



Carey McIver & Associates Ltd.
ENVIRONMENTAL CONSULTANTS

Village of New Denver

Solid Waste Collection Study



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Executive Summary

The Village of New Denver (the Village) retained Carey McIver & Associates Ltd. (CMA) to undertake a solid waste collection study. The main objectives of this project were to determine the feasibility of expanding the current curbside garbage collection service to include recycling and organics as well as the possibility of providing these collection services to the nearby Village of Silverton. The study also included preparing an implementation plan depending on the viability of the proposed service expansions.

To complete the collection study and develop service expansion options, CMA reviewed the current program metrics along with service levels in other small communities. We also reviewed waste collection and diversion actions identified in the Regional District of Central Kootenay (RDCK) 2021 Resource Recovery Plan (RRP) to better understand the wider regional context.

The management and collection of garbage generated within the Village is regulated under Bylaw 742, which establishes fees for the collection program and sets out storage and wildlife mitigation requirements.

Opportunities to expand service to include curbside recycling and organics collection are limited given the size of the communities and lack of a nearby organics processing facility. However, opportunities exist to enhance services already provided, such as purchasing a new collection truck, establishing a shared service for solid waste collection between the two Villages, and working with RDCK on recycling initiatives. Additionally, collaborating and building capacity with the Healthy Community Society is seen as a way to continue a successful organics diversion program and foster creating valuable social capital in the community.





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1 Introduction

1.1 Purpose

The Village of New Denver (the Village) engaged Carey McIver & Associates Ltd. (CMA) to undertake a solid waste collection study. The main objectives of this project were to determine the feasibility of expanding the current curbside garbage collection service to include recycling and organics as well as the possibility of providing these collection services to the nearby Village of Silverton. The study also included preparing an implementation plan depending on the viability of the proposed service expansions.

To complete the collection study and develop service expansion options CMA undertook the following:

- Completed a site visit which included meeting with Village staff and visiting the recycling and waste transfer facilities, as well as information gathering and analysis.
- Presented an overview of the study's intentions and deliverables to Village Council.
- Reviewed eligibility to apply to join the Recycle BC program as a partnering collector for curbside collection of residential packaging and paper products.
- Discussed organics collection and processing opportunities with RDCK staff so as to update the Village on the status of the proposed regional collection program as well as the options and timeline for the Villages of New Denver and Silverton to consider joining the service if desired.
- Reviewed small-scale food waste collection and processing options with respect to their applicability to New Denver and Silverton.
- Reviewed the Wildsafe BC 2022 Annual Report for New Denver and Silverton and identified actions taken by comparable local governments to reduce bear conflicts.
- Prepared recommendations for consideration by Village staff.

Section 1 of this report provides a snapshot of the municipality; its demographics and location attributes.

Section 2 provides an in-depth review and analysis of the current collection system. This includes the number of homes and properties serviced and the fees charged, the types of materials accepted for collection and the containers approved for residents to set their waste out, the truck used to perform the collection, collection scheduling, and how the municipality promotes the collection program.

Section 3 summarises the recycling collection options available under the Recycle BC stewardship program.

Sections 4 and 5 focus on organics collection and processing. These include collection and processing opportunities identified in the RDCK Resource Recovery Plan (RRP), identifying communities with larger scale centralised collection points, and a discussion of small-scale food waste processing alternatives.

In section 6, wildlife interaction reports are reviewed and mitigation actions in place in other are noted.

Section 7 summarizes the information gathered above and provides recommendations regarding the feasibility of expanding the current collection system to include recycling and organics as well as the possibility of partnering with the Village of Silverton in this service.



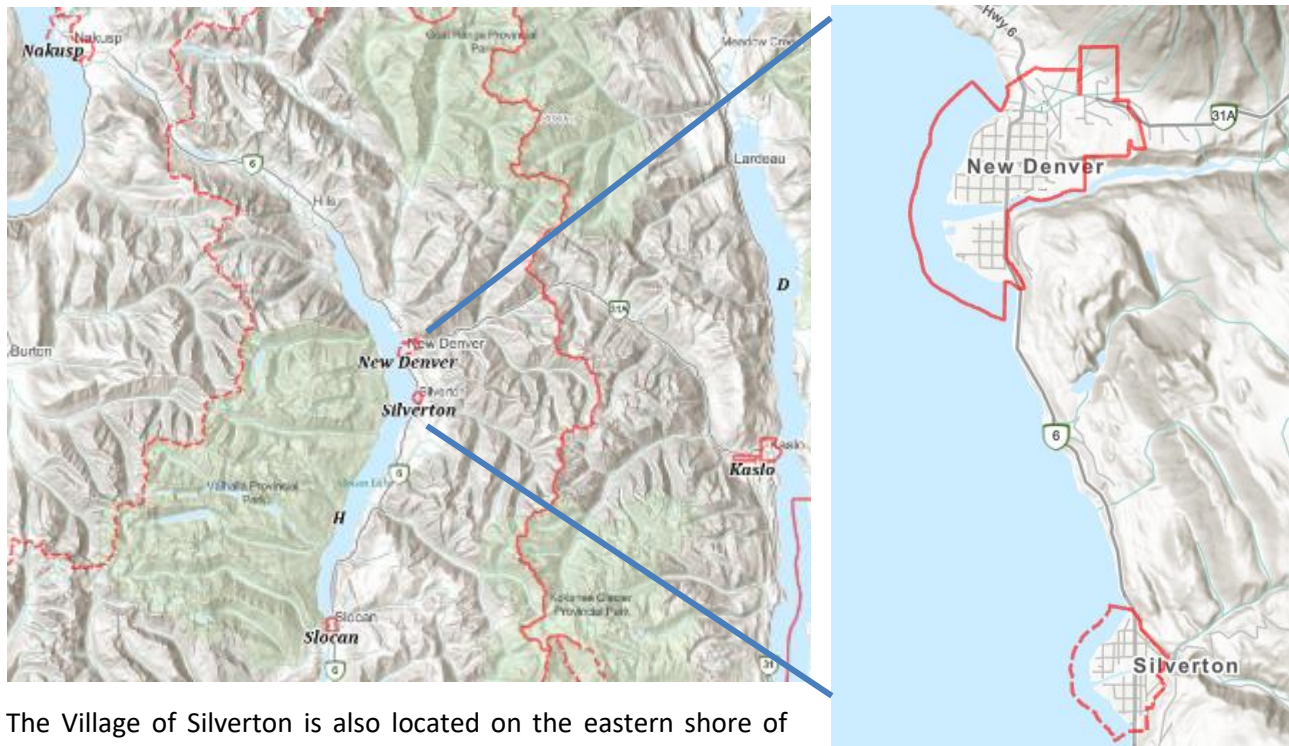
1.2 Background

The Village of New Denver is a small municipality situated on the eastern shore of Slocan Lake, within the Regional District of Central Kootenay (RDCK). It is surrounded by the Selkirk Mountain range and is in close proximity to Valhalla Provincial Park.

The Village has a dynamic history, including a mining boom in its founding days of the late 1800's, a Japanese Canadian internment camp in the 1940s, and a residential facility for Doukhobor children in the 1950s. Amongst its many attributes, the Village acknowledges some of that history with a National Historic Site dedicated to telling the story of over 22,000 Japanese Canadians who were forcibly relocated during World War 2.

Services available to residents and visitors include a K-12 school and a pre-school, health care centre, RCMP station, post office, accommodation providers, retail and food service stores. New Denver prides itself as being a volunteer-oriented and engaged community. There are non-profit organizations active in a range of initiatives such as advocating for food security, promoting arts and culture, providing care and support to older adults, and the building and preservation of trails.

The 2021 Statistics Canada census lists the population at 487. This is a slight increase from the 473 reported in the 2016 census. There is an almost equal split between those aged 15 to 64 (46.4%) and those aged over 65 (45.4%). Those aged under 15 amounted to 8.2% of the population according to the census results.



The Village of Silverton is also located on the eastern shore of Slocan Lake, approximately five (5) kilometres south of New Denver along Highway 6. With a 2021 census population of only 149 (a decrease of almost 24% from the 2016 census), and an area of just 0.35 square kilometres (0.14 sq mi) Silverton is one of BC's smallest municipalities. As its name suggests, it too shares a proud mining heritage.



2 Current Collection Program Review

Solid waste collection within the Village is regulated by Solid Waste Management Bylaw No. 742, (2022). The Bylaw applies to all property owners. [Appendix A]

Village staff collects garbage from residences and all other waste generators in the Village, including commercial properties (for example retail stores and accommodation providers), institutional properties (school and health care centre), parks and public streets.

Residential properties are permitted to set out for collection up two bags of garbage each week. A maximum weight of 50 lbs (23 kgs) applies to each bag. Bags must be contained within 80 litre garbage cans to reduce wildlife interactions. Residential garbage collection takes place on Tuesdays, beginning at 8:00 AM. Containers are not to be placed curbside before 6:00 AM. on collection day.



Ten 4-cubic-yard refuse containers are provided by the Village for use by commercial properties. These are emptied twice a week by staff. The entire container is hydraulically lifted and dumped into the collection truck.

These containers are considered bear proof due to their metal construction, solid concrete base pad, and recessed lever to open the lid.

An additional 20 Hid-A-Bag style refuse containers are located throughout the Village streets and public spaces. These containers have large garbage bags fitted inside and are emptied manually through the back door.

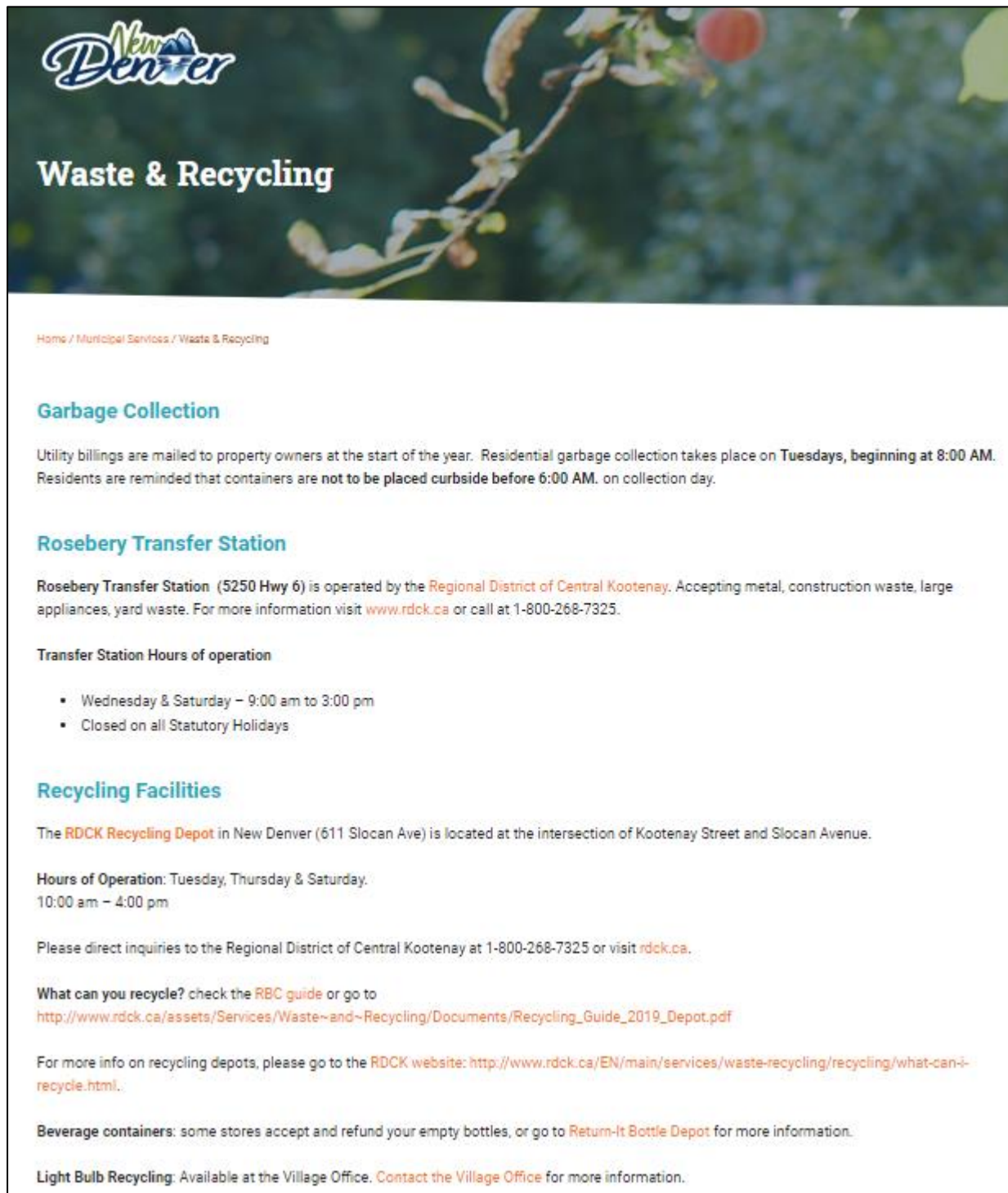
Garden waste is collected seasonally twice a year from residential properties.

A recycling depot is located at 611 Slocan Avenue. This facility is operated by the RDCK. It accepts primarily residential recycling as per Recycle BC guidelines, but does accept cardboard from commercial properties. The Silverton recycling depot is currently not in operation.





Information about garbage collection, recycling options, and the Rosebery Transfer Station operating hours are provided on the Village's website, a screenshot of which is shown here.

A screenshot of the Village of New Denver's website, specifically the 'Waste & Recycling' section. The page has a blue header with the 'New Denver' logo and the title 'Waste & Recycling'. Below the header, there is a breadcrumb trail: 'Home / Municipal Services / Waste & Recycling'. The main content area is white and contains several sections: 'Garbage Collection' with information about utility billings and collection days; 'Rosebery Transfer Station' with details about its location, operating hours, and contact information; 'Recycling Facilities' with information about the RDCK Recycling Depot, including its location, hours of operation, and contact information. There are also links to a recycling guide and information about beverage containers and light bulb recycling.

New Denver

Waste & Recycling

Home / Municipal Services / Waste & Recycling

Garbage Collection

Utility billings are mailed to property owners at the start of the year. Residential garbage collection takes place on **Tuesdays, beginning at 8:00 AM**. Residents are reminded that containers are **not to be placed curbside before 6:00 AM**, on collection day.

Rosebery Transfer Station

Rosebery Transfer Station (5250 Hwy 6) is operated by the **Regional District of Central Kootenay**. Accepting metal, construction waste, large appliances, yard waste. For more information visit www.rdck.ca or call at 1-800-268-7325.

Transfer Station Hours of operation

- Wednesday & Saturday – 9:00 am to 3:00 pm
- Closed on all Statutory Holidays

Recycling Facilities

The **RDCK Recycling Depot** in New Denver (611 Slocan Ave) is located at the intersection of Kootenay Street and Slocan Avenue.

Hours of Operation: Tuesday, Thursday & Saturday.
10:00 am – 4:00 pm

Please direct inquiries to the Regional District of Central Kootenay at 1-800-268-7325 or visit rdck.ca.

What can you recycle? check the **RBC guide** or go to http://www.rdck.ca/assets/Services/Waste-and-Recycling/Documents/Recycling_Guide_2019_Depot.pdf

For more info on recycling depots, please go to the **RDCK website**: <http://www.rdck.ca/EN/main/services/waste-recycling/recycling/what-can-i-recycle.html>.

Beverage containers: some stores accept and refund your empty bottles, or go to **Return-It Bottle Depot** for more information.

Light Bulb Recycling: Available at the Village Office. **Contact the Village Office** for more information.



2.1 Properties Serviced, User Fees & Disposal Costs

There are approximately 300 residential properties serviced with weekly garbage collection. The streetscape and commercial containers are collected twice-weekly. As of February 2022, the requirement for residents to purchase and affix \$2.00 tags for each bag of garbage was replaced with a flat annual user fee. The fees charged to properties for the solid waste service are established in Bylaw 742.

Typically, solid waste user fees are calculated through a combination of service costs (the cost for staff or contractor to operate a vehicle to pick up the waste) and weight-based disposal costs (the tipping fee). Because the facility accepting the waste (Rosebery Transfer Station) is not equipped with weigh scales, the transfer station uses a volume-metric system whereby inbound loads are charged based on the estimated cubic metre volume.

CMA is unable to determine the weight of material collected and disposed at the Transfer Station. The Village's disposal fees do differentiate between residential and commercial/institutional waste sectors and charges are different for the different generators within the sectors. The 2022 fees range from \$164 per residence for weekly garbage collection of up to two bags of garbage, \$219 to \$820 for the commercial businesses, \$1,639 for the Seniors Citizens Housing Complex, \$2,623 for the School, and \$4,262 for the hospital. See Schedule A of the Bylaw for the full list of fees (Appendix A).

The locations of the various commercial and public containers are shown in Table 1.

Table 1: Container Locations

Commercial locations	Public & streetscape locations	
Hospital	Boat Launch	Corner of 6th/Josephine (South/East)
Park – South	NIMC (West Side)	Corner of 6th/Kildare (South/East)
Park – North	Log Washroom (In park)	East of KSCU on 6th (South Side)
Mountainberry	Playground (In park)	Rutabega's
Valhalla Inn	Wash Station (North side in park)	Greer Park @ Outhouse
Behind Ava's Salon	Dog Off Leash Area (On dike - South Side)	Corner of Playground on 7th (North Side)
New Market Foods	Dike @ Kildare (North Dike)	Outhouse @ Recycling Area
School	Below Oldham's Cottages	Outhouse – West End of North Dike
YRB	Pump House #2	Bellevue @ Josephine (Lakeside)
Village Office/Shop	Post Office	Bigelow Bay



Village staff report that the disposal tipping fee costs have risen over the for the last five years. Table 2 below is derived from RDCK waste reports for mixed solid waste delivered primarily to the Rosebery Transfer station with some limited loads delivered to the transfer station in Slocan. Given that there are no scales as Rosebery or Slocan, the RDCK calculates fees based on volume, which in this case is represented by “pieces in” where one piece is equal to 1 cubic metre. This data clearly indicates that loads, pieces, and subsequent disposal fees are rising. In particular the RDCK is increasing weight and volume based tipping fees to provide revenue to meet new residual waste management requirements.

Table 2: RDCK Waste Volume and Cost Reporting

Year	Loads	Pieces In	Sales	\$/ m ³
2018	100	860	\$ 19,680.90	\$ 23
2019	106	863	\$ 20,669.04	\$ 24
2020	121	817	\$ 21,201.70	\$ 26
2021	128	1013	\$ 30,094.60	\$ 30
2022	130	1268	\$ 37,980.00	\$ 30

It is worth noting that many municipalities have recently reported waste increases despite having successful diversion programs in place. This can be attributed in part to changes in consumption, lifestyle, and purchasing habits brought about by the COVID-19 pandemic. Increased amounts of waste generation result in higher disposal costs, as indicated for 2021 and 2022 in the table above.

The Village of Silverton provides a similar level of service to residents and businesses regulated under Bylaw No. 433 – 2005. Fees for the service are \$145 (residential properties and the Church) and \$310 (commercial properties).

2.2 Collection Truck

The truck used by the Village of New Denver for the solid waste collection is an M-class M1600L Haul-All on a heavy duty Dodge Ram 5500 chassis. This is a standard left-hand drive truck with a 16 cubic-yard capacity body. The body is equipped with compaction capability to compact the contained waste.

The body of the Village truck has the bucket, where the operator places the collected garbage bags, on the left side. This is quite uncommon for a truck used on a public street collection service; it would more commonly be found on a truck used for off-street operations such as urban parks and trails.

Having the bucket on the left requires the driver to either drive per the road rules, have the bucket extend into the travelled portion of the road lane and walk around the truck carrying the bags from the curbside to dump into the truck, or to drive on the wrong side of the street so as to more easily load the garbage without having to carry it and eliminate the hazard with the bucket extending into the street.





The truck was purchased from Rollins Machinery in 2018 for \$127,621. It entered service with the Village in 2019. It is equipped with an hydraulic lift mechanism enabling it to lift and dump the large 4 cubic-yard commercial refuse containers. It is not equipped with other capabilities which can be added to this type of smaller utility service vehicle, such as a water reservoir and hoses for pressure washing park furniture or hard surfaces, vacuum for leaves or litter, snow plow blade, or cart tipper.

Additional features available on different chassis include dual steering, such as this example on a Ford truck shown below.

Rollins Machinery advises that M-Class trucks are in use in several smaller BC communities, including:

- Cache Creek
- McBride
- Hudson's Hope
- Valemount
- Tumbler Ridge
- Lillooet

Haul-All truck chassis combinations are also in service throughout BC's First Nation communities where waste collection service is provided.



Haul-All bodies can also be fitted to larger truck cab and chassis units, such as this stand-up right-hand-drive collection vehicle shown on the District of Hudson's Hope website.



An options spec sheet for the Haul-All M-Class is included at Appendix C.



3 Recycling Collection and Recycle BC

The RDCK operates twenty-two recycling depots in communities throughout the district as part of the Recycle BC collection network. Recycle BC is a Product Stewardship agency tasked with collecting and recycling packaging and printed products (PPP) in British Columbia. Producers of PPP fund Recycle BC to collect their material and a portion of the RDCK's depot operating costs are covered by Recycle BC from those funds.

Residents of New Denver and Silverton are able to recycle their paper and packaging at the RDCK operated depot, located at 611 Slocan Avenue. The depot is part of the Recycle BC collection network.

In addition to residential recycling, the depot also accepts commercial and non-residential (business generated) cardboard. The depot is open three days a week: Tuesday, Thursday, and Saturday between 10:00AM and 4:00PM.



Recycle BC has recently (2022) submitted its draft revised Packaging and Paper Product Extended Producer Responsibility Plan (“Program Plan”) to the Ministry of Environment and Climate Change Strategy (ENV) for approval. The Program Plan, which is renewed every 5 years, outlines Recycle BC’s objectives, commitments and performance targets for the next 5-year period, and acts as Recycle BC’s operational roadmap to discharging its producer members’ obligations under the Recycling Regulation.



The Village has expressed interest in having recycling collection available for residents as part of its curbside collection services. CMA has reviewed the Recycle BC draft Plan through the lens of the Village's ability and eligibility for becoming a Recycle BC collection partner. The potential opportunities for becoming a curbside collector of residential PPP recycling are discussed here.

1. Establishing residential curbside recycling collection

PPP curbside collection programs operated by local governments in communities that did not have programs as of May 2014 are eligible to be serviced under the Recycle BC program through a partnership between the local government and Recycle BC, provided ***each of the following criteria are met***:

- ✓ The community represents an incorporated municipality;
- ✗ The community has a minimum population of 5,000 residents; and
- ✓ A curbside garbage collection program is in place and operated by the municipality or scheduled to launch no later than coinciding with the introduction of PPP curbside collection.

The Villages of New Denver and Silverton meet two of the three criteria for new municipalities to join the Recycle BC residential collection program. All three criteria must be met; therefore, this is not a viable option to consider.

2. Curbside Eligibility – Equivalent Unincorporated Areas

This option for establishing curbside recycling collection does not apply because neither New Denver or Silverton are electoral areas, and the minimum 5,000 residents' criteria again applies.

3. Curbside Eligibility – Adjacent Areas

This criterion is designed to extend services beyond densely populated residential areas that currently receive curbside recycling collection into adjacent rural or sparsely populated areas. An example would be a well defined rural residential housing area, which appears to be part of a municipality but is in fact a well developed electoral area, receiving curbside recycling due to its proximity to the municipal service.

Neither New Denver or Silverton meet the eligibility criteria because there are no densely populated areas immediately adjacent to existing municipal service areas, and because there is no existing curbside recycling collection program a maximum distance of 5 km from New Denver.

4. Integrated Recycle BC Collection Services - Small Communities

Because New Denver and Silverton (through the RDCK) have ready access to a Core Recycling Depot, and have populations of fewer than 2,000 residents, the Villages do not meet the eligibility criteria for this option.

The draft Recycle BC Plan explains that at present, depot collection service (whether combined with curbside and multi-family collection or as a stand-alone service) is the primary method through which Recycle BC provides **Integrated Recycle BC Collection Services**. For New Denver and adjacent areas, Recycle BC provides depot collection service through an agreement with RDCK.

Depots provide collection services of all categories of accepted PPP in smaller communities without curbside collection. They also provide additional collection opportunities to residents in communities with curbside and multi-family collection, in particular the categories of accepted PPP that are not collected



through curbside and multi-family service (such as foam packaging, soft plastics like shopping bags, and glass containers).

RDCK and Recycling

Although the Villages do not meet the requirements to receive recycling services beyond the current depot model for PPP, working with the RDCK is encouraged to explore options for extended depot hours, and to provide opportunities for events to recycle items accepted through other stewardship programs. This could be pop-up events or “round-ups” for household hazardous waste (HHW), paint, automotive batteries and used oil, to name just a few.





4 RDCK Organics Diversion Strategy

RDCK Resource Recovery services are delivered through the following three established sub-regional service areas: the West Sub-Region which includes the City of Castlegar, Villages of New Denver, Silverton, Nakusp, Slocan and Electoral Areas H, I, J & K; the Central Sub-Region which includes City of Nelson, Village of Salmo, Village of Kaslo and Electoral Areas D,E,F & G; and the East Sub-Region which includes the Town of Creston, Lower Kootenay Band and Electoral Areas A, B & C.

The primary purpose for RDCK Resource Recovery Service is to ensure that RDCK residents and businesses have access to safe, efficient, and comprehensive facilities for recycling, organics processing and waste disposal. This is accomplished through the operation of three active landfills, thirteen waste transfer stations, twenty-two recycling depots and two organics processing facilities. A map of these facilities is included in Appendix B.

In British Columbia, regional districts develop Solid Waste Management Plans (referred to as a Resource Recovery Plan in the RDCK) under the provincial Environmental Management Act. These are long term visions of how the regional district would like to manage its solid waste. The 2021 update to the RDCK RRP, in recognition that organic waste is the largest component by weight of what continues to be disposed as garbage, contains a range of actions aimed at optimizing organics diversion.

The following initiatives contained within the 10 year time frame of the RRP will have a direct impact on solid waste management in the Village of New Denver.

- 1. Establish organic waste processing facilities at the Central, Creston and Nakusp Landfills.** The RDCK has recently completed the construction of two organic composting facilities. One at the Creston Landfill and the other at the closed Central Landfill near Salmo. These facilities were funded with grants from the Organics Infrastructure Program (OIP). The RRP also includes completing a pre-design study to build an organics processing facility at the soon to be closed Nakusp Landfill. The pre-design cost estimate will allow the RDCK to apply to anticipated future grant funding opportunities aimed at reducing GHG emissions. The pre-design study is included the 2023 budget with construction anticipated within the next three to five years.
- 2. Prepare for Organic Waste Transfer.** To support the collection of food waste in Nelson and Castlegar, the RDCK has expanded their transfer station services to these communities to include a food waste transfer area at the Grohman Narrows and Ootischenia Resource Recovery Facilities in 2023. These facilities will be able to receive food waste from municipal collection programs, as well as from commercial collection providers servicing customers in the municipalities and in the surrounding electoral areas; and residents and businesses that wish to self-haul their food waste.

The RDCK will investigate the feasibility of expanding organic transfer facilities at other transfer stations based on feasibility and community interest in the provision of organic waste collection. For the Village of New Denver transfer will depend on the construction of an organics processing facility in Nakusp.

- 3. Implement curbside collection of food scraps in Castlegar, Creston and Nelson.** Since 2017 the RDCK has worked with the municipalities of Castlegar, Creston and Nelson to design and implement curbside



collection of residential food scraps once the composting and transfer infrastructure is in place. The Town of Creston implemented curbside collection of organics in 2022 and the City of Castlegar will be implementing their organics collection program in August 2023. The RDCK has been able to support the delivery of these municipal programs through funding from the Clean BC Organic Infrastructure and Collection Program (OICP). This funding does not include the City of Nelson since they are proceeding with a pilot program to test the effectiveness of an in-home appliance designed for countertop food waste processing.

- 4. Consider the establishment of a regional curbside garbage and food waste collection service for electoral areas and municipalities that request the service.** Provision of curbside collection in portions of the regional district, where such a service is deemed reasonable (based on household density and access to organic waste management infrastructure), could increase the number of households receiving curbside collection from 42% to 83% of the region and significantly increase organic waste diversion. Based on feedback from electoral area residents during the RRP consultation process, the RDCK has just embarked on a second phase of public engagement based on refined service area boundaries, service levels and costing. This second phase of consultation also includes curbside collection of recyclables given the new Recycle BC eligibility criteria discussed in Section 3. For the West Sub-Region, the potential service area does not go beyond Slocan in Electoral Area H. Electoral Areas K and D are also not being considered for a rural collection program at this time.
- 5. Support organics diversion in other communities.** The RDCK will support municipalities interested in joining the potential regional collection program or establishing their own organic waste management solutions. With respect to the Village of New Denver, once the Nakusp organics processing facility is operating and organics transfer is available at the Rosebery Transfer Station, there is a possibility that the Village could start collecting organics for transfer to Nakusp or the rural collection program could be expanded to include more of Electoral Areas H and K.
- 6. Facilitate the reduction and self-management of organic waste by RDCK residents.** If the RDCK proceeds with the establishment of a regional curbside garbage and food waste collection service for rural areas and municipalities that request the service, there will still be roughly 15-20% of households that will not have access to this service. In all areas of the regional district, but most importantly for residents in areas without curbside organic waste collection, the RDCK will implement a program to increase the awareness of opportunities to self-manage organic waste, including reducing the generation of food waste.

4.1 Curbside Collection

Curbside collection of food waste (either on its own or in conjunction with yard waste collection) is becoming a common model for diverting organic material from landfill. Many medium to large size communities throughout BC, regardless of climate or geography, provide separated organics as an integral component of their curbside collection services. As discussed above, curbside collection of organics was recently introduced in the Town of Creston and will soon be available in the City of Castlegar.



For a variety of reasons, which may include cost, dispersed population, climate, and the lack of an organics processing facility, fewer smaller communities offer curbside collection of organics. A scan of 25 BC municipalities with populations <1,000 showed that only two (Greenwood and Midway) provide curbside collection of residential food waste. This service is provided through the Regional District of Kootenay Boundary.

Factors that influence the decision to collect organics at the curb include provision of appropriate containers, collection logistics such as collection vehicle and collection frequency, and being able to deliver the collected organics to a composting facility. As discussed above, for New Denver and Silverton, curbside collection will only be viable once the RDCK constructs the planned organics processing facility in Nakusp and organic transfer facilities at Rosebery. At that time the Village should consider the viability of municipal collection or inclusion in an expanded RDCK rural collection program.

4.2 Centralized Collection

The report authors identified four larger resort-type communities (Banff, Jasper, and Canmore AB, plus Whistler BC) that offer food waste diversion for residents and tourist visitors through a centralised collection system (large sealed “dumpsters” located throughout the community).

In the case of Banff, weekly collection of the food waste is contracted to the nearest commercial composting operation, situated 200km from Banff. The food waste is removed by the contractor for use in their own composting operations. The end-product is not returned to Banff, so the opportunity for benefitting from the resource is lost to Banff residents. However, it does help the city of Banff with its primary goal of becoming a zero-waste community and of reducing impacts on its landfill. The annual fees charged by those municipalities to each residence for solid waste services, which we presume includes operation of the organics collection, ranges from \$244 per year (Whistler) to \$424 per year (Banff).

As with any level of organics diversion, a suitable facility is required to receive and process the material. As noted above, for Banff this entails a 200km haul, whereas a facility is located within 30 minutes of Whistler. There is no facility within a convenient and economic hauling distance of New Denver, which effectively eliminates this type of collection method at this time. However, once the proposed organics processing facility in Nakusp is operational, the Village can re-evaluate the viability of curbside or centralized collection.



5 Small-Scale Organics Collection and Processing of Food Waste

Residents and businesses presently have limited options for handling their organic waste. Backyard composting of food waste and yard waste is permitted under Bylaw 742. With respect to household food waste, the Bylaw states that “Food waste generated at a property may be disposed of on the property by composting so long as it does not attract dangerous wildlife.”

In 2020-2021, a very comprehensive Organic Waste Diversion Study for Kaslo and RDCK Electoral Area D was undertaken by staff at the Kaslo Food Hub¹. Several food waste diversion options were discussed, and a range of possible solutions to achieve organics diversion from both the residential and commercial sectors were put forward. These included curbside collection, backyard compost “coaching” (mentoring and instructing residents to better compost at home), use of in-home compost processing appliances, and neighbourhood-focused food waste diversion and composting programs.

5.1 Community Composting

The Healthy Community Society (HCS) of the North Slokan Valley facilitates and oversees an active community composting program which is accessible to residents. The report authors are grateful to Julia Greenlaw for the wealth of information she provided to assist with this section of the report.

The previously referenced Kaslo and Electoral Area D Organic Waste Diversion Study noted that New Denver and Silverton provide “a local example of small communities with an organic waste diversion program where food waste is collected in neighbourhood bins and the material is composted in close proximity to the community. The end-goal involves redistribution of the finished compost to residents who participate in the program.”



The low-tech local solution to diverting and processing residential organics waste promoted by HCS utilizes 10 Joracan 401 model composting “units”.

Joracan composters are made in Quebec and are designed for Canadian conditions. They come in a range of sizes; the 401 model has a 400-litre capacity and is suited for roughly 30 people. HCS has some units located on municipal property and others are on private property with partnership agreements signed.

These composting units do not rely on power, but are self contained insulated drums which need to be rotated twice daily to mix the material (residential organics

¹ ORGANIC WASTE DIVERSION STUDY

Prepared for Kaslo and Area D May 2021 Report by: Patrick Steiner Kaslo Food Hub, North Kootenay Lake Community Services Society



and a carbon additive such as wood sawdust or pellets). HCS monitors the composters for temperature, decomposition, and thermophilic bacteria.

HCS reports that compost sampling is tested annually by a laboratory that specializes in compost tests for pathogens, soil suitability and Nitrogen, Phosphorus and Potassium. The product is slightly too acidic when it is emptied from the units, but after a few months curing at holding bays in Rosebery it becomes an excellent soil amendment which is then offered to participants two to three times a year.

Table 3 lists the locations where each of the 10 units is currently deployed. An eleventh unit is due to be deployed in 2023.

Table 3: Joracan Locations

New Denver	
Beside New Market Food on Kootenay St and 6 th Ave	Behind the Post Office
On the school grounds	Above the school on Columbia St and 8th Ave
In the orchard just off Kildare behind Katrine's place old Sappho's bakery	On 1st Ave in the orchard in the lane across from 205 Union St.
Silverton	
Public Works Area (X 2 units)	By Cooper's Beach- Sumrall Residence
By the Old Zion United Church	

The 10 composters managed by HCS are not accessible to the general public. Each unit has 20-30 users assigned to it who receive instructions on the "care and feeding" process. The HCS coordinator contacts participants when there is an issue with the usage and also when compost is available for pick up. Participants include families, Lucerne Elementary Secondary School, the youth centre, and the Adventure Domes cottage accommodations.

Compostable waste from the approximately 100 homes and accommodation units (generated by about 300 individuals, including accommodation guests, school pupils and staff), maximises the capacity of the existing composting units. Two of the units in New Denver are completely independent aside from some HCS help with carbon feed stocks. Users have a roster for emptying and taking to their homes in these two units. HCS reports that they are aware of at least 8 individual households that have purchased their own units to better manage their organic waste.

In terms of keeping organics from landfill disposal, and generating a beneficial end-product, the material being fed into each composting unit (the feedstock) is not weighed. However, the decomposed material is weighed and recorded when the units are emptied. HCS employs a conversion formula to calculate the weights of the feedstock. The calculated weights are shown in Table 4.

**Table 4: Calculated Food Waste Diverted**

2021 data	New Denver (6 Jora composting units)	Silverton (4 Jora composting units)
Calculated range of feedstock (KG) total	31.13 tonnes	
Estimated KG/Jora Unit (average)	3,087 kg	
Estimated KG/Household (average) (~100 homes & other compost generators)	311 kg/household/yr	

The amount of food waste diverted (based on HCS input conversion calculations) is 2.5 times that of a typical residential “green bin” curbside collection program. This can be attributed to the participants being committed and dedicated because they have signed up to divert their food waste (the “keeners”), and that the Jora units are also used by the school and non-residential waste generators. There is also a level of scrutiny involved, in that the participants’ performance is monitored and a roster is created to ensure the units are turned, emptied and maintained.

The units have not become wildlife attractants, and may have resulted in reduced adverse wildlife interactions because the contents are inaccessible.

While designed to be low maintenance and capable of handling of the vagaries of the Canadian climate, HCS reports the insulating foam of units placed in very sunny locations does have a tendency to warp. Replacing the foam, and unit lids, is possible. HCS volunteers repair the units when required.

5.2 Food Cycler in-home appliance

The City of Nelson is about to embark on pilot program to test the effectiveness of an in-home appliance designed for countertop food waste processing.

The City has secured roughly \$700,000 in grants to purchase 1,600 FoodCycler™ electric powered appliances. The remaining costs will be covered by the City’s Resource Recovery fund which is built from residents’ annual waste collection fee and garbage tag fees. The appliances are designed for in-home (counter top) use to grind and dehydrate food scraps. The City considers this will be a practical and sustainable alternative method to a weekly curbside organics collection program.

This will not be a full City-wide program, but it is hoped that results from the initial 1,600 participating homes will provide diversion data, performance information and participant feedback that will be analysed for both the City of Nelson and other communities interested in this option. Due to commercial sensitivities and contractual commitments, the City is unable to disclose the costs for purchasing the appliances. The online retailer (Amazon) advertises the appliances for \$500 CAD per unit.

The process used by the appliance is referred to as ‘pre-treatment’ and substantially reduces the weight and volume of food waste. Pre-treatment transforms food scraps into an odorless and dry soil amendment that can be used to enhance garden soil. Participating residents will be provided with an operating guide to get the best performance from the FoodCycler™. The operating costs consist of electricity and replacement filters (required every 500 operating hours).



The end product from the appliance is only partially decomposed; it still needs to mature and does not have the same characteristics as finished compost. FoodCycler™ recommends the user add it directly to their soil a few weeks before planting or further process it in a well-managed backyard compost system. The City will provide collection of the pre-treatment residual material from the homes who have no need for the pre-treatment end product.



5.3 Bokashi in-home low technology process

Another in-home method to compost food scraps is Bokashi. Unlike the FoodCycler™ and other powered appliances, Bokashi is a composting method that uses an inoculant developed in Japan in the 1980s containing beneficial microorganisms.



Bokashi composting degrades ingredients anaerobically, replacing the function of oxygen with fermentation, which essentially pickles them. This cuts the wait time to as little as 10 days, and creates a product that is high in nutrients. No electricity is required in the Bokashi process. A suitably sized (e.g., 5 gallon) bucket with a spout and tight-fitting lid, and a bag of inoculant (known as “bran”) are required to kick start the fermentation process. Bokashi inoculants typically contain wheat bran, wheat germ or sawdust.

A started kit including kitchen composter bucket, a year supply of the “bran” and how-to guide is available in BC through the Bokashi Living website for \$120. Additional composter buckets and bran, plus replacement parts and accessories are also available through the company website. The company is based in Vancouver, BC.



The Bokashi process requires kitchen scraps to be added in approximately 2-inch layers, sprinkling a small handful of inoculant over each layer and resealing the bucket tightly between additions. The accumulated liquid should be drained regularly when the bucket and the fermentation is active. It can take as few as 10 days for the process to complete, at which time the contents may not look overly decomposed but can be buried in soil for at least two weeks before being used for planting.

5.4 RDCK Alternative Technologies Comparison Report

In response to a motion from the RDCK Joint Resource Recovery Committee for staff to investigate composting technology (e.g.: at-home food recyclers/composters, inter alia) that may be the most appropriate composting alternatives for use in the electoral areas and small municipalities, RDCK staff brought forward a report to the December 7, 2022 meeting of that Committee.

The work completed by RDCK staff was very thorough, and is too in-depth for summary in this study, however it included a comparison of curbside food waste collection with alternatives such as the FoodCycler™ appliance and Bokashi systems. The analysis included capital and operating costs, diversion potential, and estimated greenhouse gas emission reductions. The report is available from the RDCK Resource Recovery Department staff.

In their report summary, staff feel the in-home dehydrator systems certainly would be beneficial for locations without access to curbside or other organic diversion options (remote rural areas, backcountry lodges, etc.); however, its benefits are less certain in areas where curbside services are considered feasible. To summarize concerns, staff are not confident that the high diversion rates projected from pilot studies are accurate; the unit requires daily efforts from users; it takes up space within the home; will likely cost more than a curbside program; cannot divert all organics generated in a household; and requires management (or disposal) of the residual product.

5.5 Yard Waste

Garden waste is collected twice per year, on what the Village calls Arbour Days. These collections are advertised annually. Branches must be bundled or tied together in lengths not more than 4 feet and weigh not more than 50 pounds. Leaves or other garden waste can be bagged in bags in any color other than black, weighing no more than 50 pounds, and placed at the curb for collection on these dates.

The collected material is taken to the old landfill. Slocan Integral Forestry Cooperative (SIFCo) provides a chipper and staff in the fall to chip it.

SIFCo also does wildfire fuel mitigation work for the Village, which is funded through the UBCM CRI (Community Resiliency Investment). This is generally only on municipal or crown properties.

NEW DENVER ARBOUR DAY – APRIL 20 & April 27, 2022

The Village of New Denver will pick up yard and pruning waste on April 20 & April 27, 2022. The collection is free for residents – clear bags are preferred but can use orange.

Absolutely no household garbage or construction material will be picked up.

How to prepare for Arbour Day:

1. Collect yard waste (branches, leaves, etc.): bundle/tie branches together - use sturdy twine; bag garden refuse.
2. Ensure that all bundles and bags are an acceptable weight and not more than 3 feet in length.
3. Remember, you only have to lift one bag in comparison to the number our crew will have to lift.
4. Place at the curb before April 20 & April 27.

If you have unusually large amounts of brush or woody debris that you'd like removed, please call the Village Office to confirm prior to pick up.

Collection of material may take some time as there are significant amounts of debris due to winter storms.

Thank you for your patience.

For further information, please contact the Village of New Denver:

T 250-358-2316 or E office@newdenver.ca



6 Wildlife Interactions and Considerations

Mitigation of adverse wildlife interactions is important for the Village which received the official BearSmart Community designation in 2015.



As noted in Section 5, the Village Bylaw 742 does permit residential food composting providing that it does not attract dangerous wildlife such as bears. The Bylaw further directs that “No person shall leave wildlife attractants outdoors where dangerous wildlife may be attracted, or where there is a reasonable possibility of dangerous wildlife being attracted, unless the attractants are kept in a wildlife-resistant enclosure. There is an exception for waste that has been placed in a container and put out for pickup during the designated times on collection day(s).”

In 1998, the BC Conservation Foundation adopted a leadership role in the Bear Aware program, expanding it from its genesis in Revelstoke to be active in many regions of the province. Since that time, the Bear Aware (now WildSafeBC) Community Program has become established in hundreds of communities across British Columbia. WildSafeBC Community Coordinators work to prevent conflict with wildlife through collaboration, education and community solutions. The Coordinators complete their year by compiling reports detailing their activities.

These reports are very comprehensive in detailing the Coordinator’s activities, their interactions with the public and stakeholders such as Conservation Officers, describing local information campaigns and outreach activities, providing a summary and comparison of wildlife sightings and reports as tracked by both the Conservation Officer Service and the Wildlife Alert Reporting Program (WARP) tool.

The Valley Voice, December 1, 2022 edition, [Appendix B], included coverage of the November 22, 2022 New Denver Council meeting at which the Arrow-Slocan Lakes WildSafeBC Community Coordinator (Cora Skaien) presented her 2022 report to Council. She advised that 2022 had been a year with more black bear sightings and potential human-bear conflicts than all years since 2016. The Coordinator reported that garbage was a prime attractant, along with unharvested fruit. Residents are encouraged to keep their garbage stored securely until the morning of collection, and to harvest fruit as it becomes ripe. Other summer-time attractants include pet food left uneaten outside the home, barbecues and birdfeeders.

Activities in 2022 included surveying residents during the summer of 2022, seeking feedback regarding wildlife interactions. The Valley Voice article reported that while 75 percent (or 80 respondents) of the 106 New Denver respondents indicated they liked having bears in the area, safety is a concern for many. However, very few residents (18 percent) call the Conservation Officer (CO) Service to report seeing bears out of fear the response will be lethal for the bear.

All Coordinator’s reports are available online at <https://wildsafebc.com/resources/community-reports/>



The Valley Voice article included discussion points raised by the New Denver CAO and Mayor regarding the need for a locally coordinated approach to bylaws, bylaw enforcement strategies, and in responses to wildlife reports. A need for improved communication with the CO Service earlier in the season was identified as a key action, along with coordinated communication with neighbouring municipalities and the RDCK. It was also noted that sharing a Bylaw Officer with neighbouring small communities who also lack such a staff resource could be of value.





7 Summary and Recommendations

The Villages of New Denver and Silverton each provide residents and local businesses with garbage collection services established through their respective municipal bylaws. Access to residential paper and packaging recycling is provided through a depot located in New Denver, which is and operated by the RDCK, under the Recycle BC stewardship program. Diversion and processing of food waste is available on a sign-up basis through a community-run program consisting of low-technology composting units located in each municipality. WildSafe BC employs a community coordinator tasked with promoting wildlife awareness and avoidance strategies throughout the area.

■ Collection System

The current garbage collection program in New Denver employs a vehicle that is not entirely fit for the purpose with some Occupational Health and Safety concerns due to its left-hand drive operation and the location of the hopper. Our recommendation is to purchase a new truck better suited for the work under a shared service agreement with Silverton. We do not recommend switching to a cart-based automated lift system for residential services for cost reasons. In addition to installing the lift mechanism on a truck, the cost of carts equipped with wildlife locking mechanisms is estimated at \$225 per cart.

Providing centralised collection for residential garbage, while possible, is not seen as a practical option for the Village.

Offering this level of service provides no incentive for residents to reduce their waste generation, which is currently in place through the Village's container set-out limits. Nor does it incentivize residents to comply with diversion messaging of keeping recyclables and compostable materials out of the landfill. The ability for collection personnel to screen for, and remove unacceptable, banned or hazardous items before these are received at the transfer station is lost, along with the ability for direct feedback to residents who are not adhering to the acceptable waste guidelines.

The Village becomes responsible for providing, maintaining, and servicing the centralized containers. Currently residents provide and maintain their garbage containers at their cost.

Equitable cost recovery is more difficult under a centralized open-access garbage system in that calculating annual fees that fairly represent the waste generated by the different sectors will be difficult with containers being accessible by residents and commercial sector. Currently residential fees are set for the Village to recovery the collection and disposal costs based on waste container set-out limits. No limits on waste disposal is likely to result in more waste going to the transfer station, and an increase in disposal fees charged to the Village.

■ Sharing waste collection services with Silverton

Local governments, regional districts and First Nations throughout BC have partnered in shared service agreements to provide cost savings, enhanced levels of service, and operational efficiencies.

Providing waste collection services for residents of both Villages under a shared service arrangement will have several benefits. Assuming garbage collection remains a curbside service, this can be accomplished with one truck (potentially the Haul-All truck currently owned by New Denver, or a new vehicle). The cost



of operating can be shared between the two municipalities based upon a formula that incorporates insurance, fuel, maintenance, etc.

Alternatively, New Denver could continue owning the truck and employ collection staff, provide the service to Silverton and recover the cost by billing Silverton directly. Silverton in turn would continue to bill the residents and businesses but on New Denver's behalf and remit the agreed upon fee revenue to New Denver. This makes better use of New Denver's investment in the collection truck, and alleviates the need for Silverton to own and operate a collection vehicle. For smaller communities that struggle with staffing, capital and operational budget challenges, this model can be attractive from a service provision standpoint as well as freeing up staff and/or equipment for other tasks.

CMA is aware of similar municipal type service agreements (MTSA) in place where a municipality or regional district is providing solid waste collection services to First Nation communities.

▪ **Diversion and Waste Reduction**

Despite the current limitation of up to two bags of residential garbage per week being collected, the location of the 30 publicly accessible containers makes it easy to dispose of amounts in excess of two bags.

With regards to organics (food waste) diversion, about one-third of homes in New Denver and Silverton have already committed to this by participating in the Healthy Community Society (HCS) community composting program. This is very encouraging and is a model for other smaller communities. This model also does not require a larger scale processing facility, nor does it have a high operating cost. Off-site curing of the finished product is required, which is currently handled at the Roseberry site, before the garden-ready compost is returned to the participating homes.

We recommend that New Denver and Silverton partner with HCS to solidify their funding, and consider working with other partners such as the RDCK and Columbia Basin Trust to enhance and expand the program capacity. If a partnership or closer working relationship is established with HCS, the information to promote the community composting program can be included on each Village's website.

Additionally, to promote that and encourage diversion of waste from landfill, the Village(s) could have a reduced garbage user rate for those households that sign up with HCS. The more residents use the composting option, the less disposal fees the Village(s) will pay. This saving can be passed to residents through the reduced user fee, although we recognise this may be difficult to calculate given that the RDCK garbage tipping fees are volume based not weight based.

We do not believe there is any benefit in setting up a centralized organics collection facility, in large part because there is no local organics processor. Nor do we see benefit in providing residents with in-home appliances to handle their food waste.

▪ **Recycling Collection**

Neither Village meets the criteria to become a Recycle BC collection partner and receive the financial incentive provided under that formal partnership.

If the Villages wished to collect residential recycling as part of their own curbside collection systems, this would be done with no offsetting financial inputs from Recycle BC or the RDCK. Because there would be



no receiving location for curbside collected recyclables, the collection personnel will have to offload the materials, which will be mixed together in the truck, into the segregated bins at the transfer station. This would be extremely time-consuming and very ineffective.

Providing this level of service would almost certainly result in additional costs being borne by residents for the convenience of not having to go the short distance to the depot.

Continuing with depot collection is the best option. We recommend working with the RDCK to explore options for extended depot hours if these are requested, and to provide opportunities for events to recycle items accepted through other stewardship programs.

▪ **Wildlife Interactions**

We endorse the comments made by CAO Lisa Scott as reported in the Village Voice (December 1, 2022). These comments included working closely with other small nearby communities on bylaw infraction responses, involving the Conservation Officer Service earlier in the season, and establishing a formal wildlife reporting strategy that involves local municipal senior staff and the RDCK. Continuing to support the work of WildSafe BC and their field staff is also encouraged.

▪ **Timeline & Budget**

Costs for a new collection vehicle will be determined by the features and options specified. Rough cost estimates are provided for the following specifications:

- Ford F-550 rolling chassis with a right-hand load bucket = \$165,000 price range
- Diesel (not gasoline) fuel + \$10,000
- Dual steering + \$20,000

The trade-in value of the current truck was not calculated, but this would offset some of the purchase price of a new unit.

With regards lead time for a new M-Class™ unit manufacture and delivery, Rollins Machinery Limited (a supplier of collection vehicles into the BC market) suggests that delivery of a unit ordered by the end of Quarter 1 2023 is likely to be in Quarter 2 2024. This timeframe could be reduced by opting for a Dodge 5500 rolling chassis (which is the same as the current truck in New Denver); however these units can not be fitted with dual steering.

Given that the potential organics processing facility in Nakusp would not be operational for another three to five years, we are unable to provide a time-line or budget to provide curbside collection services at this time. With respect to our suggestion to optimize participation in the HCS community composting program we believe that this could be accomplished through existing Village staff resources with assistance from the RDCK and Columbia Basin Trust. This assistance could include purchasing additional Jora units, communication materials and promotion of the program, and compost curing at the Rosebery Transfer Station.



Appendix A Bylaw 742 (2022)

THE CORPORATION OF THE VILLAGE OF NEW DENVER BYLAW 742, 2022

A bylaw to provide for the collection and
removal of solid waste within the Village of New Denver

WHEREAS Section 64 of the Community Charter provides that Council may, by bylaw:

- a) Require persons to use a waste disposal or recycling service, including requiring persons to use a waste disposal or recycling service provided by or on behalf of the municipality;
- b) Require owners or occupiers of real property to remove trade waste, garbage, rubbish or other matter from their property and take it to a specified place;
- c) Require the emptying, cleaning and disinfecting of private drains, cesspools, septic tanks and outhouses, and the removal and disposal of refuse from them;

AND WHEREAS the Council wishes to encourage waste reduction, reuse, composting and recycling to reduce the volume of waste being deposited in the landfill;

NOW THEREFORE the Council of the Corporation of the Village of New Denver, in open meeting assembled, enacts as follows:

1. This bylaw may be cited for all purposes as "Village of New Denver Solid Waste Management Bylaw No. 742, 2022."

DEFINITIONS

2. In this bylaw, unless the context otherwise requires,

"**bear proof container**" means, in the case of residential garbage, a cylindrical metal or rectangular wooden container with a secure lid, not exceeding 75 cm in height or 50cm in diameter, which is inaccessible to bears.

"**collection day**" means the day or days during each week on which waste is scheduled to be collected from a specific premises;

"**container or non-bear proof container**" means a receptacle constructed of non-corrosive durable metal or plastic equipped with a tight fitting cover constructed of the same or similar material and handles for lifting, having a capacity not greater than 79.56 litres (17.5 gallons) and fully lined with a plastic bag of the type designed for the disposal of domestic waste 76 x 90 cm (30"x 36") and constructed of material not less than 1.5 mil thickness;

"**Council**" means the Council of the Corporation of Village of New Denver;

"**dangerous wildlife**" means any animal prescribed as such by the BC Wildlife Act. This includes bears, cougars, coyotes, wolves, and any other species prescribed by that Act

"**industrial waste**" means material from excavations; material from lot clearing or building construction, repairs, alterations, or maintenance; debris from any building removed or damaged or destroyed by fire or any other cause; material from any manufacturing processes; dead animals; condemned or contaminated matter from any premises; (and any similar material other than human or animal excrement);

"**landfill**" means an area designated and established for the use of residents of the Village for the disposal of waste;

"**non-residential container**" means a metal bin, having a capacity of 3.06 cubic metres (4 cubic yards), used or intended to be used at a commercial, industrial, institutional, or other non-residential premises, supplied by the Village;

"**stand**" means a wooden or metal enclosure designed to hold all containers required by the premises on which the stand is provided, and which shall be so designed as to keep all containers a



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BYLAW 742, 2022

minimum of 250 mm (10 inches) and a maximum of 750 mm (29.5 inches) from ground level, in a closed position at all times and protected from interference from animals;

"**waste**" means discarded or rejected material but does not include human or animal excrement, industrial waste, compostable matter or recyclable material;

"**waste collection area**" means an area or areas established by Council within which waste will be collected by the Village as frequently as is considered necessary by Council;

"**wildlife attractant**" means food products and by-products, household garbage, food waste, pet food, bird food, fallen fruit, antifreeze, paint and other edible products or waste that could attract Dangerous Wildlife

"**wildlife resistant enclosure**" means a fully enclosed structure consisting of walls, roof, and door(s), capable of being securely latched and of sufficient strength and design to prevent access to the contents by wildlife

"**village**" means the Village of New Denver.

RESPONSIBILITIES OF OWNERS AND OCCUPANTS

3. (1) No person shall dispose of waste or industrial waste except in accordance with this bylaw.
(2) No person shall dump or dispose of any waste or industrial waste, or any noxious, offensive, unwholesome or discarded matter in any place other than the designated landfill unless directed to do so by the Village.
4. The owner or occupant of every premises shall provide sufficient containers to hold the normal waste generated from that premises during the period between collection days.
5. No person shall place or keep any container or receptacle for industrial/residential waste upon any street or public land in the Village except as specifically provided in this bylaw.
6. The owner or occupant of every premises shall provide, and maintain in good and sanitary condition, sufficient containers for all waste upon the premises owned or occupied by him, and shall ensure that the mouth of each container is closed or securely covered except when the container is actually being filled or emptied.
7. Every person shall dispose of waste upon the premises owned or occupied by him/her by placing or causing the same to be placed in a container maintained for that purpose, but not elsewhere.
8. The owner or occupant of premises from which waste is to be collected shall ensure that all wet or granular material is separately wrapped or put into a plastic bag before being placed in a container for pick-up.
9. All non-residential containers shall be located in an area as directed by the Village. It shall be the responsibility of the occupant to ensure that all waste containers are kept, at all times before collection, in a fashion that keeps same inaccessible to animals and impervious to weather.

GENERAL REGULATIONS

10. Food waste generated at a property may be disposed of on the property by composting so long as it does not attract dangerous wildlife
11. No person shall leave wildlife attractants outdoors where dangerous wildlife may be attracted, or where there is a reasonable possibility of dangerous wildlife being attracted, unless the attractants are kept in a wildlife-resistant enclosure. There is an exception for waste that has



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been placed in a container and put out for pickup during the designated times on collection day(s)

12. Failure to comply with Section 12 herein may result in the Village by its own employees or authorized agents, cleaning up and removing such wildlife attractant. The cost of such cleaning and removal shall be charged to the Owner of the property, and where such charges are unpaid on the thirty-first of December in the same year, the costs shall be added to and form part of the taxes payable in respect of that real property as taxes in arrears
13. Notwithstanding any other provisions of this bylaw, where a recycling program is in effect and storage or other recycling facilities are available, either within the Village or elsewhere, the following shall be either recycled or otherwise disposed of in accordance with this bylaw:
 - (a) aluminum and tin cans
 - (b) corrugated cardboard
 - (c) glass bottles and jars
 - (d) motor oil
 - (e) paper
 - (f) magazines and catalogues
 - (g) plastic milk jugs
 - (h) all other material as may, from time to time, be accepted for recycling
14. The Village shall be responsible for removing up to two bags of residential garbage per household on collection day. Each bag will have a maximum weight limit of up to 50 lbs. Removal and disposal of any additional bags or overweight bags shall be the sole responsibility of the owner or occupier of the premises which produced the waste.
15. All waste placed in containers constructed of metal or plastic, for collection, must first be placed inside a plastic bag.
16. Garden waste is collected twice per year, dates to be determined and advertised annually. Branches must be bundled or tied together in lengths not more than 4 feet and weight not more than 50 pounds. Leaves or other garden waste can be bagged in bags in any color other than black, weighing no more than 50 pounds, and placed at the curb for collection on these dates.
17. When a stand is used for the storage of waste as provided for in this Bylaw, and while the stand is on his/her premises the owner or occupant of the premises shall be responsible for maintaining the stand in a condition which is not offensive or dangerous to the public health.
18. Where Council considers it in the public interest to do so, the Village may temporarily place one or more stands on public or private lands to accommodate waste expected to be generated at a special event or function. Council may, at its discretion, establish a charge for the temporary placement, use, and removal of stands under this subsection.
19. The owner or occupant of any premises shall at all times ensure that waste or industrial waste is kept within the containers or stand provided for that purpose, and not allowed to spill onto, or accumulate on, any street or adjoining public or private property.
20. No water or other liquid shall be kept in, or be permitted to remain or accumulate in, any container or stand and no person shall keep or place any explosive, toxic, hot or highly flammable substance in any container or stand.
21. Where any premises is served by a lane, all waste from such premises shall be placed in containers for collection at a location with two (2) meters of such lane, but not in the lane.



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22. Where containers are placed for collection within any structure, fence, or other enclosure, direct access to the containers from a street or lane shall be provided.
23. Where any premises is not served by a lane, all waste from such premises shall be placed in containers for collection at a location as close as possible to the traveled portion of an adjacent street but not on a sidewalk or in such a location as to interfere with vehicular or pedestrian traffic.
24. Except on collection day, all containers shall be kept and maintained on the premises of the owner or occupant, and any can located on any street or other public land in the Village other than on collection day may be removed and disposed of at the discretion of the Village without compensation to the owner thereof.
25. Collectors designated by Council for the collection and removal of waste shall have the right to enter at all reasonable times all premises and yards to the extent necessary for the performance of his/her duties in accordance with this bylaw.
26. No person other than a lawful user thereof, or an authorized collector of the Village, shall open any container or stand, remove anything there from, add anything thereto, or in any way disturb the contents thereof; nor shall any other person handle, interfere with or in any manner disturb any container put out for collection.
27. When any can is in a condition that presents a hazard to the collector or has been condemned by the Village for any other reason, and written notice to that effect has been given to the owner or occupant, the condemned can may be removed and disposed of along with the waste from that premises.
28. No person shall operate a vehicle in the Village while it is carrying waste or industrial waste unless the portion of the vehicle in which the material is being carried is securely covered or the material is secured to prevent any part of such material from falling off or out of the vehicle while it is in transit.
29. The removal of industrial waste from any premises and the full cost thereof shall be the sole responsibility of the owner or occupant of such premises.
30. The Village may suspend collection service from properties where stands or their locations for pick-up do not comply with the requirements of this Bylaw, but such suspension shall not relieve the owners or occupants of such premises from their responsibilities under this Bylaw.
31. Collectors shall not enter any building for the purpose of carrying from or returning thereto any container, except when in the judgement of the Village it is impractical to store the container outside the building.
32. Collectors shall not pick, sort over, or remove for their own use any waste or other discarded materials on any premises or on the collection vehicle.

FEES AND PAYMENTS

33. All fees and charges, commencing in the calendar year 2022 shall be as per Schedule "A" attached and forming part of this Bylaw.



THE CORPORATION OF THE VILLAGE OF NEW DENVER
BYLAW 742, 2022

OFFENSES AND PENALTIES

34. Every person who violates any provision of this Bylaw, or who suffers or permits any act or thing to be done in contravention of any provision of the bylaw, or who neglects to do or refrains from doing anything required to be done by any provision of this Bylaw, shall be deemed to be guilty of an offence under this Bylaw and shall be liable on summary conviction to a fine of not less than \$50.00 nor more than \$2,000.00.

REPEAL

35. Village of New Denver Garbage Collection Bylaw No. 581, 2004 and all amendments thereto are hereby repealed in their entirety.

EFFECTIVE DATE

36. This Bylaw shall come into full force and effect upon final adoption.

READ A FIRST TIME this ____th day of _____ 2022.

READ A SECOND TIME this ____th day of _____ 2022.

READ A THIRD TIME this ____th day of _____ 2022.

RECONSIDERED AND FINALLY ADOPTED this ____th day of _____ 2022.

MAYOR	ADMINISTRATOR
-------	---------------

Certified to be a true copy of Bylaw 742, 2022

Corporate Officer



THE CORPORATION OF THE VILLAGE OF NEW DENVER
BYLAW 742, 2022

Village of New Denver Bylaw No. 742, 2022

SCHEDULE "A"

Solid Waste Management Fees

Annual Garbage Rates

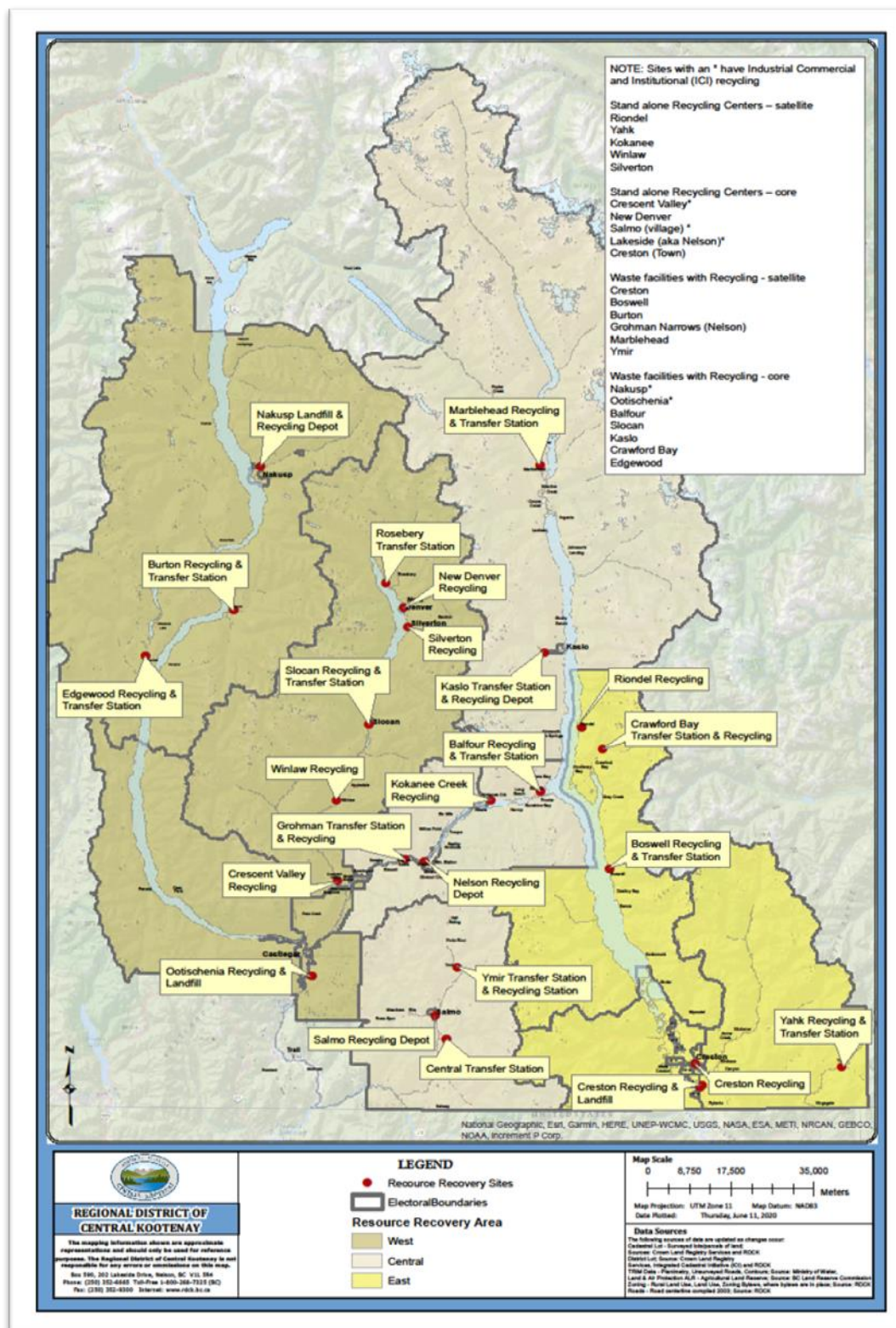
	<u>2022</u>
Residential	\$164
Hospital	\$4,262
School	\$2,623
Seniors Citizens Housing Complex	\$1,639
Municipal Buildings	NO CHARGE
Sandwich Shops	\$355
Hotel, Motel	\$601
Restaurant, Café	\$546
Beverage Room	\$219
Grocery Store, Supermarket	\$820
Convenience Store	\$273
Auto Repair Service with Gas Station	\$328
Auto Repair Service	\$273
Post Office	\$372
Car Wash	\$219
All other businesses (once weekly pick-up)	\$219

5% penalty will be applied to all amounts that have not been paid by February 15th

5% additional penalty will be applied to all amounts that have not been paid by October 1st



Appendix B RDCK Resource Recovery Sub-Regions and Facilities





Appendix C M-Class™ Haul-All Brochure

M-Class™

A white Ford F-Series truck equipped with a red snowplow on the front and a large blue vacuum hose on the back. The truck is parked on a grassy area with a stone wall and trees in the background.

**PUBLIC AREA
MAINTENANCE.
DOES MORE.**

STORAGE

COLLECTION

TRANSFER

The logo for Haul-All Equipment Systems, featuring a stylized orange and white mountain or 'A' shape above the text 'HAUL-ALL EQUIPMENT SYSTEMS'.



M-Class™

Custom Truck, Custom Options



Cart dumper arm comes with radio remote (not shown) to ensure operator safety.



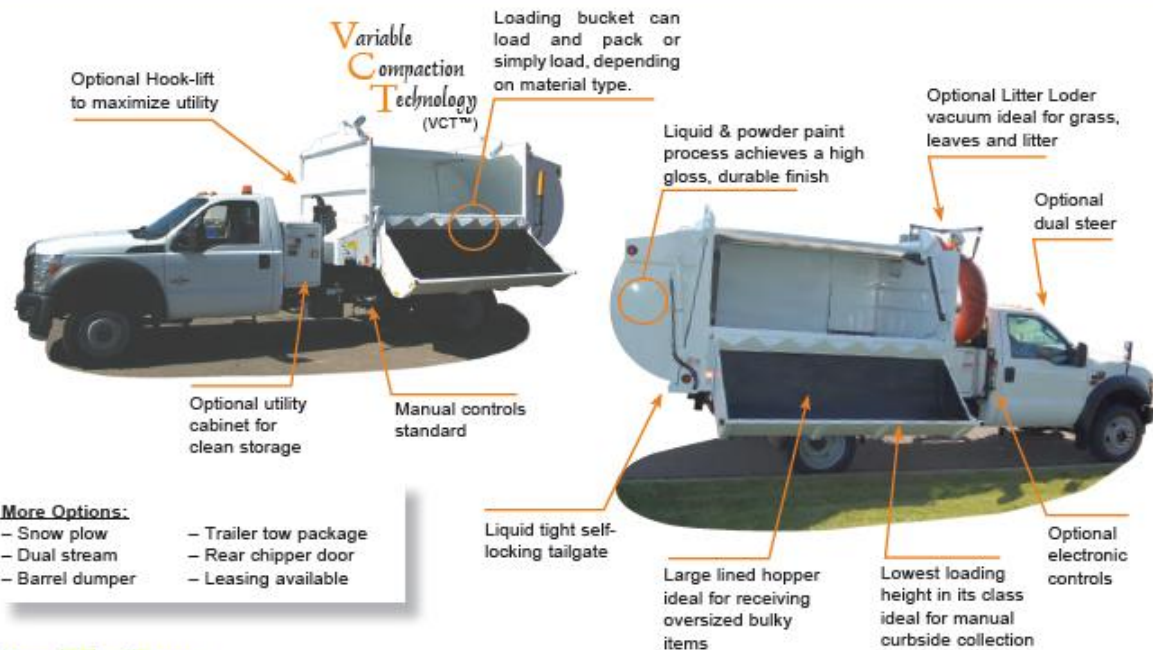
Large receiving bucket with optional crane ideal for in-ground containment systems.



Pressure washer is ideal for outside cleaning of furniture and fixtures.



Hydraulically powered Litter Loder is a powerful vacuum and eliminates auxiliary engine noise.



Specifications

ALL UNITS	M1400	M1600	M1800
Hopper Volume 1 cu yd (0.76 cu m)	Approx. Body Weight 4 500 lbs (2 040 kg)	Approx. Body Weight 4 600 lbs (2 090 kg)	Approx. Body Weight 5 300 lbs (2 400 kg)
Extended Hopper Volume 2 cu yd (1.5 cu m)	Body Capacity 14 cu yd (10.7 cu m)	Body Capacity 16 cu yd (12.2 cu m)	Body Capacity 18 cu yd (13.8 cu m)
Cycle Time @ 1200 RPM 15 seconds	GVWR Recommended 16 500 lbs (7 485 kg)	GVWR Recommended 19 500 lbs (8 845 kg)	GVWR Recommended 19 500 lbs (8 845 kg)
Packing Force 3 000 lbs (4 070 N-m)	Minimum Cab to Axle 84 inches (2 130 mm)	Minimum Cab to Axle 84 inches (2 130 mm)	Minimum Cab to Axle 108 inches (2 745 mm)

Printed in Canada

Distributor

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Appendix D The Valley Voice – WildSafe BC report to Council

Volume 31, Number 23 December 1, 2022

WildsafeBC year-end report presented to New Denver council

by Margaret Scaia, Local Journalism Initiative reporter

Local WildSafeBC Coordinator Cora Skaien presented her year-end report to New Denver council and four members of the public at a meeting in council chambers on November 22.

Skaien said there was an increase in black bear sightings and in reports of human-bear conflicts in New Denver and area in 2022 compared to all years since 2016. She reminded that garbage is the most reported attractant involved in conflicts, but that fruit trees may be the biggest problem – residents say many bear issues involving fruit trees don't get reported to the Conservation Officer Service. She encouraged securing garbage until the morning of collection, picking fruit as it ripens or using an electric fence, feeding pets indoors, and bringing bird feeders inside from April to November.

WildSafeBC ran a survey this summer, and 106 New Denver residents responded. 73.6% of New Denver respondents said they liked having bears in the area, but two-thirds of these have some safety concerns. Only 18% had called the Conservation Officer Service, while 82% had not. More than 30% said they didn't call for fear of the bear being killed.

Following the presentation, Skaien fielded questions from council. It was pointed out that while bylaws concerning bear safety do exist in New Denver, there is currently no bylaw enforcement officer in New Denver or any neighbouring community. Instead, enforcement falls mainly to the CAOs of each community. CAO Lisa Scott suggested meeting with other CAOs in the area to compare wildlife-related bylaws, and come up with enforcement strategies.

She also suggested possibly sharing a bylaw enforcement officer with Silverton, Slocan, Nakusp and Kaslo.

Mayor Casley and CAO Lisa Scott emphasized the need for better communication and a formal reporting strategy for wildlife encounters. They said this consultation and reporting protocol needs to include CAOs, RDCK Area H, WildSafeBC, and the conservation officer for our area (located in Castlegar).

Scott said that next year, to effectively address dangers to the public and to bears, the conservation officer will be involved earlier and more frequently. What is important leading up to that involvement is a clearly understood protocol for reporting bear encounters. She said the document outlining the roles and responsibilities of agencies for reporting bear/wildlife encounters needs to be updated as soon as possible, as the version in the 2012 Human-Bear Conflict Management Plan for New Denver is outdated and no longer accurate.

WildSafeBC promotes bear awareness through the WildSafeBC Rangers Program in schools (reaching nearly 450 students this year), presentations to community groups, display booths, and signage. Skaien also goes door to door in hotspots and has formed a Bear Smart Working Group in New Denver.

Locally, there are other programs such as Harvest Share's fruit gleaning and loaner electric fence program, Grizzly Bear Coexistence Solutions electric fence workshops, and Valhalla Wilderness Society Area H Bear Smart Program's cost-share program on energizers for electric fencing.

Once Skaien's year-end report has been finalized, it will be available on the WildSafeBC website. Tips

about managing attractants can be found on both the Village of

New Denver and WildSafeBC websites. The Village website

includes information from the BC Wildlife Act and from the

municipal bylaw that deals with wildlife attractants.