



**REGIONAL DISTRICT OF CENTRAL OKANAGAN  
GOVERNANCE AND SERVICES COMMITTEE MEETING  
AGENDA**

Thursday, April 8, 2021

8:30 a.m.

Woodhaven Board Room  
1450 K.L.O. Road, Kelowna, BC

**Pages**

**1. CALL TO ORDER**

Chair Given acknowledged that this meeting is being held on the traditional territory of the syilx/Okanagan peoples.

*In accordance with the Provincial Health Officer Order regarding gatherings and events, the public is currently not permitted to attend Board meetings in-person.*

As an open meeting, a live audio-video feed is being broadcast and recorded on rdco.com.

Roll Call

**2. ADDITION OF LATE ITEMS**

**3. ADOPTION OF THE AGENDA**

Recommended Motion:  
THAT the Agenda be adopted.

**4. ADOPTION OF MINUTES**

- 4.1. Governance & Services Committee Meeting Minutes - March 11, 2021 & March 18, 2021

1 - 7

Recommended Motion:  
THAT the Governance & Services Committee meeting minutes of March 11, 2021 and March 18, 2021 be adopted.

**5. DELEGATIONS**

5.1. United Way - Central Okanagan Poverty and Wellness Strategy

8 - 15

Naomi Woodland, Manager-Community Impact and Poverty Reduction, United Way Southern Interior BC

Recommended Motion:

**THAT** the Governance and Services Committee receive for information the Central Okanagan Poverty and Wellness Strategy update report dated April 8, 2021.

6. ENGINEERING SERVICES

6.1. Solid Waste Management Plan Initiatives Update

16 - 97

Recommended Motion:

**THAT** the Governance & Services Committee receive for information the Solid Waste Management Plan Initiatives (SWMP) Update report.

7. NEW BUSINESS

8. ADJOURN

Minutes of the **GOVERNANCE & SERVICES COMMITTEE** meeting of the Regional District of Central Okanagan held at Regional District Offices, 1450 KLO Road, Kelowna, BC on Thursday, March 11, 2021

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Directors:

J. Baker (District of Lake Country)  
M. Bartyik (Central Okanagan East Electoral Area)  
M. Singh, alternate for C. Basran (City of Kelowna)  
W. Carson (Central Okanagan West Electoral Area)  
M. DeHart (City of Kelowna)  
C. Fortin (District of Peachland) (*attended electronically*)  
G. Given (City of Kelowna)  
C. Hodge (City of Kelowna) (*attended electronically*)  
S. Johnston (City of West Kelowna) (*attended electronically*)  
G. Milsom (City of West Kelowna)  
B. Sieben (City of Kelowna)  
L. Stack (City of Kelowna) (*attended electronically*)  
L. Wooldridge (City of Kelowna)  
J. Coble (Westbank First Nation)

Staff:

B. Reardon, Chief Administrative Officer  
T. Cashin, Director of Community Services  
J. Foster, Director of Communication & Information Services  
C. Griffiths, Director of Economic Development (*attended electronically*)  
D. Komaïke, Director of Engineering Services  
M. Kopp, Director of Parks Services (*attended electronically*)  
M. Rilkoﬀ, Director of Financial Services (*attended electronically*)  
M. Drouin, Manager-Corporate Services (recording secretary)

**1. CALL TO ORDER**

Chair Given called the meeting to order at 8:30 a.m. and acknowledged the meeting is being held on the traditional territory of the syilx/Okanagan peoples.

It was acknowledged that today has been declared the National Day of Observance by the Prime Minister commemorate the people who lost their lives to COVID-19 since the pandemic was declared. It was also acknowledged the death of Rolli Cacchioni, a long-time educator, community volunteer and School District No. 23 trustee.

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*As an open meeting, a live audio-video feed is being broadcast and recorded on rdco.com.*

**2. ADDITION OF LATE ITEMS**

There are no late items for the agenda

**3. ADOPTION OF THE AGENDA**

#GS16/21

BARTYIK/BAKER

THAT the agenda be adopted.

CARRIED unanimously

**4. ADOPTION OF MINUTES**

- 4.1. Governance & Services Committee Meeting - February 11, 2021 & February 25, 2021

#GS17/21

HODGE/BAKER

THAT the Governance & Services Committee meeting minutes of February 11, 2021 and February 25, 2021 be adopted.

CARRIED unanimously

**5. CORPORATE SERVICES**

- 5.1. Air Quality Service - Update on Agricultural Chipping Program

Staff report dated March 5, 2021 outlined the Board's request for an update on the region's air quality service program – agricultural chipping program.

The program has an annual budget of \$80,000 and is used to provide chipping for large acreages and a mow/chip rental rebate component for smaller acreages. The program is oversubscribed each year and last year there were problems as the chipper broke down causing delays. The 2020 4<sup>th</sup> quarter report highlighted the statistics for the year. The chipping program has been in place since 2004.

Discussion ensued regarding the recommendation to increase funding for the program.

- Until 2016, 100% of the program was funded through taxation.
- In 2016, a user pay component was introduced, the program remains subsidized however the farmer now contributes 20% of their rental costs.
- The increase in funding will provide an increase in the hours of operation.
- It's not known how much agricultural debris is burnt versus chipped.
- The air quality program service review was completed 3 years ago.
- Need to continue to focus on education.
- The RDCO does not own a wood chipper or air curtain burner.
- Will the biomass inventory study include agriculture waste? The study has not started but is expected to include the waste.
- North and South Okanagan Regional Districts are no longer involved in a valley-wide air quality program. In the past both regional districts have stated they are not interested in continuing with the Okanagan Airshed Coalition.

#GS18/21

SIEBEN/BARTYIK

THAT the Governance & Services Committee recommend the Regional Board approve adding \$40,000 to the Air Quality - Agricultural Wood Chipping Program in 2021.

CARRIED unanimously

#GS19/21

SIEBEN/HODGE

THAT staff be directed to bring forward a report in 2021 outlining the regional air quality current service.

CARRIED unanimously

## 5.2. First Nations Engagement Budget Consideration

Staff report dated March 4, 2021 outlined the Board's request following the February 25, 2020 meeting to review First Nation engagement with the Okanagan's First Nations.

Discussion ensued regarding the proposed allocation of funds for a feasibility study. Reconciliation is not a one-time project but ongoing and needs to be transparent. By establishing a new service workplans would be forwarded as well as budget for Board consideration. A number of key issues need to be identified: define and clarify the service, what the governance structure would be, timeframe, etc. Discussion would occur with the Okanagan Nation Alliance and Westbank First Nation through this process.

In terms of timeline, it may take 6-8 months to develop a service if that is recommended through the feasibility study and approved by the Board. If the service is established staff would be hired in 2022.

*Director Stack arrived at 9:30 a.m.*

The CAO outlined the process of defining and engagement in setting up a new service including approval of an establishment bylaw by the Province. There is no vote at the board table as Westbank First Nation does not have treaty agreement with the Province. WFN is its own a self-government.

A feasibility study is not done by committee but is completed by a consultant and reported to the Board. Through this process what the service may appropriately be called would be considered. The end prescriptive would come out of the study. It will be important to be collaborative throughout this process.

**#GS20/21**

**SINGH/WOOLDRIDGE**

THAT the Governance & Services Committee recommend the Regional Board approve allocating \$50,000 from the RDCO feasibility reserve fund to undertake a feasibility study in consideration of establishing a Regional First Nations Engagement Service;

AND FURTHER THAT this expense be included in this years' 2021-2025 Financial Plan.

CARRIED unanimously

**6. ADJOURN**

There being no further business the meeting was adjourned at 10:02 a.m.

**CERTIFIED TO BE TRUE AND CORRECT**

\_\_\_\_\_  
G. Given (Chair)

\_\_\_\_\_  
B. Reardon (Chief Administrative Officer)

Minutes of the **GOVERNANCE & SERVICES COMMITTEE** meeting of the Regional District of Central Okanagan held at Regional District Offices, 1450 KLO Road, Kelowna, BC on Thursday, March 18, 2021

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Directors: J. Baker (District of Lake Country)  
M. Bartyik (Central Okanagan East Electoral Area)  
M. Singh, alternate for C. Basran (City of Kelowna)  
W. Carson (Central Okanagan West Electoral Area) (*attended electronically*)  
M. DeHart (City of Kelowna)  
C. Fortin (District of Peachland) (*attended electronically*)  
G. Given (City of Kelowna)  
C. Hodge (City of Kelowna) (*attended electronically*)  
S. Johnston (City of West Kelowna) (*attended electronically*)  
G. Milsom (City of West Kelowna) (*attended electronically*)  
B. Sieben (City of Kelowna)  
L. Stack (City of Kelowna) (*attended electronically*)  
A. Alexander, alternate for J. Coble (Westbank First Nation) (*attended electronically*)

Absent: L. Wooldridge (City of Kelowna)

Staff: B. Reardon, Chief Administrative Officer  
T. Cashin, Director of Community Services  
J. Foster, Director of Communication & Information Services  
C. Griffiths, Director of Economic Development  
D. Komaika, Director of Engineering Services  
M. Kopp, Director of Parks Services  
M. Rilkoff, Director of Financial Services (*attended electronically*)  
M. Drouin, Manager-Corporate Services (recording secretary)

**1. CALL TO ORDER**

Chair Given called the meeting to order at 8:30 a.m. and acknowledged the meeting is being held on the traditional territory of the syilx/Okanagan peoples.

*In accordance with the most recent Provincial Health Officer Order regarding gatherings and events, the public is currently not permitted to attend Board meetings in-person.*

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**2. ADDITION OF LATE ITEMS**

There are no late items for the agenda

**3. ADOPTION OF THE AGENDA**

**#GS21/21**

BARTYIK/BAKER

THAT the agenda be adopted.

CARRIED unanimously

M. Singh arrived at 8:34 a.m.

#### 4. **FINANCIAL SERVICES**

##### 4.1. 2021 - 2025 Budget and 5-Year Financial Plan

##### 4.1.1. Director of Financial Services Introduces the 2nd Draft of the 2021-2025 Financial Plan

M. Rilkoff provided an overview of the changes to the 2021 budget following the Committee's first meeting of February 25<sup>th</sup> and the Regional Board recommendations of March 11, 2021.

The budgets for the following cost centres have been amended:

- 142 – Regional Parks – Add \$5.7m capital to land acquisition strategy using reserves, add \$480k misc. capital revenues.
- 046 – Dog Control – Add \$37k re COVID Restart Grant Usage, and reduce expenses by \$21k. Add \$15k Capital for tablets.
- 303 – Falcon Ridge Water System – Add emergency \$15k Intake Restoration project funded by Community Works Funds.
- 012 – Grants – Electoral Area Central Okanagan West – Reduced by \$3.1k.
- 102 – Air Quality – Add \$40k for Chipping Program.
- 195 – Feasibility Funds – Add \$50k New Regional Transportation Service Study and \$50k Regional First Nations Engagement Service Study.

General summary of taxes per average house by area was outlined:

	2020 Total Tax per House. Avg House Value \$734,000	2021 House Value	Feb 25 Draft		Mar 18 Draft	
			2021	2021	2021	2021
			Total Tax per House	Change per Avg House over 2020	Total Tax per House	Change per Avg House over 2020
Kelowna	\$183.41	\$750,000	\$190.57	\$7.16 3.902%	\$190.38	\$6.97 3.800%
Peachland	213.45	754,000	\$222.05	\$8.61 4.032%	\$221.76	\$8.31 3.892%
Lake Country	210.68	774,000	\$225.38	\$14.70 6.977%	\$224.66	\$13.98 6.634%
West Kelowna	203.34	753,000	\$210.85	\$ 7.51 3.693%	\$210.59	\$7.25 3.566%
C. O. West	665.92	746,500	\$676.52	\$ 10.59 1.591%	\$674.42	\$ 8.49 1.275%
C. O. East	535.31	739,000	\$535.12	\$ (0.19) (-0.036%)	\$534.82	(\$0.49) (-0.091%)



Capital budget increases were outlined. The final budget timelines were highlighted. The final adoption of the budget is scheduled at the March 29<sup>th</sup> Board meeting.

#### 4.1.2. Public Comment on the 2021 - 2025 Financial Plan

Due to the current Provincial Health Order in effect written public comment is received via email/letters.

There have been no comments received to date.

#### 4.1.3. Recommendation to Forward the Draft Budget for Final Consideration & Approval at the March 29, 2021 Board Meeting

**#GS22/21**

#### HODGE/STACK

THAT the Governance & Services Committee receive for information the updated and additional 2021 – 2025 Financial Plan documentation;

AND FURTHER THAT any recommended amendments discussed today be made and brought forward to the Regional Board's final budget meeting on March 29, 2021.

CARRIED unanimously

### 5. ADJOURN

There being no further business the meeting was adjourned at 8:45 a.m.

### **CERTIFIED TO BE TRUE AND CORRECT**

\_\_\_\_\_  
G. Given (Chair)

\_\_\_\_\_  
B. Reardon (Chief Administrative Officer)



# Governance & Services Committee

**TO:** Governance and Services Committee

**FROM:** Todd Cashin  
Director of Community Services

**DATE:** April 8, 2021

**SUBJECT:** Central Okanagan Poverty and Wellness Strategy – Project Update

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**Purpose:** To provide the Governance & Services Committee with an update on the development of a regional strategy to increase wellness and reduce poverty in the communities of the Central Okanagan.

## Executive Summary:

In March 2019, the Province of British Columbia released their poverty reduction strategy called TogetherBC: British Columbia's Poverty Reduction Strategy. Mandated through the *Poverty Reduction Strategy Act*, the strategy set targets to reduce the overall poverty rate in BC by at least 25%, and the child poverty rate by at least 50%, by 2024.

The Province made funding available through UBCM intended to support local governments in reducing poverty at the local level and to support the Poverty Reduction Strategy. In February 2020, the Regional Board approved a collaborative grant application to be submitted to UBCM for the development of a Central Okanagan Poverty and Wellness Strategy (COPAWS) on behalf of the District of Lake Country, City of West Kelowna, District of Peachland, and the City of Kelowna. A \$149,000 grant was awarded to the RDCO to further the work that has been completed by regional community partners over the last several years and build on resources such as the Central Okanagan Community Wellness Analysis.

With the United Way Southern Interior BC as the program/delivery agent, the strategy is being developed with oversight from the COPAWS Leadership Committee which includes staff from each of the partnering communities. The Regional District is responsible for maintaining proper fiscal management and reporting requirements for the grant and Co-Chairs the Leadership Committee with the United Way.

## RECOMMENDATION:

**THAT** the Governance and Services Committee receive for information the Central Okanagan Poverty and Wellness Strategy update report dated April 8, 2021.

Respectfully Submitted:



Todd Cashin  
Director of Community Services

*Prepared by: Danika Dudzik, Senior Planner*

Approved for Committee's Consideration



Marilyn Rilko, Deputy CAO

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### Implications of Recommendation:

Strategic Plan:	Receiving the update on the development of the Central Okanagan Poverty and Wellness Strategy for information supports the Regional Board Strategic Priorities 2019-2022 with respect to "Sustainable Communities" to initiate and support efforts to create a healthy built environment in which all people throughout the region enjoy access to a diverse range of housing options, remain safe in the face of emergencies and experience a high quality of life.
Policy:	Receiving the update on the development of the Central Okanagan Poverty and Wellness Strategy for information supports numerous policies contained within Our Health, Our Food, and Our Housing outlined in the Regional Growth Strategy Bylaw No. 1336.
Legal/Statutory Authority:	Mandated through the <i>Poverty Reduction Strategy Act</i> , the Province has created a poverty reduction strategy called TogetherBC: British Columbia's Poverty Reduction Strategy." The intent of the Poverty Reduction Planning & Action program is to support local governments in reducing poverty at the local level and to support the Province's poverty reduction strategy.

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### Background:

#### Poverty Reduction Planning and Action Program

In March 2019, the Province of BC released their poverty reduction strategy called TogetherBC: British Columbia's Poverty Reduction Strategy. Mandated through the *Poverty Reduction Strategy Act*, the strategy set targets to reduce the overall poverty rate in British Columbia by at least 25%, and the child poverty rate by at least 50%, by 2024. *TogetherBC* is based on four principles: affordability, opportunity, reconciliation, and social inclusion. These principles guided the priority action areas that form the core of the strategy.

The intent of the Poverty Reduction Planning & Action program is to support local governments in reducing poverty at the local level and to support the Province's poverty reduction strategy. Funding is provided by the Province of BC and is administered by the Union of BC Municipalities (UBCM).

In February 2020, the Regional Board approved a collaborative grant application to be submitted to UBCM for the development of a Central Okanagan Poverty and Wellness Strategy on behalf of the District of Lake Country, City of West Kelowna, District of Peachland, and the City of Kelowna. Each of the four member municipalities provided a resolution that acknowledged and supported the RDCO to apply for, receive, and manage any grant funds on their behalf. The grant was awarded to the Regional District for a total of \$149,000. Currently, all project activities are to be completed no later than November 14, 2021.

### Project History

In 2017, the Central Okanagan Poverty Reduction Committee (COPRC) was established with the goal of developing a regional poverty reduction strategy with an upstream focus. Supported by funding from the Vancouver Foundation and the Central Okanagan Early Years Partnership, the committee set the stage for a community-driven, regional approach to addressing poverty. The COPRC determined that there were specific requirements needed to move ahead into strategy development including a poverty analysis, significant community engagement, further involvement of those with lived and living experience of poverty, and a governance structure and sufficient resources to plan and execute a strategy.

In 2019 the COPRC contracted Urban Matters to create a regional community poverty analysis informed by lived experience and key engagement from stakeholders. The analysis provides baseline data and insights into poverty at the community and regional level, and identified eight key priority areas to help determine and inform action areas through the next phase. Key stakeholders involved in the Central Okanagan Community Wellness Analysis identified the need to pursue the development of a strategy with a regional focus.

### Alignment

A regional focus provides considerable benefits to Central Okanagan communities. A regional strategy provides for efficiencies in resources, engagement processes and advocacy. Through the City of Kelowna's Journey Home process, the community identified the need for a regional approach to complex social issues, as people move throughout the region for services, employment, childcare and housing. A regional strategy can create an action plan on policies and structures at the regional level, while building capacity within each community to address their unique needs and priorities.

The strategy aligns with the Regional Board priority of Community Sustainability to initiate and support efforts to create a healthy built environment in which all people throughout the region enjoy access to a diverse range of housing options, remain safe in the face of emergencies and experience a high quality of life.

### **Central Okanagan Poverty and Wellness Strategy:**

The development of the Central Okanagan Poverty and Wellness Strategy (COPAWS) is aimed at creating a strategy to be implemented across the region to increase community wellness and decrease poverty in the communities of the Central Okanagan which:

- Recognizes, values and seeks to build on existing strengths, strategies and initiatives;
- Builds capacity for collaborative action through engagement, with a goal of community ownership and leadership;
- Prioritizes inclusion and the active involvement of priority populations; and
- Focuses on implementation and on-going evaluation beyond the strategy development project.

The strategy development process includes opportunities for various collaborators such as local governments, Indigenous and non-Indigenous community members, the local health authority, not-for-profit agencies serving people living in poverty, persons with lived or living experience, and the private sector.

### Key Deliverables

1. Broad and inclusive community engagement program that develops ownership, collective impact and sustainability of the work ahead.
2. A “What We Heard” report from the community engagement process and events across the region.
3. A Central Okanagan Poverty and Wellness Strategy which outlines how we will reduce poverty and increase wellness in each community within the Central Okanagan region.
4. An Implementation Plan and accompanying accountability framework for each community in the region, identifying how the strategy will be actioned, responsibilities of key community stakeholders, and resources required for implementation.
5. An Evaluation Framework which provides specific, measurable targets to evaluate progress on implementing the strategy.

### The Strategy will:

- Align and integrate with Provincial and National Poverty Reduction Strategies, with related local systems change strategies, and current initiatives completed or underway in within the Region.
- Have an upstream, systems and policy change focus.
- Increase community awareness and will.
- Build capacity within and across the region for collaborative action (leverage resources).
- Create a roadmap that identifies ways for systems and policy to change and be equitable and diverse.
- Identify grass roots movements, organizations and systems that can support a regional goal of reducing poverty and build a strong collaborative and sustainable network with these groups.
- Focus on the unique needs of the individual communities across the region.

Through the development of the strategy, strengths of individual communities will be identified and used to create a community agenda and understanding to support the conditions for:

- Connecting, activating and mobilizing;
- Building a framework for sharing, gathering, and analyzing quantitative and qualitative data to inform niche initiatives;
- Inspiring innovation and creativity in finding solutions;
- Developing programs, projects and services that have tangible benefits for individuals and families;
- Creating a shared measurement framework to ensure continual improvement; and
- Coordinating existing services and infrastructure to maximize impact.

### Structure

The United Way Southern Interior BC is responsible for project management and development of the strategy with support and oversight from the COPAWS Leadership Committee and Community Action Teams (see attached Organizational Chart). A consultant will be part of the strategy development process through the development of an Indigenous engagement framework, preparation of an Implementation Framework and accompanying Accountability Framework for each community within the region, and preparation of an Evaluation Framework.

### Summary of Key Milestones

#	Key Milestones	Timeline	Status
1	Support for the project from the RDCO & member municipalities	Early 2020	Complete
2	UBCM Grant	May 2020	Complete
3	Formation of the Leadership Committee	November 2020	Complete
4	Communications Plan	March 2021	Complete
5	Community Engagement Plan	March 2021	Complete
6	Community Engagement and Consultation	April – July 2021	
7	Indigenous Engagement	May – July 2021	
8	Community Engagement Analysis and 'What We Head' report	August 2021	
9	Draft Strategy, implementation and evaluation framework	September 2021	
10	Final Strategy, Implementation, and evaluation framework	November 2021	

### Next Steps

#### 1. Select Consultant

An RFP was issued in February 2021 for a consultant to develop an Indigenous engagement framework and an implementation and evaluation framework relating to the development of the strategy. Proposals are currently being reviewed by United Way staff. With oversight from the United Way SIBC Project Manager, the purpose of this call for proposal is to:

1. Provide a strategic framework for engaging Indigenous communities into this work through involvement and collaboration and implementation of this framework
2. Create an implementation and accountability framework for COPAWS
3. Develop an evaluation framework for COPAWS that measures the effects and changes of the Strategy on people and communities

#### 2. Finalize Community Engagement Plan

Planning for community engagement has been ongoing and includes strengthening relationships with community service providers. The engagement plan was developed with input from the Community Action Teams and is to be reviewed and endorsed by the COPAWS Leadership Committee prior to undertaking any engagement.

#### 3. Community Engagement

The COVID-19 pandemic has disproportionately impacted those living in poverty, people who are precariously housed, facing food insecurity, with chronic health conditions or living with disabilities, marginalized and racialized groups and individuals, and families and seniors who were already facing structural and social inequities. In order to effectively create a community-based, actionable wellness and poverty strategy in our region, we need to adapt to ensure equitable, inclusive community engagement will still occur across the region despite the barriers that remain in place due to COVID-19. The project team is shifting in-person community engagement activities (forums, focus groups) to virtual methods, and will leverage existing social service programs, relationships and connections to scale up one-to-one and small group engagement focused on those with limited or no access to technology to engage virtually.

Additionally, the project team will continue the planned engagement with community-identified priority groups (youth, lived and living experience) and specific engagement activities focused on diverse and priority populations in all communities across the Central Okanagan region.

The community engagement approach includes:

- Asset Mapping – building a community roadmap of existing services and initiatives
- Community Action Teams – community led activation and guidance of approach
- Online Surveys (priority groups and general public)
- 1:1 interviews
- Focus groups with priority populations (disproportionately affected by poverty)
- Community consultation through service delivery partners in the community

### **Financial Considerations:**

The District of Lake Country, City of West Kelowna, District of Peachland, and the City of Kelowna all provided Council resolutions that acknowledged and supported the RDCO to apply for, receive, and manage any grant funds on their behalf.

As the primary applicant, the Regional District of the Central Okanagan is responsible managing the grant funding on behalf of the regional partners. The RDCO is responsible for the completion of the project, reporting requirements and maintaining proper fiscal management.

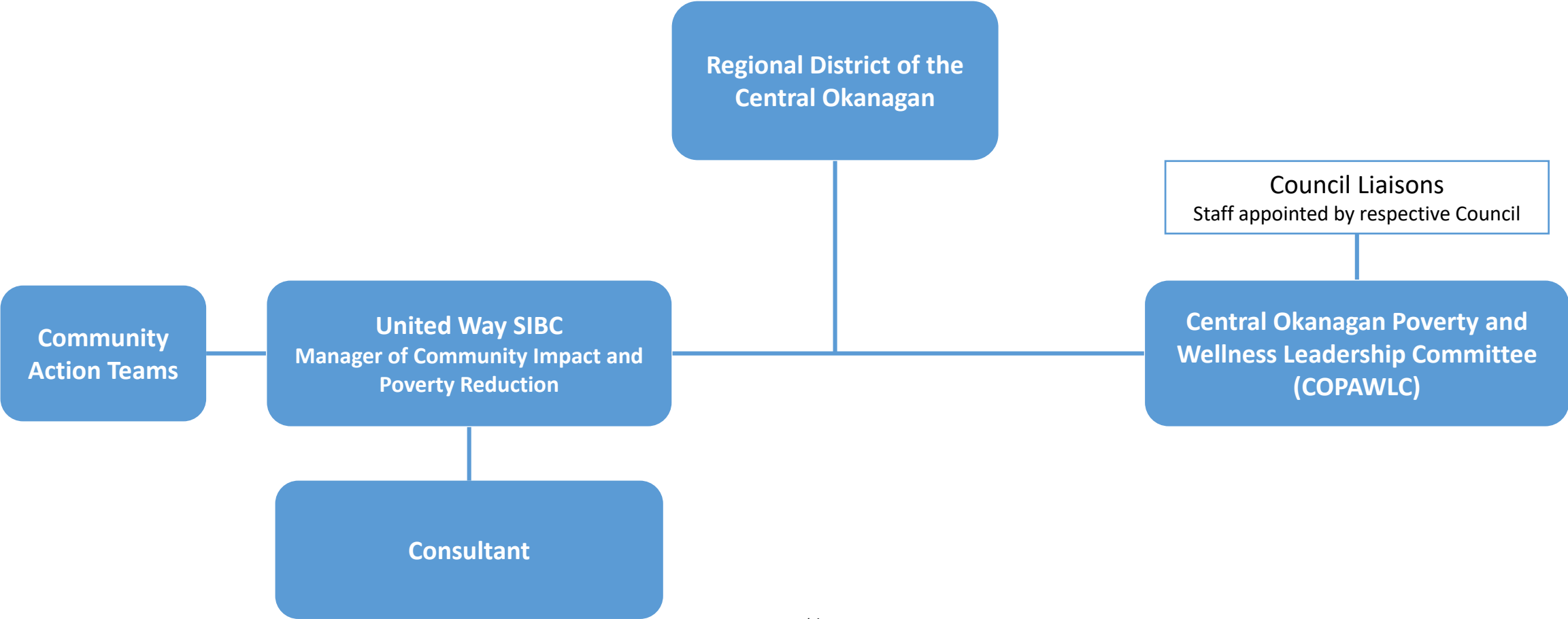
### **Organizational Issues:**

Along with the fiscal and reporting responsibilities, the Regional District is involved in the strategy development process through the review and input of components identified in the work plan, and a staff representative Co-Chairs the COPAWS Leadership Committee with the United Way. Staff from each of the partnering communities (Council liaisons) form part of the Leadership Committee and are accountable for guidance on community engagement and strategy implementation in each respective community.

Attachment:

- COPAWS Organizational Chart

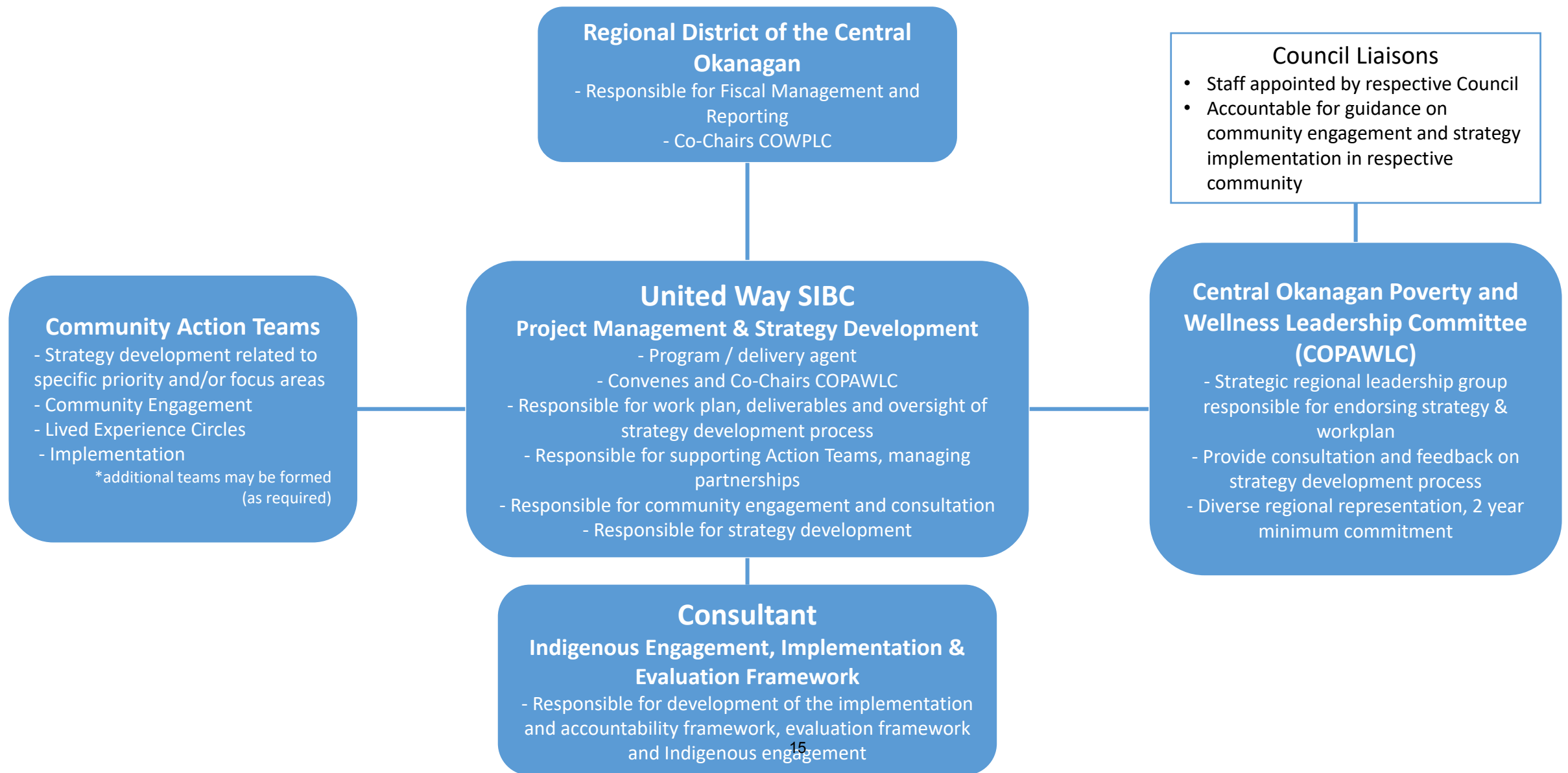
**Central Okanagan Poverty and Wellness Strategy (COPAWS)  
Organizational Chart**





# Central Okanagan Poverty and Wellness Strategy (COPAWS)

## Organizational Chart (detailed)





# Governance & Services Committee

**TO:** Governance and Services Committee

**FROM:** David Komaika  
Director - Engineering Services

**DATE:** April 8, 2021

**SUBJECT:** Solid Waste Management Plan Initiatives (SWMP) Update

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**Purpose:** To provide the Committee with an update on the Solid Waste Management Plan (SWMP) and seek feedback in a workshop environment.

## Executive Summary:

On October 8<sup>th</sup>, 2020 David Lefebvre from Recycle BC made a presentation to the Governance and Services Committee outlining the scope of services they provide, what products they are recycling and to answer any questions the Committee members had. There was good discussion on the need to reduce contamination rates through education and the desire to explore alternate technologies & approaches for our recycling program. Towards the end of deliberations, the Committee passed the following resolution:

***“THAT the presentation by David Lefebvre, Recycle BC, be received for information.***

***AND FURTHER THAT staff schedule a workshop to review the current recycling program and possible alternative recycling options.”***

The purpose of this report and associated workshop is to review the current Solid Waste & Recycling Program by providing an overview of the Solid Waste Management Plan (SWMP) that was given Provincial approval last year, review the timelines associated with the SWMP and to provide an update on what the future holds for recycling plastics, how best to manage glass as well as provide options that would not require a formal amendment to the SWMP.

The Workshop will inform the Committee on the following matters:

- Studies being undertaken in 2021 will result in recommendations for new policy and bylaw regulations being brought forward to the Board;
- The Central Okanagan is “on track” in achieving our 2022 Waste Reduction Target;
- As part of the Solid Waste Management Plan, an “Effectiveness Review” will be conducted in 2024 which will provide an opportunity to petition the Province to make any necessary amendments to the SWMP that the Board deems necessary;
- More than 52% of waste going into the Glenmore Landfill comes from residential and ICI sources. Nearly 50% of that waste is organics. Glass represents ~1% of annual waste;

- The diversion of compostable organics represents the most significant opportunity to reduce material entering the landfill and meet our diversion targets.

Across Canada, we observed other provinces progress towards a “BC-Like” EPR program to support localized recycling efforts following the drastic shifts within global recycling markets. With Single Use Plastics, the Federal government has committed to ban specific items including plastic straws, bags, and stir sticks by the end of 2021.

An internal analysis was completed of alternative curbside collection options for depot only materials. The analysis confirmed the initiatives within the SWMP, and suggests that the pursuit of curbside collection of flexible plastics or glass is not an optimized use of resources. The analysis found that dollar for dollar other initiatives, such as curbside organics, could result in up to 50 times the positive environmental and operational impact. Work is planned for 2021 to further quantify and explore opportunities as outlined within the SWMP.

## RECOMMENDATION:

**THAT** the Governance & Services Committee receive for information the Solid Waste Management Plan Initiatives (SWMP) Update report.

Respectfully Submitted:



David Komaïke  
Director of Engineering Services

Approved for Committee's Consideration



Brian Reardon, CAO

*Prepared by: Travis Kendel, Manager of Engineering Services*

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## Implications of Recommendation:

### Strategic Plan:

- The Solid Waste Management Plan (SWMP) contributes directly to reducing our community's environmental footprint.

### General:

- It is recommended that the RDCO and member municipalities continue to complete initiatives identified within the SWMP. If new strategies or initiatives outside of the SWMP are desired, the RDCO may undergo a public consultation process and complete a detailed consultation report before submitting a revised SWMP to the Minister for approval.
- Implementation schedules within the SWMP are flexible to allow for changes in priorities and available funding.
- The 2024 effectiveness review may result in recommendations to update initiatives, strategies, or targets.

### Organizational:

- The SWMP aligns with existing resources, and does not contemplate significant unforeseen change. Significant events, such as the COVID-19 Pandemic may impact timelines and over the longer term. New initiatives, or fast-tracked timelines may require additional staff or consulting resources to support.

## Policy:

- Extended Producer Responsibility (EPR) as a policy tool shifts the responsibility for end-of-life management of products (physically and economically) to the producer and away from municipalities to create an incentive for producers to include environmental considerations in design of products.

## Legal/Statutory Authority:

- The *Environmental Management Act* requires that all regional districts prepare and submit a SWMP to the provincial government.
  - The *Environmental Management Act* states that: for the purposes of implementing an approved SWMP, a regional district may make bylaws to manage municipal solid waste or recyclable materials.
  - The RDCO is required to undergo public consultation, and complete a detailed consultation report, before submitting a revised plan to the Minister for approval that includes major changes. Minor changes, such as shifts in priority or implementation schedule are permitted without Minister approval.
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**Background:****Solid Waste Management Plan - Background and Progress Update**

The Solid Waste Management Plan (SWMP) provides 10 years of direction to the RDCO and member municipalities regarding all things Solid Waste, and is a regulated requirement under the British Columbia *Environmental Management Act*. Under the same regulation, the development, amendment, and final contents of the SWMP requires extensive public review and consultation before approval by the Minister. To aid in consultation, the RDCO created the Public Technical Advisory Committee (PTAC), the PTAC included local government and RDCO staff, First Nations, local environmental groups, owners of private waste facilities, commercial waste generators, waste haulers, and facility operators.

The RDCO SWMP, following extensive public feedback and consultation, committed to the following goals, in addition to the guiding principles developed by the Ministry:

- Zero Waste: regard all discards as a resource
- Citizens actively engaged in behaviours that reflect the waste management hierarchy (Three R's)
- Make it easy for residents and businesses to make the right decision

The PTAC considered strategies and initiatives in the context of the goals and guiding principles, resulting in a recommendation to include the 24 strategies that support 28 initiatives to be undertaken over the life of the SWMP. 22 of 28 initiatives have been completed or are currently in progress as of March 2021.

Under the guidance of the SWMP, the RDCO and member Municipalities have successfully reduced annual waste disposal from 681 kg/person (2017) to 636 kg/person (2020). With this progress, and the work planned yet to occur, our community is on track to achieve the 2022 target of 600 kg/person. Single family curbside waste accounts for approximately 204 kg/person, 32% of the total waste disposal per capita in the RDCO. The most significant reduction in waste disposal over the next two years is expected to come from other segments of the waste landscape, such as multifamily, commercial, and construction.

Key initiatives to seize upon opportunities within these areas include the completion of the Multifamily Study best practices and policy recommendations, expanded communication planning and public awareness activities, and an internal Organics gap analysis to review and revise factors within the 2011 Organics Lifecycle Assessment in the context of our current waste environment.

The SWMP is required to be reviewed for effectiveness in 2024, at which time further public consultation and amendments to the plan should be considered.

### **Solid Waste Timeline**

The Waste Reduction office undertakes many operational and maintenance activities to support positive waste reduction behaviours within the RDCO beyond major milestones. These activities include:

- Ongoing Campaigns; including:
  - 'Love Food, Hate Waste'; 'Make Memories, Not Garbage'; and 'Christmas Tree Chipping'.
- Annual Events, including:
  - Trunk Sales; Community Clean Up; Household Hazardous Waste and Bulky Item Collection; Repair Cafes and Compost Sale and Education
- Waste Collection Operations, including:
  - Curbside Collection; Transfer Stations; and Recycling Depots
- Monitoring and Clean-ups, including:
  - Commercial Landfill Monitoring; Contamination Reduction; Curbside Cart Management and Inspections; Illegal Dump Monitoring and Clean Up

Beyond regular activities the Waste Reduction office also undertakes significant projects to support the SWMP and RDCO Strategic Priorities. The journey towards our current waste reduction landscape began in 2000 with the roll-out of the curbside collection program, following shortly afterwards with the 2006 SWMP.

From 2006 through to 2016 the RDCO underwent a flurry of activity guided by the 10-year SWMP, including: the automation of curbside collection, closure of the Westbank landfill, various waste audits, expansion of the curbside recycling program and partnership with Recycle BC. In 2016, the SWMP update process began with extensive public consultation, followed by new contracts with Recycle BC in 2018 and E360s in 2019. In early 2020, the SWMP and its corresponding extensive public engagement was approved by the Minister.

As part of the 2021 Budget, the RDCO Waste Reduction office, in consultation with the Solid Waste Technical Advisory Committee, plans to propose the following initiatives for Board consideration:

- Development of a regional Wildlife resistant cart program;
- Analysis and update of the 2011 Organics Lifecycle assessment;
- Implementation of an Expanded Multifamily Recycling program;
- Transfer Station Service Improvements (Trader's Cove and North Westside Road)

With the SWMP established and approved, the next 10-years of Solid Waste guidance are established. The SWMP includes significant initiatives to be explored and considered before the 2024 effectiveness review, including potential for multifamily recycling programs and curbside organics collection.

Waste Generation within the Central Okanagan appears to be projecting downwards following a spike in 2018. From 2013 through to 2018, the RDCO and member municipalities observed a steady increase in waste generation per capita as a result of significant increase in construction waste. Summarized below is the last 8 years of waste performance, a true indication of just how far we've come in recent history.

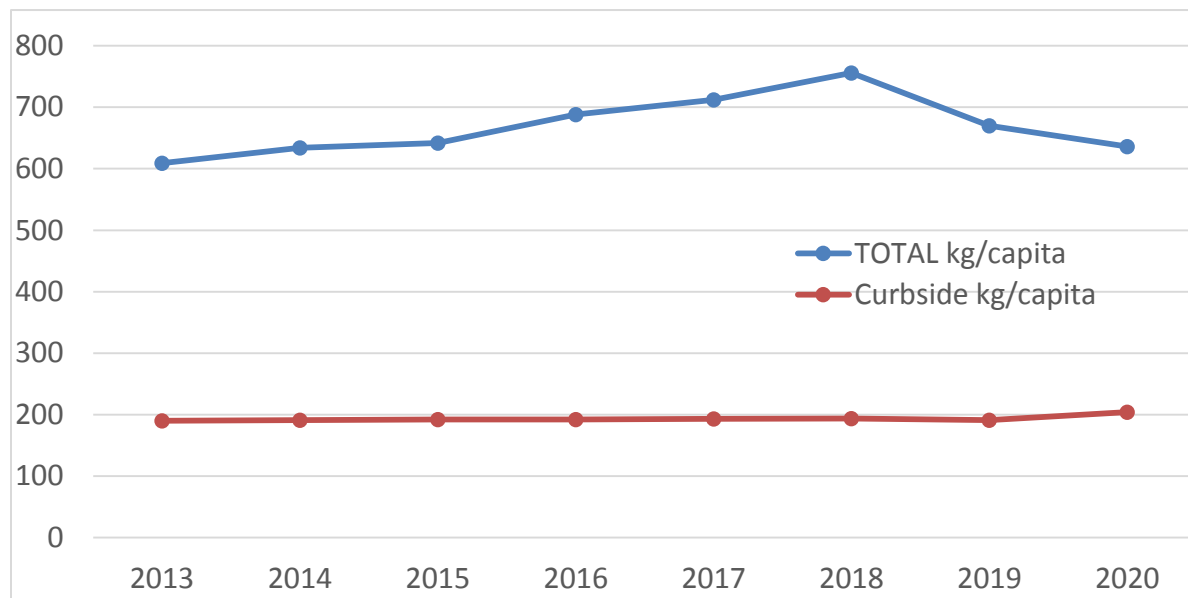


Figure 1 - Waste disposal per capita in the Central Okanagan

### Solid Waste Environmental Analysis and Waste Composition

Within British Columbia, a number of important initiatives and programs are evolving. Single use plastics continue towards an inevitable ban, along with concerted efforts to reduce the overall use of plastic in packaging. Organic diversion continues to be a significant portion of the Province's CleanBC program, with regular annual grants provided to support the construction and expansion of community organics recovery infrastructure.

In other communities Recycle BC has working to expand the number of items accepted curbside through their curbside collection service. Nearby we've observed this with the introduction of curbside glass collection within the North Okanagan Regional District. The RDCO and its member municipalities have a different relationship with Recycle BC, where through partnership we collect curbside materials on their behalf, receive direct compensation, and allocate that funding to pay for the curbside service and educational programs. The RDCO and member municipalities contract with Recycle BC is up for renewal at the end of 2023, by which time the SWTAC will provide a recommendation for consideration to regional Councils and the RDCO Board regarding our collective ongoing relationship with Recycle BC.

Other communities outside the RDCO are also updating their SWMP, with the CRD considering a draft SWMP in November 2020. Their new SWMP reads very similar to the RDCO SWMP, with emphasis on commercial and multifamily diversion, support of EPR programs, and increasing organics diversion.

Outside the borders of our Province, significant change is occurring. Last year, Ontario continued its shift within the provincial recycling program to match the EPR program already existing in BC. New Brunswick also followed suite, announcing that printed paper and packaging would be covered under EPR legislation within the province. Alberta was the latest to jump on the bandwagon, announcing that it plans to advance EPR consultation in early 2021.

BC currently has a 100% industry funded system, with Saskatchewan and Ontario's existing EPR systems targeting 75% and 100%, respectively. British Columbia's recycling system is nation leading, and the envy of local and provincial governments across the country. The success of the EPR program within BC has enabled above average waste reduction and has advanced the recycling and reuse of materials beyond what was achievable through traditional market driven systems. With the introduction of China's National Sword policy in 2018, recycling systems that relied on shipping undesired recyclables overseas were stopped in their tracks, with many communities entirely dropping recycling efforts in favour of landfill disposal. Communities like Calgary, Alberta, which had previously collected plastic clamshells for recycling at curbside found themselves landfilling 92 semi-trailer loads of the same material when overseas markets disappeared.

Across North America, businesses and governments are embracing a shift towards a circular economy. In a traditional linear economy, resources are extracted, products made, and end-of-life items are disposed of (make, use, dispose). In a circular economy, resources are kept in use as long as possible by maximizing product value while in use, recovering or regenerating product life if possible, and then recycling materials at the end of life.

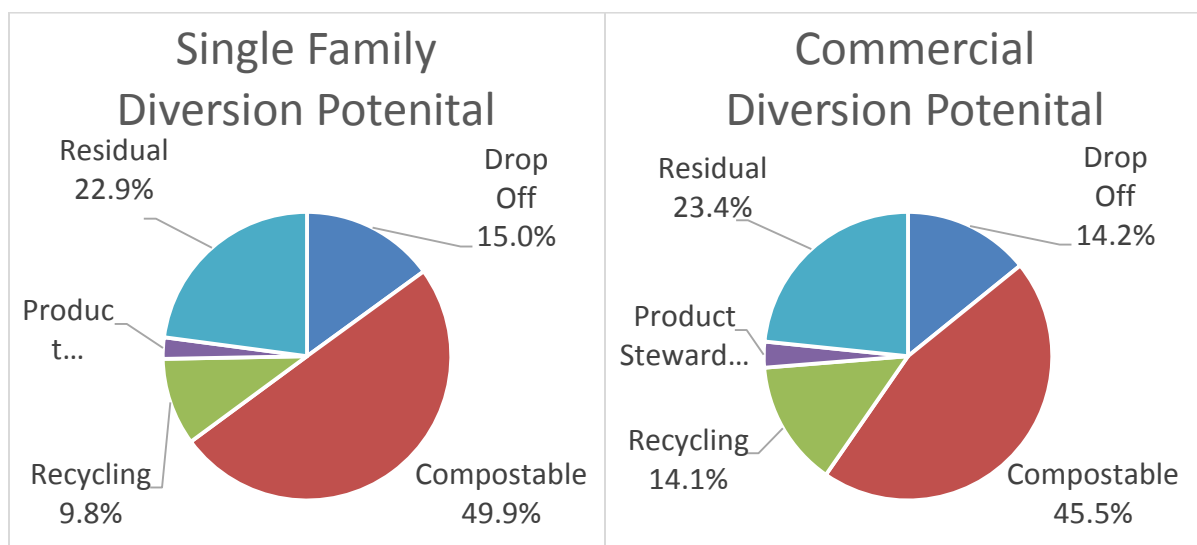
BC is well positioned to embrace a circular economy with its well established EPR program. As provincial capacity to process recyclable materials continues to develop, EPR programs like the one offered curbside through partnership with Recycle BC will begin to include more recoverable materials.



Image: Sustainable Global Resources Ltd.  
Recycling Council of Ontario

The gradual adoption of a circular economy will naturally lend itself to improved waste reduction, new regulatory controls over product development and disposal, and new responsibilities for local governments when procuring products.

In the RDCO, our waste composition supports the strategies and initiatives approved within the SWMP. As seen in the figure below, there are significant portions of existing regional waste streams that may be divertible in both Single Family and Multifamily segments. The most significant of these is compostable organics.





Compostable organics within the Central Okanagan are part of a complex environment, and more detailed analysis has been included within the proposed 2021 and 2022 Waste Reduction work plans to validate overall feasibility and impacts. Other communities have seen great success with organics collection, such as Capital Regional District (CRD), which observed a 75 kg/person decrease in waste generation following the implementation of organics diversion programs.

Other divertible materials, such as glass (1%) experience significantly diminished returns and are not funded through EPR programs when collected curbside by Municipalities. These other divertibles are not favourable candidates for curbside diversion programs within the current waste reduction environment and are already being responsibly recycled by the majority of consumers.

### **Alternative Recyclable Collection**

On May 9, 2019, the Board directed staff to explore and report to the Board on alternate collection methods for recyclable material which is currently collected through the depot system. Staff reported in September 2020 the outcome of preliminary findings, indicating that no communities in BC have been identified that collect recyclable materials outside of established Extended Producer Responsibility (EPR) programs.

It is recommended that the RDCO and member municipalities remain aligned with the regional SWMP, which advocates for full cost compensation by producers for material recycling. The curbside collection of depot only materials is not aligned with RDCO Strategic Priorities or the SWMP, and does not result in tangible environmental or operational benefits.

For those materials where curbside collection is not recommended, alternative community collection strategies may be viable. Research and analysis is currently underway to explore the inclusion of Encorps 'Express & GO' automated recycling units within underserved areas of the community for beverage container recovery. Initiatives like these represent no-cost recycling options that provide convenient alternatives to residents and visitors.

When the existing Recycle BC contract is up for consideration at the end of 2023, the collection of depot only materials should be considered again in the context of those opportunities. It is not currently recommended to pursue the collection of curbside depot only materials.

### **Emerging Issues and Opportunities**

Recycling contamination continues to be an ongoing concern across British Columbia. Recycle BC maintains a 3% contamination target, which includes items such as garbage, books, textiles, electronics, scrap metal, hazardous waste, and construction debris. Depot only materials included within recycling bins are not calculated as part of the 3% target, however are considered to be incompatible with existing recycling equipment or processes. The RDCO is under contract with Recycle BC to maintain non-acceptable material contamination below 3%.

The Q3 2020 Kelowna Contamination scorecard provides the most representative regional snapshot of contamination performance, and is summarized in the figure below. Kelowna's Q3 2020 not-accepted rate was 8.3%, with an additional 6.1% incompatible materials such as glass, plastic bags, and foam.

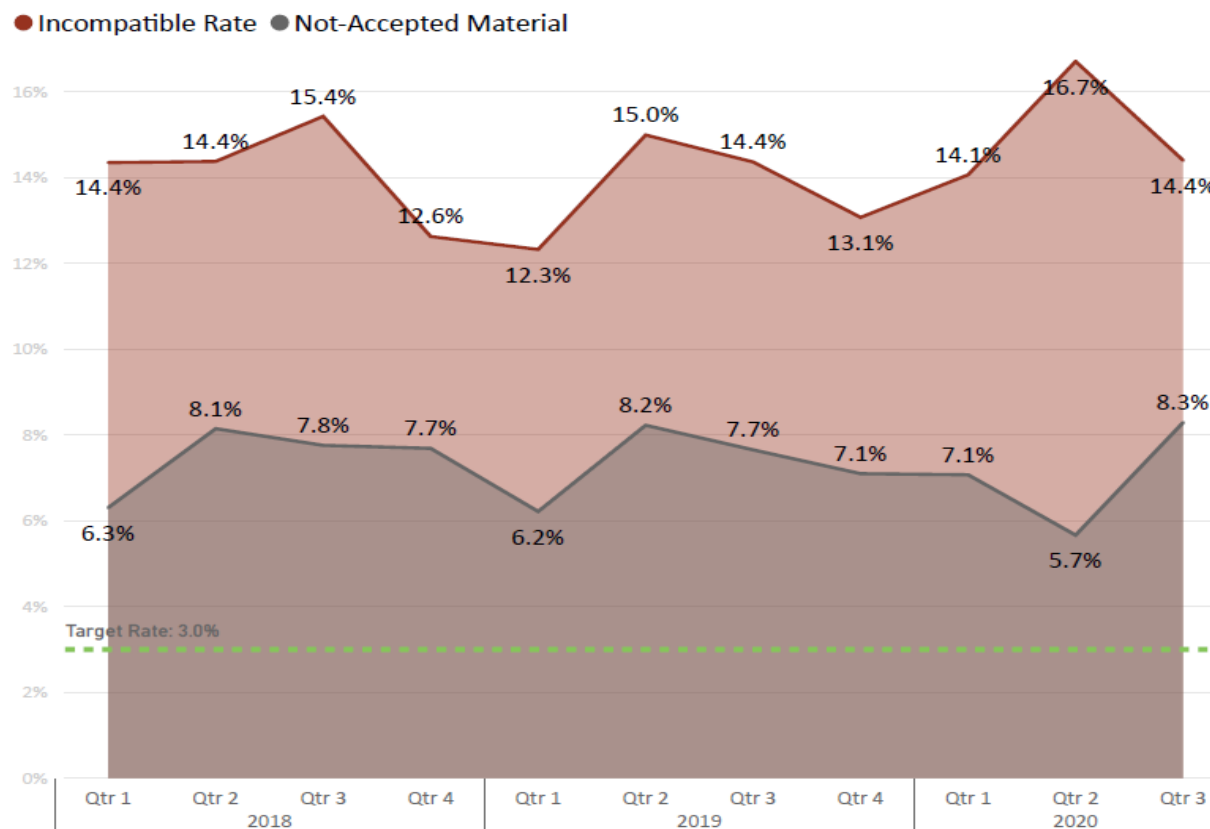


Figure 2 - Q3 Kelowna Recycling Contamination Scorecard

RDCO Waste Reduction is expanding communication planning in 2021 to better analyze and address consumer behaviours that result in recycling contamination. Shifting away from a universal approach, on a trial basis the RDCO will tailor focused messaging, delivered through audience specific mediums to support behavioural change that supports good recycling practices where change needs to occur. The RDCO intends to expand this method of communication to all aspects of Waste Reduction, should it be successful in contamination reduction.

Many consumers want to do the right thing, and may not have access to the resources, services, or information to do so. Multifamily properties remain a relatively untapped segment, representing the 'low hanging fruit' of regional waste reduction opportunities. As part of a 2020/2021 study, preliminary findings recommend that the RDCO consider: Bylaw changes, Educational resources and Policy recommendations. When the Multifamily study is complete, the RDCO will engage municipal members through the Solid Waste Technical Advisory Committee to prepare an update and potential recommendations to the Board for consideration.

Extended Produce Responsibility within BC continues to evolve, with the RDCO and member municipalities submitting a joint comprehensive response to the Provincial EPR Intentions Paper to expand the Recycling Regulations. The SWTAC advised the consideration and support of the following products for EPR: Mattresses, Pressurized tanks, Electric vehicle batteries, and Paper and packaging beyond residential sources.

Waste Reduction staff also participated in engagement with Federal and Provincial counterparts regarding the banning of Single Use Plastics. CleanBC has committed to a staged action plan which includes (in this order) bans on single use plastics, reduced plastic in landfills, expanded container returns, and reduced plastic use overall. The Federal government has taken a more focused and structured stance to plastics, working towards banning single use plastics where: viable alternatives exist; products are often not recycled; and, products are detrimental to the environment.

To this end, the Federal Government has announced the single-use plastic ban will take effect by the end of 2021, and impact all single use plastic grocery bags, straws, stir sticks, six-pack rings, cutlery, and foodware. Specifics regarding enforcement or requirements of local governments have not yet been made public.

### **Financial Considerations:**

- Recyclables within the region are currently managed through Recycle BC programs.
- The Recycle BC EPR program is currently funded by producers of paper and packaging.
- Independent recycling initiatives will not be eligible for producer funding, and will require alternative revenue streams, such as the sale of marketable produces and increased user fees.

### **Organizational Issues:**

- Recycle BC currently collects, sorts, markets, and distributes recyclables on behalf of participating regions. A recycling program operating outside of Recycle BCs programming would require additional positions to undertake the same work.

### **External Implications:**

- Current recyclable management within the RDCO and member municipalities aligns with the Solid Waste Management Plan, which advocates for reasonable service levels for the region from all EPR programs and full cost compensation by producers.
- The Solid Waste Management Plan was created with input from the public, local government, and technical experts.
- Prescriptive public engagement and consultation is required to update the SWMP, the last update took approximately 4 years from start to finish.

### **Alternative Recommendation:**

- None

### ***Considerations not applicable to this report:***

- *Which of the above are not applicable – list here*

### **Attachment(s):**

- SWMP Initiatives Update.pdf
- Glass Recycling Report.pdf
- Organics Composting Report.pdf

Strategy	Update	Priority	Progress
<b>Reduction and Reuse</b>			
Investigate options to support the reuse of items	Continue to hold various reuse events (outside of COVID) including two annual repair cafés and two trunk sales. Partner with reuse organizations like Canadian Diabetes clothing collection program at Transfer Stations	High	<input checked="" type="checkbox"/> Establish reuse events <input checked="" type="checkbox"/> Establish reuse partnerships <input type="checkbox"/> Explore Landfill Reuse Facility
Encourage residents to reuse bags through an awareness campaign and consider banning targeted materials (e.g. single-use plastic bags)	<p>In 2020, the RDCO and member Municipalities through the Solid Waste Technical Advisory Committee have participated in engagement sessions with the Federal government surrounding the nation-wide initiative to ban single use plastics.</p> <p>The first round of engagement has concluded, and we are awaiting further information from the Federal government regarding this initiative.</p> <p>Awareness campaign not yet developed.</p>	Medium	<input checked="" type="checkbox"/> Engage with Federal Government <input type="checkbox"/> Establish Awareness Campaign (2021) <input type="checkbox"/> Consider bans in RDCO (2021)
Investigate collection of EPR materials at RDCO's recycling depots	Not yet formally investigated.	Medium	<input type="checkbox"/> Investigation Complete <input type="checkbox"/> Consider Policy Recommendations
Increase public awareness of existing collection opportunities for EPR products	Continue to promote all recycling options to residents through website, Recycle Coach App, social media, recycling guides. New processes and methods to improve engagement with public continually being evaluated and implemented.	Medium	<input checked="" type="checkbox"/> Continue Recycle Coach App <input checked="" type="checkbox"/> Promote through Social Media <input type="checkbox"/> Detailed Communication Plan (2021) <input checked="" type="checkbox"/> Establish Student Ambassadors
Assess options to incentivize backyard composting (residents)	Subsidized composters (\$5/composter), sell between 300-400 composters annual. Introduced Green Cone with \$20/unit subsidization (sold between 25-75 units per year. Plan to increase exposure to the Green Cone Food digester as a way to manage all food waste from households	Medium	<input checked="" type="checkbox"/> Establish Annual Subsidization <input checked="" type="checkbox"/> Release Instructional Videos
<b>Recycling</b>			
Conduct a review of services offered at RDCO's recycling depots	Reviewed hours and services at NWSTS and Trader's Cove transfer station, both which also include depots. Additional review required to include other facilities.	High	<input checked="" type="checkbox"/> Northwest <input checked="" type="checkbox"/> Trader's Cove <input type="checkbox"/> Westside <input type="checkbox"/> Glenmore
Re-evaluate organic waste diversion opportunities while considering the need to maintain landfill gas collection and use at the landfill	Waste Reduction to review 2011 Organics Lifecycle Assessment Plan to complete gap analysis and confirm need to update Organic Waste Management within the RDCO.	Medium	<input type="checkbox"/> Complete Organics Gap Analysis (2021) <input type="checkbox"/> Complete Organics Study Update (2021) <input type="checkbox"/> Evaluate Curbside Organics Prg. <input type="checkbox"/> Evaluate Multifamily Organics Prg. <input type="checkbox"/> Evaluate Commercial Organics Prg.
RDCO to adopt a preferential purchasing policy for green procurement that supports the 3Rs and encourage member municipalities to follow its example.	CNG powered trucks being used for all curbside collection. Corporate green procurement policy has not yet been developed. Green procurement incorporated into evaluation for some planned purchases, such as 'Wildlife Resistant Curbside Carts'	Medium	<input type="checkbox"/> Consider Policy Recommendations <input checked="" type="checkbox"/> Consider Green Evaluation
Lobby through the BC Product Stewardship Council to influence issues relating to EPR products and programs.	RDCO staff sits on BC Product Stewardship Council - a coalition of regional districts that contributes to the success of EPR programs in BC	Medium	<input checked="" type="checkbox"/> Undertake BCPSC Advocacy
Investigate policy options to encourage recycling.	Multifamily recycling study commissioned in 2020 to identify barriers to increased recycling. Best practices and tool kit ready in 2021. Will include bylaw and policy recommendations.	Medium	<input checked="" type="checkbox"/> Complete Multifamily Study <input type="checkbox"/> Consider Bylaw Recommendations (2021) <input type="checkbox"/> Provide Planning Feedback (2021) <input type="checkbox"/> Consider Policy Recommendations (2021)
Investigate requiring all contractors for construction and demolition (C&D) projects to develop waste management plans to meet specified recycling target	Not yet started	Medium	<input type="checkbox"/> Investigation Complete <input type="checkbox"/> Consider Policy Recommendations
Encourage recycling and waste minimization at events	Guidance documents to encourage recycling and waste minimization not yet developed.	Medium	<input type="checkbox"/> Develop Guidance Documents <input type="checkbox"/> Broadcast Guidance Documents
Establish a mechanism for sharing knowledge with other stakeholder and interest groups within the region in order to improve waste diversion opportunities	Formal mechanism not yet established. Communication occurring regularly between RDCO and other Municipalities, Regional Districts, and interest groups.	Medium	<input type="checkbox"/> Mechanism Established <input checked="" type="checkbox"/> Knowledge sharing underway
Increase public awareness of existing recycling opportunities	Bin label program, boots on the ground education, increased promotion of Recycle Coach App, improved signage at depots planned for 2021	Medium	<input checked="" type="checkbox"/> Establish Cart Labelling Program <input checked="" type="checkbox"/> Establish Student Ambassadors <input checked="" type="checkbox"/> Promote Recycling Coach App <input type="checkbox"/> Update Transfer Station Signs (2021)

Investigate facilitating waste audits to educate businesses/organizations on what is in their waste stream and to initiate discussion on diversion options	Multi-family study completed, which included waste audits. While not business specific, this study will assist with overall Commercial Diversion Programming	Medium	<input checked="" type="checkbox"/> Complete Multifamily Study <input type="checkbox"/> Consider Diversion Recommendations (2021)
Before renewing the curbside collection contract, investigate a number of changes to the service to encourage improved waste diversion.	Expanded length of yard waste collection system by one additional month in 2019. Consulted with MMBC to assess feasibility of accepting depot materials at curbside.	Medium	<input checked="" type="checkbox"/> Implement Yard Waste Extension <input type="checkbox"/> Consider Weekly Recyclable Collection <input type="checkbox"/> Consider 'Pay per cart tip' <input checked="" type="checkbox"/> Consider Reduced Garbage pickup <input checked="" type="checkbox"/> Consider 'depot only' at curbside <input checked="" type="checkbox"/> Consider Recycle BC curbside
Investigate opportunities to process and recycle C&D materials	Not yet started	Medium	<input type="checkbox"/> Investigate Opportunities <input type="checkbox"/> Consider Policy Recommendations
<b>Recovery and Residual Waste</b>			
Investigate opportunities to process and recover energy from C&D materials.	Not yet started	Medium	<input type="checkbox"/> Investigate Opportunities <input type="checkbox"/> Consider Policy Recommendations
Develop Glenmore Landfill in accordance with proposed fill plan.	City of Kelowna continues to operate landfill in accordance with operating certificates and approved fill plans. RDCO and City of Kelowna remain in consistent communication regarding Solid Waste management.	Medium	<input checked="" type="checkbox"/> Follow fill plan
Review tipping fees over the next 2-3 years as part of the development of Glenmore Landfill design, operation and closure plan	Tipping fees recently adjusted following review by City of Kelowna.	Medium	<input checked="" type="checkbox"/> Review tipping fees
Conduct feasibility studies to review overall services at transfer stations and potential improvements. Including review of the transfer station within the City of West Kelowna, and the possibility of moving it to an industrial zone within the City.	Service review completed for North Westside Transfer Station and Trader's Cove Transfer Station - completed in 2018. Implementation of recommendations taking place in 2021 including increased hours and site reconfiguration. Review of Westside Transfer Station within the City of West Kelowna not yet started.	High	<input checked="" type="checkbox"/> North Westside Road <input checked="" type="checkbox"/> Trader's Cove <input type="checkbox"/> Westside (West Kelowna) <input type="checkbox"/> Consider additional station
<b>Illegal dumping</b>			
Investigate the success in other regions to mitigate illegal dumping by providing curbside collection of bulky items	Conducted 2 month Bulky Item Pilot program Oct-Dec 2017 including follow up survey with residents. Sent out RFI, received 6 responses. Did not proceed further as full cost recovery pricing was deemed too high.	Medium	<input checked="" type="checkbox"/> Investigate Programs <input checked="" type="checkbox"/> Sponsor illegal dump clean-ups <input checked="" type="checkbox"/> Support local clean-up efforts
<b>Wildlife and Waste Management</b>			
When renewing the curbside collection contract, assess the option to incorporate bear-proof locks on the garbage carts for residents that report issues with wildlife	2020 began bear resistant cart pilot. Will continue to pilot carts in 2021 while developing funding and service models	Medium	<input checked="" type="checkbox"/> Initiate pilot <input type="checkbox"/> Assess options (2021) <input type="checkbox"/> Consider Bylaw Recommendations (2021)
<b>Policy and Landuse Planning</b>			
Work with municipal and RDCO planning departments to ensure that that long-range planning tools identify and preserve lands for future waste management facilities	Formal framework not yet developed. Landfill footprint identified in community plan.	High	<input type="checkbox"/> Lands preserved <input checked="" type="checkbox"/> Lands identified
<b>Ministry of Environment - Requirements</b>			
RDCO shall complete a Five-Year effectiveness review as recommended within 'A Guide to Solid Waste Management Planning'. A review report shall be submitted to the Ministry by December 31, 2024	Effectiveness review planned for 2024.	High	<input type="checkbox"/> Report Complete
RDCO shall re-evaluate organic waste diversion opportunities and assess effectiveness of maintaining landfill gas collection and use at the landfill. A report should be submitted to the Ministry by December 31, 2030.	The 2021 organics gap analysis review will inform on the next steps to capture organic waste diversion opportunities. Next steps to take place 2022-2024.	High	<input type="checkbox"/> Report Complete



# Regional District of Central Okanagan

## Curbside Glass Collection – Preliminary Analysis and Recommendation

2021



## **Preliminary Analysis and Recommendation**

**DATE:** April 8, 2021

**SUBJECT:** Curbside Glass Collection

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### **Purpose:**

To explore options for curbside glass collection within the Central Okanagan, providing specific financial and environmental considerations.

### **Objectives:**

1. Summarize other comparable communities within British Columbia that collect glass at curbside.
2. Complete preliminary costing analysis for curbside glass collection within the Central Okanagan.
3. Complete a brief environmental analysis for curbside glass collection within the Central Okanagan.
4. Provide a recommendation, through the Solid Waste Technical Advisory Committee (SWTAC)

### **RECOMMENDATION:**

THAT the RDCO fully explore curbside glass collection as part of the consideration of regional participation in the Recycle BC curbside collection program prior to the 2024 Solid Waste Management Plan effectiveness review.

## 1. Community Comparison

*Table 1 - Summary of other community Curbside Glass Collection Programs Annual Fees*

Community	Population	Est. Serviced Dwellings	Curbside Glass Annual Fee \$/SFU/Year	Glass Start-up \$	Glass \$ / year
Chilliwack	83,790	22,500	\$23.80	\$163,000	\$550,000
Mission	38,833	10,000	\$9.00	N/A	\$90,000
Port Moody	33,551	3913 / 9,062*	\$12.00 / \$7.00*	N/A	\$110,000
Hope	6,181	2887	\$39.00	\$15,000**	\$115,000
RDNO	84,354	24,000***	\$0 (EPR Funded)	\$0 (EPR Funded)	\$0 (EPR Funded)
CRD	383,360	71,000	\$0 (EPR Funded)	\$0 (EPR Funded)	\$0 (EPR Funded)
RDCO	222,749	61,360	-	-	-

\*Port Moody includes multi-family in its glass collection program

\*\*Estimated expense for curbside glass bins

\*\*\*Estimated using 2016 population and 2006 dwelling unit data

All communities with curbside recycling collection that collect curbside glass collection advise residents that only glass packaging is acceptable in their curbside glass bin. No dishware, drinking glasses, mirrors, aquariums, windows, light bulbs, deposit containers, vases, or other non-packaging glass items. This service is limited to glass packaging like pickle jars and sauce bottles.

In Chilliwack, curbside glass collection was removed as a service in 2017 when Chilliwack joined the updated Recycle BC program. The year of removal, Chilliwack observed that glass made up approximately 1.5% of curbside garbage, similar to the 1% that we observed in the Central Okanagan. To support the program, Chilliwack Council approved a \$23.80 fee per dwelling, per year in 2018 to support curbside glass collection. Public opinion was mixed, with residents opposing the additional fees and also supporting the convenience of not hauling glass containers to recycling depots.

"It's absolutely ridiculous, I'd rather not pay an extra charge to recycle 4 pasta jars per month."

*-Opposed Chilliwack Resident*

"...having to make a special trip to the depot for glass was wasteful. People wanted it bad so they brought it back."

*-Supporting Chilliwack Resident*



For all communities that have initiated curbside glass collection, it followed as a desired convenience after already initiating or fully exploring many curbside programs to reduce landfill bound waste.

All communities, for example, that offered co-mingled curbside recycling collection and initiated curbside glass collection already had a kitchen food scrap program in place. All comparison communities have also reduced curbside garbage collection to bi-weekly. The following table was prepared to aid comparison, RDNO and CRD were not included, as all of their curbside recycling is undertaken by Recycle BC:

*Table 2 - Summary of other community Curbside Glass Collection Programs by frequency*

<b>Community</b>	<b>Waste Collection Frequency</b>	<b>Glass Collection Frequency</b>	<b>Recyclable Collection Frequency</b>	<b>Food Scrap Collection</b>	<b>Yard Waste Collection Frequency</b>
Chilliwack	Bi-Weekly	Weekly	Weekly	Weekly	Weekly
Mission	Bi-Weekly	Weekly	Weekly	Weekly	Weekly
Port Moody	Bi-Weekly	Monthly	Bi-Weekly	Weekly	Weekly
Hope	Bi-Weekly	Bi-Weekly	Bi-Weekly	Weekly	Weekly
RDCO	Weekly	Not Applicable	Bi-Weekly	Not Applicable	Bi-Weekly

#### Community Comparison Summary:

- The RDCO and member Municipalities provide, through weekly waste collection, twice as much landfill disposal as comparable communities that have initiated glass collection at curbside.
- Kitchen and food scrap collection is not provided in the RDCO and is provided in all comparable communities with co-mingled recycling that have initiated glass collection at curbside.
- Communities with recycling services provided by Recycle BC have no expense when participating in curbside glass programs, all expenses are fully funded through Extended Producer Responsibility programs.
- Residents in the comparable communities still have to go to a depot to recycle plastic bags, foam packaging, and other flexible plastic packaging.

## 2. Cost Estimates

Curbside glass collection varies from community to community, and can be broken down to the following ranges:

- **Startup expenses, including bin and bin delivery:** \$5 - \$10 per curbside dwelling
  - RDCO Range: \$310k - \$615k
- **Ongoing Program Expenses:** \$7 - \$39 per curbside dwelling, per year
  - RDCO Range: \$430k - \$2.4M
- **Program Revenue:** \$80/MT for collected glass
  - RDCO Estimate (2020 values): \$24,000 maximum

Community	Population	Curbside Dwellings	Curbside Glass Annual Expense	Glass Start-up \$	Glass Revenue	Annual Net Expense
RDCO	222,749	61,360	\$430k - \$2.4M	\$310k- \$615k	Maximum: \$24k	\$406k - \$2.4M

*Table 3 – Summary of estimated Probable Cost*

RDCO Estimated Probable Cost - Curbside Glass Collection					
#	Item	Unit Rate Estimate	Units	Cost	Comments
1	Collection Bins and Delivery	\$7.00	61,360 SFU	\$429,520	One bin per SFU
2	Collection Contract (monthly)	\$24.00	61,360 SFU	\$1,472,640	\$2 per SFU, per month
3	Education / Promotion (Year 1)	5% of expense	\$1.9M	\$95,000	Best Practice
4	Education / Promotion (Ongoing)	5% of expense	\$1,47M	\$73,500	Best Practice
4	RDCO Overhead (Year 1)	14.01% of program	\$2.0M	\$279,600	RDCO policy
5	RDCO Overhead (Ongoing)	14.01% of program	\$1.55M	\$216,600	RDCO policy
	<b>Net Expense (Year 1)</b>			<b>\$2.3M</b>	
	<b>Net Expense (Ongoing)</b>			<b>\$1.8M</b>	

6	Program Revenue	\$80	300 tonnes	(\$24,000)	High Estimate
7	Landfill Savings	\$75 / airspace	182 m <sup>3</sup>	(\$13,600)	High Estimate
	<b>Net Revenue (Ongoing)</b>			<b>(\$37,000)</b>	
	<b>Project Cost (Year 1)</b>			<b>\$2.3M</b>	
	<b>Project Cost(Ongoing)</b>			<b>\$1.7M</b>	
8	<b>Cost per Dwelling (Ongoing)</b>	\$1.7M	61,360 SFU	<b>\$28.12</b>	\$2.34 per month
9	<b>Cost per glass container</b>	300 MT @ \$1.7M	225g/container	<b>\$1.28</b>	per recycled glass container

#### Summary:

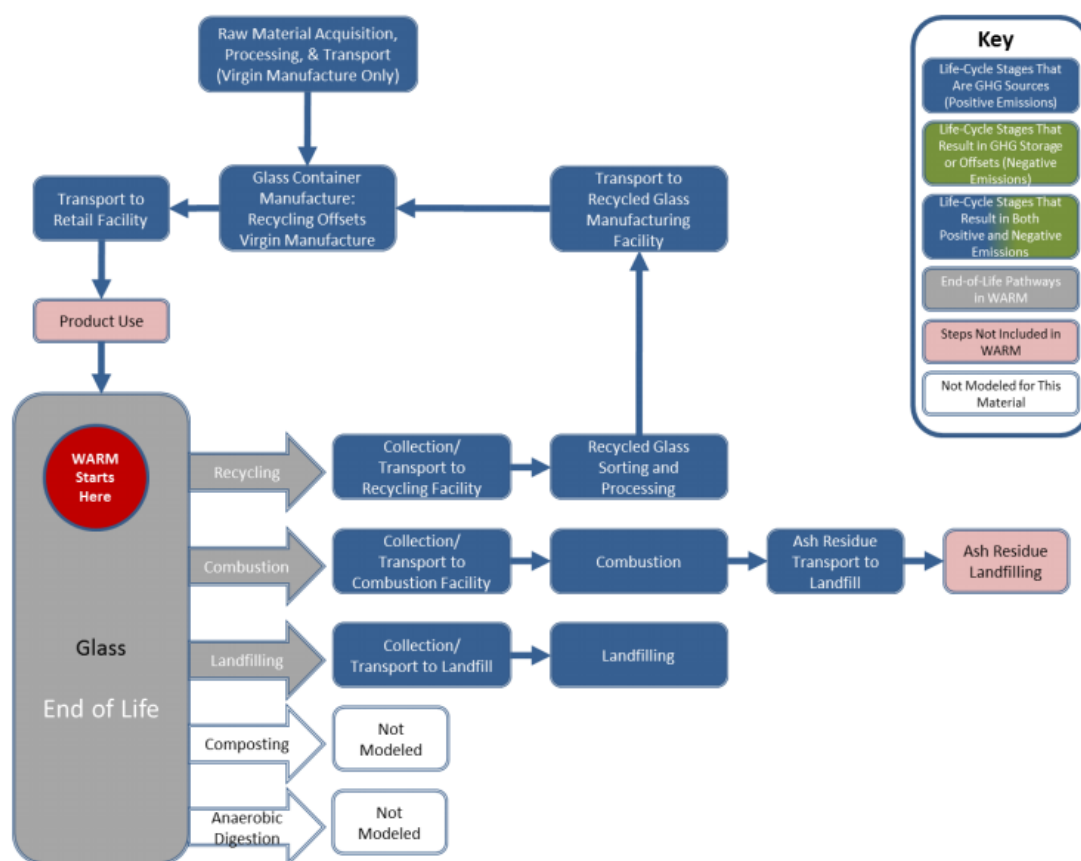
- Providing curbside glass collection in the RDCO is expected to reduce landfill bound waste by approximately 185 m<sup>3</sup> per year (300 MT), enough to fill 4 school buses.
- The average weight of a glass container is 8oz, the RDCO and member municipalities could potentially remove 1.3 million glass containers from the landfill each year, at a cost of \$0.30 to \$1.80 per container.
- The sale of glass to Recycle BC is not substantial when compared to the costs of the program.
- RDCO relationship with Recycle BC as a 'Collector' generates approximately \$2.4M for the RDCO and member municipalities that is used to offset waste reduction and collection expenses.
- If a change to the regional relationship with Recycle BC from a 'Collector' to a 'Customer' is desired to fund glass collection through the EPR program, it would require at least 18 months' notice to Recycle BC.
- As estimated, a curbside glass collection program represents a cost of approximately \$6000 per tonne to collect and recycle glass.

### 3. Environmental Analysis

The movement of the public to and from recycling depots is complex, and beyond the scope of this study. A general analysis using the Net Recycling Emissions data calculated by the US Environmental Protection Agency within the Waste Reduction Model (WARM) was used to estimate the magnitude of net GHG reduction potential.

The USEPA published a CO<sub>2</sub> equivalent value of -0.30 MTCO<sub>2</sub>E/Ton of glass, when recycling glass instead of landfilling. The latest waste composition study suggested that curbside recyclable glass represented about 1% of total curbside waste, or 330 tons.

Figure 1 - Life-Cycle Stages of Glass, WARM



The USEPA WARM model assumes that all glass recycling is considered to be a closed-loop process, in that glass bottles and jars are recycling into the same packaging material (glass bottles and jars). This model represents an ideal, best case scenario for the recycling of glass.

Using the values within the USEPA WARM model, the recycling of glass within the RDCO could generate a net reduction of approximately 99 MTCO<sub>2</sub>E/year. That's roughly equivalent to the CO<sub>2</sub> emissions used to power 10 homes for 1 year.

## Conclusion:

The RDCO Solid Waste Management Plan (SWMP) was developed through feedback from businesses, experts, residents, and elected officials. It is a regulatory document that the RDCO and member municipalities are tasked with implementing. Initiatives included within the SWMP include impactful items such as assessing the feasibility of weekly recyclable collection, reduced waste collection, curbside kitchen scrap collection, the inclusion of curbside glass, and lobbying of EPR programs for better service.

It is the recommendation of the Solid Waste Technical Advisory Committee, that the RDCO and member municipalities continue to undertake initiatives and feasibility studies included within the SWMP, and prioritize implementation to align with the Strategic Priorities of the Regional District.

The environmental benefits of curbside glass collection as estimated are low. The estimated expense of \$0.30 to \$1.80 per recycled glass container may surpass the expense of the container and the product within it. Efficient funding models are available through existing EPR programming, and require a relationship change with Recycle BC.

**Environmental Benefit: Low**

Less than 100 MTCO<sub>2</sub>E/year.

**SWMP Goal Alignment: Moderate**

Alignment with 1 of 3 goals: Making it easy

**Cost-Benefit Analysis: Low**

Relatively high cost per container or MTCO<sub>2</sub>E suggests low relative benefit. More economical methods are available to collect glass and reduce GHGs.

**Recommendation:**

It is recommended that curbside glass collection be continually considered and explored as the RDCO delivers the 2020-2030 SWMP. This will enable the RDCO to continue to explore and implement initiatives within the SWMP in order of priority and effectiveness, and allow for consideration of Recycle BC curbside service, which may include curbside glass collection. This approach avoids approximately \$500,000 in start-up expenses that may not be required, should the relationship with Recycle BC change within the next 10 years. Likewise, at that time participation costs could be funded through the EPR program, eliminating the \$1.7M in annual expense for curbside glass collection paid for by Central Okanagan residents.



# Regional District of Central Okanagan

## Curbside Organics Collection – Preliminary Analysis and Recommendation

2021



## **Preliminary Analysis and Recommendation**

**DATE:** April 8, 2021

**SUBJECT:** Curbside Organics Collection

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### **Purpose:**

To explore options for expanded curbside organics collection within the Central Okanagan, providing specific financial and environmental considerations.

### **Objectives:**

1. Summarize other comparable communities within British Columbia that collect kitchen scraps at curbside.
2. Complete preliminary costing analysis for expanded curbside organics collection within the Central Okanagan.
3. Complete a brief environmental analysis for expanded curbside organics collection within the Central Okanagan.
4. Provide a recommendation, through the Solid Waste Technical Advisory Committee (SWTAC)

### **RECOMMENDATION:**

**THAT** the RDCO fully explore expanded curbside organics collection, including food scraps and other compostable materials, in alignment with the Solid Waste Management Plan.

## 1. Community Comparison

*Table 1 - Summary of other community Curbside Organics Collection Programs*

Community	Population	Est. Serviced Dwellings***	Curbside Food Waste \$/SFU/Year	Start-up \$	Service \$ / year
Chilliwack	95,178	22,500	\$100**	\$1.7M*	\$2.4M
Victoria	94,415	9,945**	\$120**	\$500,000**	\$1.2M
Salmon Arm	19,296	4,840	\$60	\$150,000**	\$290,400
Grand Forks	3,892	1,400	\$60**	\$60,000	\$84,000
Kamloops	101,198	19,100	\$94*	\$4.7M	\$1.8M
RDNO****	84,354	24,000**	Not Available	\$1,000,000	Not Available
Abbotsford	161,581	26,361	\$110**	Not Available	\$2.9M
Coquitlam	152,752	19,785	\$80	Not Available	\$1.6M
RDCO	222,749	61,360	Not Applicable	Not Applicable	Not Applicable

\*Estimated using published expenses and census data

\*\*Individual kitchen scraps expenses not broken out, estimated using available data

\*\*\*Obtained from 2016 Census data, or other published information

\*\*\*\*Based on a 2017 report estimating cost to undertake curbside organics collection, not a current service

*Table 2 – Summary of other community Curbside Collection by frequency*

Community	Waste Collection Frequency	Recyclable Collection Frequency	Food Scrap Collection	Yard Waste Collection Frequency	Organics Processing Technology
Chilliwack	Bi-Weekly	Weekly	Combined Weekly		Gore Cover System (Abbotsford)
Victoria	Bi-Weekly	Bi-Weekly	Bi-Weekly	Annual	In-Vessel (Fisher Road)
Salmon Arm	Bi-Weekly	Bi-Weekly	Weekly	Bi-annual	Aerated Bunker (Spa Hills)



Community	Waste Collection Frequency	Recyclable Collection Frequency	Food Scrap Collection	Yard Waste Collection Frequency	Organics Processing Technology
Grand Forks	Weekly	Bi-Weekly	Weekly	Monthly	Gore Cover System (Grand Forks Landfill)
Kamloops	Weekly	Weekly	Not Applicable	Not Applicable	Undecided*
Abbotsford	Bi-Weekly	Weekly	Combined Weekly		Gore Cover System (Net Zero Waste)
Coquitlam	Bi-Weekly	Weekly	Combined Weekly		Anaerobic Digestion (Fraser Richmond S&F)
RDCO	Weekly	Bi-Weekly	Not Applicable	Bi-Weekly	Not Applicable

\*Planned, not yet implemented. Awaiting OMRR regulation update

#### Community Comparison Summary:

- There appears to be a larger number of communities that offer curbside kitchen scrap collection between \$80 and \$100 per year, per serviced dwelling. Many of these communities operate their own compost facilities, transfer stations, and collection fleets.
- Technology used to undertake organics processing in communities varies.
- Kitchen and food scrap collection is not provided in the RDCO and is provided or planned in many comparable communities.
- Nearly all communities that offer curbside kitchen and food scrap collection have reduced garbage pick-up to bi-weekly, and provide organics pickup weekly.

## 2. Cost Estimates

Curbside organics collection, not including yard waste, varies from community to community, and can be broken down to the following ranges:

- **Startup expenses, including bin and bin delivery:** \$31 - \$178 per curbside dwelling
  - RDCO minimum: \$85 per curbside dwelling
- **Ongoing Program Expenses:** \$60 - \$120 per curbside dwelling, per year
  - Varies significantly based on processing technology and location
- **Landfilling Expense:** \$100/tonne
  - RDCO Estimate (2020 values): \$920,000 per year

Table 3 – RDCO Estimated Probable Cost

RDCO Estimated Probable Cost - Expanded Curbside Organics Collection					
#	Item	Unit Rate Estimate	Units	Cost	Comments
1	Collection Bins and Delivery	\$54	61,360 SFU	\$3.3M	One bin per SFU
2	Transfer Station	-	1 Station	\$1.5M	Not yet confirmed if required
3	Collection Contract (weekly)	\$36	61,360 SFU	\$2.2M	\$3 per SFU, per month
4	Composting and Hauling	\$115/MT	4,600 MT	\$529k	Estimate, 50% uptake
5	Education / Promotion (Year 1)	5% of expense		\$376k	Best Practice
6	Education / Promotion (Ongoing)	5% of expense		\$136k	Best Practice
7	RDCO Overhead (Year 1)	14.01% of program		\$1.11M	RDCO policy
8	RDCO Overhead (Ongoing)	14.01% of program		\$401k	RDCO policy
9	Pilot Year		300 units	\$51.5k	Inclusive of OH/Contingency
	Net Expense (Year 1)			\$9.0M	
	Net Expense (Ongoing)			\$3.3M	\$5.70 per SFU, per month
10	Contingency (Conceptual)	40%	Year 1 Ongoing	\$3.6M \$1.3M	
11	Landfill Cost Savings (ongoing)	\$100 / MT	4,600 MT	(\$460k)	50% of potential
12	Project Net Cost (Year 1)			\$12.1M	
13	Project Net Cost (Ongoing)			\$4.1M	
14	Incremental Cost per Dwelling		61,360 SFU	\$66.82	\$5.57 per month

Table 4 – RDCO Expanded Curbside Organics Collection

Cost Range Analysis - RDCO Expanded Curbside Organics Collection					
#	Item	Lowest Comparable Cost	Probable Cost Estimate	Highest Comparable Cost	Comments
1	Project Cost (Year 1)	\$6.2M	\$12.6M	\$14.3M	
2	Project Cost (Ongoing)	\$4.0M	\$4.6M	\$7.36M	
3	Cost Reduction (Landfill Diversion)	(\$920,000)	(\$460,000)	\$0	
4	<b>Net Cost (Ongoing)</b>	<b>\$3.1M</b>	<b>\$4.1M</b>	<b>\$7.36M</b>	
5	Cost per meal	\$0.02	\$0.03	\$0.05	per meal
6	Incremental Cost per Dwelling	\$4.39	\$5.57*	\$10.00**	per month

\*Reflects cost for out of region traditional windrow composting.

\*\*More indicative of in-region, in-vessel composting.

#### Summary:

- Providing expanded curbside organics collection in the RDCO could divert up to an additional 10,200 m<sup>3</sup> per year of landfill bound waste (~9200 MT), enough to fill over 220 school buses.
- Costs include the addition of a 4<sup>th</sup> curbside bin, scheduled for weekly collection, specifically for Kitchen Scraps and other compostables.
- Probable costs assume non-yard waste organics are collected, consolidated, and transported to an out of region composting operation. Incremental costs will increase beyond these estimates to develop and operate in-region, in-vessel processing.
- Yard Waste collection is proposed to remain as currently delivered.
- As estimated expanded organics collection would cost those receiving the service about 3 cents per meal, \$5.57 per month, or about \$67 per year.
- There may be potential to align a Wildlife Safe curbside cart with an expanded curbside organics program, synergizing the benefits of both programs.
- As estimated, an expanded organics program represents a cost of approximately \$890 per tonne to collect, transport and process non-yard waste organic material.

### 3. Environmental Analysis

A general analysis using the Net Emissions data calculated by the US Environmental Protection Agency within the Waste Reduction Model (WARM) was used to estimate the net GHG reduction potential.

The USEPA published a CO<sub>2</sub> equivalent value of -0.12 MTCO<sub>2</sub>E/Ton for traditional windrow composted food waste, and a CO<sub>2</sub> equivalent value of 0.42 MTCO<sub>2</sub>E/Ton for landfilling waste with LFG recovery and use of gas. The latest waste composition study suggested that curbside compostable organics represented about 10,131 ton of organics (equivalent to 9190 MT) within the Waste Stream.

This model represents an ideal, best case scenario for the composting. It also represents a similar best case scenario for landfill gas capture and use.

Using the values within the USEPA WARM model, the composting of curbside food waste within the RDCO could generate a net reduction of approximately 5,470 MTCO<sub>2</sub>E/year.

Curbside collection of organics within the RDCO will contribute 285 MTCO<sub>2</sub>E/year, while transporting curbside organics to an out-of-district composting facility would generate approximately 200 MTCO<sub>2</sub>E/year in emissions.

This results in a net GHG reduction of approximately 4985 MTCO<sub>2</sub>E/year, equivalent to the CO<sub>2</sub> emissions used to power 541 homes for 1 year, from the estimated expanded curbside organics program.

## **Conclusion:**

The RDCO Solid Waste Management Plan (SWMP) was developed through feedback from businesses, experts, residents, and elected officials. It is a regulatory document that the RDCO and member municipalities are tasked with implementing. Initiatives included within the SWMP include impactful items such as assessing the feasibility of weekly recyclable collection, reduced waste collection, curbside kitchen scrap collection, the inclusion of curbside glass, and lobbying of EPR programs for better service.

It is the recommendation of the Solid Waste Technical Advisory Committee, that the RDCO and member municipalities continue to undertake initiatives and feasibility studies included within the SWMP, and prioritize implementation to align with the Strategic Priorities of the Regional District. The environmental benefits of expanded curbside organics collection as estimated appear significant, diversion potential seems high, and further analysis is required to verify assumptions and further investigate costs.

**Environmental Benefit:** **High - Moderate**  
Approximately 5000 MTCO<sub>2</sub>E/year.

**SWMP Goal Alignment:** **High**  
Alignment with all three goals, and the regulatory requirement to re-evaluate organic diversion opportunities before 2030.

**Cost-Benefit Analysis: Moderate**

Relatively low cost per meal or MTCO<sub>2</sub>E. More economical methods may be available for GHG reduction, but this appears to be the most effective and economical method for diverting organic wastes from landfill.

**Recommendation:**

It is recommended that expanded curbside organic collection be considered and explored as the RDCO and SWTAC deliver the 2020-2030 SWMP. This will enable the RDCO and SWTAC to explore and implement initiatives within the SWMP in order of priority and effectiveness. For 2021, this includes further curbside organic analysis, consideration of impact to landfill gas generation, and the initiation of a regional biomass inventory.

# Solid Waste Workshop

Governance and Services Committee Meeting

April 8, 2021

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1450 K.L.O. Road  
Kelowna, BC, V1W 3Z4  
rdco.com



A large, chaotic pile of electronic waste and scrap metal. Visible items include a white washing machine, a blue printer, a bicycle wheel, various metal rods, wires, and plastic components. The background is a dense, tangled mass of these materials.

# Solid Waste Management Plan Overview



# Section Outcomes



- What is a SWMP?
- How was our SWMP developed?
- What is the goal of the SWMP?
- Are we on track to achieve goals?
- What are the key undertakings in 2021?
- What's next for the SWMP?



# What is the Solid Waste Management Plan?

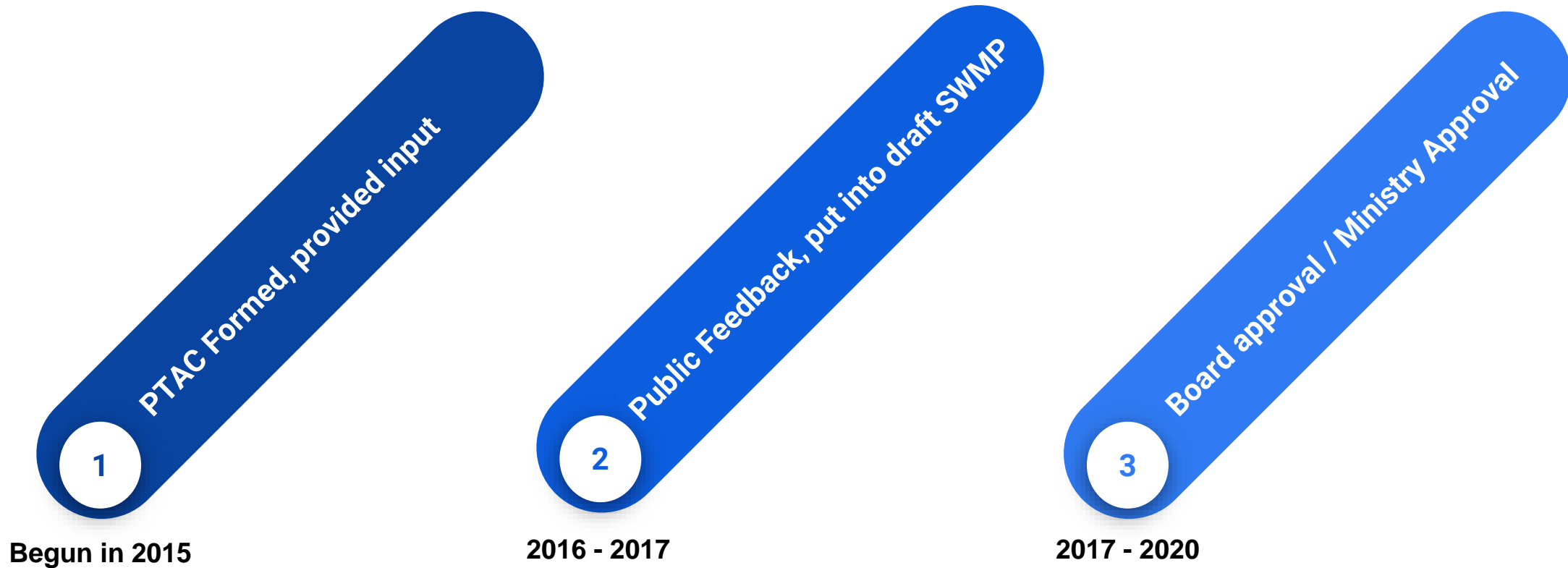
- Environmental Management Act
- Public review and consultation required

**SWMP:** 10 years of direction

Current SWMP expires 2030



# How was the SWMP Developed?



**Approximately 4 years to initiate consultation, consolidate feedback, draft, and receive approval**

# SWMP Goals



1

The goal is zero waste

2

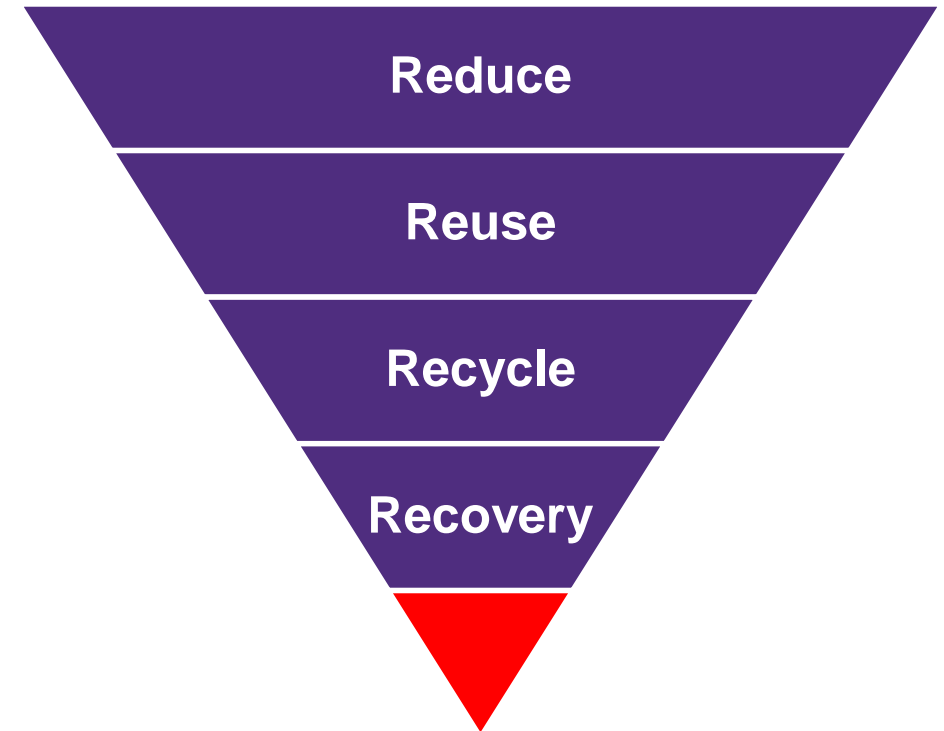
Citizens are actively engaged

3

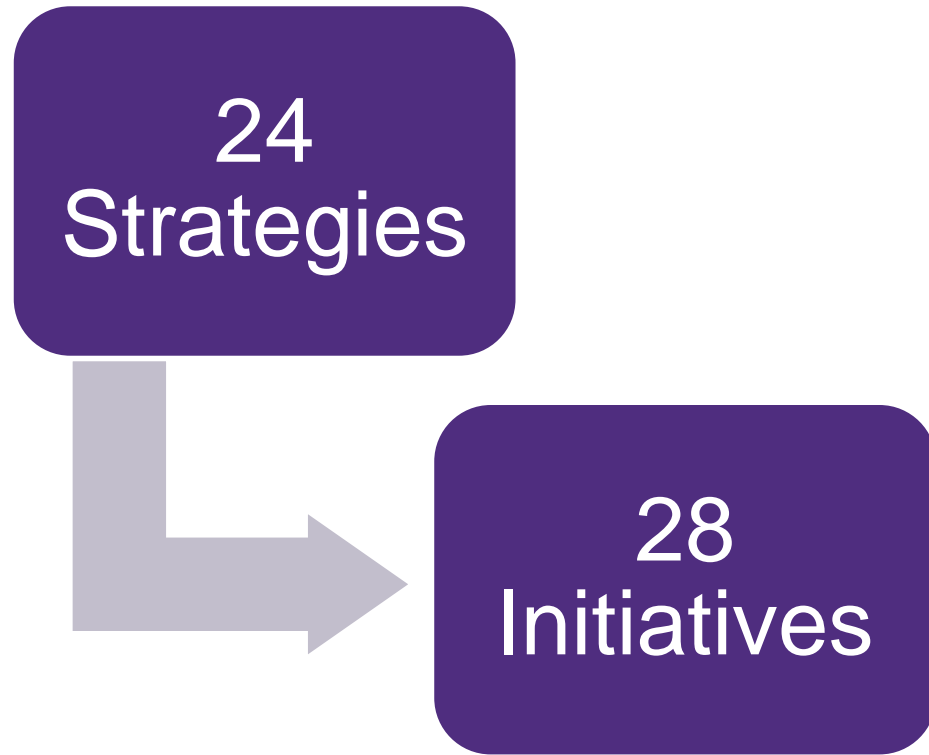
Make it easy

# Guiding Principles

- Developed by BC Ministry of Environment
  - Promote the 3 R's
  - Promote zero waste approaches
  - Support a circular economy
  - Maximize beneficial use
  - Support polluter and user-pay approaches
  - Collaborate with other regional districts
  - Level the playing field for private business and public solid waste management

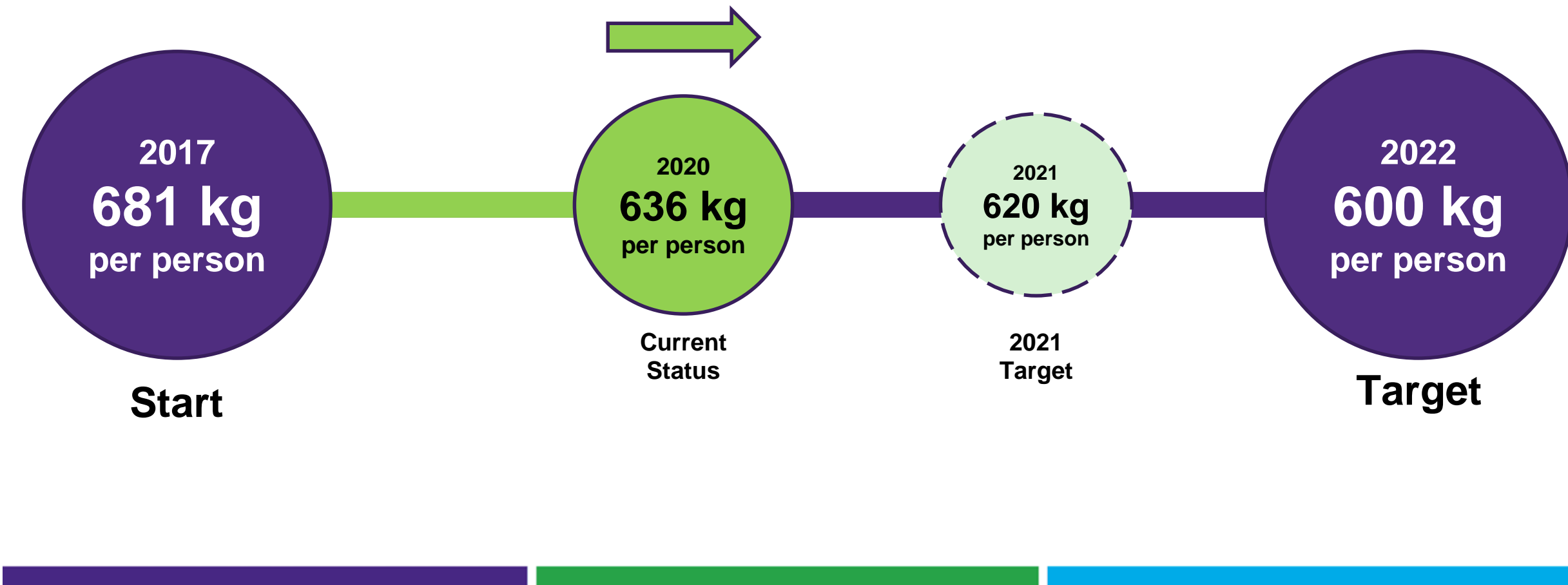


# Planned Outcomes

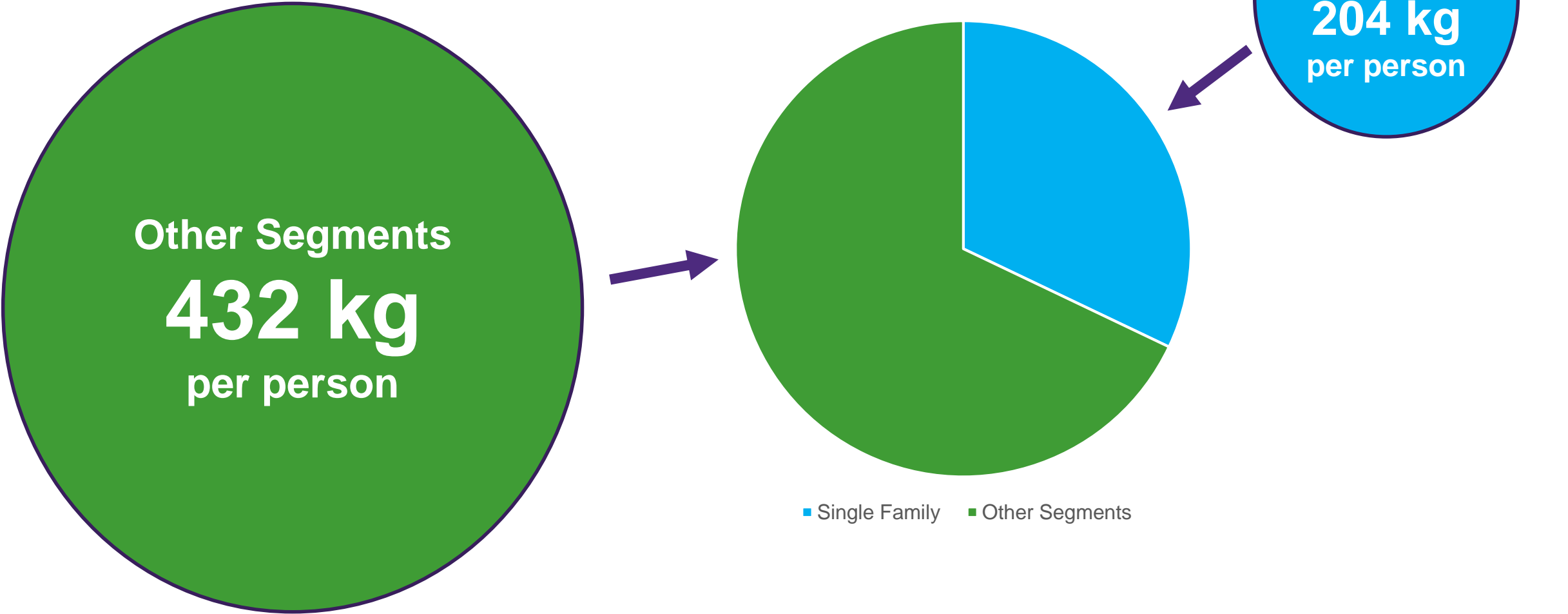


- Desired Outcomes:
  - Waste reduction
  - Reuse of materials
  - Increase collection of recyclable and compostable components

# Target: Total Waste Disposed



# Another Perspective



**To achieve our target with Single Family alone, we require a 18% reduction in waste from 2020 levels.**

**Institutional, Commercial, Industrial & Construction: 8%....**

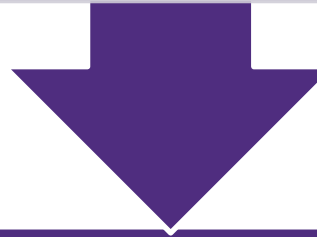


## Key Diversion Initiatives (SWMP)

Re-evaluate Organics

Investigate Policy Options

Increase Public  
Awareness



## Key 2021 Deliverables (Waste Reduction Office)

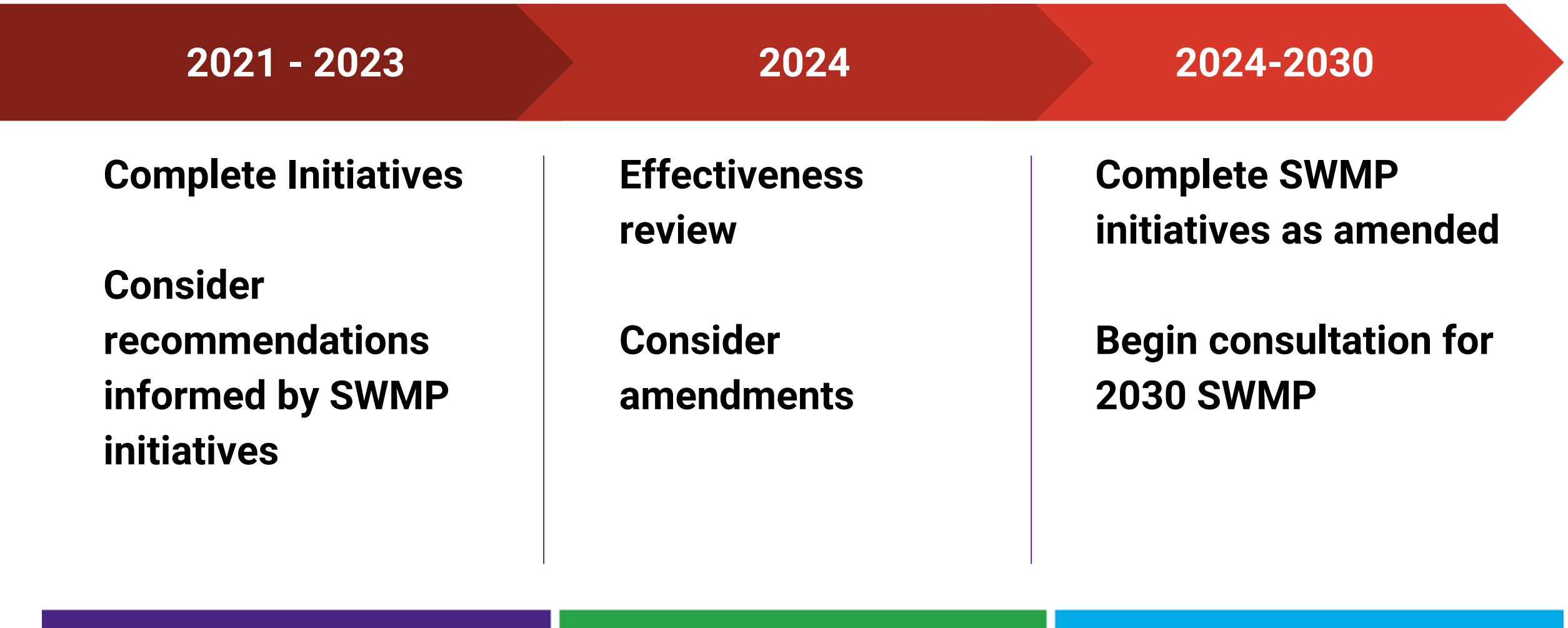
Organics Gap  
Analysis

Multifamily  
Policy/Bylaw  
Recommendations

Contamination  
Reduction Plan

Expanded Student  
Ambassador  
Program

# SWMP – Next Steps



A photograph of a wooden tunnel, likely a storm drain or culvert, with a rocky path leading towards a bright, sunlit exit at the far end. The wooden planks forming the walls and ceiling of the tunnel are dark and weathered, showing a prominent grain. The path is composed of smooth, grey stones. The exit is a bright, circular opening where sunlight is streaming in, illuminating some green plants and a small yellow object on the path.

# Solid Waste Timeline



# Section Outcomes



- What has happened so far?
- How have we improved?
- What are we doing now?
- How are we delivering on the SWMP and Strategic Priorities?
- What is planned for the future?

# Business as usual - Engagement

## SWTAC



## Campaigns



## Annual Events





# Business as usual - Operations

## Transfer Stations



## Curbside Collection





# Business as usual – Contamination Reduction





# Business as usual – Monitoring / Clean-up

## Landfill Monitoring



## Illegal Dumping

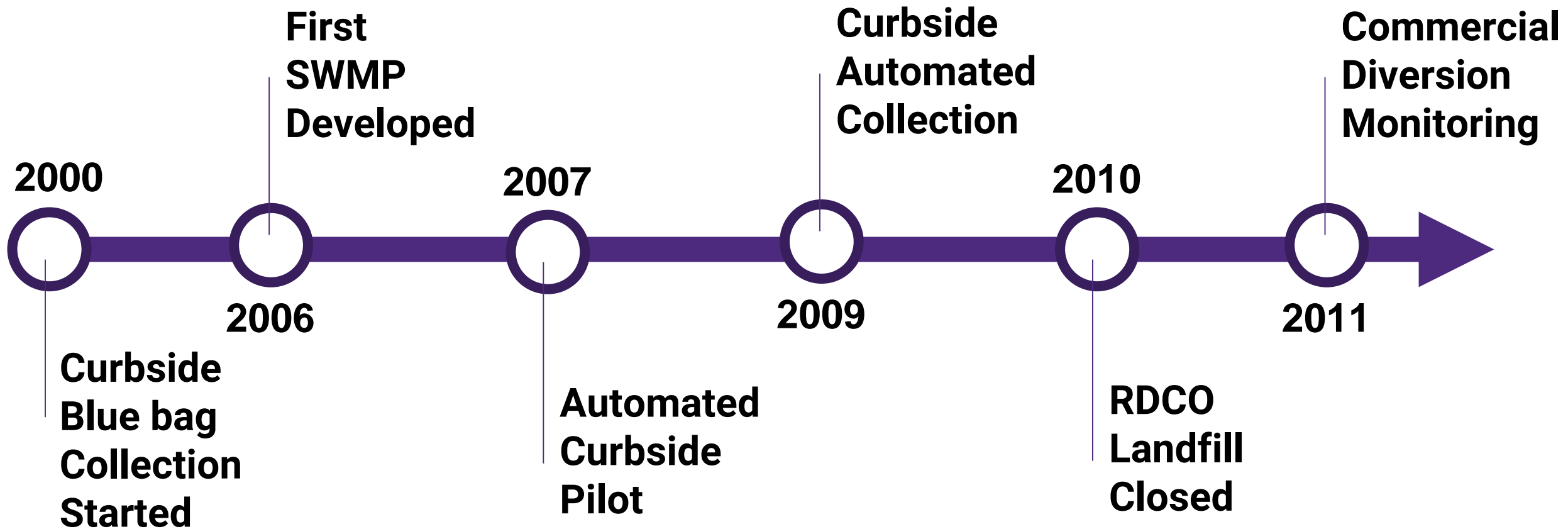


## Contamination

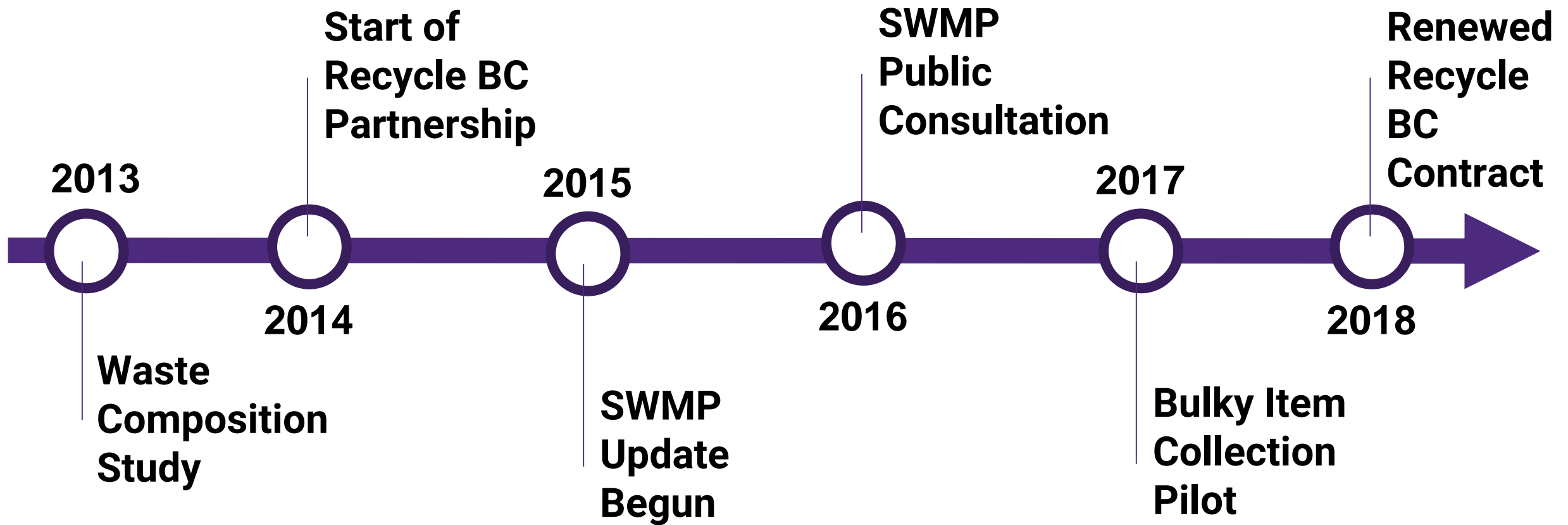




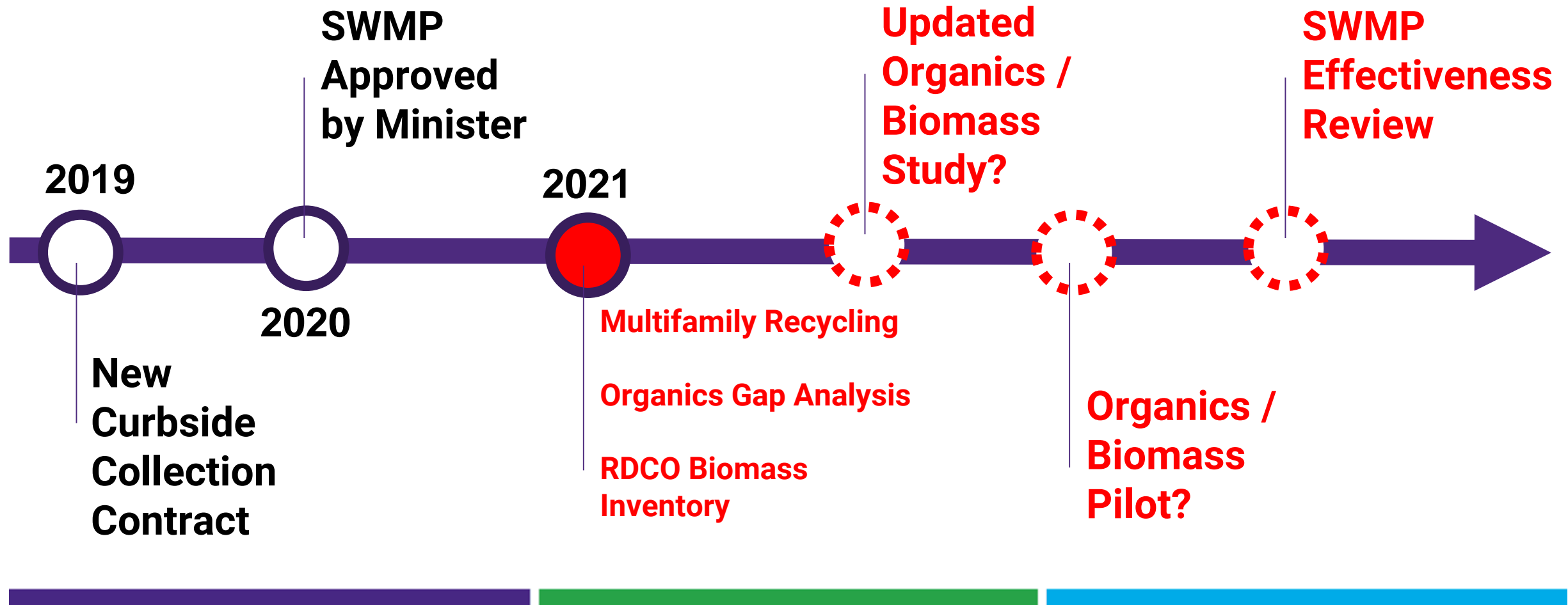
# Timeline of Major Changes & Milestones



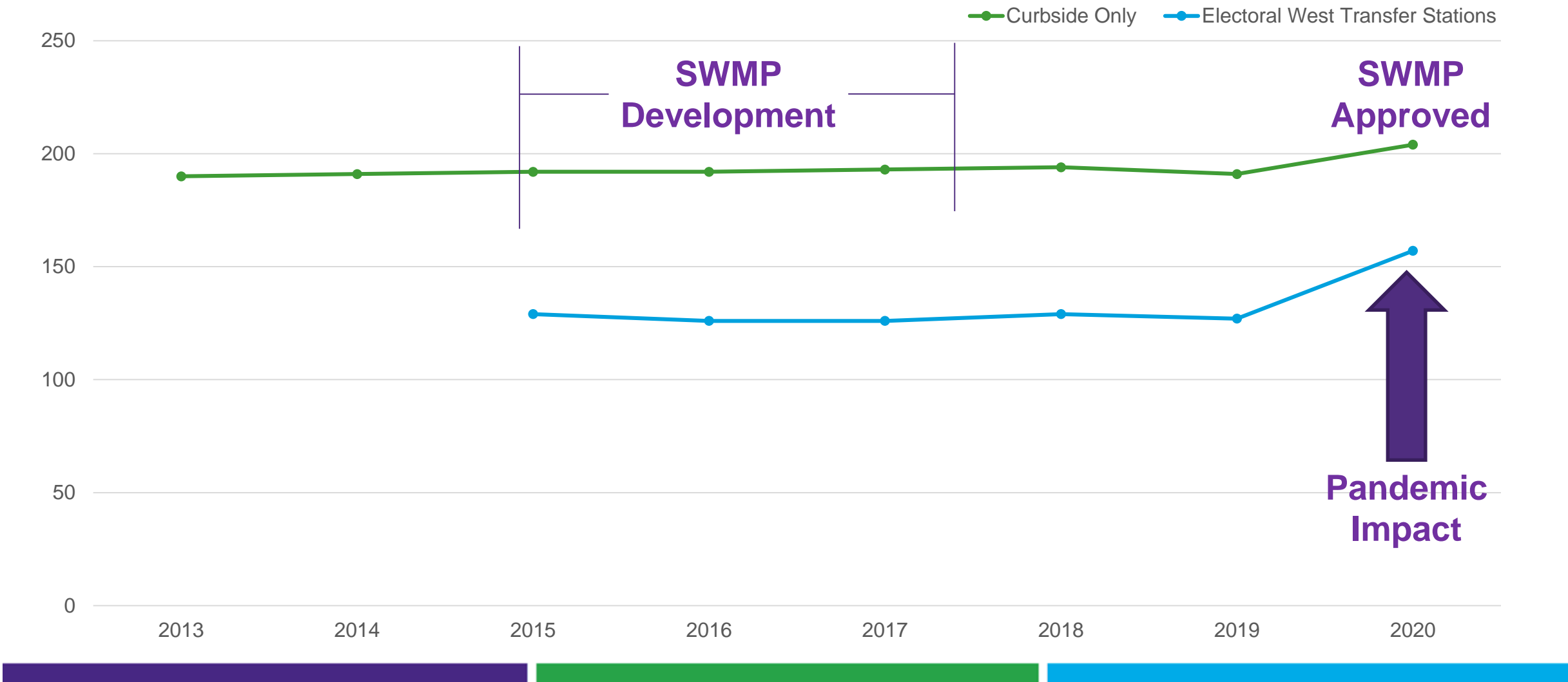
# Timeline of Major Changes & Milestones



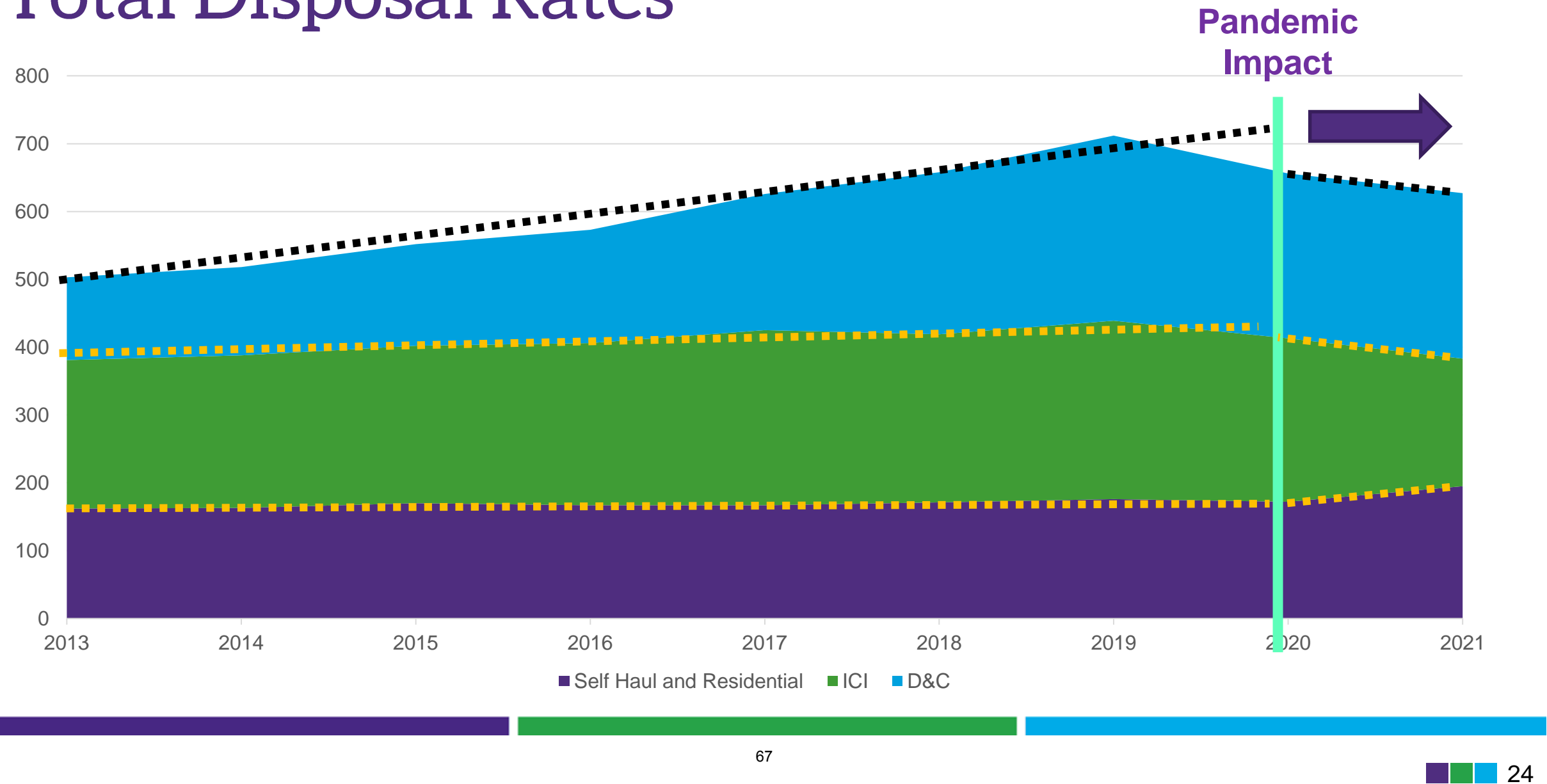
# Timeline of Major Changes & Milestones



# Residential Disposal Rates



# Total Disposal Rates



# Wildlife Resistant Cart Program (2021)

## Strategic Priority

- **Environment Priority**
  - Initiate and support efforts to reduce our environmental footprint, adapt to climate change, and connect with nature.

## SWMP

- Assess opportunities to make curbside garbage collection carts wildlife proof

## 2021 Project

- Complete ongoing Pilot Program
- Provide recommendation to the Board

# Organics Analysis & Inventory (2021)

## Strategic Priority

- **Environment Priority**
  - Initiate and support efforts to reduce our environmental footprint, adapt to climate change, and connect with nature.

## SWMP

- Re-evaluate organic waste diversion opportunities while considering the need to maintain landfill gas collection.

## 2021 Project

- Organics Lifecycle Assessment report (Gap Analysis)
- Biomass Inventory Project
- Investigate need to maintain landfill gas collection

# Expand Multifamily Recycling (2021)

## Strategic Priority

- **Environment Priority**
- Initiate and support efforts to reduce our environmental footprint, adapt to climate change, and connect with nature.

## SWMP

- Investigate facilitating waste audits to educate businesses/organizations on what is in their waste stream and to initiate discussion on diversion options.
- Investigate policy options to encourage recycling.

## 2021 Project

- Develop waste reduction educational materials
- Host waste reduction guidance and training sessions for multifamily units
- Recommend policy and bylaw for consideration



# Transfer Station Service Improvements (2021)

## Strategic Priority

- **Environment Priority**
  - Initiate and support efforts to reduce our environmental footprint, adapt to climate change, and connect with nature.

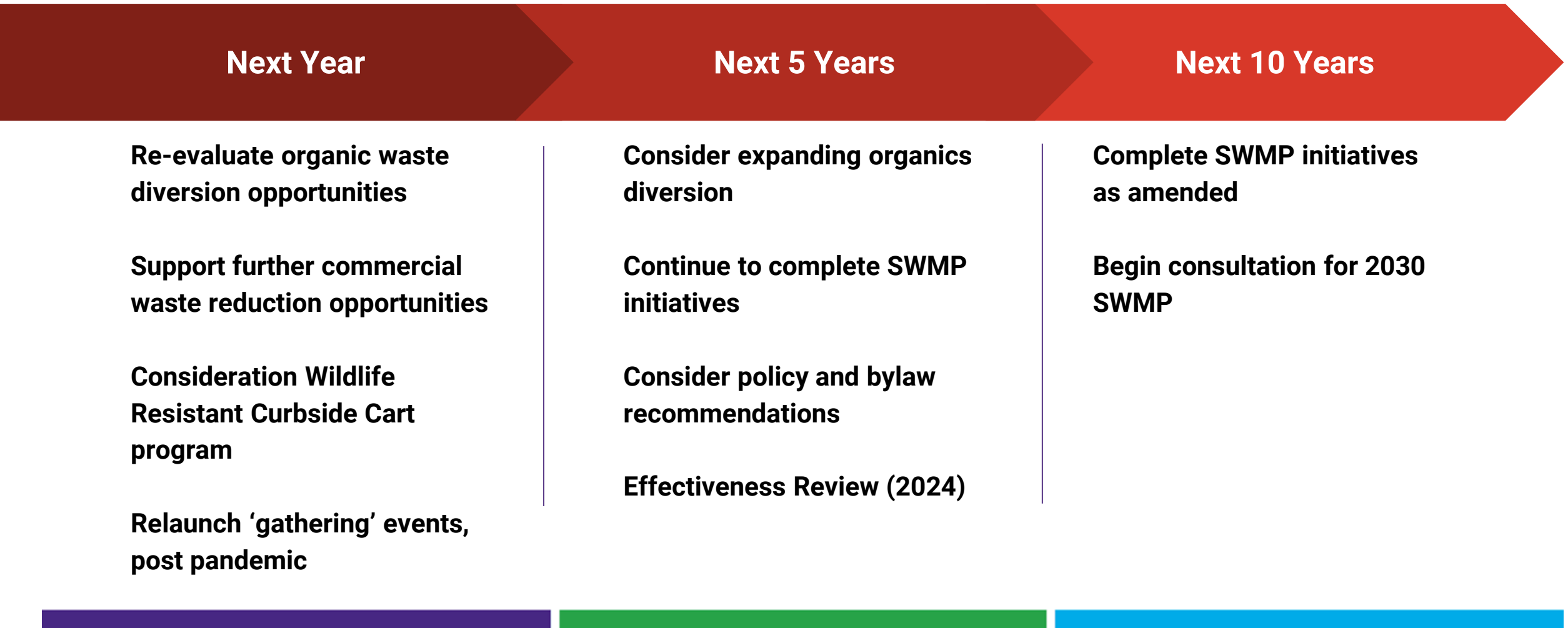
## SWMP

- Conduct feasibility studies to review overall services at transfer stations and potential improvements.

## 2021 Project

- Consider extending hours and days of service at Transfer Stations
- Improve upon sites as recommended within the 2019 Transfer Station Review

# Beyond 2021 - Timeline







# Solid Waste Update



# Section Outcomes



- What is happening in the industry?
- What does our waste stream look like?
- What options or alternatives are we exploring to reduce waste?
- How do we compare to other communities?
- What are we doing about contamination?

# What is happening in BC?

## Single Use Plastic Ban

- Province supports civic bylaws banning single-use plastics
- Province wide single-use plastic bans are on the way

## CleanBC organics diversion

- Program in place with \$25.7M for infrastructure funding for 2021
- Target to divert 95% of organics from landfills in BC

## Recycle BC Curbside Glass Collection

- North Okanagan Regional District and other 'Recycle BC' communities
- RDCO and member municipalities have a different relationship

## EPR Program Expansion

- Additional products considered for inclusion within BC EPR program

# Emerging Issue - EPR (BC)

- RDCO provided feedback Nov 2020 on EPR Intentions Paper
- New categories being considered under Recycling Regulation
  - Mattresses
  - Additional hazardous wastes (pressurized tanks, additional products)
  - Additional electronics (electric vehicle batteries)
  - Paper and packaging beyond residential sources



# What is happening in Canada?

## EPR expansion

- Ontario, Saskatchewan, Alberta, New Brunswick, even the Federal government
- Everyone wants to follow in BC's footsteps

## Limited Recycling Markets

- China's National Sword policy in 2018 - many communities landfilling recyclables
- Calgary, Alberta: previously recycled plastic clamshells, landfilled 92 semi-trailer loads.

## Single-Use Plastic Ban

- National framework for the consideration and banning of single use plastics
- Comes into effect 2021



# Emerging Issue - Single Use Plastic (Canada)

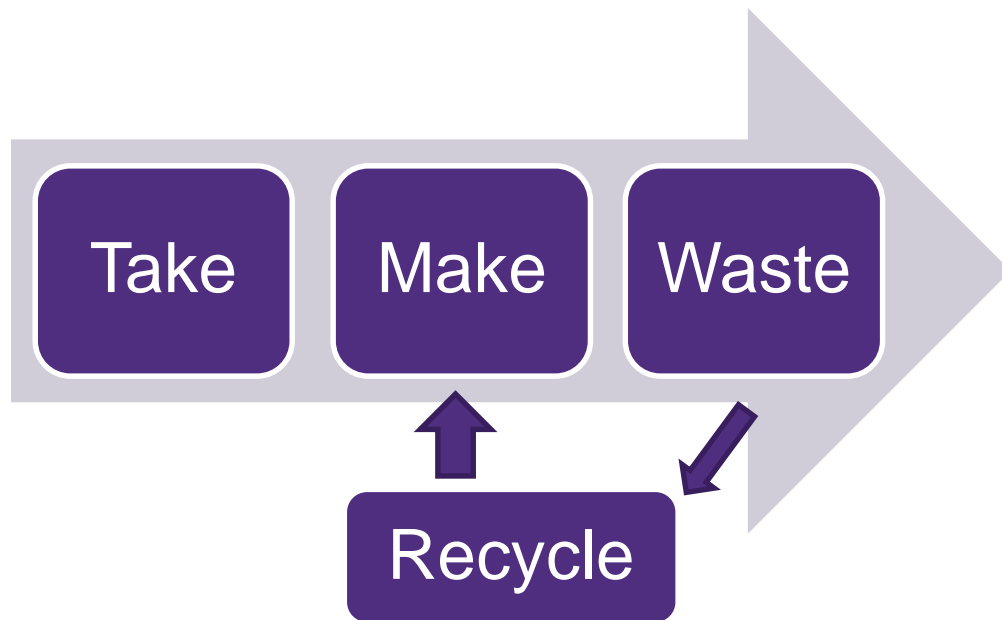
Federal ban of specific single-use plastic products by end of 2021:

- Plastic grocery bags
- Straws
- Stir sticks
- Six-pack rings
- Cutlery
- Foodware made from hard to recycle plastics

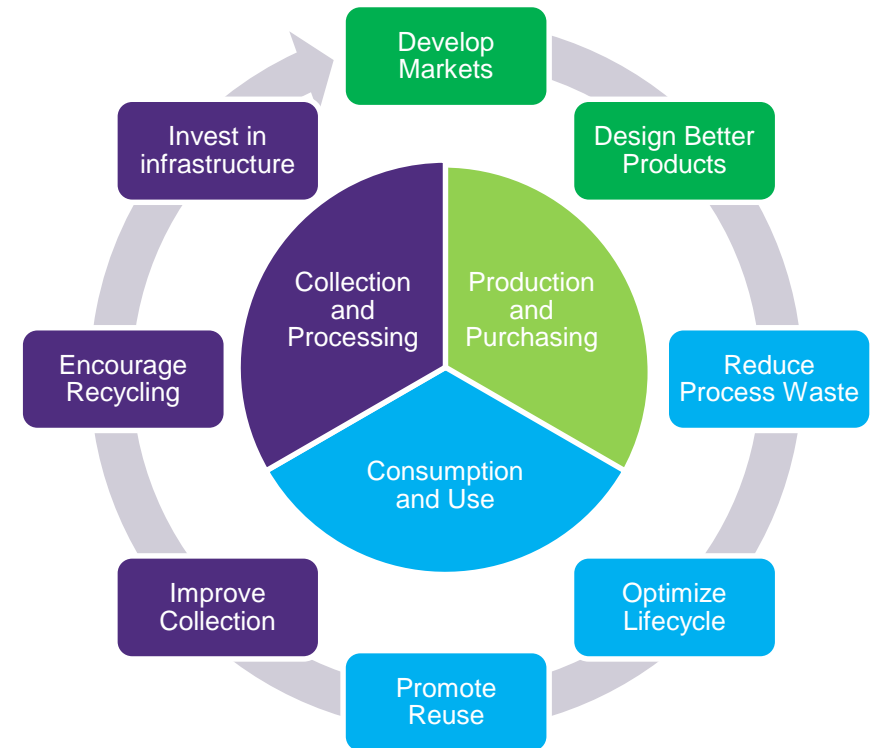


# What is happening in North America?

## Traditional linear economy



## Circular economy



# Developing Technology

## Waste to Energy

- Still developing for use in North America, widespread in Europe/Asia
- BC requires regional districts to explore all possible options to reduce and reuse before considering WTE

## Biogas and Organic Digesters

- Food Scrap anaerobic digestion
- Thermal Decomposition, scalable approach

## Aerobic Landfilling

- Under development, two locations in North America
- May reduce landfill closure life from +100 years to <15 years

## Waste Conversion

- Converting waste into other products
- Limited pilot scale facilities in US

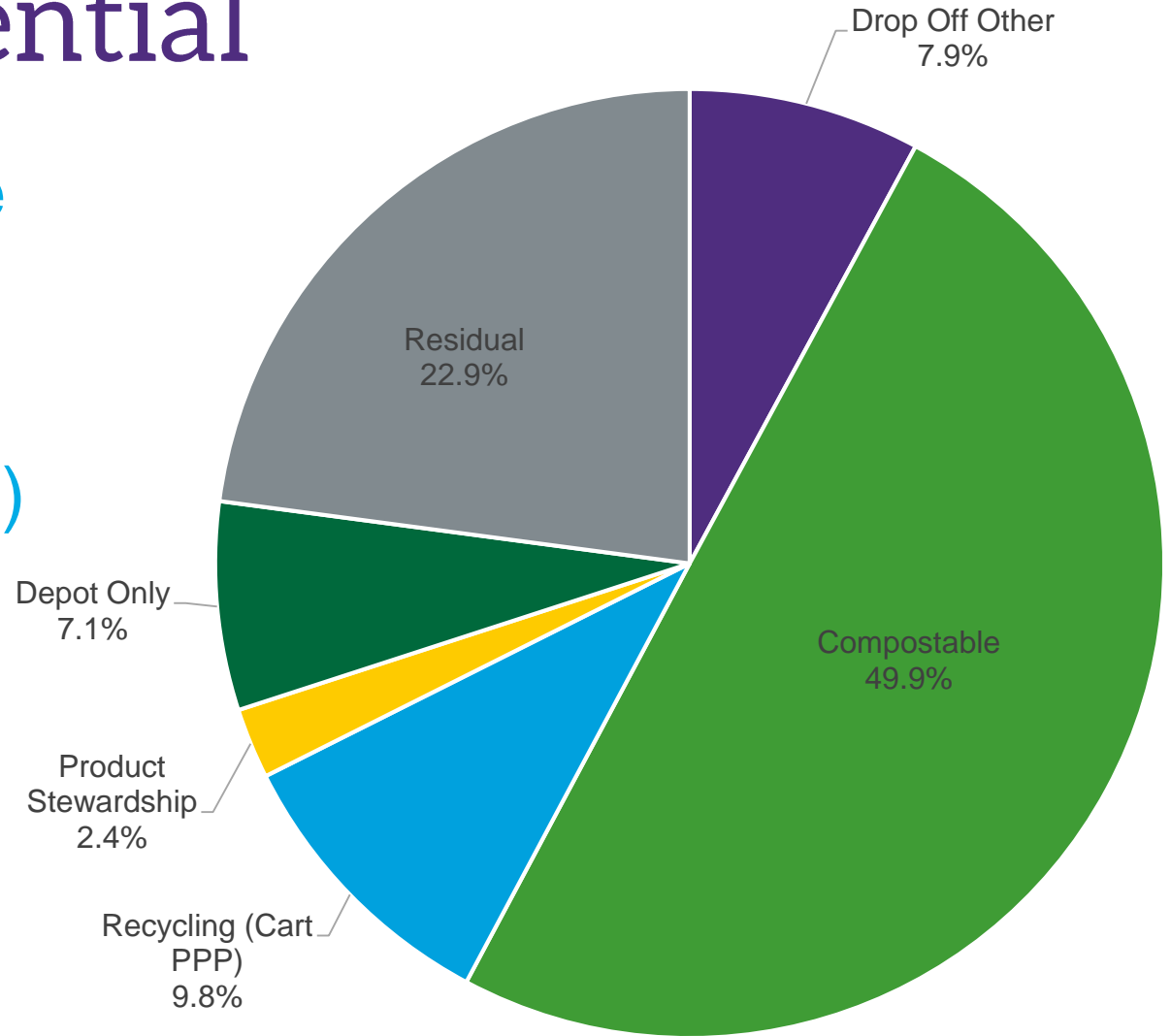
# Waste Diversion Potential

- Single Family Curbside Waste

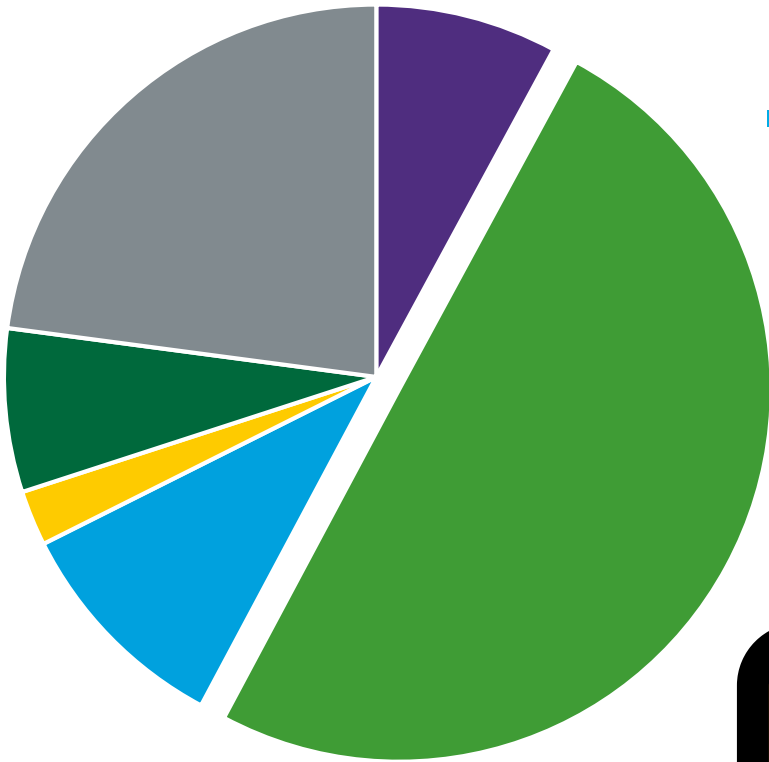
- 204 kg/person/year

- Waste Diversion Potential (SF)

- Compostables: 49.9%
- Depot Only: 7.1%
- Curbside Recycling: 9.8%
- Other Drop Off: 7.9%



# Alternative Collection Strategies



- **Curbside Organics Collection**

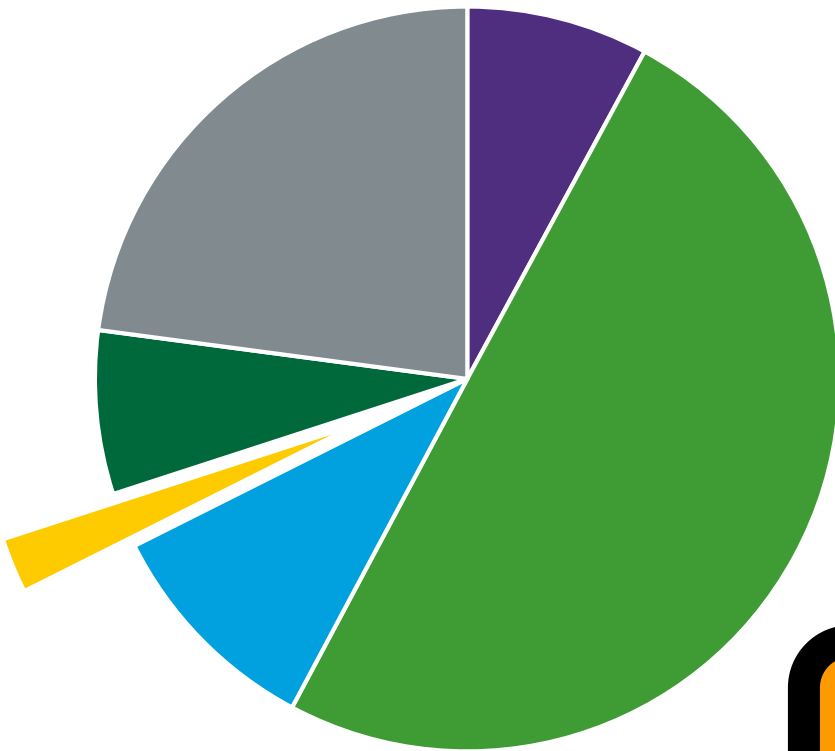
- Est. Service Expense: \$3.1M - \$7.4M per year
- Other BC communities: \$5 - \$10 / month / dwelling
- Implementation and Start-up costs vary
- 49.9% of landfill bound RDCO residential waste
- Need to investigate further: SWMP requirement

**Service Cost**  
\$5 - \$10/mth

**Diversion**  
< 15,000  
MT/year

**GHG**  
< 6,000  
MTCO<sub>2</sub>E

# Alternative Collection Strategies



## ■ Curbside Glass Collection

- Est. Service Expense: \$430k to \$2.4M per year
  - \$0.75 to \$3.25 per month / dwelling
- Start up: \$300k to \$600k
- Revenue: \$80/MT + Landfill Airspace

1.0% of landfill bound waste

**Service Cost**  
\$1 - \$3 / month

**Diversion**  
< 300 MT/year

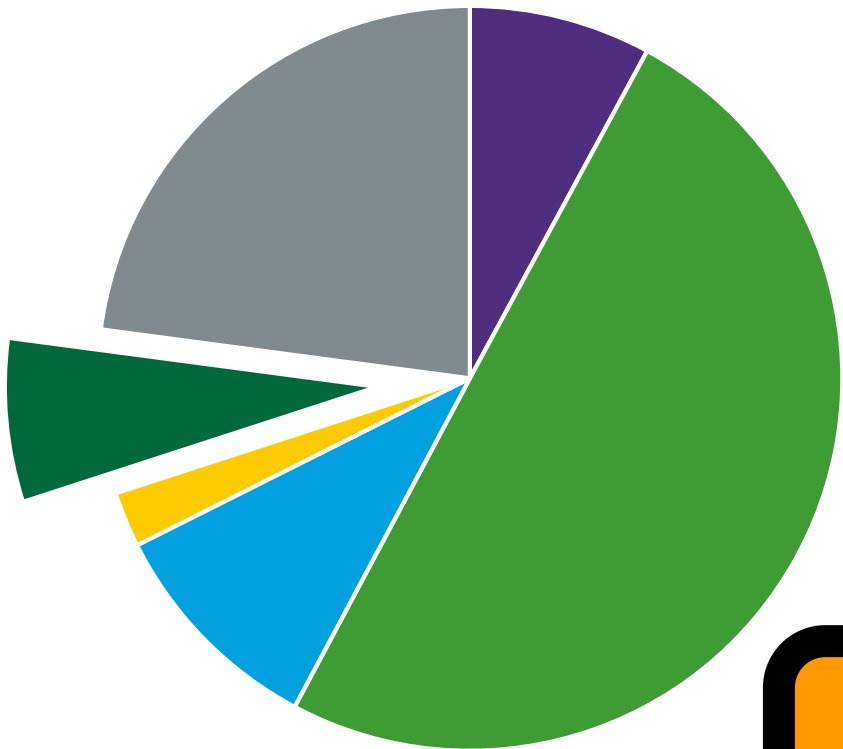
**GHG**  
< 75  
MTCO<sub>2</sub>E

# Alternative Collection Strategies



- Automated Collection (Express & GO)
  - Cost: Nil (\$0)
  - No significant GHG reduction
  - No significant landfill diversion
  - May reduce returns to existing bottle depots in RDCO
- Viable option for 'making it easy'

# Alternative Collection Strategies



- **Curbside 'Depot Only' materials**
  - No existing comparable in BC
  - Outside BC: \$20 - \$50 per month
  - Unmarketable products would be landfilled
  - 7.6% potential diversion, likely lower

**Service Cost**  
< \$50/month

**Diversion**  
< 2,264  
MT/year

**GHG**  
< 6,452  
MTCO<sub>2</sub>E



# Alternative Collection Strategies



- **Pop-up Recycling Depot**
  - Operate for a day, staffed
  - Some expected additional waste diversion
  - Reduced travel to depot locations
  - Convenience for residents
  - Low likelihood of contamination

**Diversion**  
< 40  
MT/year

**GHG**  
< 50  
MTCO<sub>2</sub>E

# Alternative Collection Strategies

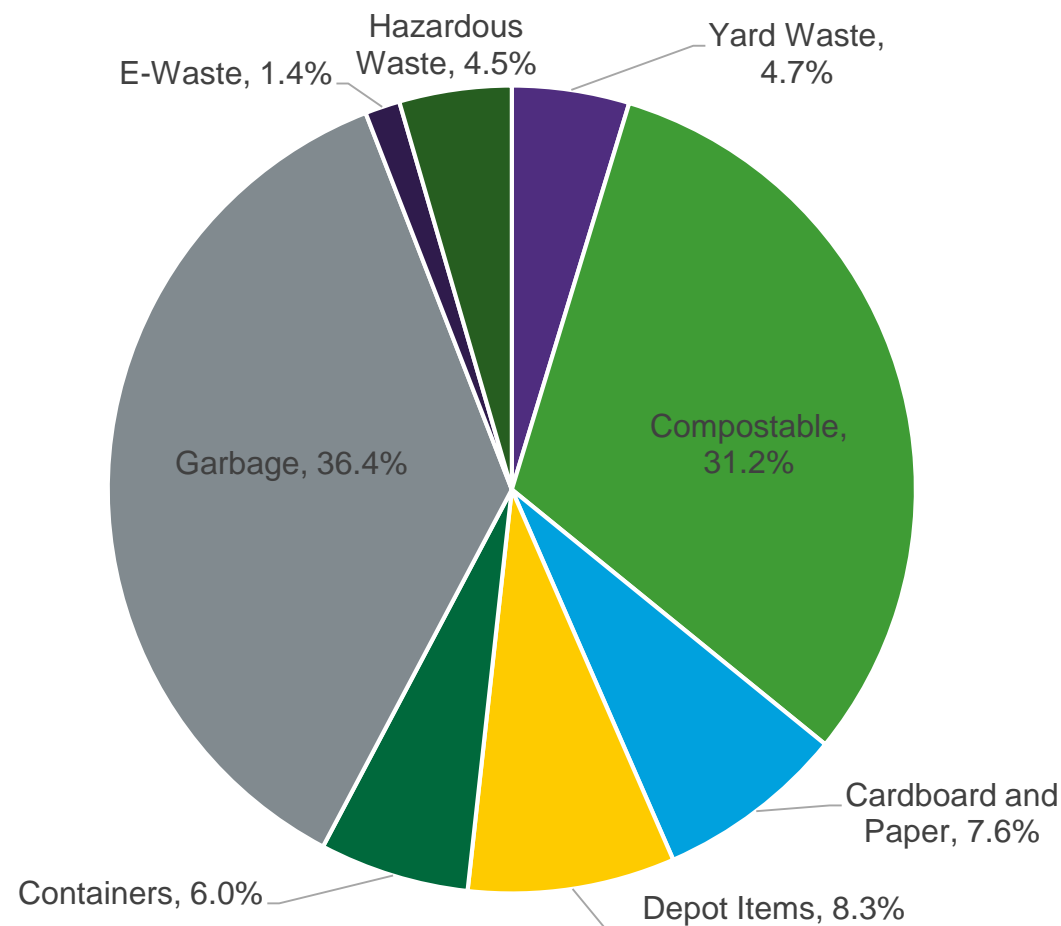


Source: City of Winnipeg

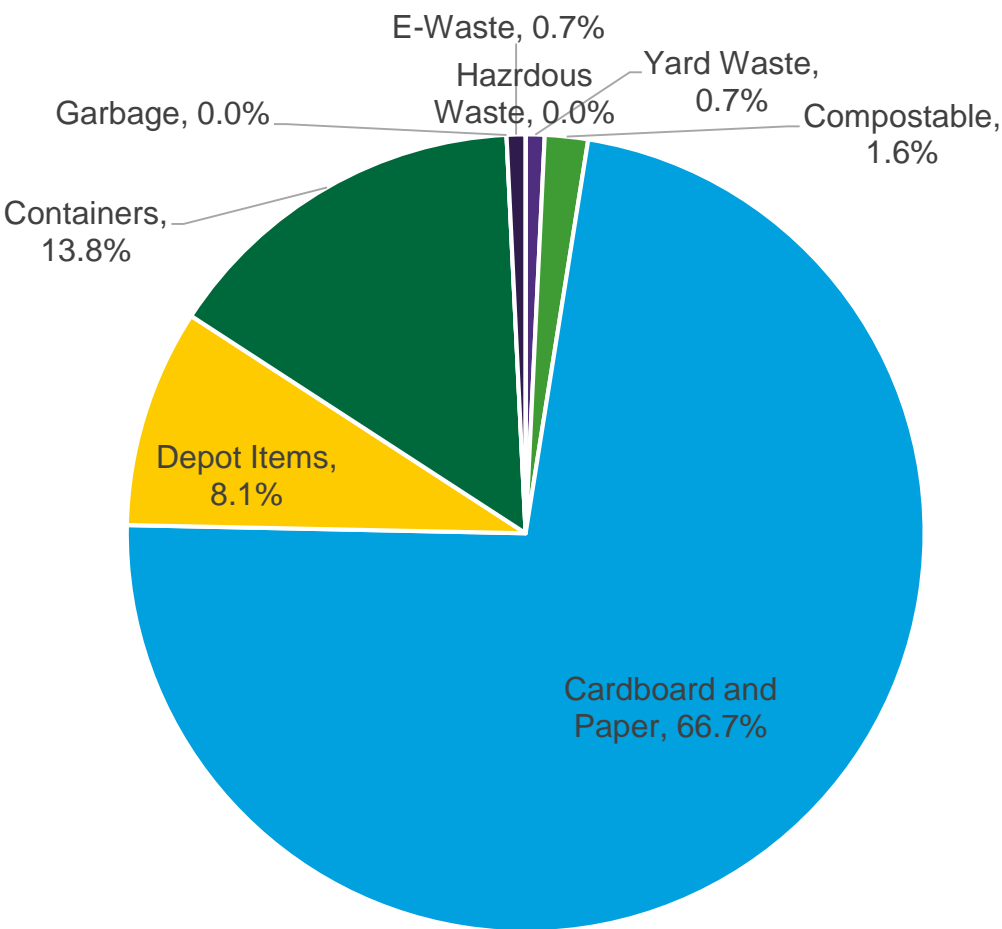
- **Unmonitored Parking Lot Depots**
  - No significant environmental benefit over existing programs
  - Minimal additional waste diversion
  - High likelihood of contamination
- Reduced travel to Depots

# 2020 Multifamily Study - Findings

Garbage



Recycling



# 2020 Multifamily Study - Recommendations

- Create educational tool kits
- Develop 'multifamily' communication program
- Offer multifamily units onsite training/coaching
- Continue to engage with Strata councils/residents





# 2020 Multifamily Study - Recommendations



- **Program Improvements:**
  - Partner with Recycle BC
  - Consider updates to bylaws
  - Consider development guidance to implement further source separation for multifamily recycling programs

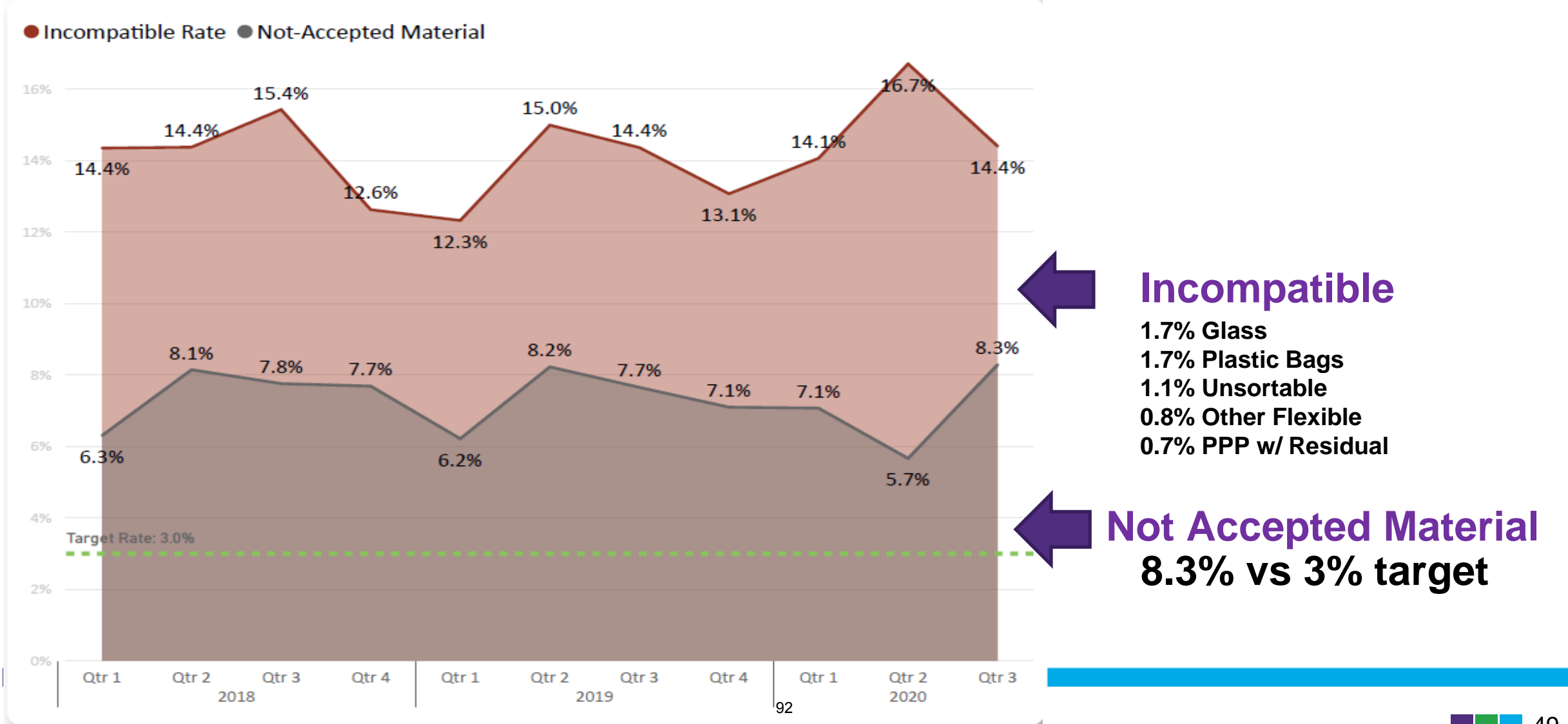
# Recycling Contamination

- **3% target of Not Accepted Material**
  - (i.e. garbage, construction material, textiles, books, electronics, plastic products, scrap metal, hazardous wastes, multi-material PPP)
- **No target for Incompatible Material**
  - Depot only recyclables (Flexible Plastics, Glass, Styrofoam, Plastic Bags)
  - Packaging with residual (ie: Uncleaned Peanut butter jar)
  - Unsortable or nested packaging (ie: Paper and plastic shoved in a box)

**Not Accepted + Incompatible = Contamination**

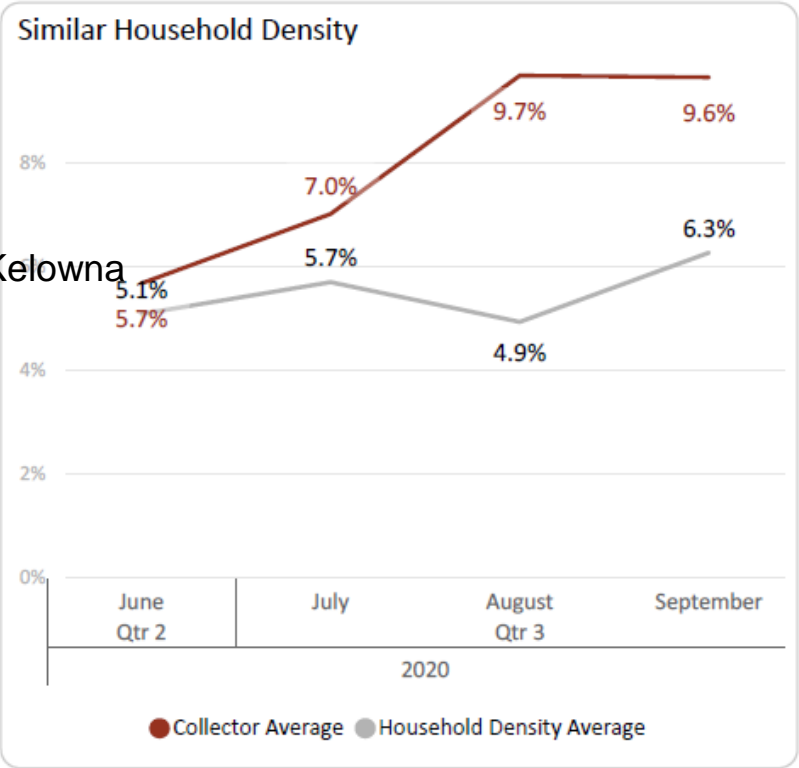
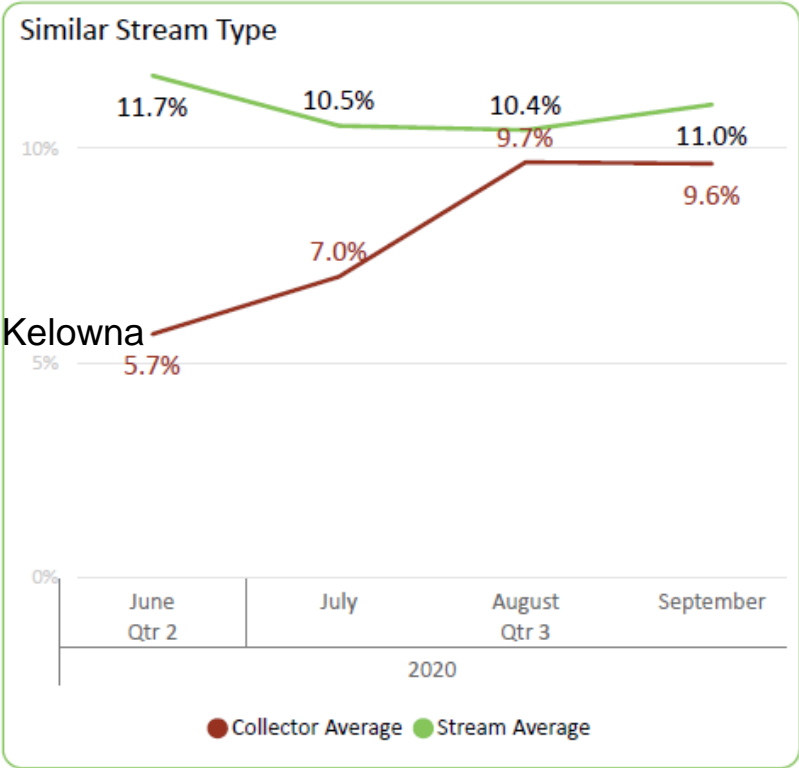
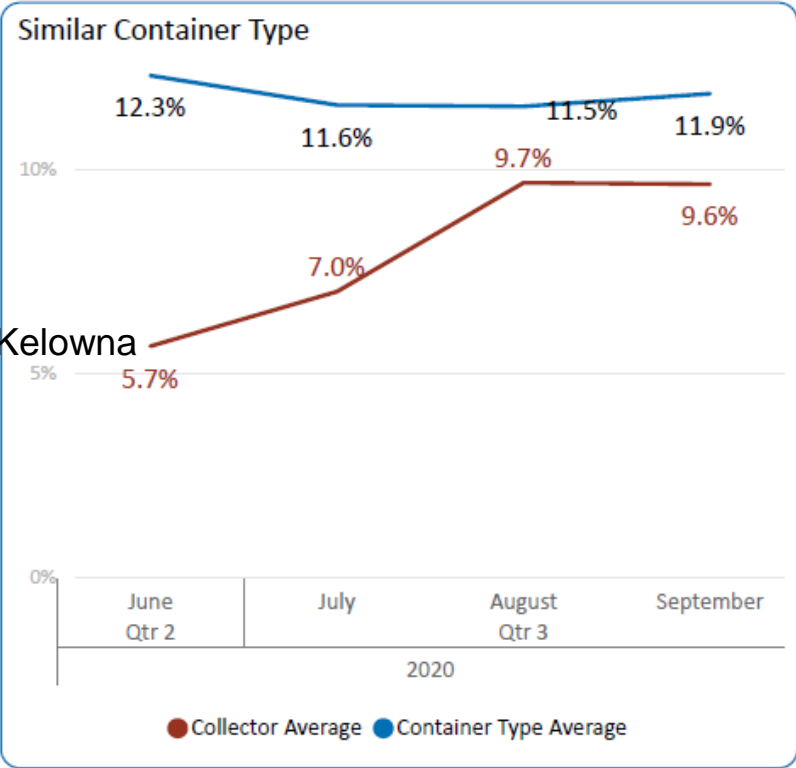
# Recycling Contamination Comparison

Kelowna Q3 2020 Score Card

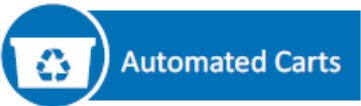


# Recycling Contamination Comparison

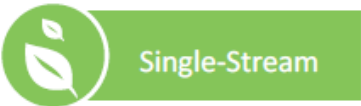
Not-Accepted Material in Q2 and Q3 2020 by:



Container Type:



Stream Type:



Household Density (HH / Hectare):

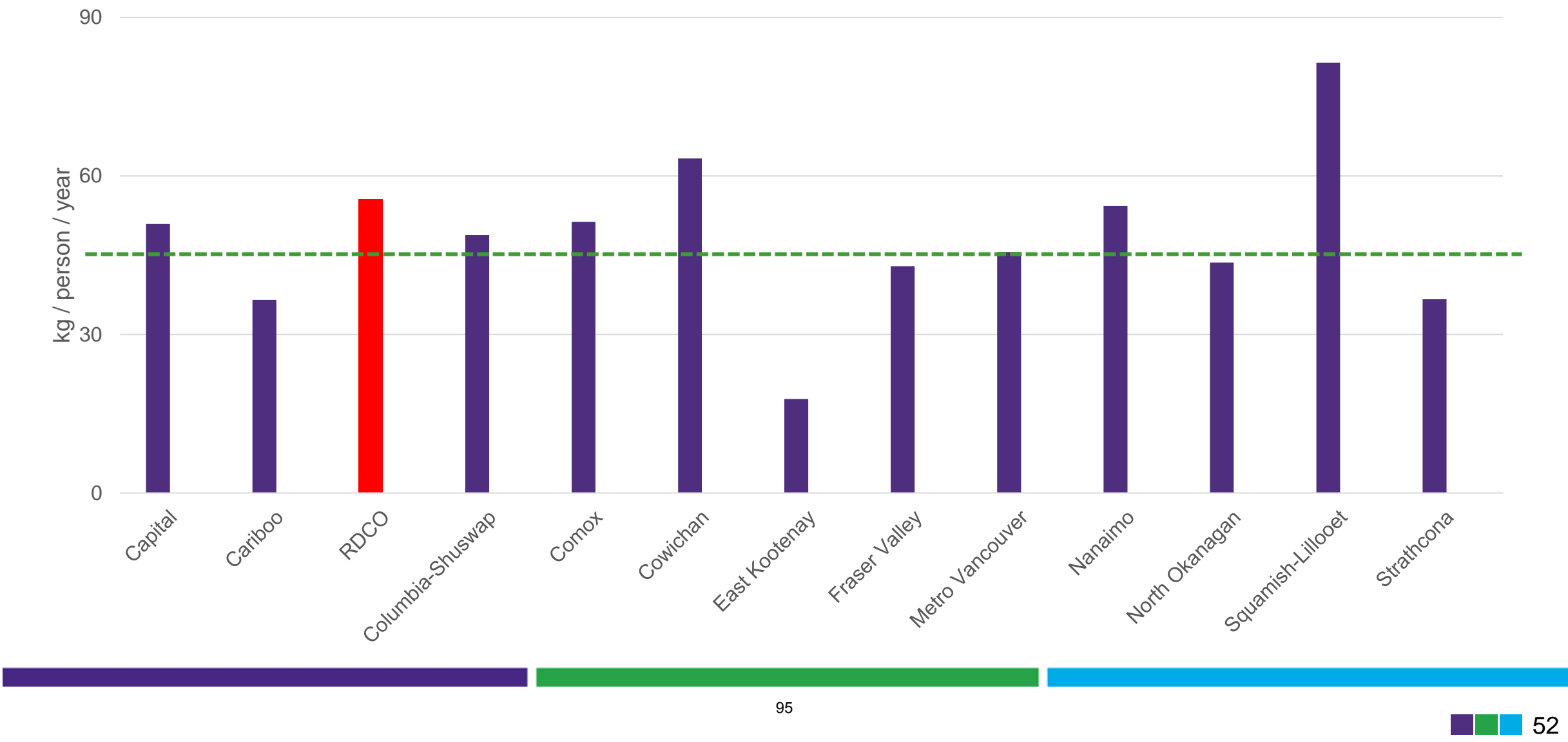




# Contamination Communication Plan

- Analyze and address consumer behaviours that result in recycling contamination
- Focused messaging through specific media
- Future consideration for all aspects of Waste Reduction

# Recycling Collection Comparison



# Key Items and Recommendations

- RDCO on track to achieve 2022 Waste Reduction target
- SWMP effectiveness review to occur in 2024
- RDCO continue as per the SWMP to:
  - Bring policy and bylaw recommendations for Board consideration;
  - Investigate organics diversion potential;
  - Investigate ICI & C&D diversion opportunities; and,
  - action all other strategies and initiatives within the SWMP.



End of Presentation