

# Solid Waste Management Strategy & Action Plan

2020-2022

*Working Towards Zero Waste*

May 2020



**KITIMAT**  
A Marvel of Nature and Industry



## WHY DO WE NEED A SOLID WASTE MANAGEMENT STRATEGY?

The current solid waste management system in Kitimat is deficient with respect to waste diversion and residual waste management services. That is why reducing and diverting landfill waste and associated greenhouse gas emissions (GHG) is a key objective in Council's Strategic Plan for 2018-2022.

### ***Residential Curbside Collection System***

Unlike many comparable communities in BC that have implemented one-can limits on residential garbage, curbside collection of recyclables, and to a lesser extent yard and/or food waste collection, our garbage collection service still allows households to put out up to three containers of garbage and two bags or bundles of yard waste at the curb every week. Although yard waste is set out separately from garbage, it is still collected in the same truck and deposited in the landfill as garbage.

### ***Residual Management- Kitimat Landfill***

The design and operation of our Landfill is decades behind how most other landfills operate in BC. The site is operated as a natural control (un-lined) landfill in accordance with a Ministry of Environment and Climate Change Strategy (MOE) permit issued November 1975 and subsequently amended in May 1996 to meet the provisions of the 1993 Landfill Criteria for Municipal Solid Waste.

Since the introduction of the 1993 Landfill Criteria, most local governments, in cooperation with their regional district, have moved towards closing unlined landfills and replacing them with transfer stations and fully engineered lined regional landfill facilities. Best practices in landfill operation also include the provision of weigh scales, improved safety by the separation of commercial and self-haul customers, as well as opportunities for recycling.

In 2016 the MOE updated the 1993 Landfill Criteria to outline new standards and operating procedures to ensure better environmental protection by requiring new landfills and expansions of existing landfills to install liners and leachate collection systems.

Our Landfill is not in compliance with the 2016 Landfill Criteria. Particularly, the planned expansion into the Phase 3 fill area (Phase 1 was closed in 2018 and garbage is currently being placed in Phase 2), will require construction of a liner and leachate collection and treatment system.

Reduce and divert landfill waste and GHG emissions by:

- Completing Solid Waste Management Strategy and Action Plan
- Implementing curbside recycling and composting

Council Strategic Plan (2018-2022)

**Landfill Capacity Shortage**

This means that once the Phase 2 fill area is full, which could be in less than three years, we will not have the authority to move into Phase 3 without significant capital investment in design and operational improvements. In the meantime, it is imperative that we conserve the remaining space in Phase 2 to provide time to fully assess residual management options.

Consequently, conservation of landfill space will be achieved through the implementation of curbside collection of residential recyclables and organic waste (in collaboration with the Haisla Nation), as well as prohibiting the disposal of commercial and institutional food waste and all industrial camp waste at the Landfill. We will also explore opportunities to divert clean wood waste instead of the current practice of burning it at the landfill.

Conserve remaining landfill capacity by diverting residential, commercial, and industrial camp waste

**Harmonization with Regional District of Kitimat-Stikine System**

In 2016 the Regional District of Kitimat-Stikine (RDKS) modernized the solid waste management system in the Terrace Service Area by closing the Terrace and Thornhill landfills and replacing them with the Thornhill Transfer Station and the Forceman Ridge Regional Waste Management Facility.

Forceman Ridge, which is roughly 30 kilometers from Kitimat, consists of a compost facility, septage receiving facility, an engineered landfill, and a five-stage leachate collection and treatment system. The Terrace Service Area also operates a residential curbside garbage, recyclables, and organics collection program. Both yard waste and food scraps are collected as part of the organics collection program. Harmonization between the solid waste management systems operating in the District of Kitimat and the RDKS Terrace Service Area may provide substantial benefits to both us and RDKS.

WHAT ARE THE GOALS OF THE STRATEGY?

<b>Goal 1</b>	Maximize waste diversion (zero waste) to conserve landfill capacity
<b>Goal 2</b>	Manage residual waste to meet current environmental design and operational standards
<b>Goal 3</b>	Evaluate harmonizing the District’s solid waste management system with the Regional District of Kitimat-Stikine system.

## HOW WILL WE MEET THESE GOALS?

Goal 1: Maximize waste diversion (zero waste) to conserve landfill capacity

*Strategy 1.1: Modernize the residential curbside service by collecting garbage, recyclables, and organics*

No.	Actions	Schedule
1.1.1	Issue a Request for Proposals (RFP) for a contracted 3 stream (garbage, recyclables, and organics) collection service.	Q1 2020
1.1.2	Execute a 5-year service contract with Recycle BC (in collaboration with the Haisla Nation).	Q2 2020
1.1.3	Award a curbside collection service contract (5 years with two-year renewal option)	Q2 2020
1.1.4	Amend the Municipal Code to incentivize diversion and reflect the new service contract (e.g., container volume, weight and set-out limits, unacceptable items, separate yard waste collection, and new fee schedule).	Q3 2020
1.1.5	Design and initiate community outreach and awareness program	Q3 2020
1.1.6	Distribute program materials to all households	Q1 2021
1.1.7	Program Start Up	Q2 2021



*Strategy 1.2: Incentivize diversion from the ICI sector by banning the disposal of food waste, prohibiting the disposal of all work camp waste, and exploring opportunities to divert wood waste at the Kitimat Landfill.*

No.	Actions	Schedule
1.2.1	Consult with industrial camp providers within municipal boundaries (LNG Canada, Civeo, and Horizon North) regarding our intention to prohibit the disposal of their garbage and food waste at the Kitimat Landfill.	Q1 2020
1.2.2	Consult with large local commercial food waste generators (Save-On, No Frills) as well as institutional food waste generators (Northern Health, Coastal Mountain School District) to determine the viability of banning ICI food waste from disposal at the Kitimat Landfill.	Q1 2020
1.2.3	Confirm with the Regional District of Kitimat-Stikine that municipal solid waste (MSW) from industrial camps and food waste from large commercial generators will be accepted at Forceman Ridge.	Q1 2020
1.2.4	Consult with LNG Canada to better understand their solid waste management plans both during and post construction prior to formally prohibiting the disposal of their MSW at the Kitimat Landfill.	Q1 2020
1.2.5	Consult with Rio Tinto to better understand their solid waste management plans prior to formally prohibiting the disposal of their MSW at the Kitimat Landfill.	Q1 2020
1.2.6	Design an education and communications program to support the ban and invite ICI partners to collaborate on such programs.	Q1 2020
1.2.7	Amend the Municipal Code to prohibit all industrial camp waste and food waste from large generators.	Q2 2020
1.2.8	Investigate options to divert clean wood waste in conjunction with the implementation of the revised provincial Open Burning Smoke Control Regulation	Q2 2020

*Strategy 1.3: Review the role of KUTE in a modernized waste diversion system*

No.	Actions	Schedule
<b>1.3.1</b>	Consult with KUTE regarding their role in the modernized waste diversion and residual waste management system.	Q3 2020
<b>1.3.2</b>	Determine how we can best support KUTE’s preferred role going forward.	Q4 2020

Goal 2: Manage residual waste to meet current design and operational standards

*Strategy 2.1: Upgrade the Kitimat Landfill to allow for continued disposal of all District MSW.*

No.	Actions	Schedule
<b>2.1.1</b>	Review the MOE response to the AECOM Landfill Conformance Review	Q1 2020
<b>2.1.2</b>	Estimate the current Phase 2 fill area lifespan based on the impact of proposed diversion actions.	Q1 2020
<b>2.1.3</b>	Prepare a Landfill Upgrade Plan that includes conceptual cost estimates for weigh scales, a self-haul drop-off area for garbage, organics and recyclables, a transfer facility for recyclables and potentially organics, an organics processing facility, and an engineered liner, leachate collection and treatment system.	Q2 2020
<b>2.1.4</b>	Review and amend the Landfill Site Operations contract based on the requirements of the Landfill Upgrade Plan.	Q2 2020
<b>2.1.5</b>	Prepare detailed cost estimates to construct infrastructure in support of the new residential curbside collection program (weigh scales, self-haul area and recyclable transfer)	Q4 2020
<b>2.1.6</b>	Construct required infrastructure to coincide (as much as possible) with the new curbside collection program start-up	Q3 2021
<b>2.1.7</b>	Design and construct the engineered Phase 3 expansion if harmonization with the RDKS system is not a cost-effective option (see 3.2.1 and 3.2.3)	Q3 2023

**Goal 3: Evaluate harmonizing the District solid waste management system with the RDKS System**

*Strategy 3.1: Evaluate the cost effectiveness of participating in the Terrace Area Curbside Collection System for garbage, recyclables, and organics.*

No.	Actions	Schedule
<b>3.1.1</b>	Review the education and communication services provided by the RDKS to the City of Terrace as a participant in the Terrace Area Solid Waste Management Service. This includes maintenance of the Recycle Coach app as well as delivering workshops at local schools and community events.	Q2 2020
<b>3.1.2</b>	Evaluate the cost effectiveness of becoming a full participant in the Greater Terrace curbside collection service. Given that the RDKS already delivers a similar service and may have the staff resources to expand service delivery to the District, there could be a significant financial advantage to join forces.	Q2 2020

*Strategy 3.2: Evaluate the effectiveness of participating in the Terrace Area Solid Waste Management Service*

No.	Actions	Schedule
<b>3.2.1</b>	Review the implications associated with full participation in the Terrace Area Solid Waste Management Service. This would entail the design and construction of a new Kitimat Transfer Station and use of the Forceman Ridge Waste Management Facility for disposal and composting. Issues requiring review include whether the District operates the transfer station or cedes control to the RDKS; who would be responsible for landfill closure activities and what will the financial implications be of joining the Terrace Service Area cost recovery model.	Q2 2020
<b>3.2.2</b>	Review the implications of remaining outside of the Terrace Area Solid Waste Management Service and access the Forceman Ridge facility as a user (i.e. pay tipping fees). Waste from the District would need to comply with all disposal restrictions in place, and the “out of service area” surcharge of 25% would be applied to the tipping fee.	Q2 2020

## SUMMARY

Kitimat Council believes that the goals, strategies, and actions identified above will significantly improve our solid waste diversion and disposal system as well as reduce our community greenhouse gas emissions. However, it is important to recognize that this Strategy contains several crucial decision points that will modify actions going forward. Council's direction regarding whether to upgrade the Kitimat Landfill or join the Terrace Area Solid Waste Management Service is an example of such a decision point. Consequently, this Strategy should be viewed as a flexible document that will require regular adjustment as Council obtains more information to guide the implementation of this strategy.

