranking officials in the finance unit, who are responsible for the ordinary budget and have a comprehensive understanding of the budgetary process, is a key enabling factor. Given experience managing organisational barriers in the ordinary budget negotiations and having understood how climate features as part of the city's objectives, the team is better equipped to support the climate budgeting process. This creates confidence throughout other departments about the city's commitment to the process, which empowers them to identify related strategic objectives of their own.

CASE STUDY:

Oslo

The City of Oslo's procurement activities are crucial for meeting the city's environmental goals. Oslo is committed to using procurement as a strategic tool to drive a transition to more sustainable production and consumption. By introducing climate requirements into the procurement of construction services, Oslo is taking full advantage of their purchasing powers.

Oslo's use of procurement to require fossil fuel-free construction sites and zero-emission machinery creates a predictability in the market.

This means private stakeholders in the construction industry can invest in new machinery knowing that the city will continue to apply climate criteria in tendering processes. Over time, these requirements have knock-on effects throughout the supply chain. This approach offers a multitude of additional benefits. For example, reducing construction-related emissions and noise pollution has health and wellbeing benefits, and grows the market for low-emission machinery and construction equipment.

Embrace external stakeholders and participate in knowledge sharing

Cities at the start of their climate budgeting journey benefit from strong relationships with allies outside the administration. This is especially important in administrations with limited resources, limited direct powers to reduce city-wide emissions, and with national targets that are not aligned with the level of ambition of the city.

A key enabler to work through the complexity of emissions reduction-responsibility is the ability to convene all relevant actors. By doing this through a partnership model, city-wide stakeholders can leverage policy development and financial opportunities to act on emissions-reduction. Climate budgeting is a transparent process that allows cities to send strong signals to national governments to consider their responsibilities and align on actions to deliver the city's CAP.

A climate budget can also shape other parts of the economy by strengthening public and private-sector partnerships, creating confidence in the low-carbon economy, and encouraging investment. Developing a climate budget process that embraces local civil society can unlock meaningful and inclusive participation towards the reduction of emissions.

Climate budgeting requires continuous learning. For many cities, this will stretch existing capacity and expertise. Engaging in national and international networks enables cities to identify shared challenges and learn from different ways of working.

Knowledge sharing platforms are another opportunity to recognise and reflect on progress made, challenge existing thinking for better ideation, and plan for the future. Sharing knowledge also creates healthy competition among cities that advances best practice and enables city-level impact to scale even further.

TOP TIPS

Climate budgeting is ground-breaking and innovative work. Across different contexts, cities will experience distinct challenges in mainstreaming climate into existing governance systems. The following tips can help cities to successfully get started.

DO

Commit to climate budgeting through strong political and administrative leadership and clear mandates
Mainstream climate budgeting into existing governance processes
Build technical competency and institutional capacity
Start immediately by focusing on the biggest emission sources within the city's powers and plan to gradually align with the city-wide scope of the CAP
Focus on local climate concerns and widen the remit year-on-year
Engage internal stakeholders early and build cooperation and ownership across the city departments
Ensure ongoing access to and active engagement of key political and administrative leaders
Embrace external allies, communicate, and collaborate on common responsibilities

DO NOT

Attempt to implement climate budgeting from an exclusively bottom-up approach
Design a new process for reporting, managing, and budgeting on climate
Underestimate the time, resource or momentum needed to sustain climate budgeting
Overcomplicate the first budget by seeking and collecting new data, or expecting to have the perfect systems in place at the outset
Attempt to solve the whole city's climate challenges in one go
Introduce vague processes that mean work continues in silos and there is a lack of ownership and responsibility
Make climate budgeting an overly bureaucratic exercise by disconnecting it from leaders
Feel intimidated by challenges outside the city's direct control and miss the opportunity to influence the wider community

CONCLUSION

A climate budget is a process to integrate climate considerations into all decision-making to comprehensively deliver strategic goals.

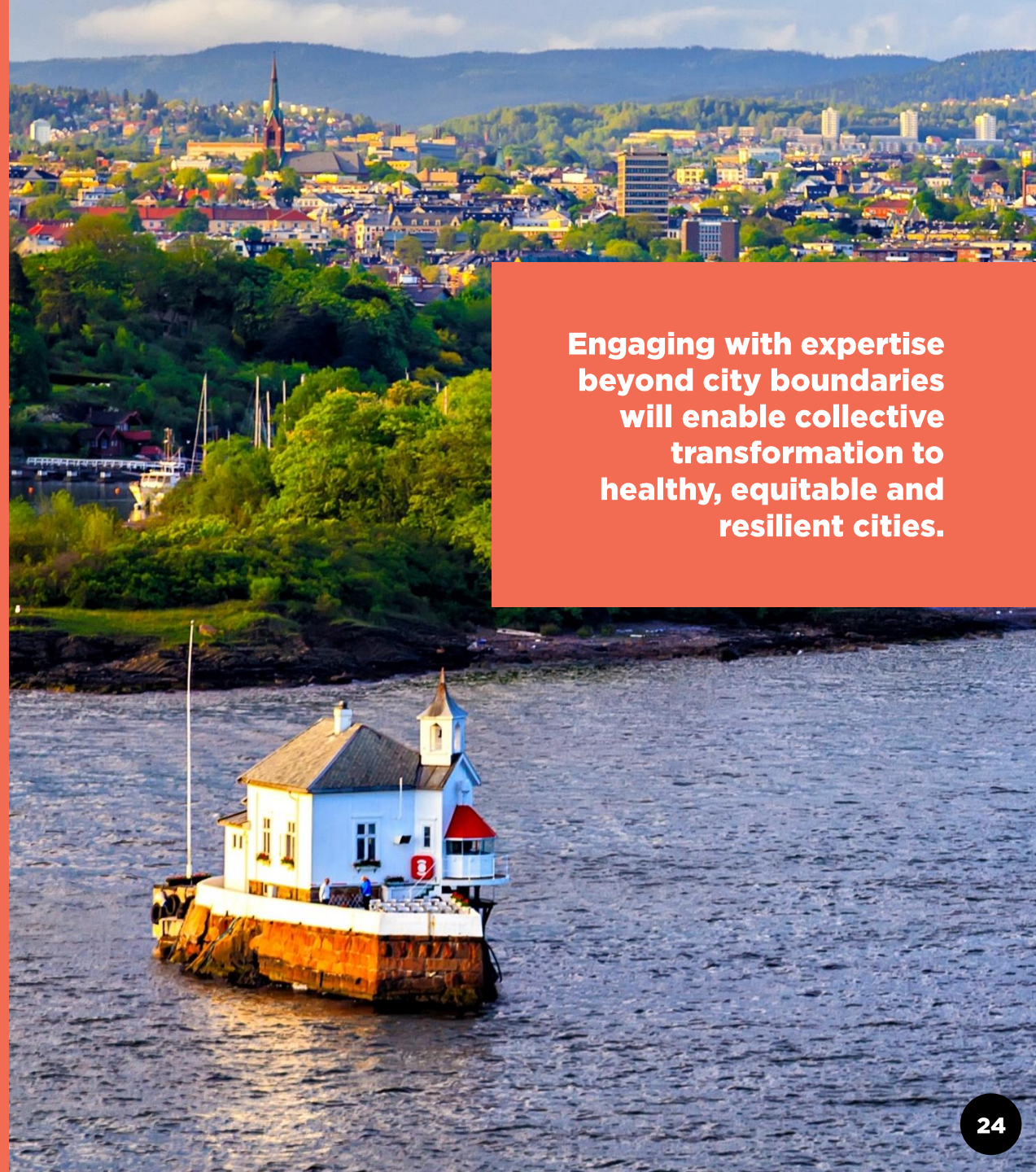
This report summarises how climate budgeting is a key lever for cities seeking to accelerate action in the face of the climate emergency.

Leaders need to position climate budgeting as a key governance system to support the delivery of the city's CAP. By aligning with other strategic objectives, cities can generate the momentum to overcome technical and institutional challenges. Identifying existing administrative systems that climate budgeting can integrate into allows cities to track emission-reductions progress year-on-year and enables science-based and data-driven decision-making.

To mainstream climate priorities across the administration, it is important that cities build the knowledge and expertise of internal departments and appropriately distribute responsibility to strengthen climate competence. As with a responsible financial budget, a climate budget should deliver value by focusing resources to the strategic priorities of the city and tangible interventions that address the key climate concerns.

A phased approach to climate budgeting allows cities to immediately start targeting emission sources within direct control, and work year-on-year to align with the city-wide scope of their CAP. Multi-departmental collaboration supports the distribution of actions across the administration and sets accountability for achieving emissions targets. Ongoing participation of political and administrative leaders provides legitimacy and endorsement to the continuous climate budgeting process.

As city administrations are responsible for only a small share of city-emissions, it is vital they tap into networks across multiple sectors, including businesses and civil society.



Engaging with expertise beyond city boundaries will enable collective transformation to healthy, equitable and resilient cities.

Making a difference...together

ERM 24-54

REPORT TO ENVIRONMENTAL SERVICES COMMITTEE
MEETING OF WEDNESDAY, SEPTEMBER 25, 2024

SUBJECT **Solid Waste Disposal: Hartland Landfill Tonnage Report – July 2024**

ISSUE SUMMARY

The Solid Waste Disposal: Hartland Landfill Tonnage Report – July 2024 is attached for information.

BACKGROUND

The Environmental Services Committee Chair requested that a copy of the Solid Waste Disposal: Hartland Landfill Tonnage Report – July 2024 be provided to the committee for information.

RECOMMENDATION

There is no recommendation. This report is for information only.

Submitted by:	Russ Smith, Acting General Manager, Parks, Recreation & Environmental Services
Concurrence:	Ted Robbins, B. Sc., C. Tech., Chief Administrative Officer

ATTACHMENT

Appendix A: Solid Waste Disposal: Hartland Landfill Tonnage Report – July 2024

Solid Waste Disposal

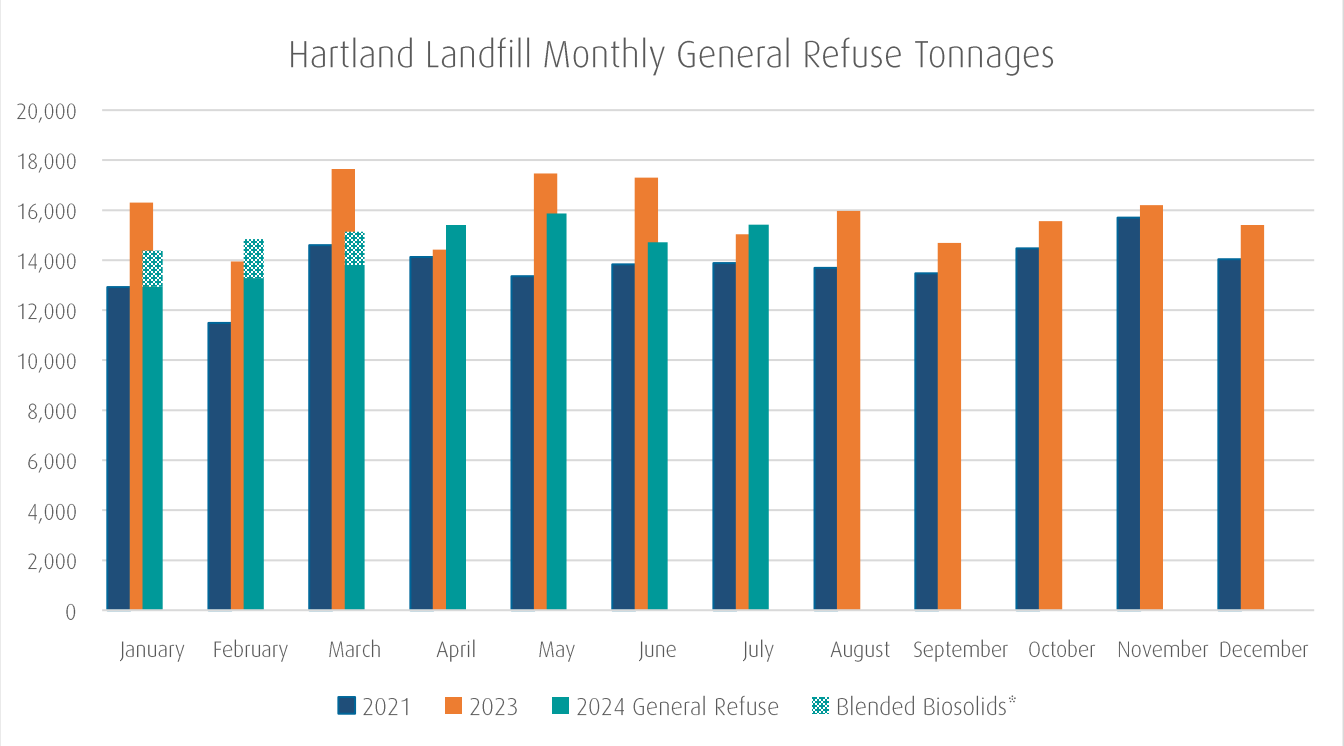
HARTLAND LANDFILL TONNAGE REPORT

Capital Regional District | July 2024

Summary of General Refuse Received at Hartland Landfill

In July 2024, 15,425 tonnes of general refuse was received at Hartland Landfill. This represents an increase of 2.6% over the same month in 2023.

Below is the monthly general refuse tonnage graph for Hartland. The bar chart compares 2021 (start of the Solid Waste Management Plan), 2023 (previous year) and 2024 (current year).



* Before being landfilled as general refuse, Class A Biosolids are blended with soil to render them inert. Non-class A Biosolids are landfilled as controlled waste and are not included in this report. For more information on CRD Biosolids Production, click here.

Solid Waste Disposal

HARTLAND LANDFILL TONNAGE REPORT

Capital Regional District | July 2024

Per Capita Disposal Rate

The CRD uses the per capita waste disposal rate for the region to track progress towards reaching the targets and goals outlined in the Solid Waste Management Plan.

Per Capita Disposal Rate for the Capital Region

Year	Population *Based on BC Stats*	Total Blended Biosolids Landfilled (tonnes)	Excludes Blended Biosolids **	
			Total Material Landfilled (tonnes)	Disposal Rate (kg/person)
2021	432,062	N/A	172,886	400
2022	439,950	1,714	178,290	405
2023	455,092	10,591	173,975	382
*2024****	*464,938*	*4,352*	*173,871*	*374*

**Beneficial use strategies for biosolids are not included within CRD's Solid Waste Management Plan and are not included within the above calculation of the per capita disposal rate. For more information regarding the per capita waste disposal rate methodology see the 2023 SWMP Progress Report.

*** The numbers for 2024 are only an estimate. They are expected to fluctuate throughout 2024.

Capital Regional District

Meeting Minutes

Solid Waste Advisory Committee

Friday, September 6, 2024

Compost Education Centre
1216 North Park Street
Victoria, BC
V8T 1C9

PRESENT: F. Baker, M. Coburn, B. Desjardins (Chair), M. Hauzer, E. Latta, D. Monsour, J. Oakley, C. Remington, J. Shaw, A. Sibley, K. Siefried, J. Smith, D. Thran R. Tooke (Vice-Chair),

STAFF: A. Chambers (Recorder), A. Campbell, D. Moghaddam, K. Master, N. Roberts

REGRETS: R. Anderson, C. Blanchard, S. Gose, E. Klimke, M. Kurschner, M. McCullough, R. Pirie, W. Stevens, S. Young Jr.

EP - Electronic Participation

The meeting was called to order at 12:35 pm.

1. Territorial Acknowledgement

2. Approval of Agenda

Agenda for the September 6, 2024 Solid Waste Advisory Committee meeting.

MOVED by D. Monsour SECONDED by J. Shaw
That the agenda be approved as circulated.
CARRIED

3. Adoption of Minutes

Minutes from the June 7, 2024, Solid Waste Advisory Committee meeting.

MOVED by F. Baker, SECONDED by D. Monsour
That the minutes of the June 7, 2024, Solid Waste Advisory Committee meeting be adopted as circulated.
CARRIED

4. Chair's Remarks

There were none.

5. Presentations/Delegations

There were none.

6. Committee Business

a. What Goes Where Project (Multi-family Dwelling Project)
A. Campbell and D. Moghaddam presented to the group. The link to presentation attached as Appendix A.

7. Correspondence

There was no correspondence.

8. Compost Education Centre – Site Tour

K. Siefried provided a tour of the grounds to the Solid Waste Advisory Committee.

9. Other Business

There was no other business.

10. Next Meeting

The next Solid Waste Advisory Committee meeting will be October 4, 2024.

11. Closing Comments

There were no closing comments.

12. Adjournment

The meeting was adjourned at 13:50

MOVED by D. Thran, SECONDED by J. Shaw
That the Solid Waste Advisory Committee be adjourned.
CARRIED

APPENDIX A

Capital Regional District's Multi-family Dwelling Waste Diversion Initiatives

Solid Waste Advisory Committee

September 6, 2024

Agenda

1. Background
2. Signs and Educational Materials
3. Results
   - Participation of buildings
   - Visual Waste Audits
   - Apartment vs Condos
   - Survey Results
   - Common Themes and Challenges
4. Recommendations

Background

2021 Solid Waste Management Plan

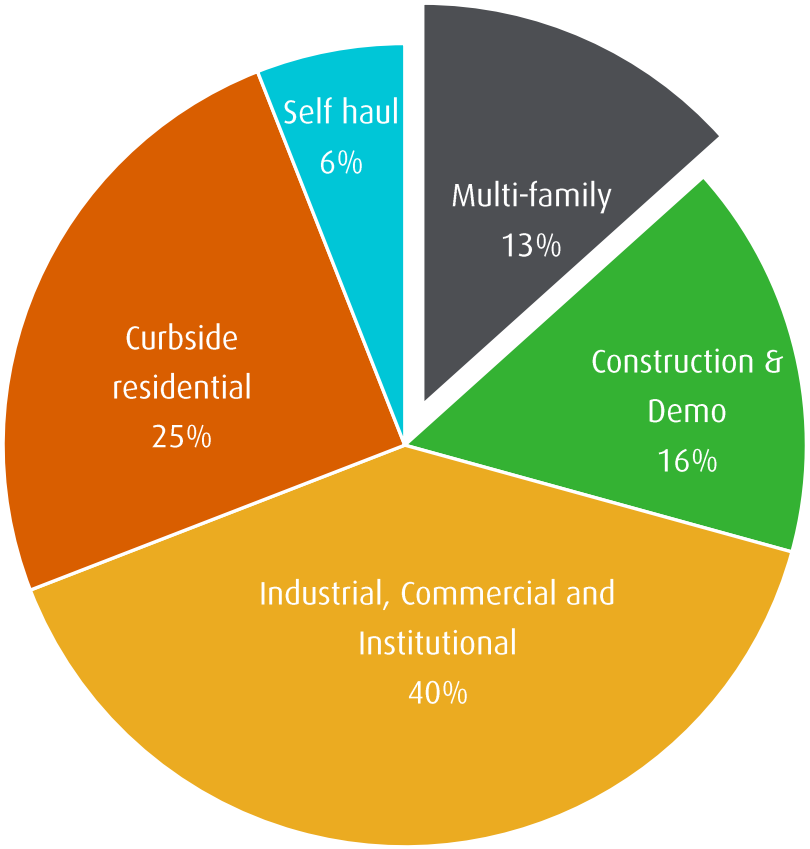
- Identified MFDs as an area of focus for outreach and education to increase diversion of waste from Hartland Landfill.

2022 Solid Waste Composition Study

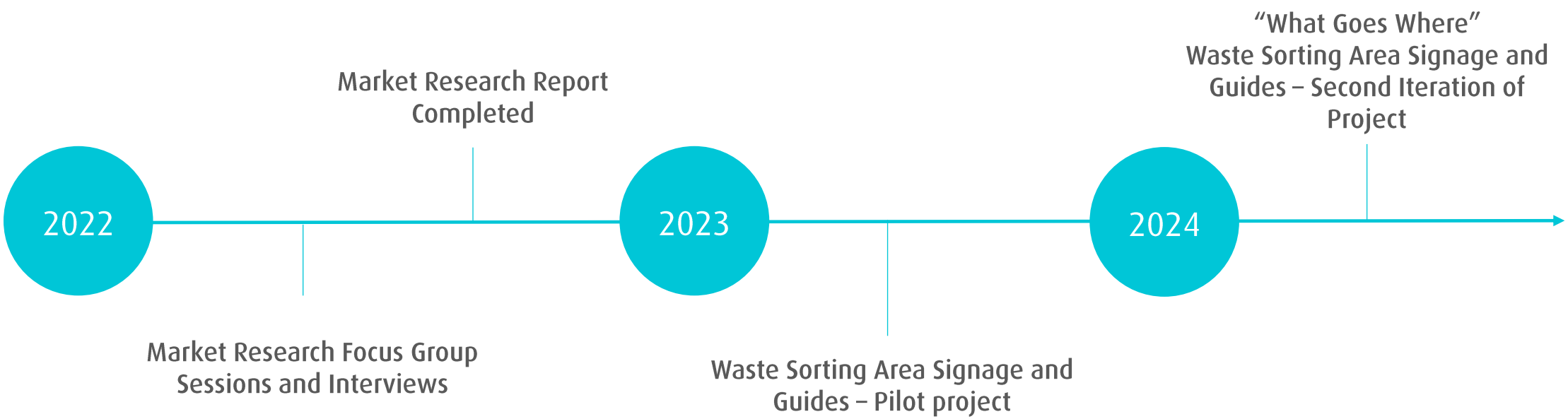
- Estimated MFDs contribute 13.4% of waste to Hartland Landfill.

Education and Outreach

- Through education, proper outreach & communication strategies and public awareness materials, we believe we can make an impact on this number.



Timeline


Market Research Report Completed
"What Goes Where" Waste Sorting Area Signage and Guides – Second Iteration of Project
2022
2023
2024
Market Research Focus Group Sessions and Interviews
Waste Sorting Area Signage and Guides – Pilot project

What Goes Where 2024

Staff were hired to recruit multi-family building residents and property managers to participate in the project.

Site Visit 1: initial waste audit, install signage, and provide educational materials.

Site Visit 2: check-in, final visual waste audit and participant survey is conducted.

2023 Follow-up

2023 Recommendations	2024 Actions Taken
✓ More direct public awareness	Expanded communications strategy for outreach on social media, stakeholder organizations.
✓ Increase program funding-revaluate signage/implementation	Project budget increased which facilitated improved educational packages and added new signage types (magnetic and vinyl stickers), improved adhesive.
✓ Reduce number of visits to meet time constraints	40 buildings down from 50; Reduced number of visits down to 2 per building.
✓ Enhance efficiency of the project	Project started early May. Streamlined by targeting property managers with multiple buildings
✓ Add surveys and reporting	Introduced survey to gather feedback and perceived impact, stronger emphasis on data collection & reporting.

Signs and Educational Materials

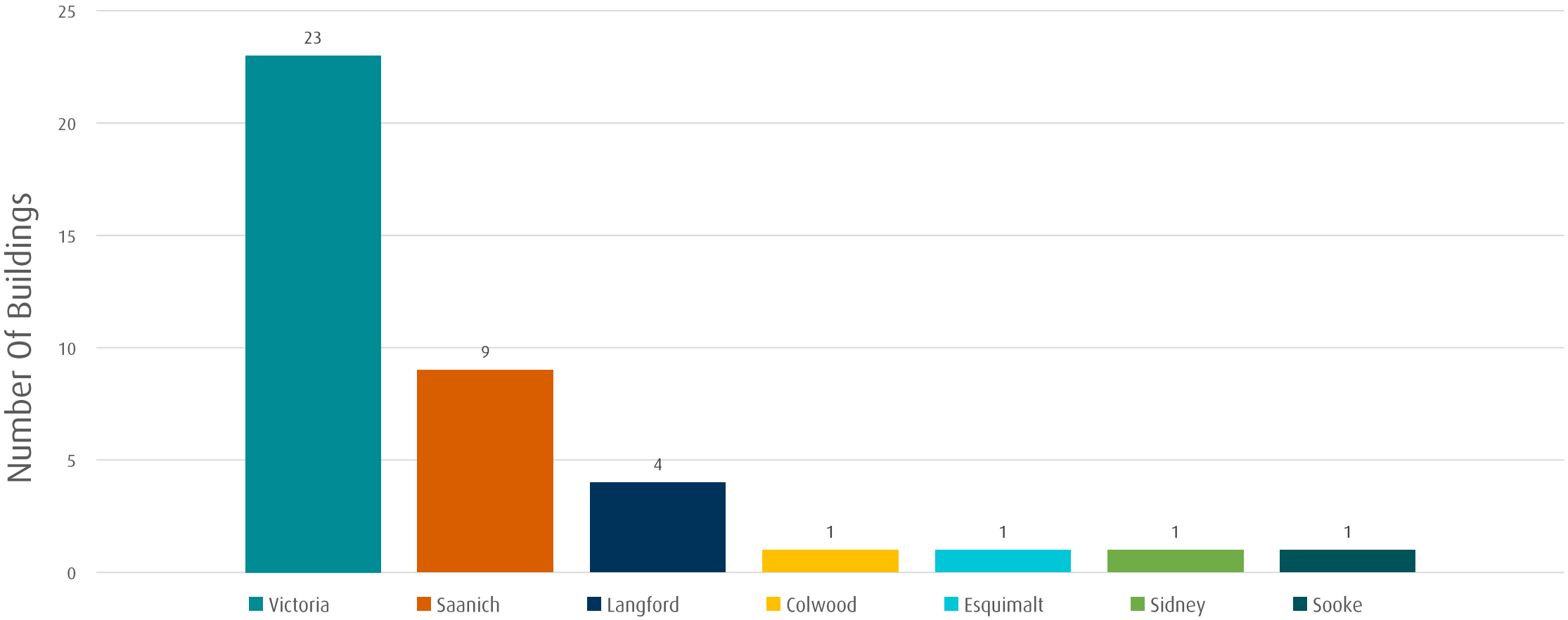
Installed 512 signs

- ✓ Magnetic signs and vinyl stickers – NEW!

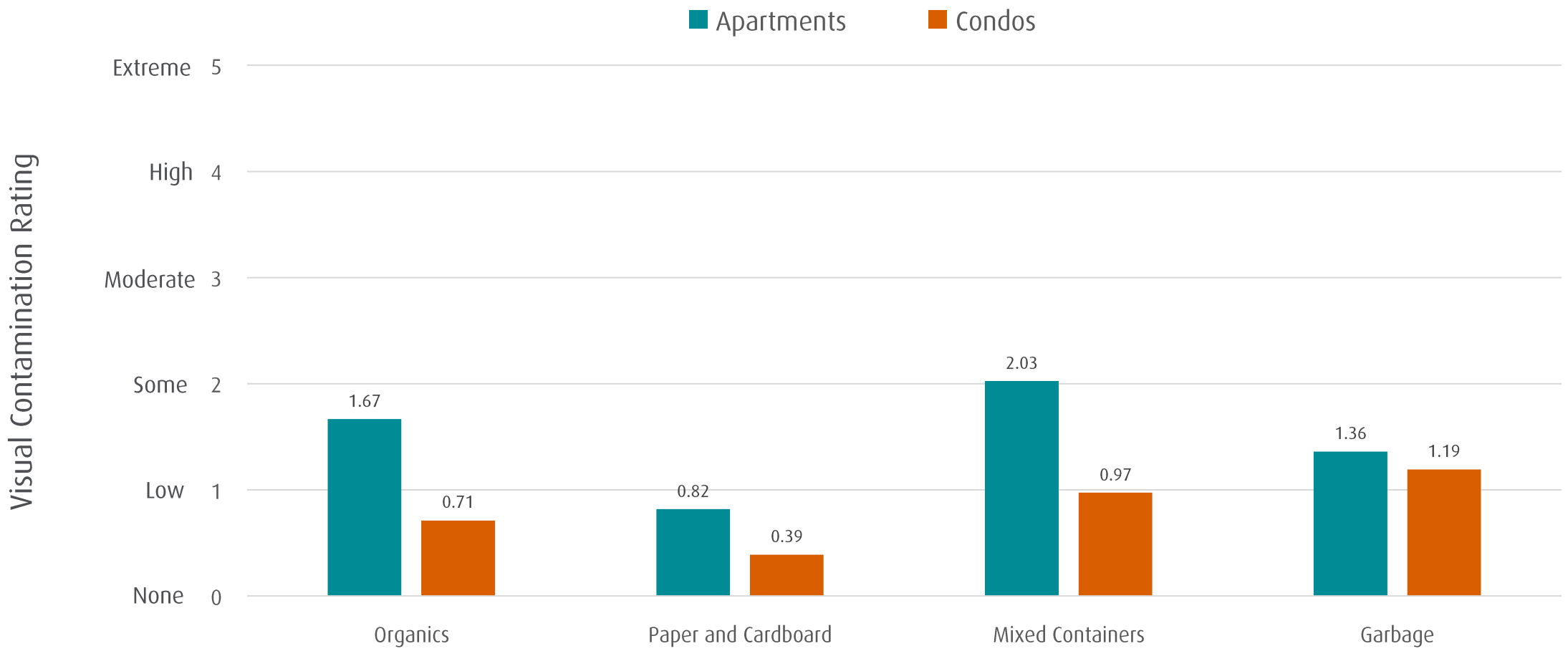
Distributed 2,669 comprehensive packages

- ✓ Sorting guides
- ✓ Move-in/move-out guides
- ✓ Hartland Depot sorting guides – NEW!
- ✓ Kitchen Scraps guides –NEW!

Buildings by Municipality



Visual Waste Audit



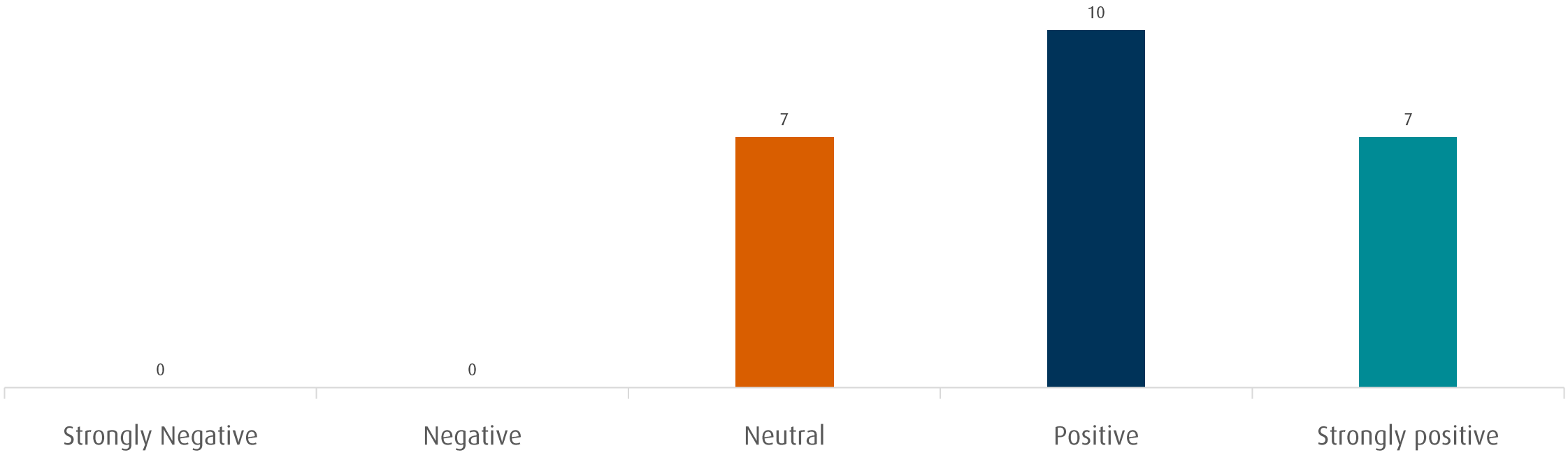
Feedback Survey

Each project contact (39) got an electronic survey link to provide feedback on the 'What Goes Where' project, including their opinions on:

- Recycling habits within their building
- Effectiveness of the educational materials and signage

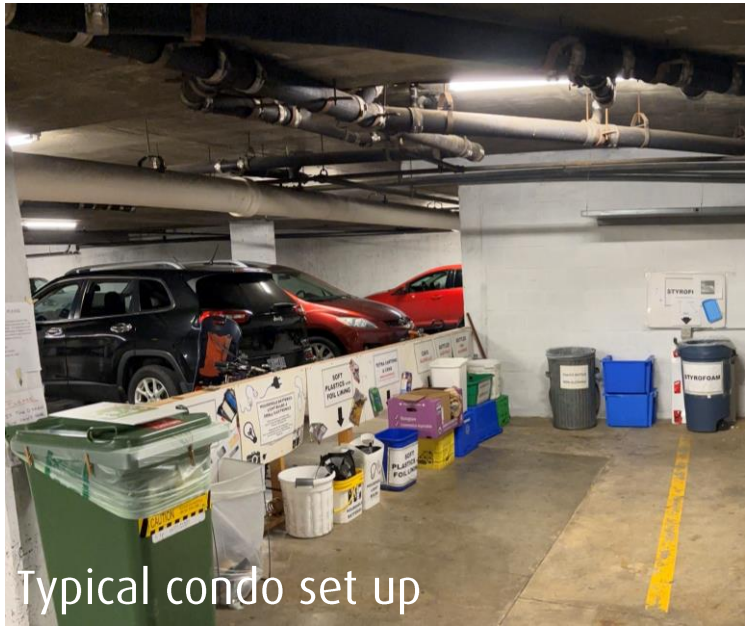
Feedback Survey Results

How would you describe the response to the What Goes Where Project by the building management and/or strata council?



Common Themes and Challenges

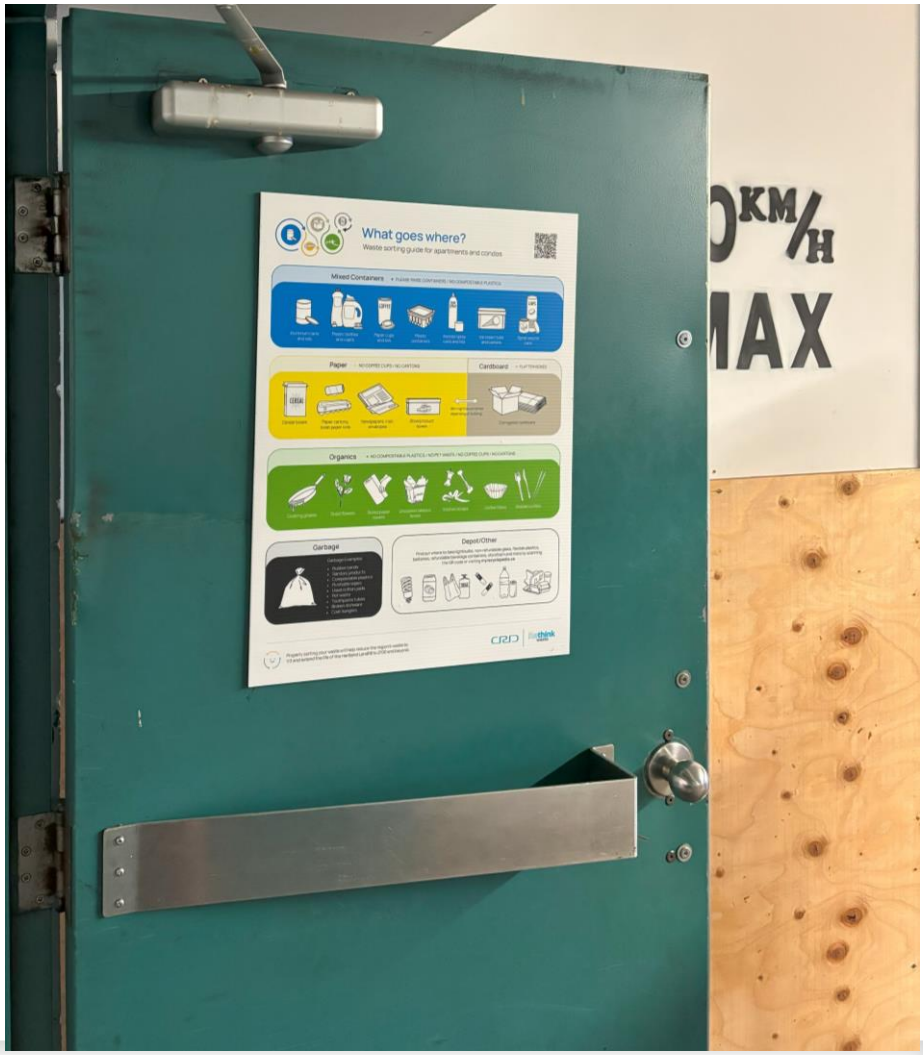
- Illegal Dumping
- Items placed in wrong bins
- Missed pick-ups
- Lack of accountability
- Layout of the waste sorting room
- Attitudes and behaviors between apartments and condos


Typical condo set up

Typical apartment set up

Recommendations for 2025

- Outreach Plan - focus on apartments
- Utilize the waitlist
- Update signage/guides
- Building long-term relationships with MFDs
- Develop educational plan to get more information to residents (e.g., posters/booths)



Thank you

dmoghaddam@crd.bc.ca | 250.360.3164

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Capital Regional District

CRDVictoria

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