

RE: Notice of Motion: Development of City of Nanaimo Zero Waste and Circular Economy Strategy in 2022 Work plan.

September 13th, 2021

Submitted: Councillor B. Geselbracht

Motion:

"That the City of Nanaimo 2022 work plan include the development of a Zero Waste circular economy strategy that:

seeks to leverage municipal powers to advance the regional goal of 90% diversion of waste from landfill by applying the framework of the zero waste hierarchy and the systems and process of Circular economy that eliminate waste and pollution, keep materials in circulation, and regenerate natural systems; and

Includes investigating initiatives that improve access to recycling services and amenities, eliminates unnecessary single use items, implement deconstruction and sustainable demolition regulations, and supports circular business entrepreneurship."

Background:

Zero Waste and Circular Economy are two mutually supporting frameworks that guide solid waste planning and to a certain extent are beginning to inform economic development. These frameworks have been adopted in whole or in part by the Regional District of Nanaimo and City of Nanaimo.

Zero waste definition

'The conservation of all resources by means of responsible production, consumption, reuse, and recovery of products, packaging, and materials without burning and with no discharges to land, water, or air that threaten the environment or human health.' (Zero Waste International Alliance)

The zero waste hierarchy of highest best use and similarly the provincial pollution prevention hierarchy are planning tools¹ to guide priority actions and initiatives towards achieving zero waste. The sequential priority for managing waste is as follows:

¹ This tool is referenced in B.C.'s Environmental Management Act and guiding documents for solid waste management planning across the province and the world.

1. **Avoid** - The prevention or avoidance of use of a material or product
2. **Reduce** - The reduction in the consumption or use of a material or product
3. **Reuse** - The reuse of an existing material or product
4. **Recycle** - The recycling a material or product into something new
5. **Dispose** - The disposal or incineration of a material or product

Circular Economy

The widely endorsed “circular economy” framework encompasses not only the concepts of zero waste, but defines the systems and processes that need to be in place to reach it.

A circular economy is in contrast to the conventional "linear economy", which extracts resources to create products that are used and then disposed (linear, being "take, make, waste"). The circular economy instead seeks to design out waste and pollution, keep products and materials in use, and regenerate natural systems. The circular economy is represented by circular loops of continual reuse to avoid heavy resource extraction². A circular economy requires that materials are retained at their highest value for as long as possible and emphasizes the prioritization of key processes in both industrial/technological and natural systems (biological cycle) for a product or material as follows (see below):

² Ellen MacArthur Foundation, available online at: <https://www.ellenmacarthurfoundation.org/circular-economy/concept>

criterion in its sustainable procurement policy⁵, zero waste public education and the inclusion of Circular economy as a principle in its recent economic development strategy⁶. The City of Nanaimo department of Sanitation also has a zero-waste coordinator to support initiatives.

Recently the City of Nanaimo in partnership with the Regional District of Nanaimo begun participating in the “Circular Cities and Regions Initiative” which is an FCM project to provide local government with the knowledge and tools to accelerate circular economy solutions.

Discussion:

Despite the focus on zero waste and several initiatives, and growing usage of circular economy language, the City of Nanaimo does not have a formal strategy to identify and prioritize zero waste and circular economy initiatives to maximize effectiveness in achieving waste reduction and economic development goals.

Although solid waste management is a primary responsibility of the regional district, the City of Nanaimo is uniquely positioned to enhance regional waste reduction and circular economy development initiatives due to additional regulatory powers granted to municipalities. These additional regulatory powers and authorities include zoning, permitting, business regulation and nuisance regulation.

It is also important to note that solid waste, or certain types of waste materials, can have direct impact on the natural environment. Local governments in British Columbia have shared authority with the provincial government to regulate in this area. These powers were exercised in Nanaimo’s recent single use bag regulation bylaw. The ability to regulate the use of certain products is another zero waste/circular economy policy lever at the city of Nanaimo’s disposal.

The City of Nanaimo is a major source of the waste disposed at the regional landfill and there is a unique suite of solid waste management considerations for Nanaimo given its role as one of the main urban centres for central Vancouver Island. Important sectors and characteristics involving waste in the city include:

- Centre of employment
- Significant number of multifamily buildings
- Light and medium industry
- Densification and development
- Shopping districts
- Busy parks and open spaces

⁵ City of Nanaimo Sustainable Procurement Policy: [cityhttps://www.nanaimo.ca/docs/your-government/city-council/policies/sustainable-procurement-policyb97c823a1b316d6b9fc9ff0f001037d2.pdf](https://www.nanaimo.ca/docs/your-government/city-council/policies/sustainable-procurement-policyb97c823a1b316d6b9fc9ff0f001037d2.pdf)

⁶ Nanaimo Economic Development Strategy 2021: <https://www.nanaimo.ca/docs/doing-business/economic-development/2020-economic-development-strategy.pdf>

These unique characteristics require careful consideration in designing targeted policies and programs to achieve zero waste.

In addition, the City of Nanaimo uses its authority under the community charter to provide the following solid waste services.

- residential curbside collection for garbage, recycling and organic materials;
- Collection of materials in the public realm through waste bins, street cleaning, litter collection and pickup of illegally dumped items; and
- Solid waste, recyclable and organics transfer and disposal.

These services can be enhanced with the application of zero waste and circular economy initiatives.

There is still ample opportunity to improve waste reduction and diversion in Nanaimo. According to the Regional District's 2012 solid waste audit, over 50% of materials still being landfilled are easily reusable, recyclable or compostable⁷. A good majority of these materials coming from the institutional, commercial and industrial sector. Building materials make up over 11% of materials being disposed and the waste from construction, demolition and renovations are in great need of being addressed. Plastics still make up a large portion of the waste stream and more options for textile re-use and recycling need to be developed.

In addition to extending the life of the regional landfill, benefits of pursuing zero waste and circular economy initiatives include:

Environmental Benefits
<ul style="list-style-type: none">• Reduced greenhouse gas emissions from the diversion of organic material• Reduced pollutants from leachate• Reduced upstream ecological damage and greenhouse emissions from primary resource extraction• Reduced litter throughout the community
Economic Benefits
<ul style="list-style-type: none">• Cost avoidance for siting new disposal facilities and services• Sharing and reuse can avoid the cost of (re)purchasing products• New local business opportunities for sharing, reuse and re-manufacturing• Supports a shift towards a circular economy
Social Benefits
<ul style="list-style-type: none">• Community connection and the potential for ongoing education from sharing and reuse programs• Job creation• Recovering quality products to serve communities in need (e.g. furniture and food recovery)

⁷ Regional District of Nanaimo: Solid Waste Management Plan : https://www.rdn.bc.ca/sites/default/files/inline-files/2018%20SWMP%20Amendment_1.pdf

Some municipalities in Canada have already developed or are in the process of developing zero waste and circular economy strategies. These include the city of Toronto⁸, Vancouver⁹ and Victoria¹⁰. The city of Victoria is a municipality that is governed under similar legislation to Nanaimo. In their plan, the City of Victoria has identified several potential initiatives and programs to support their regional waste diversion goals. Some of these initiatives and programs the city of Nanaimo has already commenced and others could be potentially pursued; leveraging the work that has already been accomplished in the other municipalities. Some initiatives pursued in the City of Victoria include¹¹:

- Adapt zoning regulations to enable the siting of facilities that support the achievement of zero waste.
- Develop requirements/guidelines for source-separation and diversion from residential properties, businesses and events.
- Develop or amend municipal bylaws and plans to align with the Regional Solid Waste Management Plan/
- Apply procurement models for municipal products and services that support waste diversion.
- Introduce requirements for waste plans through business licensing.
- Regulate construction, renovation and demolition waste through construction permitting.
- Develop and enforce building standards and codes to support end-of- life material recovery from urban development.
- Allocate space or resources to reuse and sharing programs.
- Regulate the use of single use products
- Incentivize material diversion through municipal service user fees.
- Support regional infrastructure through the commitment of municipally collected materials
- Support the development and dissemination of educational material.
- Advocate to provincial and federal governments to make regulatory changes to address local waste management issues.

Some examples of Zero Waste policies and programs from other leading cities identified by the city of Victoria as potential initiatives are summarized in the below table.

⁸ <https://www.toronto.ca/services-payments/recycling-organics-garbage/long-term-waste-strategy/working-toward-a-circular-economy/>

⁹ City of Vancouver Zero Waste 2040: <https://council.vancouver.ca/20180516/documents/pspc2a.pdf>

¹⁰ City of Victoria Zero Waste Strategy:

https://www.victoria.ca/assets/Departments/Sustainability/Documents/ZW_Report%202021%20FOR%20WEB%20JAN%202021.pdf

¹¹ Report_Zero Waste Strategy - Update and Considerations City of Victoria Nov. 2019:

https://www.victoria.ca/assets/Departments/Sustainability/Documents/Report_Zero%20Waste%20Strategy%20-%20Update%20and%20Considerations.pdf

Transformational Policies and Programs	
<i>Proven</i>	<i>Experimental</i>
<ul style="list-style-type: none"> • Municipal or single-source contracts for solid waste collection services for multifamily buildings • Purchasing policies for municipal products and services that direct the market to incorporate considerations for zero waste and a circular economy 	<ul style="list-style-type: none"> • Partnerships to support textile recycling • Repair programs and services for appliances and electronics • Tax breaks to organizations participating in food redistribution • Financial incentives to support local innovation • Pay as You Throw (PaYT) programs to encourage increased recycling and composting
Incremental Policies and Programs	
<i>Proven</i>	<i>Experimental</i>
<ul style="list-style-type: none"> • Building demolition material diversion requirements • Regulations for unnecessary and problematic single-use items • Building standards that facilitate material reuse and recovery • Regulations for mandatory separation of recycling, organics and landfill waste for all sectors and at events • Development standards for space requirements for recycling, composting and landfill waste bins 	<ul style="list-style-type: none"> • Litter abatement fees for items commonly littered such as cigarettes • Downsizing of waste collection bins/totes • Mobile technology applications that provide sorting tools and drop-off depot and donation locations • Piloting and testing the implications of new technologies and operational models with corporate solid waste programs

Although Nanaimo has its own unique scale and capacity, there are ample options and opportunities for zero-waste and circular economy initiatives to be strategically pursued.

Given the city's current participation in circular cities initiative, strong community interest, existing city commitment to waste reduction and the current updating of the official community plan, it is an excellent moment in time for the city to develop a zero waste and circular economy strategy to enhance our municipalities efforts in waste reduction and economic development.