
TO: Solid Waste Management Select **MEETING:** October 4, 2018
Committee

FROM: Vivian Schau **FILE:** 5370-01
Zero Waste Coordinator

SUBJECT: Curbside Collection Recommendation

RECOMMENDATIONS

1. To direct Staff to issue a Request for Proposal to solicit proposals for the delivery of an automated garbage, recycling, organics collection service with yard waste and the option for variable garbage and organic cart sizes, for a ten year contract from April 2020 to April 2030.
2. That Staff report back to the Board on the results of the Request for Proposal.

SUMMARY

The current solid waste and recycling curbside contract between the Regional District of Nanaimo (RDN) and Waste Connections of Canada (Waste Connections) expires on March 31, 2020. Due to lengthy equipment procurement timelines, a Board decision regarding manual vs automated collection service is required in order to issue a Request for Proposal (RFP) for a replacement service to meet the current collection contract expiry. The purpose of this report is to provide the Board with detailed costing information and the results of the public consultation on the replacement curbside collection service.

Public consultation was carried out through both an on-line survey and a focus group to gauge the preference for:

1. Continuing the current manual collection system where workers manually lift and empty containers and bags into trucks;
2. Replacing with an automated collection system which uses an articulated mechanical arm to lift standardized wheeled carts in trucks; or,
3. Replacing with an automated collection system with the ability to also set out yard and garden waste,

Information provided along with the public consultation included details related to costs and worker safety.

The results of the online survey consultation are:

- Overall, 45% (357) of respondents preferred automated collection with yard waste, 18% (147) of respondents preferred automated collection without yard waste, 33% (266) of

respondents preferred to continue with manual collection service, and the remaining 4% (35) of respondents either had no opinion or did not know.

- 56% (452) of all respondents were willing to pay more for an automated collection service with yard waste.
- Higher density neighborhoods (i.e. City of Parksville, District of Lantzville, Town of Qualicum Beach, Electoral Areas A, E and G) favored automated collection with yard waste.
- Lower density neighborhoods (i.e. Electoral Areas B, C, F and H) favored continuing with manual service.
- 91% of respondents cited safety as either “very important” or “somewhat important”, 5% of respondents reported safety was not an important factor in their decision.

The survey results were varied and did not provide a clear distinction of preferred service by a majority of users. However, staff are recommending an automated system with the ability to set out yard and garden waste based on:

- 91% of online survey respondents and 75% of focus group participants confirmed public interest in automated service from a worker safety perspective;
- When yard and garden waste was presented as an option, nearly half of respondents and focus group participants were in favor of yard waste collection (only practical with automated system), largely based on increased convenience for those living in the member municipalities and higher density electoral areas;
- 75% of the focus group supported automated collection; and
- Automated collection carts have demonstrated improved neighborhood aesthetics, reduced wildlife conflict and less deterioration of recyclables due to rain intrusion.

In summary, the automated system will provide the following benefits:

1. Worker benefits

- Improve worker safety – a reduction or elimination of manual lifting will improve working conditions and reduced worker injury.
- Improve worker diversity – reduce the staffing challenges currently faced by waste collection companies in recruiting and retaining workers for manual collection service by increasing the diversity of the pool of candidates, as well as longevity of workers.

2. Environment benefits

- The elimination of setting out garbage in plastic bags which results in decreased human-wildlife interactions and improved neighborhood aesthetics.

3. Resident benefits

- Service improvements – no weight restrictions as worker safety requirements with respect to weight are no longer a consideration; and added convenience of yard waste disposal as an available option for residents.

4. Administrative benefits

- Service improvements – standardized carts equipped with Radio Frequency Identification (RFID) technology provides better coordination, and real-time tracking to streamline customer inquiries, complaints and compliance issues.

Challenges identified with an automated system include:

1. Cart maneuverability issues
 - The carts, in particular the 360L cart size, may pose a challenge for people with mobility issues.
 - The carts may be problematic for rural residents with large properties and long driveways.
2. Cost
 - The automated system program cost (without consideration for yard waste collection) is anticipated to be 18% higher compared to a manual collection replacement service, in large part due to the purchase and maintenance of wheeled carts.

The expected lead time to provide the successful proponent of the Curbside Collection Service RFP to procure the trucks is approximately 12 months (manual or automated). Based on the timeline required to meet the expiration of the current Waste Connections contract on March 31, 2020, a Board decision will be required in October 2018 in order to provide sufficient time to compile and issue the Curbside Collection Service RFP in November 2018 with a 6 week response time. It is anticipated, the RFP recommendation would be presented to the February 2019 Select Committee and Board for approval.

BACKGROUND

The RDN residential curbside garbage, recycling and organics collection program is a compulsory service set up under Local Service Establishment Bylaw No. 793, fully funded by user fees. Manual curbside collection services are currently provided by Waste Connections under contract to the RDN, to approximately 29,000 residential households in the City of Parksville, Town of Qualicum Beach, District of Lantzville, Electoral Areas A, B, C, E, F, G, H, and Snaw-Naw-As First Nation.

The manual garbage collection process is very labour intensive; the collection crew lifts on average 12,000 lb (5.4 tonnes) per worker per garbage and food waste collection day. The primary sources of injury stems from repetitive motion injuries, slips and trips, and exposure to sharp objects and infectious diseases.

The current solid waste and recycling curbside contract between the RDN and Waste Connections expires on March 31, 2020. A Board decision regarding future curbside collection service is required in order to issue a Request for Proposal (RFP) for a replacement service in time to meet the current contract expiry.

The “Preliminary Evaluation of Solid Waste Curbside Collection Options” report was received by the Board on July 24, 2018, and Staff were directed to:

- report back on a recommended service option and implementation plan; and

- conduct a public consultation and evaluation of the service options.

The purpose of this report is to provide the Board recommendations with detailed costs, financing, benefits and proposed implementation plans for:

Option 1: Manual system with garbage, recycling and food waste only

Option 2: Fully automated system with garbage, recycling and food waste only

Option 3: Fully automated system with garbage, recycling, food and yard waste

SAFETY

The General Conditions in Part 4 of the Occupational Health and Safety Regulation under the authority of the Workers Compensation Act, stipulates that the employer shall “eliminate or if that is not practicable, minimize the risk of musculoskeletal injury to workers”¹. Following the implementation of the Regulation, cities like Vancouver and Toronto were issued orders to conduct risk identifications and ergonomic assessments, and implement control measures to reduce or eliminate worker injuries. In response to the orders, the City of Toronto and City of Vancouver and many others in the industry are shifting from manual to automated collection.

RDN’s current curbside collection provider, Waste Connections, carries full WorkSafe BC coverage and associated premiums or penalties for itself and employees as required under the terms of the contract. Based on a jurisdictional scan across 14 municipalities, the primary motivator for cities like Nanaimo, Victoria, Surrey, Coquitlam and Richmond who have opted to transition to automated collection service was done in effort to reduce worker health and safety claims and associated costs. While difficult to measure, significant savings in worker compensation costs, disability claims and levies are expected as a result of transiting to an automated collection system. Details of WorkSafe garbage collection injury statistics and premium rates can be found in Attachment 1.

PUBLIC CONSULTATION

The main objective of the public consultation (online survey and focus group) is to consult on the public’s preference for manual versus automated collection. The consultation process ran from August 1 to September 30, 2018, and included an online survey and a focus group. The two month duration for the online survey allowed residents sufficient time to fill out the survey to provide representative and meaningful data. The online survey data up to September 17, 2018 was summarized for the purposes of this report in order to meet the timeline for the October Board meeting. An updated summary will be provided on the Get Involved website following the conclusion of the survey.

Online Survey

The Get Involved website (www.getinvolved.rdn.ca/beyondrecycling) was updated to include relevant information on the curbside collection evaluation to inform residents of the options and

¹ Workers Compensation Act – Occupational Health and Safety Regulation (2018). Retrieved from: www.bclaws.ca/civix/document/id/lc/statreg/296_97_02

respective financial considerations. The online survey sought resident feedback on the current state of service delivery and opinions on the preferred method of collection for waste, recycling and organics for the future residential curbside collection contract. A copy of the online survey can be found in Attachment 2.

Advertising for the online survey was targeted at occupants of single residential dwellings across the region. The survey was advertised via print and digital media (Facebook, Twitter, RDN Get Involved website, Nanaimo News Now, Nanaimo News Bulletin, Vancouver Island News, Gabriola Sounder, Recollect app alert, postcards distributed at the transfer station and landfill, and municipal partner websites and print advertising) to generate interest within the community and to encourage participation in the survey. The survey was made distinctly clear it was intended for RDN curbside collection service customers only and not for the City of Nanaimo residents.

Online Survey Summary Results

At time of reporting, a total of 805 responses (852 completed surveys minus 47 responses from the City of Nanaimo residents) were received from the online survey which demonstrates a high level of interest from the community regarding the current and future curbside collection system. Attachment 3 shows the regional breakdown of survey respondents. The data is well distributed between the catchment areas to provide a high level of confidence. Using a population size of 28,621 single family dwellings and 805 online survey respondents, this survey has a 95% confidence level +/- 3.41%. It is also worth noting, 51% of respondents took the time to provide written feedback regarding their current service and the changes they would like to see in the future contract, which suggests respondents felt their input is valued.

Overall, the online survey was effective in gauging residents' feedback on the current state of service delivery and their opinion on the preferred method of collection for waste, recycling and organics for the future residential curbside collection contract. A summary of the preliminary detailed results can be found in Attachment 4. The results for principal questions are discussed in the following subsections.

Question 1 – Are you willing to pay more for an automated curbside collection service?

As shown in Table 1, of the 63% (504) of respondents in favour of automated service (both with and without yard waste), 56% (280) of respondents are willing to pay more in utility fees for automated service and 29% (148) of respondents were not willing to pay more, citing current user fees are already too high or rather see the money spent on other services. The remaining 15% (76) of respondents were undecided or did not have an opinion.

Table 1. Responses to Question 1

Catchment Area	Do not know / No opinion	No	Yes	Total
City of Parksville	11	23	46	80
District of Lantzville	7	9	18	34
Town of Qualicum	23	38	68	129
Electoral Area A	7	13	19	39
Electoral Area B	1	5	10	16
Electoral Area C	2	6	14	22
Electoral Area E	13	15	38	66
Electoral Area F	2	8	13	23
Electoral Area G	7	24	43	74
Electoral Area H	3	7	11	21
Grand Total	76	148	280	504
	15%	29%	56%	

Question 2 – Are you willing to pay more for yard waste collection if it was offered at an additional cost?

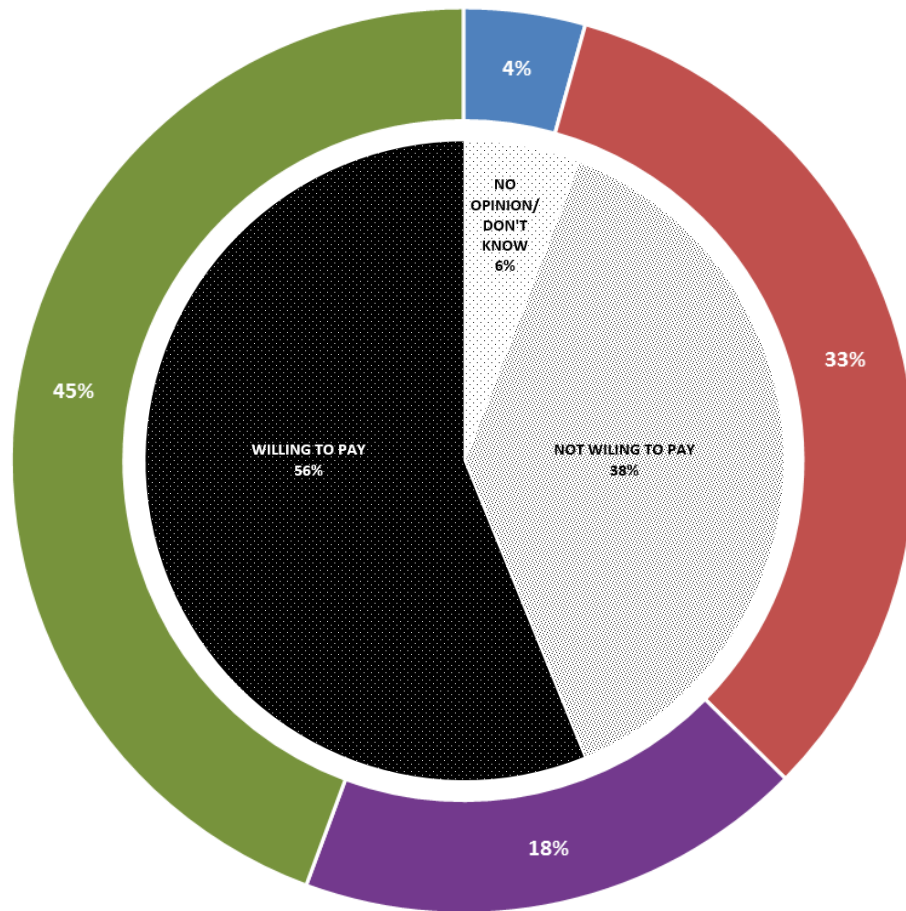
As shown in Table 2 below, of the 63% (504) of respondents in favour of automated service (both with and without yard waste), 76% (383) of respondents were in favour of yard waste collection if offered at an additional cost of approximately \$50 annually. In all three member municipalities (District of Lantzville, City of Parksville and Town of Qualicum Beach) and higher density rural neighborhoods (Electoral Areas A, E and G), an average of 75% of respondents were willing to pay additional fees for yard waste collection, compared to an average of 61% in the lower density rural neighborhoods (Electoral Areas B, C, F and H).

Table 2. Responses to Question 2

Catchment Area	Do not know / No opinion	No	Yes	Total
City of Parksville	2	10	68	80
District of Lantzville	4	5	25	34
Town of Qualicum Beach	3	14	112	129
Electoral Area A	3	18	18	39
Electoral Area B	1	5	10	16
Electoral Area C	2	7	13	22
Electoral Area E	1	14	51	66
Electoral Area F	2	9	12	23
Electoral Area G	4	11	59	74
Electoral Area H	1	5	15	21
Grand Total	23	98	383	504
	5%	19%	76%	

Figure 1 illustrates the summary of total responses from all municipalities (excluding City of Nanaimo) and electoral areas within the RDN (outer ring), as well as their willingness to pay for yard waste collection if offered at an additional cost (inner circle). 45% of respondents are in support of automated collection with yard waste collection, 18% of respondents are in support of automated collection without yard waste collection, 33% of respondents favoured status quo with manual collection and the remaining 5% of respondents did not know/ have no opinion. A breakdown by municipality and electoral area is shown in Attachment 5.

Figure 1. Respondents' Preference and Willingness to Pay for an Automated Service with Yard Waste Collection



Legend

Outer Ring – All respondents' collection preferences including cost considerations

- Do not know / No opinion
- Manual Collection
- Automated Collection WITHOUT Yard and Garden Waste
- Automated Collection WITH Yard and Garden waste

Inner Circle – All respondents' willing to pay for automated collection with consideration for yard waste if offered at an additional cost

Question 3 – what are your ideal collection cart sizes if the RDN were to go to automated collection service?

The responses were quite varied and did not correspond to the waste generation responses (i.e. respondents reported garbage generation <100 L/bi-weekly collection voted for 240 L/ 360 L). The focus group participants cited the graphic depicting the cart size references was not intuitive and participants were not able to correlate the reference to the actual cart size, hence, the responses were askew. Therefore, the online responses for the cart sizes cannot be relied upon.

Question 4 – Would you prefer the new automated collection carts to be owned by the RDN/contractor or by the resident?

If the RDN pursues the automated collection route, 90% of residents preferred the carts be supplied, owned and maintained by the RDN (stays with the property), 4% of residents preferred to own the carts, and the remaining 6% did not have a preference or do not know.

Question 5 – Please rate the level of importance of improved worker safety through elimination of manual intervention.

On the subject of worker safety, 91% of respondents cited it is either “very important” or “somewhat important”, of which, 38% of respondents were willing to support the additional cost. Only 5% of respondents reported safety was not an important factor in their decision.

Based on the results of the survey, there is not a clear preference amongst respondents with 63% of respondents in favour of some form of automation (45% for automated service with yard waste and 18% for automated service without yard waste). It is apparent an automated system augmented by yard waste collection (only available as part of an automated service) is an important consideration for 45% of respondents. Without yard waste collection as an option, and the choices are between automated and manual service, the results would suggest residents prefer to stay with manual collection and are not willing to pay additional costs to implement an automated collection system.

Focus Group

The focus group was conducted on September 6th, 2018 with the intention of:

- Obtaining feedback and input on manual vs. automated collection systems;
- Obtain participants perspectives on cart sizing and value in offering varying cart sizes;
- Participants were provided an opportunity for hands on experience with collection carts for sizing and maneuverability;
- Obtain participants perspectives on perceived increased value for the anticipated increase in user fees associated with an automated system;
- Obtain a better understanding of misconceptions about automated service; and
- Determine participants’ opinion on whether the RDN should update Bylaw 1591 to mandate the use of rigid garbage and recycling containers. The intent is to improve

general neighborhood aesthetics by preventing litter or wildlife issues as a consequence of setting out garbage in plastic bags.

Majority of the participants were nominated by Directors to represent their respective catchment areas. The number of participants for each catchment area was calculated based on the percentage of the total population as shown in Attachment 6. A public call for volunteers was made via the Get Involved website to fill available spaces after Director nominations. All participants were screened to ensure proper regional and demographic representation.

The key findings from the focus group are summarized as follows and the detailed finding can be found in Attachment 7:

1. Manual vs. Automated

- 75% of participants were inclined to switch to automated service
 - 42% of participants in favor of yard waste collection
 - 58% against yard waste collection
- 75% of participants were willing to pay additional cost to improve worker safety
- Unanimous support for updating the bylaw to mandate the use of rigid containers if the Board decides to stay with a manual collection system to minimize worker injury

2. Automated cart sizing

- Garbage - either 80L or 100L/household
 - There should be an option for residents to purchase larger carts to accommodate their household needs
- Recycling - 100L/household
 - There should be an option for residents to opt for large carts at no charge
- Organics – 80L and 120L/household without and with yard waste collection, respectively
- Participants noted the carts may pose a challenge for people with mobility issues but after testing out the wheeled carts, the general consensus is the wheeled carts (with sandbags to simulate filled carts) are easier to maneuver than lifting a container or bag.

Public Consultation Summary

The qualitative findings from the focus group were intended to provide context to the broader online survey responses. While the survey results and focus group findings did not entirely align, the focus group results did confirm public interest in automated service from a safety perspective.

Overall, approximately half of respondents and focus group participants were in favour of automated collection with yard waste, largely based on increased convenience for those living in the member municipalities and higher density electoral areas. It is important to note, 25% of focus group participants and 33% of survey respondents were not in favour of, and not willing to pay, for automated service with or without yard waste collection. Therefore, if an automated service is adopted in the RDN, it will be imperative to anticipate and proactively address potential negative reactions to increased costs and impact for those in favour of status quo.

The online survey results have been tracked over the past month and a half, and the support for and against automation, with and without yard waste collection have been consistent. Therefore, it would suggest additional consultation would not add increased confidence to the understanding of public opinion regarding collection preference.

PROPOSED COLLECTION PROGRAM DESIGN

Overall, the public consultation feedback indicates residents support increased diversion which presents an opportunity to build on the momentum and continue to reinforce reduction/recycling initiatives to drive further diversion. An automated collection system would allow for implementation of a variable rate user pay system. This would allow residents to tailor their cart size to their waste generation, and be financially rewarded for opting to a smaller cart size and/or extending their collection (up to a maximum of 14 declined set outs per year), supporting increased diversion and user satisfaction.

A user pay pricing structure aligns well with the Solid Waste Management Plan goal as it encourages recycling by requiring residents to pay for garbage collection proportionate to actual use. Moreover, this approach will:

- * accommodate the current level of waste generation and allow for flexibility to meet future economic and environmental goals, specifically the RDN’s goal of 109 kg/capita/year by 2029;
- * draw awareness to waste generation, and the corresponding cost of collection and disposal; and
- * encourage residents to recycle and reduce the amount of waste disposal.

In determining the optimal cart size options for the RDN, it is prudent to consider the the overall goals of the Solid Waste Management Plan projected to 2029. Based on the online survey feedback, 82% of respondents indicated they are happy with their current 100 L limit, which formed the basis for the proposed default cart sizes for single family households and single family households with secondary suite(s), as summarized in Table 3 below. The recycling cart sizes were chosen to allow the utmost flexibility to accommodate collection of new recyclables that may be introduced to the system, as well as seasonality variations.

Table 3 Proposed Default Automated Service Cart Sizes

Waste Stream	Single Family Residence	Single Family Residence with Secondary Suite
Garbage	100 L	240 L
Recycling	240 L	360 L
Organics – primarily food waste	80 L	80 L
Organics – food and yard waste	120 L	120 L

IMPLEMENTATION PLAN

Some municipalities, such as City of Nanaimo and City of Vancouver, have opted to take a cautious, phased in approach to allow for smooth delivery of carts and transition from manual to automated collection service. The main benefit of the phased implementation is the ability to apply lessons learned to the subsequent phase to minimize impact. It is important to note, both City of Nanaimo and City of Vancouver have in house collection service and therefore, there is incentive to phase in service to ensure a smooth implementation. With a contracted service, it is the contractor’s responsibility to deliver the service, so there is limited benefit to the RDN for a phased in approach. Additionally, given the timing of the current contract expiration, this may not be possible unless the contractor agreed to a contract extension.

The proposed, high-level implementation schedule required to meet the March 31, 2020 deadline is shown in Table 4 below, with no consideration for a phased in approach.

Table 4. Proposed Implementation Schedule

	Activity	Target Completion Date
2018	Public Consultation (online survey and focus group)	Aug - Sep
	Curbside collection recommendation for Select/Board approval	Oct
	Issue RFP (6 week response time)	Nov
2019	Automated collection education promotion	Jan - Dec
	Evaluate RFP responses	Jan
	Prefer proponent recommendation for Select/Board approval	Feb
	Contract award (one year required to procure equipment)	Mar
2020	Automated collection education promotion	Jan - Dec
	Cart delivery	Jan - Feb
	Transition from manual to automated collection	Mar
	Current contract expires	Mar
	Commencement of new contract	Apr

Communications to RDN residences receiving curbside collection services is proposed to include the following:

- Personalized mail out to each service address (and owner address if applicable) to notify them of the upcoming changes, cart size options and request for cart size selection. Default sizes are to be provided unless a smaller/larger cart size is requested based on space/accessibility limitations.
- Region-wide advertising through the following communication channels:
 - Open houses at each municipality and Electoral Area to provide residents an opportunity to ask questions, get clarifications, and to test out the new carts
 - Print and digital media

ENVIRONMENTAL IMPLICATIONS

The RDN Solid Waste Management Plan promotes user-pay to encourage waste reduction through financial incentives. Allowing residents to tailor their cart sizes to best suit their waste generation and charging a higher utility fee for those who opt for larger garbage carts, makes residents accountable to the amount of waste generated and in turn, potentially increases recycling and waste reduction efforts.

The introduction of yard waste collection will encourage residents to minimize the amount of yard and garden waste disposed in the garbage waste stream which amounts to 5% of the current waste stream, and sent for proper processing. Based on the responses from the public consultation, a high level of participation is expected across the RDN in urban/higher density neighborhoods.

According to the BC Ministry of Environment, 695² black bears were destroyed by conservation officers and other agencies in response to report of human-wildlife conflict in 2017, with unsecured garbage left out at the curb as the primary human cause directly and indirectly leading to the death of wildlife. Once a bear is habituated to residential garbage, it poses a threat to the community and the bear usually ends up destroyed. The simple act of utilizing carts with closed lids, especially with bear proof locks in rural areas, will deter bears and other wildlife and prevent dangerous wildlife encounters in our communities and subsequently reduce the number of senseless wildlife deaths.

Communities with automated service have reported improvement in general neighborhood aesthetic through the use of standardized carts. Additionally, carts with lids help keep rain out of recyclables during set outs which preserves the quality of the recyclables and in turn, improves the marketability of the materials.

PRIVATE HAULING AND COLLECTION BUSINESS IMPLICATIONS

If the collection of yard waste is introduced as part of the mandatory collection service, there are approximately a dozen lawn maintenance, hauling and collection businesses operating in the region, primarily based out of City of Nanaimo that may be adversely impacted. Early communications to these potentially affected businesses is necessary to give sufficient time for any changes they might make to their services.

MOBILITY CONSIDERATIONS

A number of online survey respondents and focus group participants indicated potential mobility issues with regards to the collection carts. Generally speaking, the wheeled carts are easier to maneuver and ergonomically superior compared to lifting a container/bag of an equivalent weight. Based on the feedback, it is acknowledged there will be a number of residents that may

² Human-Wildlife Conflict Statistics. Retrieved from <https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/conservation-officer-service/predatorstatisticsblackbear.pdf>

not be able to maneuver the collection carts (or anyone to help), and therefore, consideration for a set out service could be considered to provide assistance to those who need it.

A number of municipalities and regional districts such as the City of Nanaimo and Regional District of Central Okanagan, have a “carry out” program to assist qualified residents to have their collection carts collected from a pre-determined location on their property by the collection driver, emptied and returned to the same location. The City of Nanaimo currently have approximately 100 “carry out” accounts with an additional 24 applications pending, which amounts to 0.4% of the total household count. The application for the “carry out” service requires a medical note from a physician, as well as a site visit from a solid waste team member to confirm and validate the need.

If a similar “carry out” program is implemented for the RDN, a reasonableness clause would be required as long private driveways, especially in rural areas, can be prohibitive for such service. Should the Board adopt an automated service, costing for a “carry out” program will be included in the future staff report in response to the RFP.

ALTERNATIVES

1. Approve the implementation of an automated garbage, recycling and organics collection program for a 10 year term commencing in April 2020 with yard waste and the option for variable garbage and organics cart sizes, and direct staff to proceed with the issuance of a RFP to solicit potential service providers to provide an automated curbside collection service with a yard waste..
2. Decline the recommended automated collection service with yard waste, and direct staff to proceed with the issuance of a RFP to solicit potential service provided to provide an automated collection with no yard waste collection.
3. Decline the recommended automated collection service, and direct staff to proceed with the issuance of a RFP to solicit potential service provided to provide a manual collection service with no yard waste collection.
4. Provide alternate direction.

FINANCIAL IMPLICATIONS

With approval from the Board, the Solid Waste Capital Reserve was established with the intention to meet future financial obligations as it pertains to the next curbside agreement and/or system, specifically to offset a portion of the capital cost associated with the solid waste program to lower the impact to user fee for all users. There is currently approximately \$530,000 in reserve which is intended to be applied to the new service.

UTILITY FEE

By setting user fees proportionally higher for larger carts, residents are encouraged to reduce waste generation. City of Victoria and the Town of Lake Cowichan are examples of proportional pricing and both municipalities have since improved diversion as a result of their fee structure.

One of the notable findings from the focus group is the amount of interest in the 80 L garbage cart; a number of participants (primarily seniors) indicated they generate very little garbage and a smaller cart would better suit their needs. As such, the reduced fee for 80 L cart is intended to financially reward residents for lower waste generation.

Table 5 below is an example estimated fee schedule for the different service options. Please note, the estimated annual fee is intended for information only, and to assist the Board in the evaluation of the available options; an actual annual fee structure will be reported back to the Board following an evaluation of RFP responses.

Based on a 100L garbage cart size service, the user fee for a manual collection replacement system is estimated to be in the range of \$170 and an automated collection service without yard waste is estimated at \$200 (an 18% increase). Based on the proposed recommendation for automated collection with a yard waste, which 45% of RDN residents are expected to select a 120L organic cart size with the remaining 65% opting for a 80L organic cart size, the estimated utility fee will be \$245 annually (44% increase) and \$215 annually (26% increase), respectively. A detailed user fee schedule with the variable garbage cart size can be found in Attachment 8.

Table 5. Example Estimated User Fee Schedule Based on 100L Garbage Cart Size

Cart Size (L)	Estimated # of Households	Estimated Annual Fee*			
		Option 1	Option 2	Option 3	
		Manual Collection	Automated Collection without Yard Waste	Automated Collection with 80L Yard Waste Cart	Automated Collection with 120L Yard Waste Cart
100	29,000	\$ 170	\$ 200 18%	\$ 215 26%	\$ 245 44%

* Estimated annual fees were calculated based on available information. Actual annual fees will be determined following evaluation of RFP responses

The current curbside collection contract with Waste Connections was based on pricing set in 2009. There is an inflationary provision in the contract to account for increases in operation costs over the course of the contract. With respect to the new contract, the waste collection costs will increase regardless of the type of service due to the requirement of new collection vehicles.

EXTRA BAG TAG PROGRAM

The current extra bag tag program, valued at approximately \$50,000 annually (approximately 17,000 tags sold per year), allow residents to dispose of their extra waste along with their

regular manual curbside collection, to a maximum of three total garbage containers/bags per collection. While it is possible to configure an automated collection truck to allow for manual deposits for extra bags beyond the allowable limits, it is not preferred as it would defeat the primary safety motivation to restrict drivers in the cab of the trucks. As such, it is advisable to provide residents the option to switch to a larger size to tailor to their actual level of waste generation.

PROPOSED FINANCIAL INCENTIVES

To further drive waste diversion, a financial incentive could be offered to encourage resident to reduce waste generation and/or increase recycling efforts. For example, if a household does not fill the garbage cart within the 2 week collection period and have the capacity to hold their garbage for the following 2 week period, residents can opt to forego the scheduled pickup and delay their pickup to the following collection period. The proposed fee structure will see a rebate applied to the resident's following year's utility bill corresponding to the total number of declined collections to a maximum of 14 declined set outs. An example fee schedule can be found in Attachment 9. Such a service can only be practically implemented with automated collection due to the Radio Frequency Identification (RFID) system used with standardized carts.

UTILITY BILLING CONSIDERATIONS

As noted previously, the current RDN curbside collection program is fully user funded, through a flat fee separate from property taxation. The flat fee is determined based on the total cost of the curbside program apportioned by the total number of single family residential household; each household is charged the same flat fee regardless of the volume of waste generated.

The proposed fee structure is based on the same full fee recovery approach incorporating a variable fee structure to provide a financial incentive to produce less waste. Cities that have employed this approach such as City of Vancouver, Seattle, City of St. Albert, have seen positive impacts in their diversion rates.

If the Board approves an automated service with the proposed fee structure to apply rebates, the implementation of a new billing schedule for an automated service would require a considerable time commitment from the Finance department. The scope of the work is expected to include but not limited to:

- involvement in the RFP process to solicit proposals for the delivery of an automated garbage, recycling, organics collection service with yard waste and the option for variable garbage and organic cart sizes, for a ten year contract from April 2020 to April 2030, and subsequent evaluation and award to the successful proponent;
- involvement in the RFP process to solicit proposals for the procurement and delivery of 90,000 carts (if applicable), and subsequent evaluation and award to the successful proponent;
- a one-time overhaul of the billing system to set up approximately 29,000 household to correspond to the Radio Frequency Identification (RFID) tags used on the standardized

- carts intended to simplify the utility billing process, as well as improve identification of secondary suites; and
- administration of utility billing.

STRATEGIC PLAN IMPLICATIONS

The RDN's Strategic Priorities formed the basis of the goals of the curbside collection evaluation. Consistent with the *focus on organizational excellence and services* as set out in the Strategic Plan, the transition from the current manual collection to an automated system would improve the delivery of solid waste services, reduce worker injuries and implement a user pay structure.

With the improved convenience of an automated collection system, the diversion rate is anticipated to increase resident participation rates and capture rates, which is aligned with the *focus on the environment*, as well as the diversion goals as defined in the Solid Waste Management Plan. Additionally, a transition to an automated collection system presents an opportunity to shift to a user pay model



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September 17, 2018
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- P. Carlyle, Chief Administrative Officer

Attachments

1. WorkSafe BC Injury Statistics and Premium Rates
2. Online Curbside Collection Survey Questionnaire
3. Online Curbside Collection Survey Respondents by Catchment Area
4. Preliminary Detailed Online Survey Results
5. Online Survey Results by Catchment Area
6. Focus Group Participant Distribution Breakdown
7. Focus Group Findings
8. Example Fee Schedule for Proposed Financial Incentive