

REGIONAL DISTRICT OF NANAIMO
SOLID WASTE MANAGEMENT SELECT COMMITTEE
AGENDA

Thursday, October 4, 2018

1:30 P.M.

Committee Room

Pages

1. CALL TO ORDER
2. APPROVAL OF THE AGENDA
That the agenda be approved as presented.
3. ADOPTION OF MINUTES
 - 3.1 Solid Waste Management Select Committee Meeting - September 6, 2018 3
That the minutes of the Solid Waste Management Select Committee meeting held September 6, 2018 be adopted.
4. DELEGATIONS
5. CORRESPONDENCE
6. UNFINISHED BUSINESS
7. REPORTS
 - 7.1 Curbside Collection Recommendation 5
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.
That Staff report back to the Board on the results of the Request for Proposal.
 - 7.2 Crawler Dozer Purchase 69
That the Board approve the purchase of a 2018 Case 2050M Crawler Dozer with a Waste Handling Package from The Inland Group for \$434,520 (exclusive of taxes).
8. BUSINESS ARISING FROM DELEGATIONS
9. NEW BUSINESS

10. IN CAMERA

That pursuant to Section 90 (1)(k) of the Community Charter the Committee proceed to an In Camera meeting for discussion related to negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages.

11. ADJOURNMENT

REGIONAL DISTRICT OF NANAIMO
MINUTES OF THE SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING

Thursday, September 6, 2018
1:30 P.M.
Committee Room

In Attendance:	Director A. McPherson	Chair
	Director H. Houle	Electoral Area B
	Director M. Young	Electoral Area C
	Director J. Stanhope	Electoral Area G
	Director B. McKay	City of Nanaimo
	Director D. Brennan	City of Nanaimo
	Director B. Colclough	District of Lantzville
	Director T. Westbrook	Town of Qualicum Beach
Regrets:	Director J. Hong	City of Nanaimo
	Director J. Kipp	City of Nanaimo
	Director K. Oates	City of Parksville
Also in Attendance:	Director B. Veenhof	Electoral Area H
	P. Carlyle	Chief Administrative Officer
	R. Alexander	Gen. Mgr. Regional & Community Utilities
	L. Gardner	Mgr. Solid Waste Services
	V. Schau	Zero Waste Coordinator
	S. Schultz	Recording Secretary

CALL TO ORDER

The Chair called the meeting to order and respectfully acknowledged the Coast Salish Nations on whose traditional territory the meeting took place.

APPROVAL OF THE AGENDA

It was moved and seconded that the agenda be approved as presented.

CARRIED UNANIMOUSLY

ADOPTION OF MINUTES

Solid Waste Management Select Committee Meeting - July 5, 2018

It was moved and seconded that the minutes of the Solid Waste Management Select Committee meeting held July 5, 2018, be adopted.

CARRIED UNANIMOUSLY

INVITED PRESENTATIONS

Kevin Cameron, Sustane Technologies re, Sustane Waste Processing Technology

REPORTS

Bylaw 1591 Solid Waste and Recycling Collection Service Rates and Regulation Amendment

It was moved and seconded that “Regional District of Nanaimo Solid Waste and Recycling Collection Service Rates and Regulation Amendment Bylaw No. 1591.10”, be introduced and read three times.

CARRIED UNANIMOUSLY

It was moved and seconded that “Regional District of Nanaimo Solid Waste and Recycling Collection Service Rates and Regulations Amendment Bylaw No. 1591.10”, be adopted.

CARRIED UNANIMOUSLY

Recycle BC Packaging and Printed Paper EPR Program Renewal

It was moved and seconded that the Board authorize the execution of the Recycle BC “Statement of Work for Curbside Collection Services Provided by Local Government” to be effective November 30, 2018 to December 31, 2023.

CARRIED UNANIMOUSLY

ADJOURNMENT

It was moved and seconded that the meeting be adjourned.

CARRIED UNANIMOUSLY

TIME: 3:00 PM

CHAIR

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?

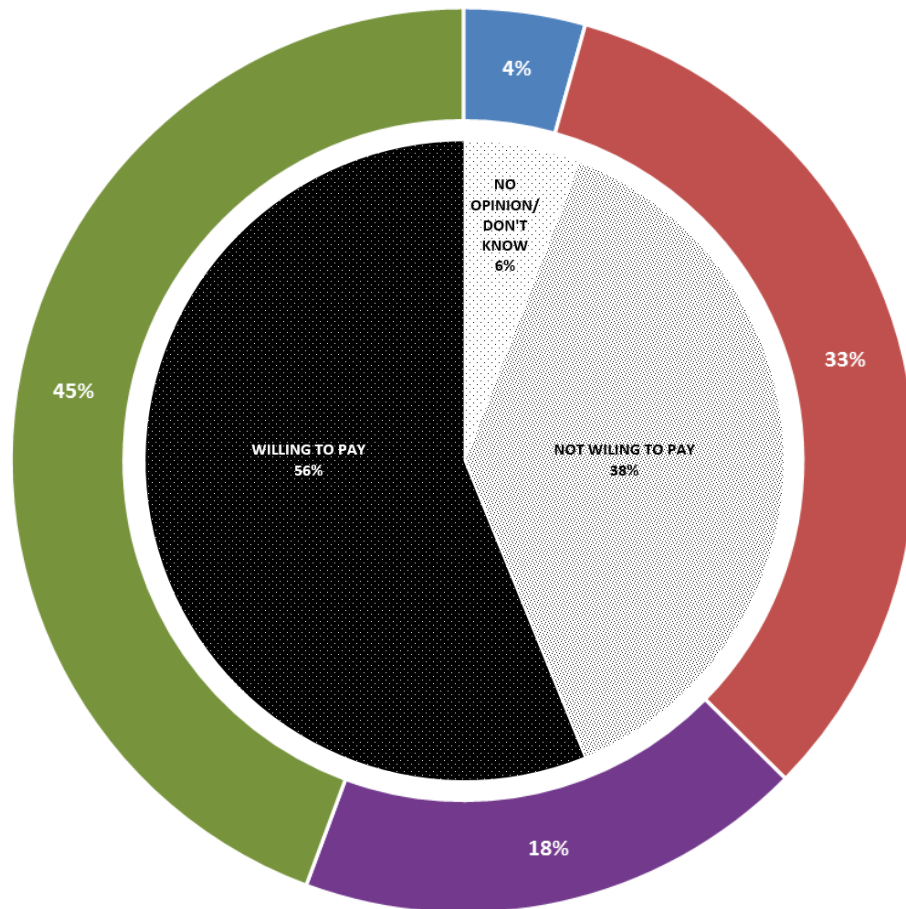
As shown in Table 2 below, of the 63% (504) of respondents in favour of automated service (both with and without yard waste), 76% (383) of respondents were in favour of yard waste collection if offered at an additional cost of approximately \$50 annually. In all three member municipalities (District 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



Vivian Schau
vschau@rdn.bc.ca
September 17, 2018
Reviewed by:

- L. Gardner, Manager, Solid Waste Services
- R. Alexander, General Manager, Regional and Community Utilities
- 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

WorkSafe BC, the authority established by provincial legislation on workplace safety and oversees a no-fault workplace insurance system, publishes injury stats and base premiums for all sectors. As illustrated in Figures 1 below, between 2013 and 2017, the Garbage, Debris, Industrial Waste and Recycling Material Removal industry (WorkSafe BC classification unit 732018) reported on average 208% higher injury rate, and 167% serious injury rate, respectively, compared to the rest of the BC industries' average.

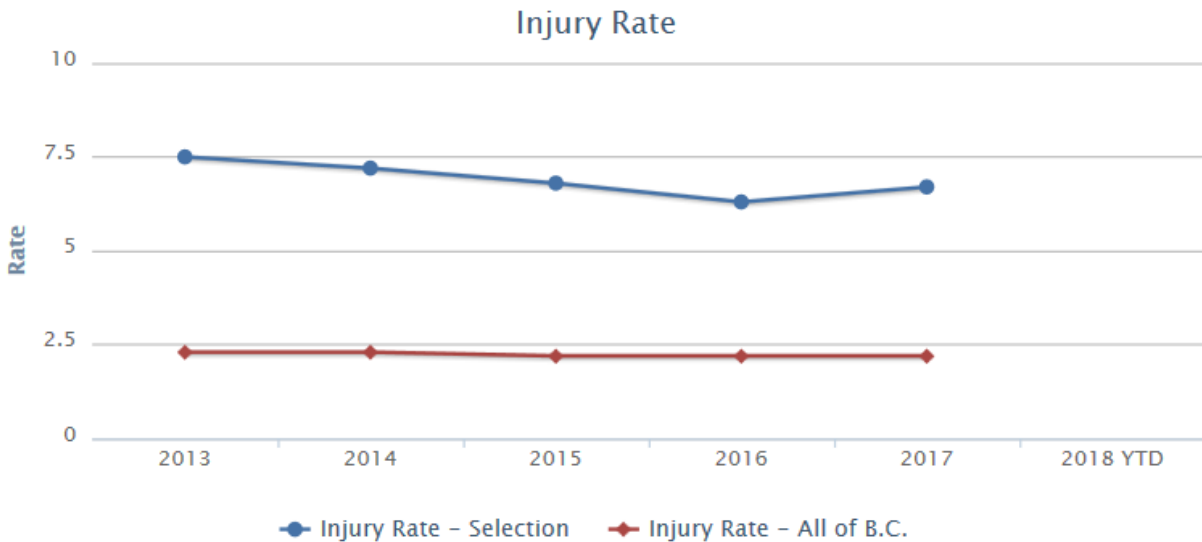


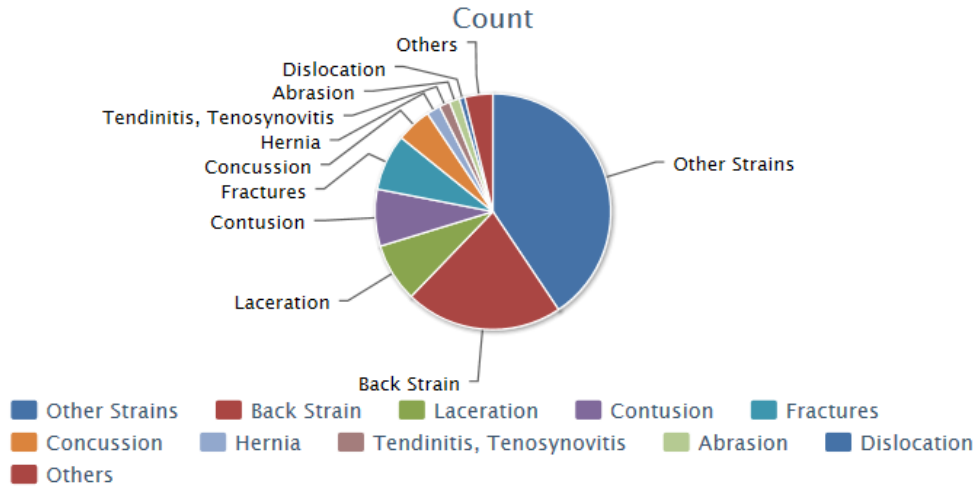
Figure 1 WorkSafe BC Injury Rate for Garbage, Debris, Industrial Waste or Recyclable Material Removal Industry – Classification Unit 732018

Figure 2 below indicates the top nature of injury for the garbage, debris, industrial waste or recyclable material removal industry is predominately due to strains, a common injury amongst collection workers in the manual waste collection industry.



Top 10 Nature Of Injuries

The following charts illustrate the leading injuries over a five-year period. Injuries representing a high percentage of claims or claim costs paid in an industry are potential focus areas for health and safety.



Claim Count



Nature of Injury	Claim Count	Claim Count %
Other Strains	520	40.6 %
Back Strain	277	21.6 %
Laceration	103	8.0 %
Contusion	100	7.8 %
Fractures	99	7.7 %
Concussion	62	4.8 %
Hernia	24	1.9 %
Tendinitis, Tenosynovitis	19	1.5 %
Abrasion	18	1.4 %
Dislocation	10	0.8 %
Others	49	3.8 %

Figure 2 WorkSafe BC Top 10 Nature of Injuries for the Garbage, Debris, Industrial Waste, and Recycling Removal Industry - Classification 732018

The *Workers Compensation Act* requires WorkSafe BC to set premium rates annually for employers to pay into the workers' compensation system. WorkSafe BC Base Premium rates for classification unit 732018 for 2018 is 3.49% (or \$3.49 per \$100) of assessable payroll, which is has been consistently on the higher end of the base premium spectrum across the 547 classification units. Depending on a company's claim rates, a discount or surcharge may apply. 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.

Beyond Recycling

Get Involved RDN

Beyond Recycling - Curbside Services Survey

We want to hear from you!

We are engaging the community regarding the current state of service delivery and your preferred method of curbside collection. Your feedback will be used to help influence the future of curbside collection of residential waste, recycling and organics collection.

Complete our curbside collection survey for a chance to get your **2019 annual curbside collection fee WAIVED!** A total of 3 prizes to be won - valued at \$145, no cash value and cannot be transferred.

Please note this survey is for ***RDN Curbside Collection Service customers only*** and is not intended for City of Nanaimo residents.

This survey should take approximately 5-10 minutes to complete. The survey is open for contributions until the end of September, 2018.

Program details

Manual vs. Automated Collection

	Manual (Current Program)	Automated
		
Description	1-2 workers per truck to drive, and manually lift and empty containers into truck	Operated by a driver inside the truck through the use of a mechanical arm to lift and empty carts
Staffing	Prone to higher turnover due to the labour intensive nature of the job (workers lift on average 12,000 lbs (5.4 tonnes) per collection day)	Generally less turnover and greater workforce diversity
Worker Safety	Higher risk compared to automated (repetitive motion injuries, slips and trips, exposure to sharp objects and infectious diseases)	Reduced to no risk, workers do not lift materials, exit truck nor handle material
Weight Limit	Limited to 50 lb per container for work safety	No weight limit as long as the material is contained inside the cart with lid closed
Volume Limit	Limited to 100 L per container for worker safety and waste diversion goal	Limited to the predetermined cart size to align with waste diversion goal
New equipment requirement	Yes, new trucks will be required for the new contract (even if collection remains manual)	Yes, new trucks with mechanized lifting arm and compatible carts
Container	Residents purchase, own and maintain waste containers and green bins (must meet the volume and weight specifications)	RDN/Contractor will supply, own and maintain the carts for all three waste streams to encourage diversion efforts
Finances	Overall lower system cost due to lower initial capital investments and maintenance costs but generally have a higher worker compensation costs factored into contract pricing	Overall higher system cost due to higher initial capital investments and associated maintenance costs, offset by lower worker compensation costs, disability claims and work accommodations

Beyond Recycling

Get Involved RDN

If the decision is made to stay with a manual collection system, the RDN is contemplating the use of rigid garbage and recycling containers to improve general neighbourhood aesthetics by preventing litter/odour issues from wildlife and/or exposure to elements. Do you support this? (Choose any one option) (Required)

- Yes
- No, I should have a choice to use bags rather than putting my material in an enclosed container
- Do not know / No opinion

A common sight on garbage collection day



Beyond Recycling

Get Involved RDN

Automated collection will require the use standardized carts

Standardized carts are available in set sizes, and have specialized features so they can be picked up and emptied by collection trucks.

What are your ideal collection cart sizes if the RDN were to go to automated collection service? (Required)

Questions	80 litres	120 litres	240 litres	360 litres	Do not know / No opinion
Garbage (collected every two weeks)					
Recycling (collected every two weeks)					
Food Waste ONLY (collected every week)					
Food AND Yard and Garden Waste (collected every week) *					

Comparison of cart sizes



Would you prefer the new automated collection carts to be: (Choose any one option) (Required)

- Supplied and owned by the RDN/contractor (to stay with the property)
- Resident purchased and owned
- Do not know / No opinion

Beyond Recycling

Get Involved RDN

Curbside collection service options

Are you willing to pay more for an automated curbside collection service? (Choose any one option) (Required)

- Yes
- No
- Do not know / No opinion

Answer this question only if you have chosen No for Are you willing to pay more for an automated curbside collection service?

If no, why not? (Choose all that apply)

- User fees already too high
- Rather see the money spent on other services
- Do not agree with the overall curbside collection program
- Other

Answer this question only if you have chosen Other for If no, why not?

If other, please specify

Would you support yard and garden waste collection if it were offered at an additional cost? Please note, yard and garden waste collection is only an option with an automated system. (Choose any one option) (Required)

- Yes
- No
- Do not know / No opinion

Note: This service would cost an estimated \$50 per household annually. Primarily due to weight and volume limits, along with other collection challenges, yard and garden waste collection is not practical through a manual system.

Please rate the level of importance: (Required)

Questions	Not important	Somewhat important	Very important but NOT willing to support the additional cost	Very important AND willing to support the additional cost	Do not know / No opinion
Improved worker safety through elimination of manual intervention					
Yard waste collection					
Large item pickup event					
Upgrade to bear proof cart at an additional cost of \$65 per cart					
Extreme weather event response (i.e. additional trucks after ice storm)					

Beyond Recycling

Get Involved RDN

Would you prefer manual or automated curbside collection service?

What is your preference? (Choose any one option) (Required)

- No change – manual collection for garbage, recycling and food waste
- Automated collection for garbage, recycling and food waste (at an increased cost)
- Automated collection for garbage, recycling, food AND yard and garden waste (at an increased cost)
- Do not know / No opinion

Beyond Recycling

Get Involved RDN

Please provide your feedback with the current curbside collection services

Do you receive RDN curbside service? (Choose any one option) (Required)

- Yes
- No
- Do not know

Note: You likely receive RDN curbside collection service if you live in a single family home or secondary suite, and live in an electoral area or municipality within the RDN, excluding the City of Nanaimo.

On average, how much garbage does your household generate for each pickup (every other week)? (Choose any one option) (Required)

- Less than 100 litres / 50 pounds
- More than 100 litres / 50 pounds
- Do not know

Note: A standard 100 litre bin holds 2-3 garbage bags

How satisfied are you with the current curbside collection service? (Required)

Questions	Not at all satisfied	Somewhat satisfied	Satisfied	Very satisfied	Do not know / No opinion
Overall curbside collection service					
Weight limit: 50 pounds					
Volume limit: 100 litres					
Frequency of service					
Material streams (garbage, food waste, recycling)					
Delivery of service					
RDN communications and education materials (curbside calendar, newsletter, outreach and social media)					

Are there other services, or changes to existing services, you would like to see?

Which curbside calendar system would you prefer? (Choose any one option) (Required)

- Add-a-day (i.e. your curbside pickup would shift one day later after each statutory holiday; this is the existing system)
- Fixed-day (i.e. your curbside pickup would always be collected on the same week day; this system would have an increased cost)
- Do not know / No opinion

Beyond Recycling

Get Involved RDN

Please tell us about your home

This section is optional

What type of home do you live in? (Choose any one option)

- Single family home
- Single family home with secondary suite
- Mobile home
- Duplex
- Triplex
- Quadplex
- Do not know
- Other

Answer this question only if you have chosen Other for What type of home do you live in?

If other, please specify

How many people live in your home?

Do you live at your home full time or part time? (Choose any one option)

- Full time
- Part time / Seasonal

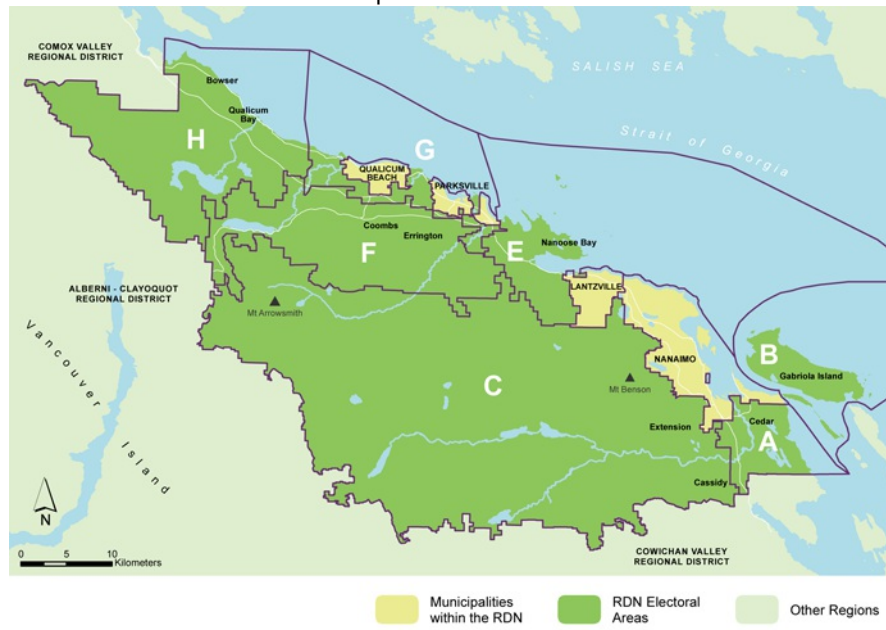
Where in the region do you live? (Choose any one option)

- Area A - Cassidy, Cedar, Yellowpoint, South Wellington
- Area B - Gabriola, DeCourcy, Mudge Islands
- Area C - Extension, Arrowsmith-Benson, East Wellington, Pleasant Valley
- Area E - Nanoose Bay
- Area F - Coombs, Hilliers, Errington
- Area G - French Creek, Dashwood, Englishman River
- Area H - Shaw Hill, Qualicum Bay, Deep Bay, Bowser
- District of Lantzville
- City of Parksville
- Town of Qualicum Beach
- The City of Nanaimo (does not receive RDN curbside service)

Beyond Recycling

Get Involved RDN

RDN Electoral Areas and Municipalities



Beyond Recycling

Get Involved RDN

Please tell us about yourself

This section is optional.

What age group do you fall into? (Choose any one option)

- Under 18
- 18-25
- 26-35
- 36-45
- 46-65
- Over 65

How many years have you lived within the Regional District of Nanaimo?

Do you have a good understanding of the recycling and food waste programs? (Choose any one option)

- Yes
- No
- Do not know / No opinion

Do you use recycling depots / drop off services? (Choose any one option)

- Yes
- No

Are you aware the RDN board has approved a new Solid Waste Management plan, which aims to divert 90% of the waste away from the landfill in 10 years? (Choose any one option)

- Yes
- No

Do you work in the waste industry? (Choose any one option)

- Yes
- No

Beyond Recycling

Get Involved RDN

General feedback

Tell us how we can improve! This section is optional.

Do you have any Solid Waste Services related questions you wish the RDN to contact you about? (Choose any one option)

- Yes
 No

Answer this question only if you have chosen Yes for Do you have any Solid Waste Services related questions you wish the RDN to contact you about?

If yes, please explain

Answer this question only if you have chosen Yes for Do you have any Solid Waste Services related questions you wish the RDN to contact you about?

Please provide your email address so we can contact you

How were you directed to this survey? (Choose all that apply)

- Newspaper
 RDN website
 RDN Curbside app
 Social media (Facebook and Twitter)
 Radio
 Zero Waste newsletter
 Other

Note: Choose all that apply

Answer this question only if you have chosen Other for How were you directed to this survey?

If other, please specify

Beyond Recycling

Get Involved RDN

Please provide any comments or suggest ways we can improve.

How would you prefer to receive information about the RDN's Solid Waste management and recycling programs? (Choose all that apply)

- Newspaper
- RDN website
- RDN Curbside app
- Social media (Facebook and Twitter)
- Radio
- Direct mailout (curbside collection calendar, Zero Waste newsletter)
- Utility bill inserts
- Other

Note: Choose all that apply

Answer this question only if you have chosen Other for How would you prefer to receive information about the RDN's Solid Waste management and recycling programs?

If other, please specify

Online Curbside Collection Survey Respondents by Catchment Area

Catchment Area	# of SFDs		# of Survey Respondents	
City of Parksville	5302	19%	119	15%
District of Lantzville	1428	5%	50	6%
Town of Qualicum Beach	4046	14%	172	21%
Area A - Cassidy, Cedar, Yellowpoint, South Wellington	2915	10%	65	8%
Area B - Gabriola, DeCourcy, Mudge Islands	2533	9%	31	4%
Area C - Extension, Arrowsmith-Benson, East Wellington, Pleasant Valley	1108	4%	41	5%
Area E - Nanoose Bay	3192	11%	105	13%
Area F - Coombs, Hilliers, Errington	2578	9%	56	7%
Area G - French Creek, Dashwood, Englishman River	2655	9%	123	15%
Area H - Shaw Hill, Qualicum Bay, Deep Bay, Bowser	2864	10%	43	5%
Total	28621	100%	805	100%

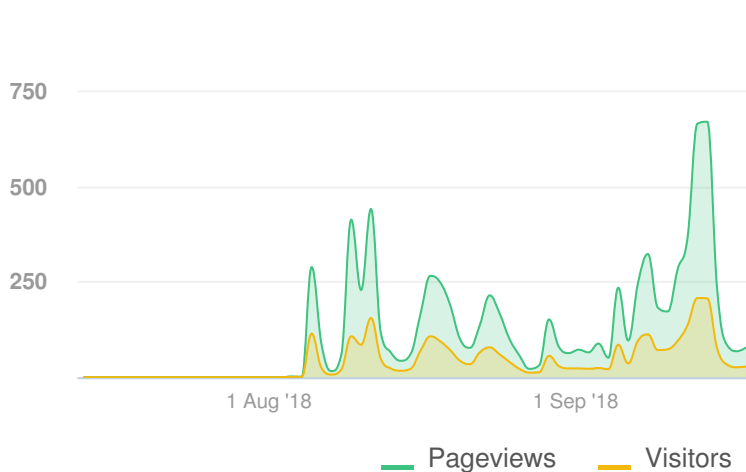
Project Report

13 September 2017 - 16 September 2018

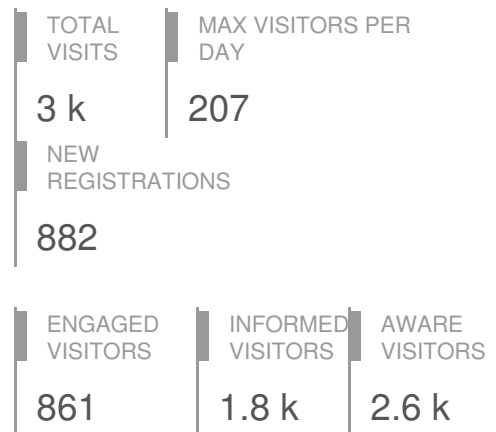
Get Involved RDN Beyond Recycling



Visitors Summary

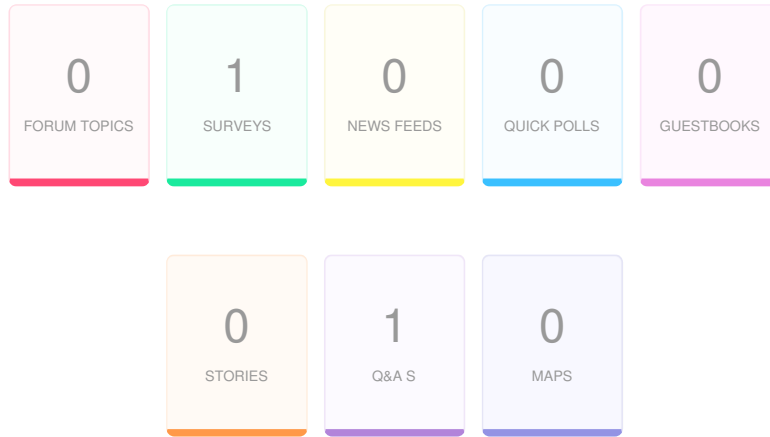


Highlights



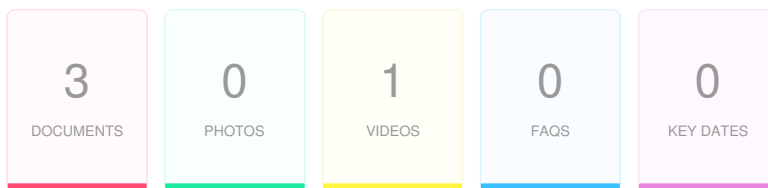
Aware Participants	2,604	Engaged Participants	861		
Aware Actions Performed	Participants	Engaged Actions Performed	Registered	Unverified	Anonymous
Visited a Project or Tool Page	2,604				
Informed Participants	1,835	Contributed on Forums	0	0	0
Informed Actions Performed	Participants	Participated in Surveys	859	0	0
Viewed a video	0	Contributed to Newsfeeds	0	0	0
Viewed a photo	0	Participated in Quick Polls	0	0	0
Downloaded a document	65	Posted on Guestbooks	0	0	0
Visited the Key Dates page	0	Contributed to Stories	0	0	0
Visited an FAQ list Page	0	Asked Questions	2	1	0
Visited Instagram Page	0	Placed Pins on Places	0	0	0
Visited Multiple Project Pages	1,022	Contributed to Ideas	0	0	0
Contributed to a tool (engaged)	861				

ENGAGEMENT TOOLS SUMMARY



Tool Type	Engagement Tool Name	Tool Status	Visitors	Contributors		
				Registered	Unverified	Anonymous
Qanda	Q&A	Published	43	2	1	0
Survey Tool	Beyond Recycling - Curbside Services Survey	Published	1967	859	0	0

INFORMATION WIDGET SUMMARY



Widget Type	Engagement Tool Name	Visitors	Views/Downloads
Document	Factsheet for Residents in Single Family Homes	47	50
Document	Final Solid Waste Management Plan Summary	20	22
Document	Final Solid Waste Management Plan	10	11
Document	deleted document from	5	8
Video	Solid Waste Management Plan Review	0	0

QANDA

Q&A

VISITORS 43	CONTRIBUTORS 3	CONTRIBUTIONS 3
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JordanE

16 August 18

Are you considering including soft plastic as part of curbside collection? Most people don't even know that they can recycle soft plastics and when they do find out they often don't want the trouble of having to take it in somewhere. Curbside collection of soft plastic would truly make it possible to be "zero waste"!



Publicly Answered

Great question! Recycle BC, a non-profit agency in charge of the residential stewardship plan for Packaging and Printed Paper, rolled out the Other Flexible Plastic Packaging (soft plastics) program on June 1, 2018. It is a program Recycle BC developed in partnership with Merlin Plastics to provide a commercially viable solution to recycle common but difficult-to-process items across BC. This type of packaging is difficult to collect and process because of the materials it's made out of. Although it may not look like it, it's actually made of many different layers of material. Because the material collected at the curb goes through a mechanical process to separate the material, these soft plastics get confused as paper or other plastics, contaminating large loads of material, making them non-recyclable. To learn more about how curbside material is separated, watch this video <https://www.youtube.com/watch?v=DUH-u2TCq4g>. The program will roll out in 3 phases, intended to better serve British Columbians across the province. During the pilot phase starting June 1, there were a total of 116 depots across BC collecting this material. On September 1, additional voluntary depots will begin collection. By January 1, 2019, all Recycle BC depots in the province are expected to collect this type of packaging. As you mentioned, not everyone knows about this program so we will focus on educating residents. We will be doing this through our Zero Waste newsletters and a Winter campaign once the program is fully implemented.

QANDA

Q&A

Q

Linda

12 September 18

What do I fill in the "login" blank to register?

A

Publicly Answered

Thank you for your question! Here are the steps to access the survey if you haven't yet created a login account: Go to the RDN Get Involved Registration page ([you can click here](#)). You will be asked to fill in four boxes. The first box is Login: create a login name, it can be anything from your real name, to your pet's name, or anything else you'd like. In the second box enter your email address. And in the third and fourth boxes, you'll create a password. This login name can be used again for any RDN Get Involved project and survey. Once you are registered and logged in to your account, you can fill out the Curbside Services Survey ([access it by clicking here](#)). If you have any more questions, please feel free to contact our office at 250-390-6560 or rcu@rdn.bc.ca.

QANDA

Q&A

Q

konadev

11 September 18

Why has the RDN not have automated truck pick up containers like they have in the lower mainland in place of the little blue box(not nearly big enough) and customer supplied garbage cans. We are way beyond manual pick up in this day and age.

A

Publicly Answered

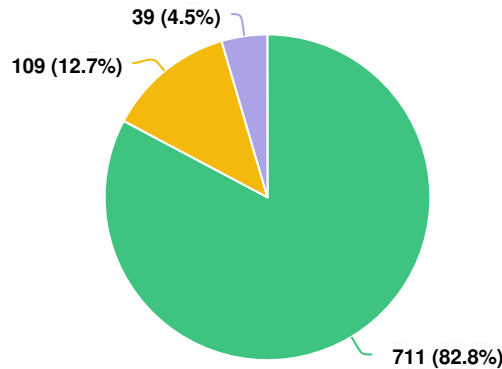
That's a great question! We have created the Curbside Services Survey to hear what residents receiving RDN curbside collection services think about the options for curbside collection. Please take part, if you haven't already. You might be interested to know that the RDN doesn't limit recyclables at the curb, as long as it's a reasonable residential amount. Many residents like the blue box and yellow bag system, but you can also use any bin(s) you wish, as long as it's less than 100 litres in volume, and weighs less than 50 pounds out at the curb. We supply Yellow Recycling Stickers (for free) to help easily identify bins as recycling.

ENGAGEMENT TOOL: SURVEY TOOL

Beyond Recycling - Curbside Services Survey

VISITORS	1967	CONTRIBUTORS	859	CONTRIBUTIONS	859
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If the decision is made to stay with a manual collection system, the RDN is contemplating the use of rigid garbage and recy...

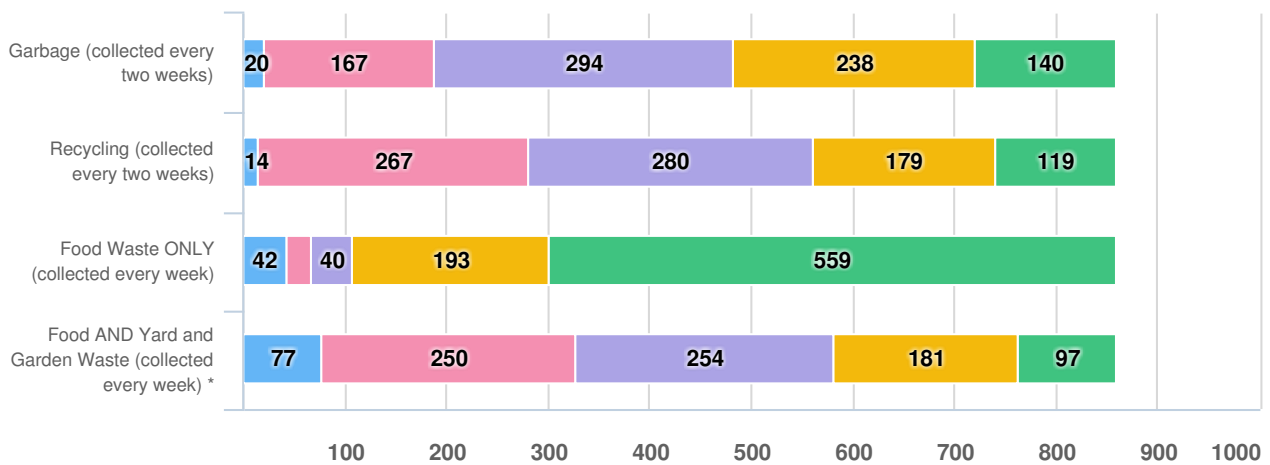


Question options

- Yes
- No, I should have a choice to use bags rather than putting my material in an enclosed container
- Do not know / No opinion

(859 responses, 0 skipped)

What are your ideal collection cart sizes if the RDN were to go to automated collection service?

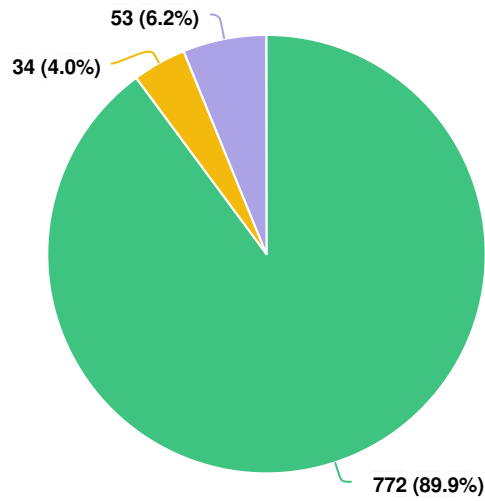


Question options

- 80 litres
- 120 litres
- 240 litres
- 360 litres
- Do not know / No opinion

(859 responses, 0 skipped)

Would you prefer the new automated collection carts to be:

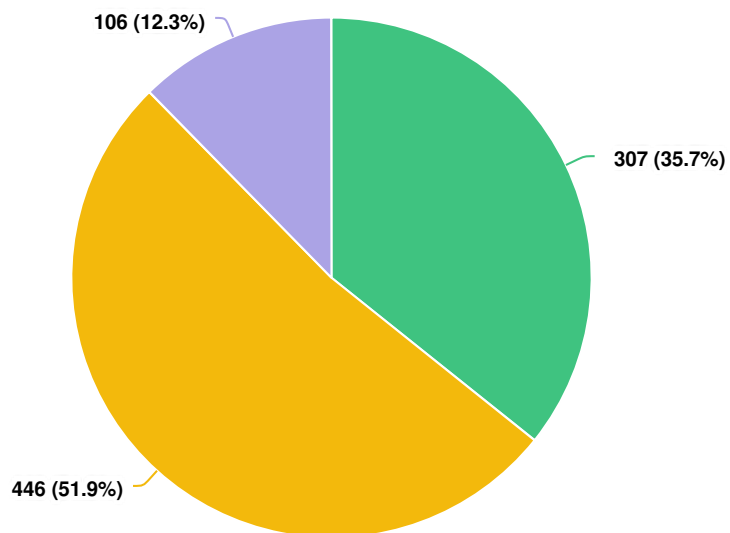


Question options

- Supplied and owned by the RDN/contractor (to stay with the property)
- Resident purchased and owned
- Do not know / No opinion

(859 responses, 0 skipped)

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

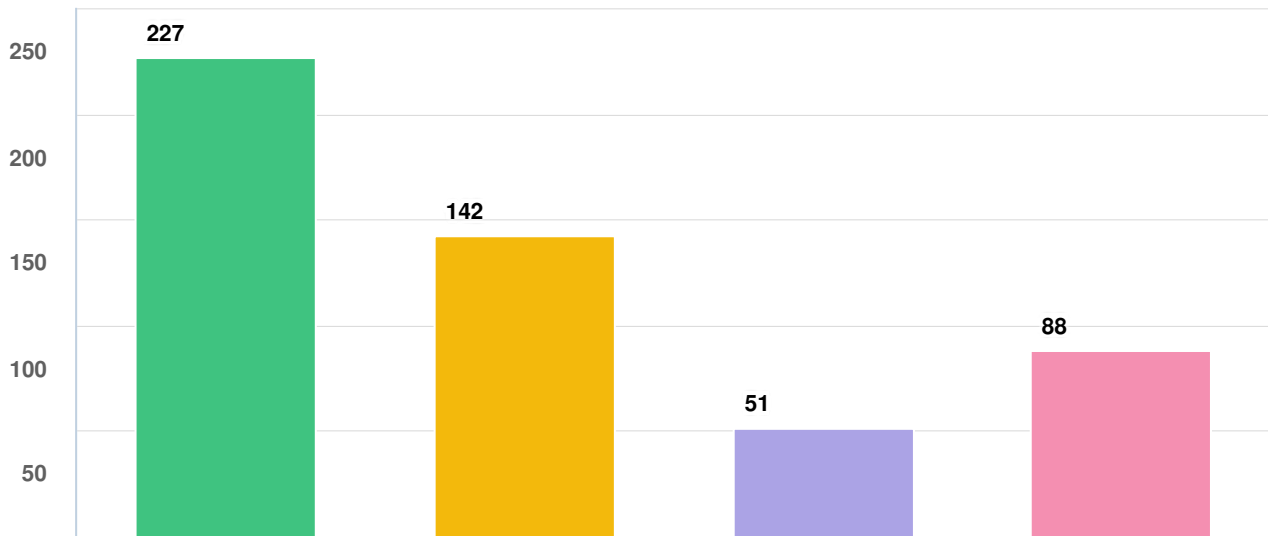


Question options

- Yes
- No
- Do not know / No opinion

(859 responses, 0 skipped)

If no, why not?

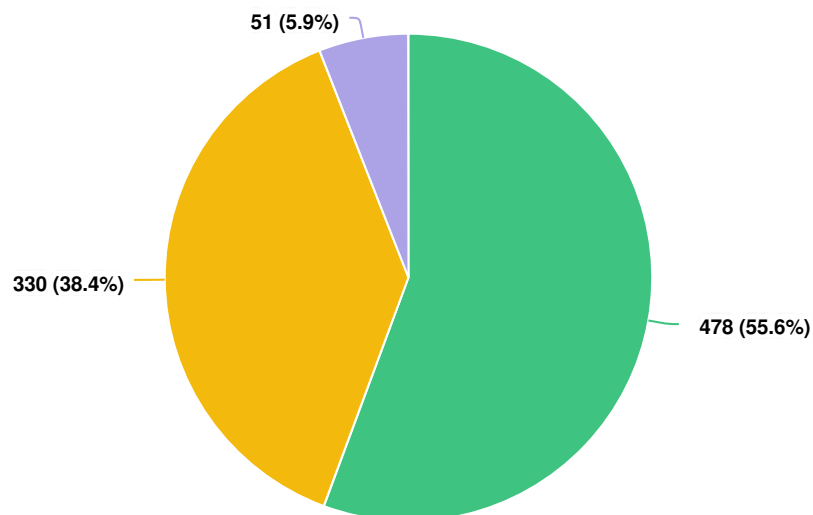


Question options

- User fees already too high
- Rather see the money spent on other services
- Do not agree with the overall curbside collection program
- Other

Optional question (859 responses, 0 skipped)

Would you support yard and garden waste collection if it were offered at an additional cost? Please note, yard and garden ...

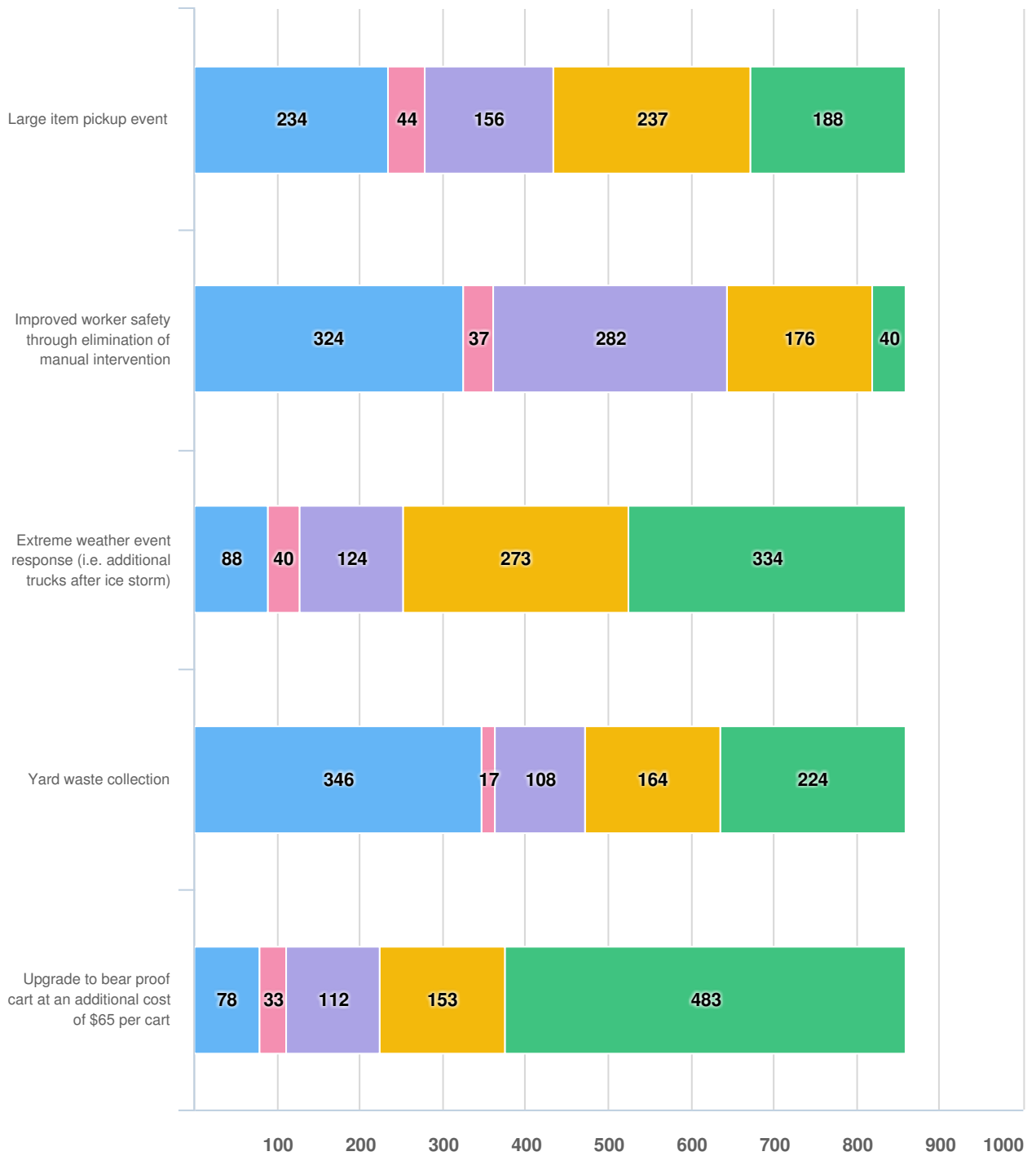


Question options

- Yes
- No
- Do not know / No opinion

(859 responses, 0 skipped)

Please rate the level of importance:

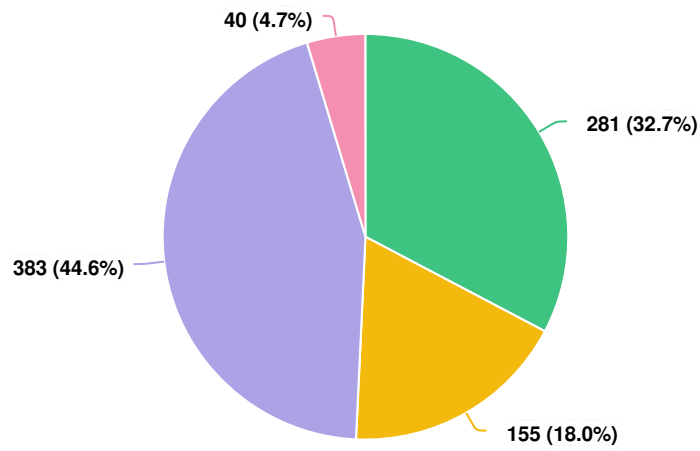


Question options

- Not important ● Somewhat important ● Very important but NOT willing to support the additional cost
- Do not know / No opinion ● Very important AND willing to support the additional cost

(859 responses, 0 skipped)

What is your preference?

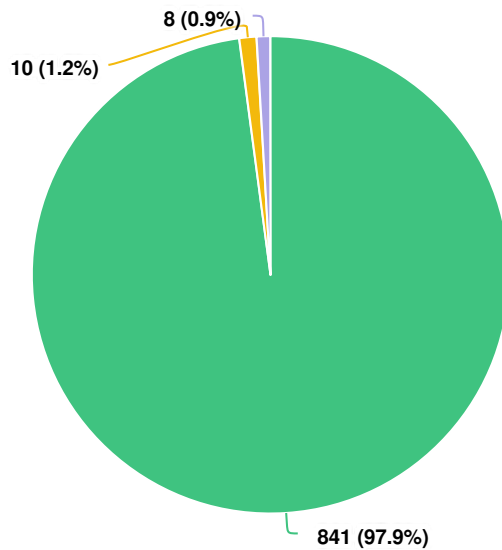


Question options

- No change – manual collection for garbage, recycling and food waste
- Automated collection for garbage, recycling and food waste (at an increased cost)
- Automated collection for garbage, recycling, food AND yard and garden waste (at an increased cost)
- Do not know / No opinion

(859 responses, 0 skipped)

Do you receive RDN curbside service?

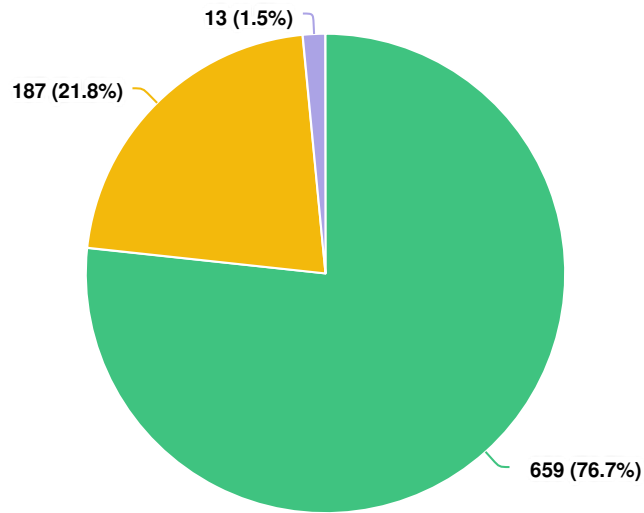


Question options

- Yes
- No
- Do not know

(859 responses, 0 skipped)

On average, how much garbage does your household generate for each pickup (every other week)?



Question options

- Less than 100 litres / 50 pounds
- More than 100 litres / 50 pounds
- Do not know

(859 responses, 0 skipped)

How satisfied are you with the current curbside collection service?

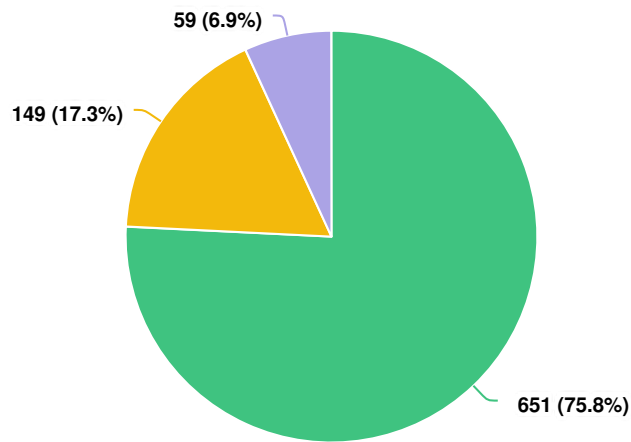


Question options

● Satisfied
 ● Somewhat satisfied
 ● Very satisfied
 ● Do not know / No opinion
 ● Not at all satisfied

(859 responses, 0 skipped)

Which curbside calendar system would you prefer?

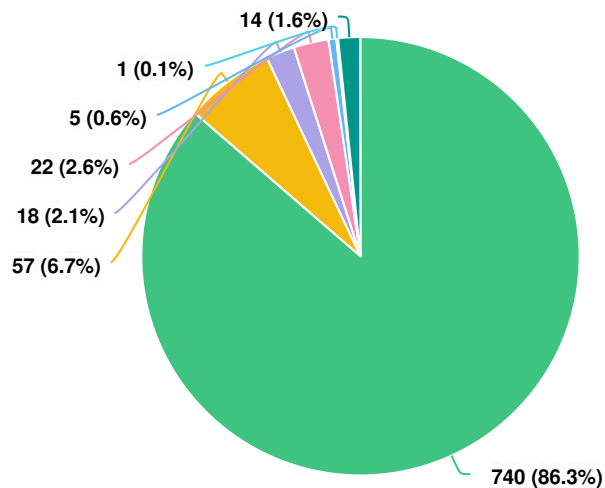


Question options

- Add-a-day (i.e. your curbside pickup would shift one day later after each statutory holiday; this is the existing system)
- Fixed-day (i.e. your curbside pickup would always be collected on the same week day; this system would have an increased cost)
- Do not know / No opinion

(859 responses, 0 skipped)

What type of home do you live in?

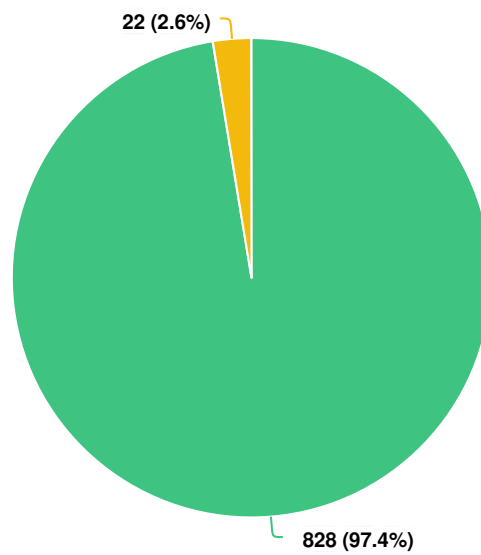


Question options

- Single family home
- Single family home with secondary suite
- Mobile home
- Duplex
- Quadplex
- Do not know
- Other

Optional question (857 responses, 2 skipped)

Do you live at your home full time or part time?

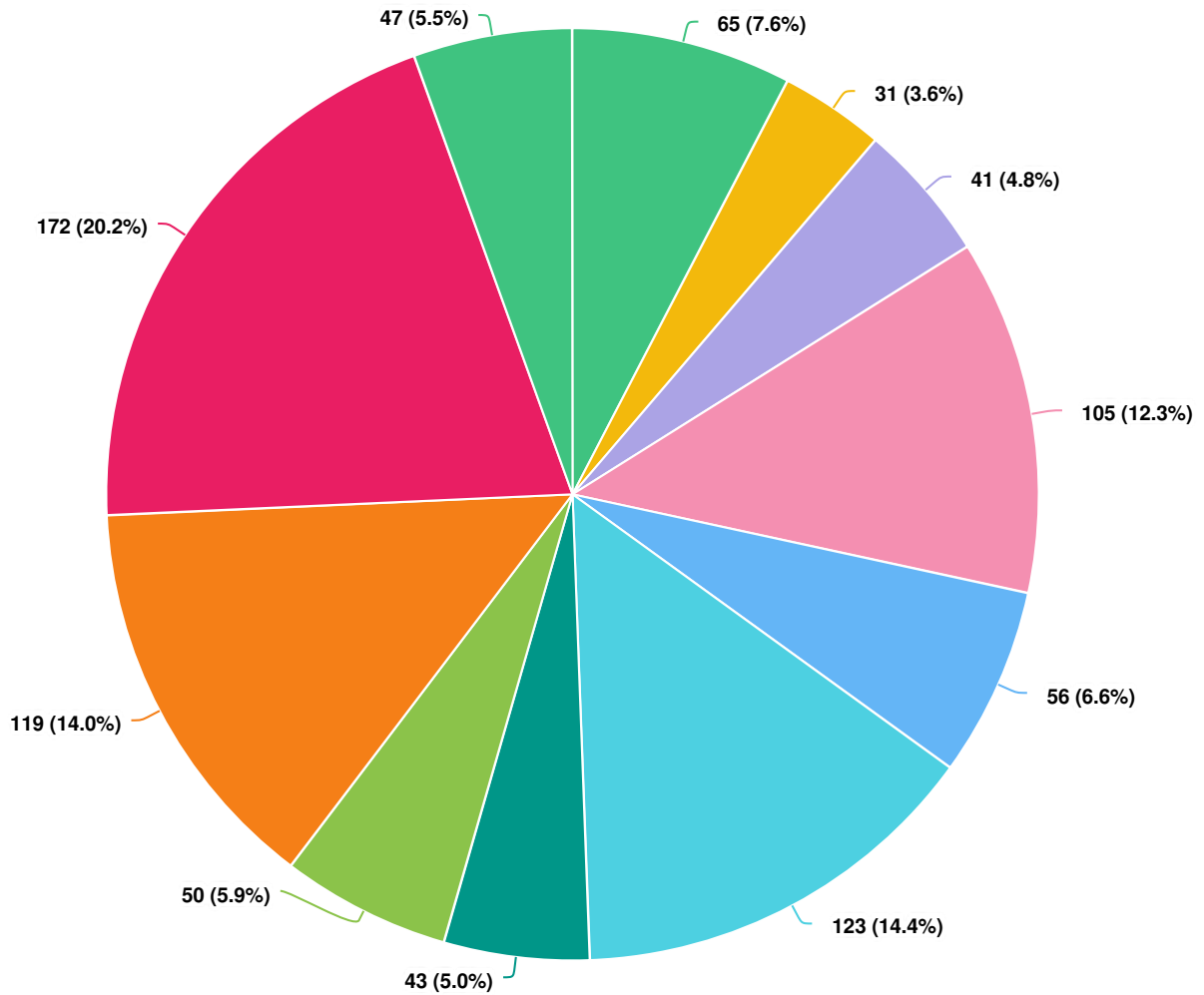


Question options

- Full time
- Part time / Seasonal

Optional question (850 responses, 9 skipped)

Where in the region do you live?

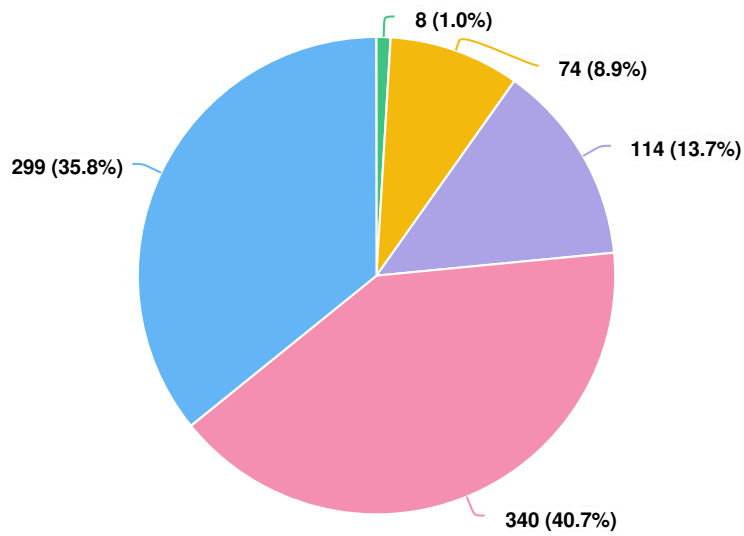


Question options

- Area A - Cassidy, Cedar, Yellowpoint, South Wellington
 ● Area B - Gabriola, DeCourcy, Mudge Islands
- Area C - Extension, Arrowsmith-Benson, East Wellington, Pleasant Valley
 ● Area E - Nanoose Bay
- Area F - Coombs, Hilliers, Errington
 ● Area G - French Creek, Dashwood, Englishman River
- Area H - Shaw Hill, Qualicum Bay, Deep Bay, Bowser
 ● District of Lantzville
● City of Parksville
- Town of Qualicum Beach
 ● The City of Nanaimo (does not receive RDN curbside service)

Optional question (852 responses, 7 skipped)

What age group do you fall into?

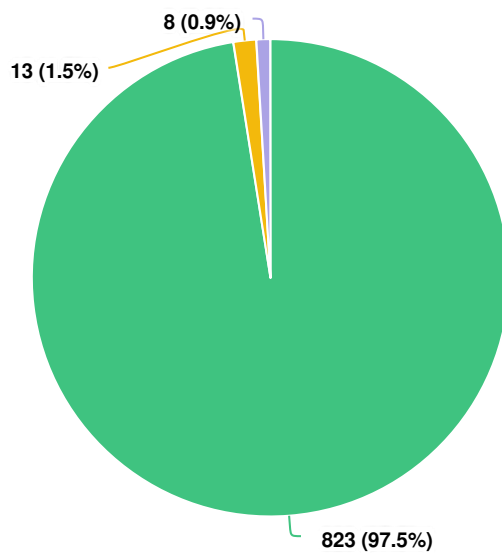


Question options

- 18-25
- 26-35
- 36-45
- 46-65
- Over 65

Optional question (835 responses, 24 skipped)

Do you have a good understanding of the recycling and food waste programs?

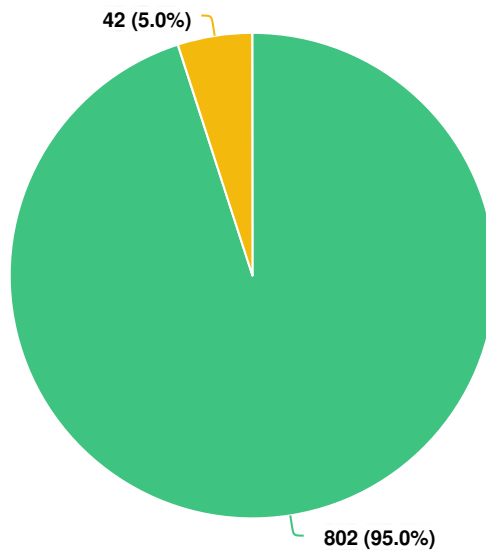


Question options

- Yes
- No
- Do not know / No opinion

Optional question (844 responses, 15 skipped)

Do you use recycling depots / drop off services?

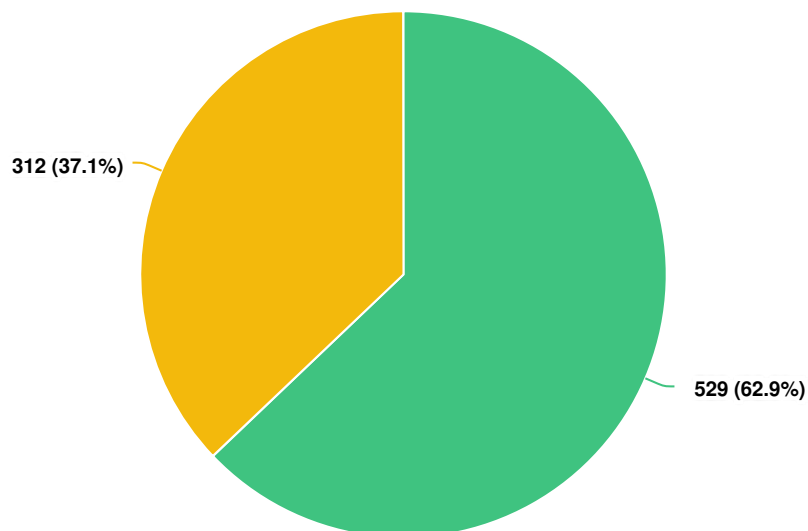


Question options

- Yes
- No

Optional question (844 responses, 15 skipped)

Are you aware the RDN board has approved a new Solid Waste Management plan, which aims to divert 90% of the waste away from...

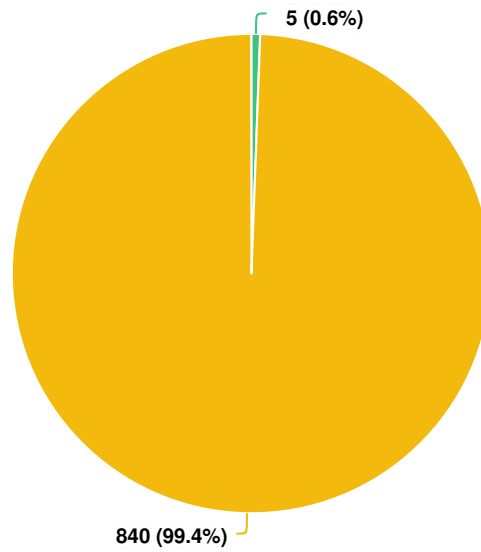


Question options

- Yes
- No

Optional question (841 responses, 18 skipped)

Do you work in the waste industry?

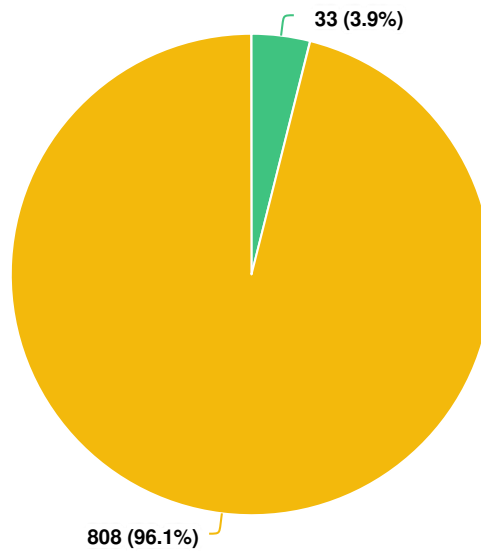


Question options

- Yes
- No

Optional question (845 responses, 14 skipped)

Do you have any Solid Waste Services related questions you wish the RDN to contact you about?

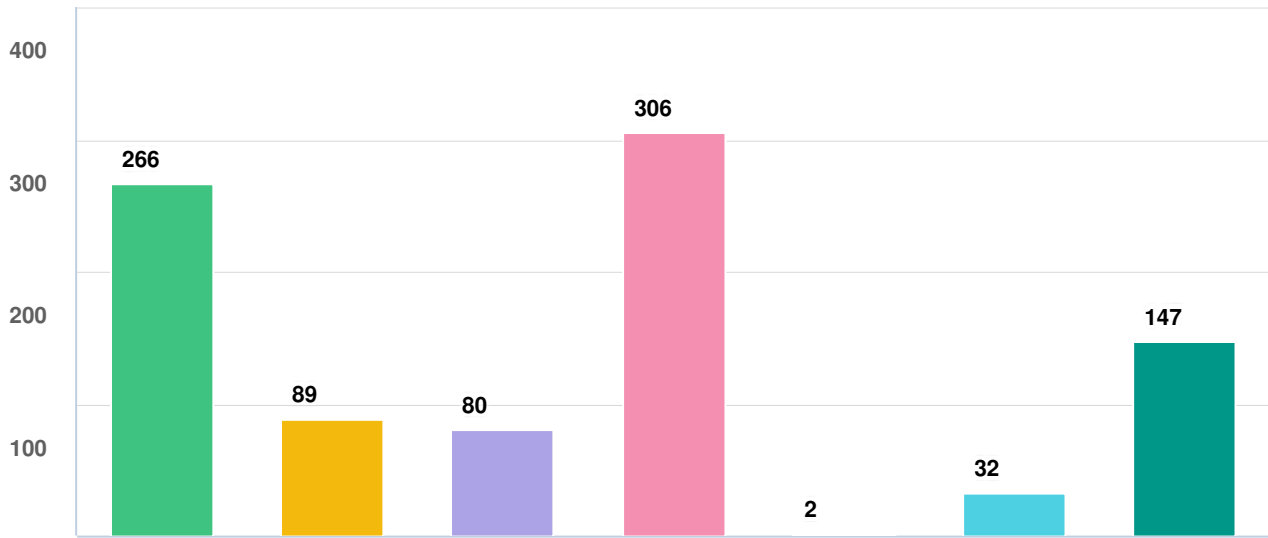


Question options

- Yes
- No

Optional question (841 responses, 18 skipped)

How were you directed to this survey?

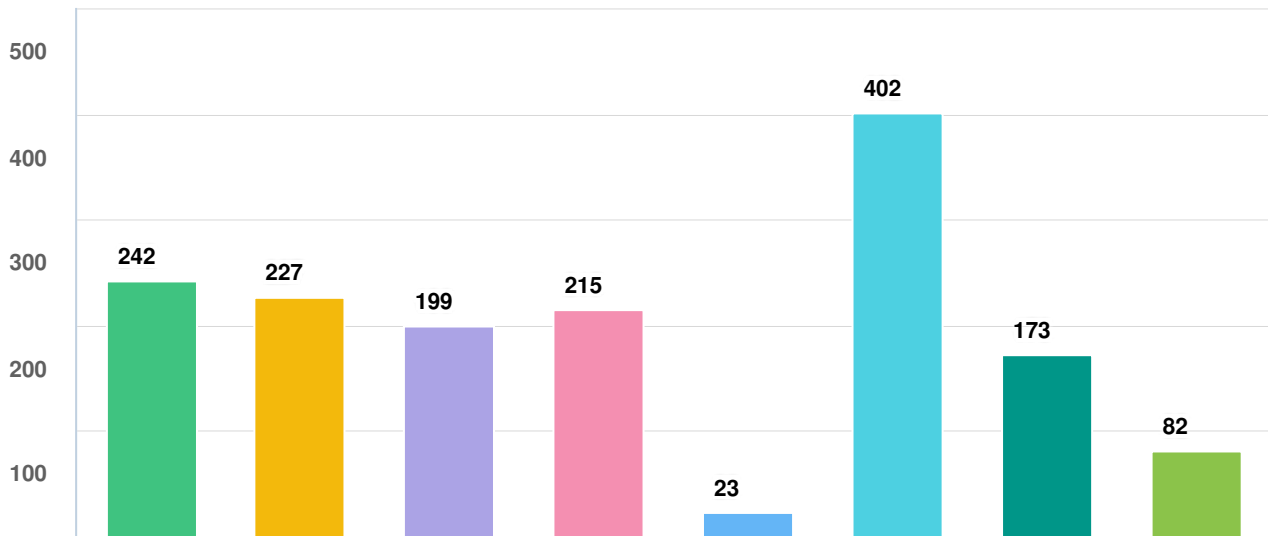


Question options

- Newspaper
- RDN website
- RDN Curbside app
- Social media (Facebook and Twitter)
- Radio
- Zero Waste newsletter
- Other

Optional question (859 responses, 0 skipped)

How would you prefer to receive information about the RDN's Solid Waste management and recycling programs?

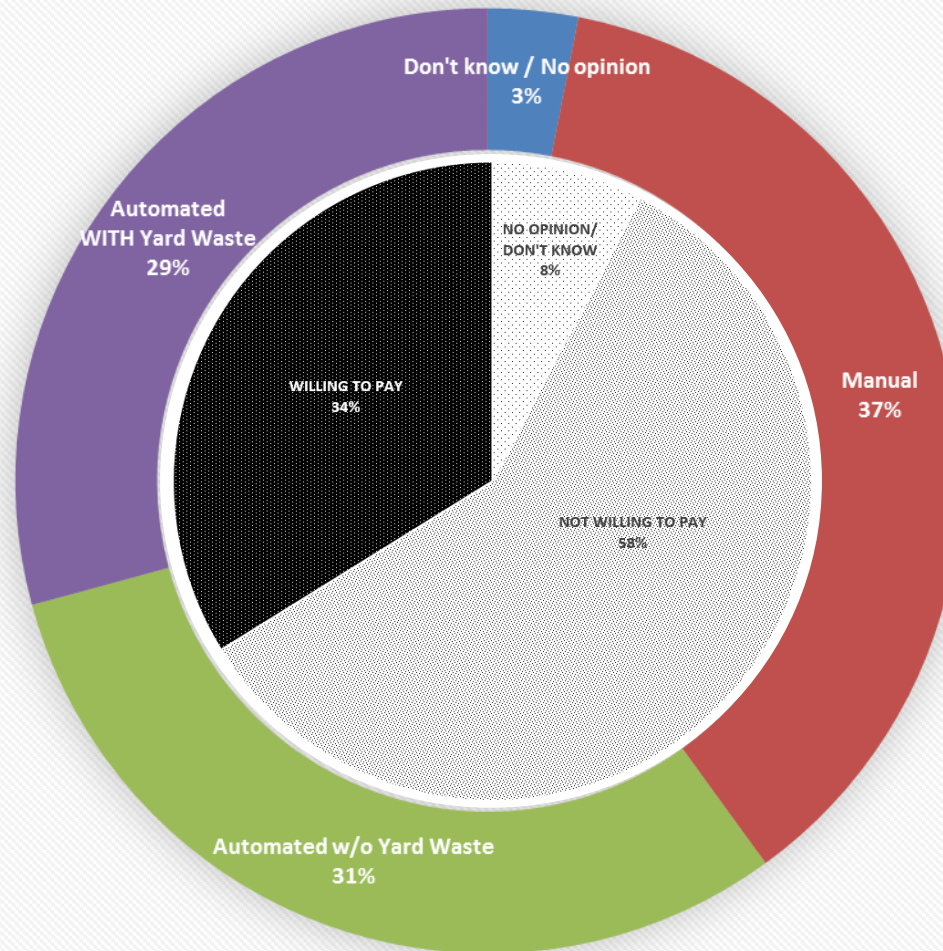


Question options

- Newspaper
- RDN website
- RDN Curbside app
- Social media (Facebook and Twitter)
- Radio
- Direct mailout (curbside collection calendar, Zero Waste newsletter)
- Utility bill inserts
- Other

Optional question (859 responses, 0 skipped)

Area A - Cassidy, Cedar, Yellowpoint, South Wellington



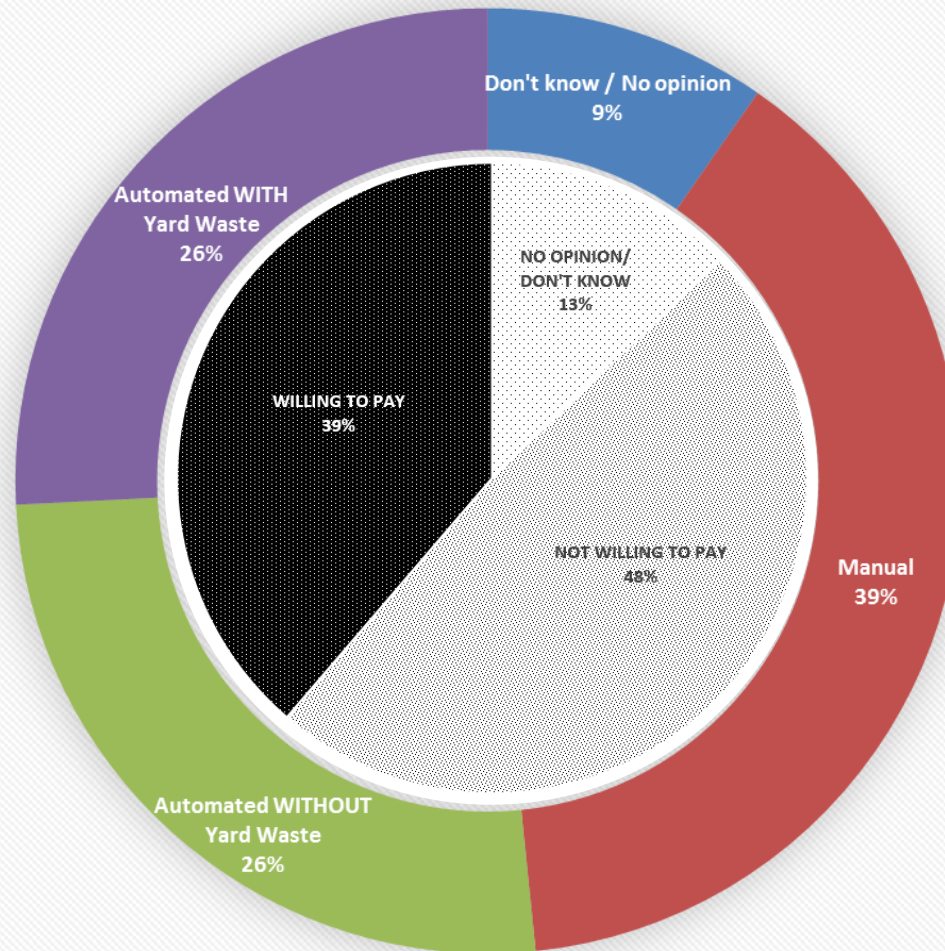
Legend

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

Area B - Gabriola, DeCourcy, Mudge Islands



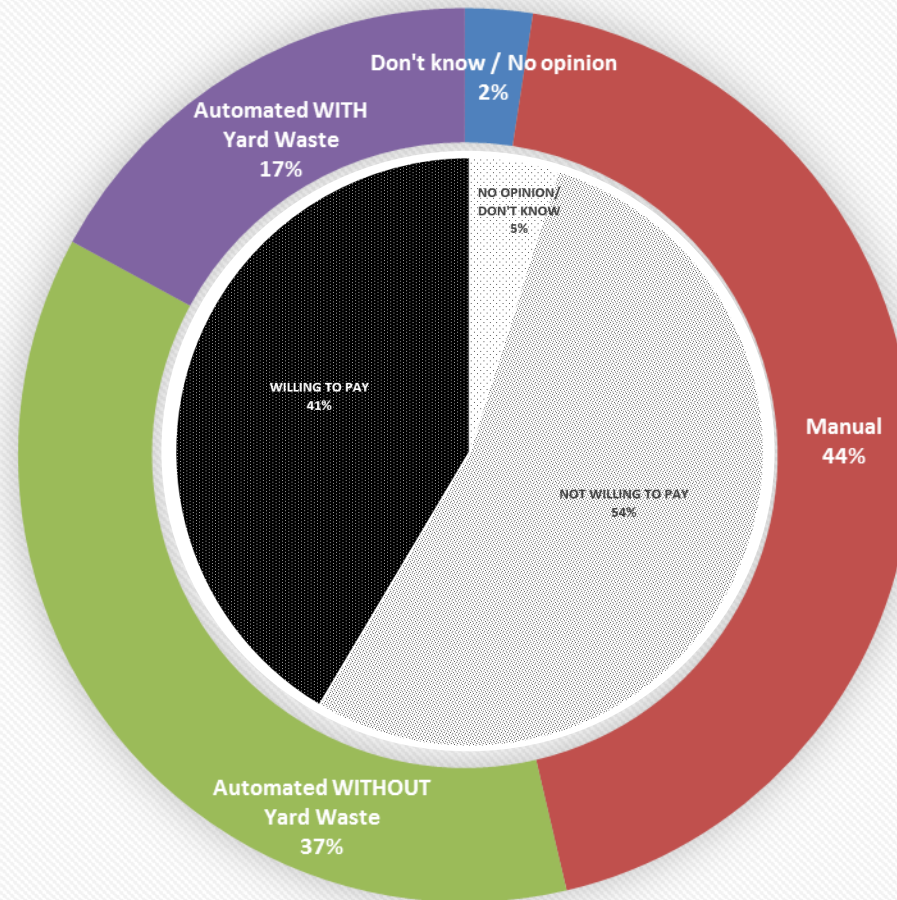
Legend

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

Area C - Extension, Arrowsmith-Benson, East Wellington, Pleasant Valley



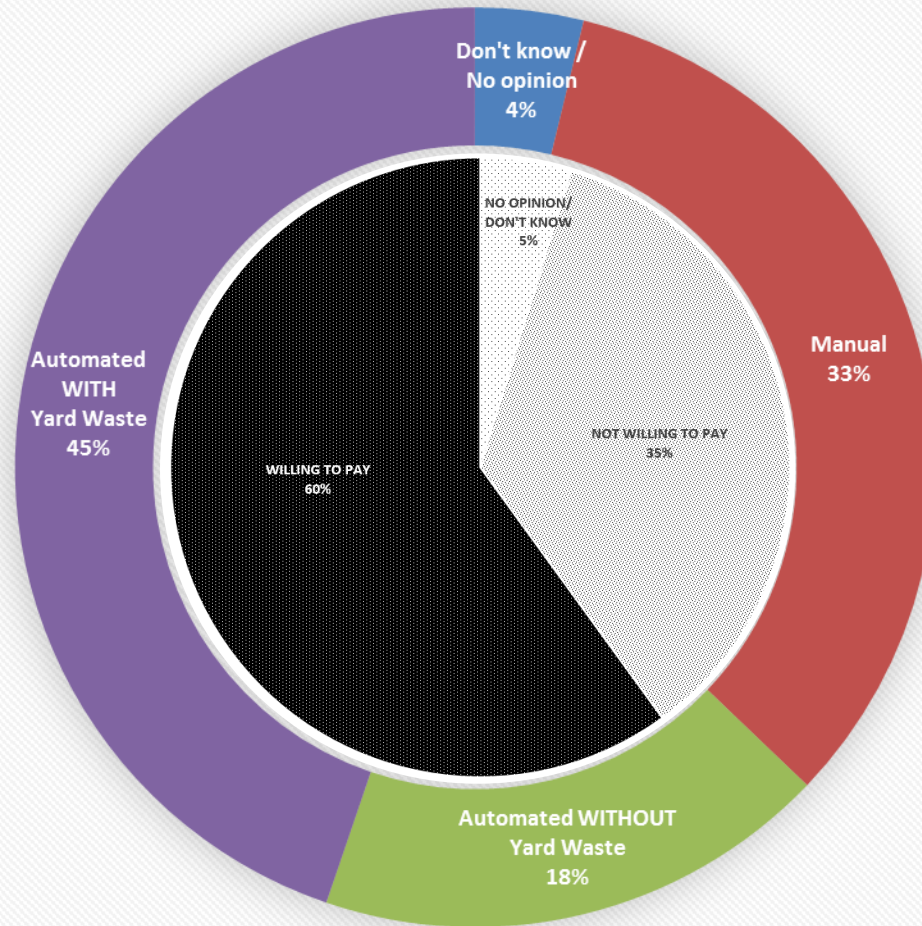
Legend

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

Area E - Nanoose Bay



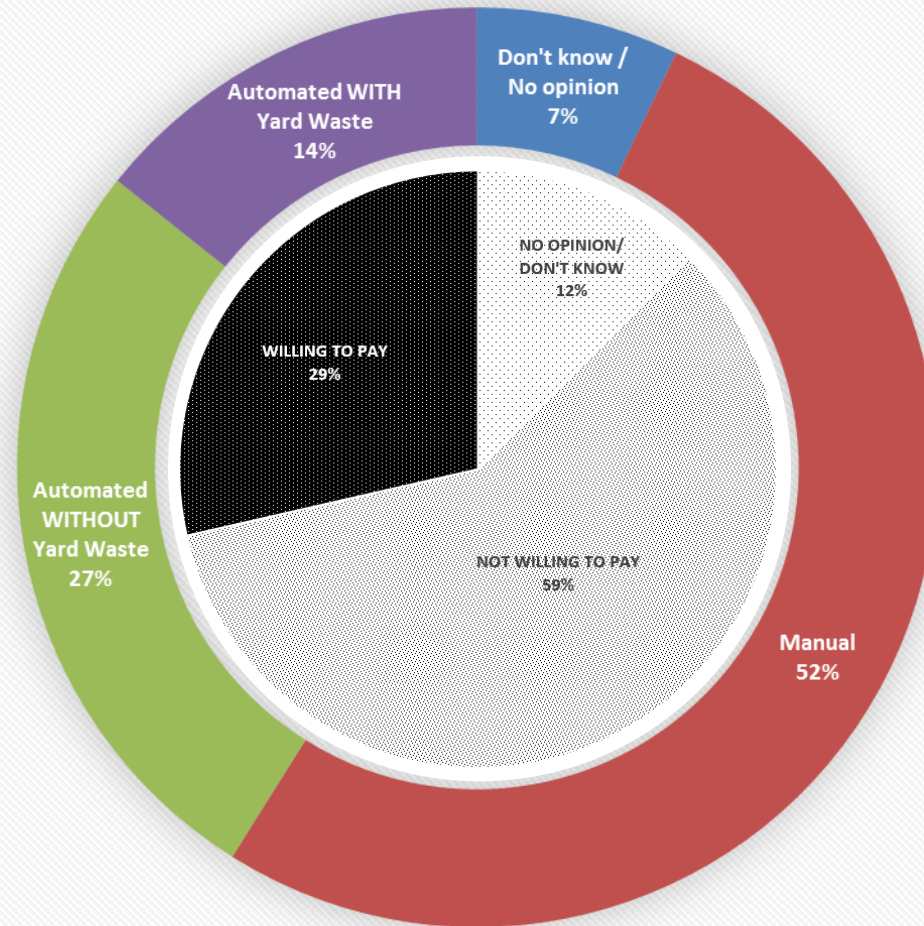
Legend

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

Area F - Coombs, Hilliers, Errington



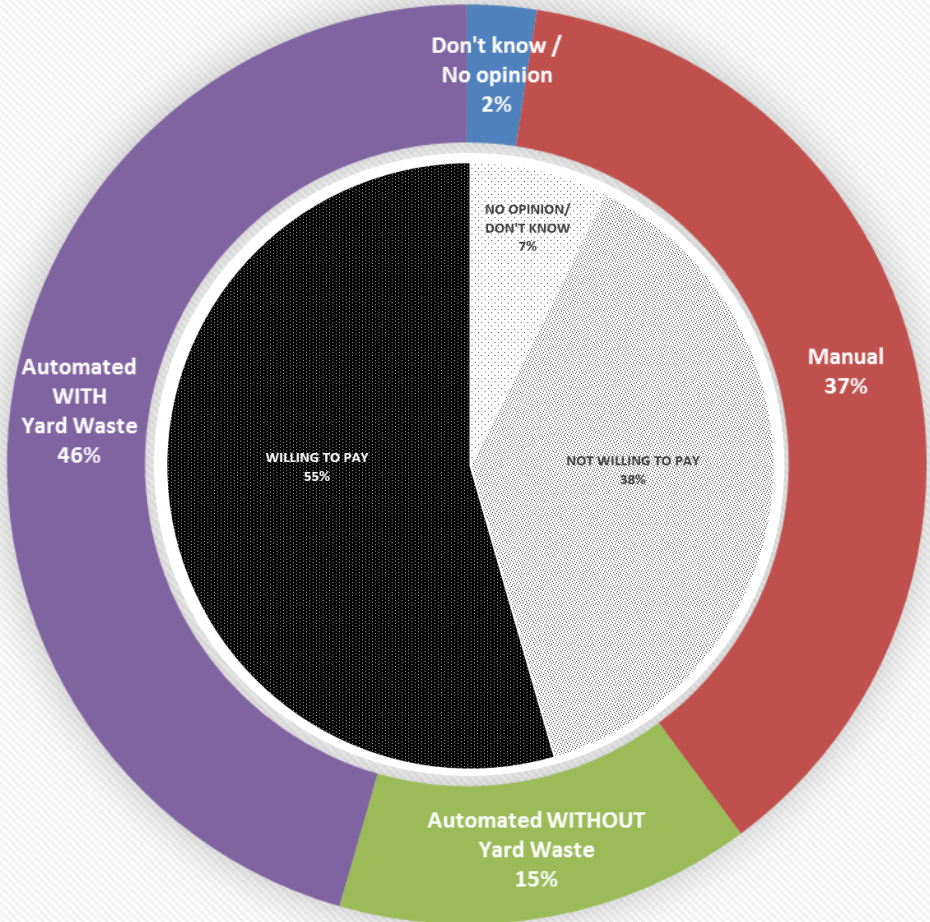
Legend

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

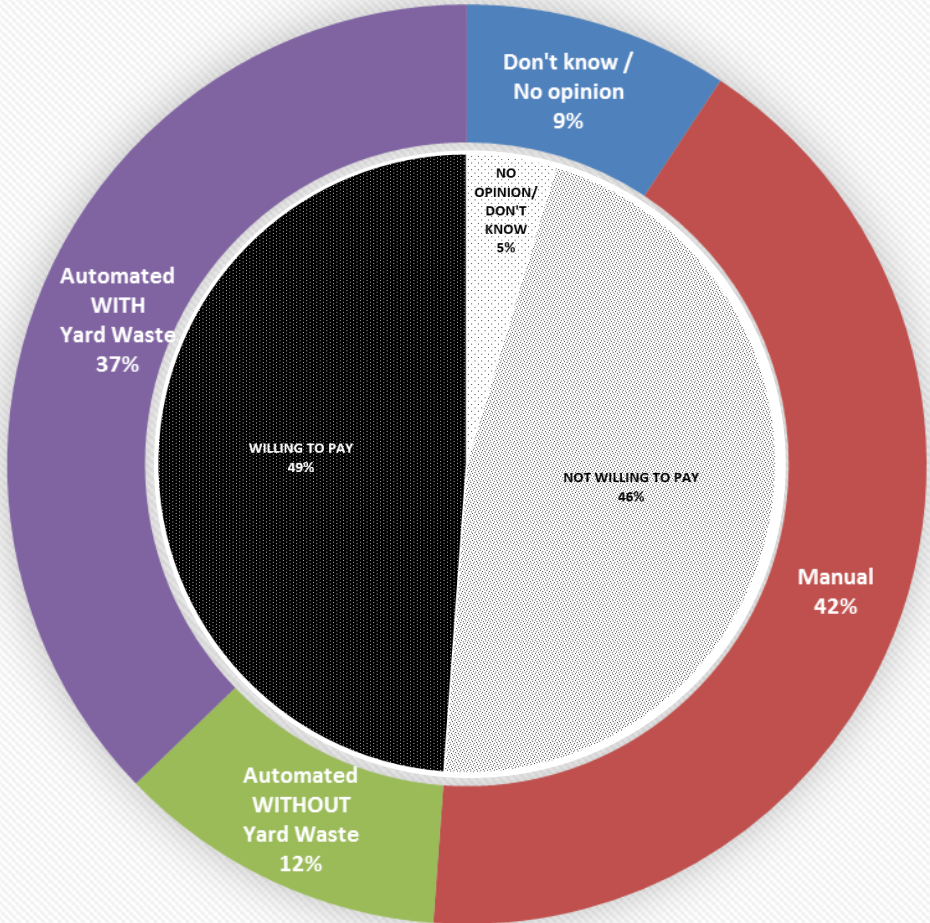
Inner Circle – All respondents' willing to pay for automated collection with consideration for yard waste if offered at an additional cost

Area G - French Creek, Dashwood, Englishman River



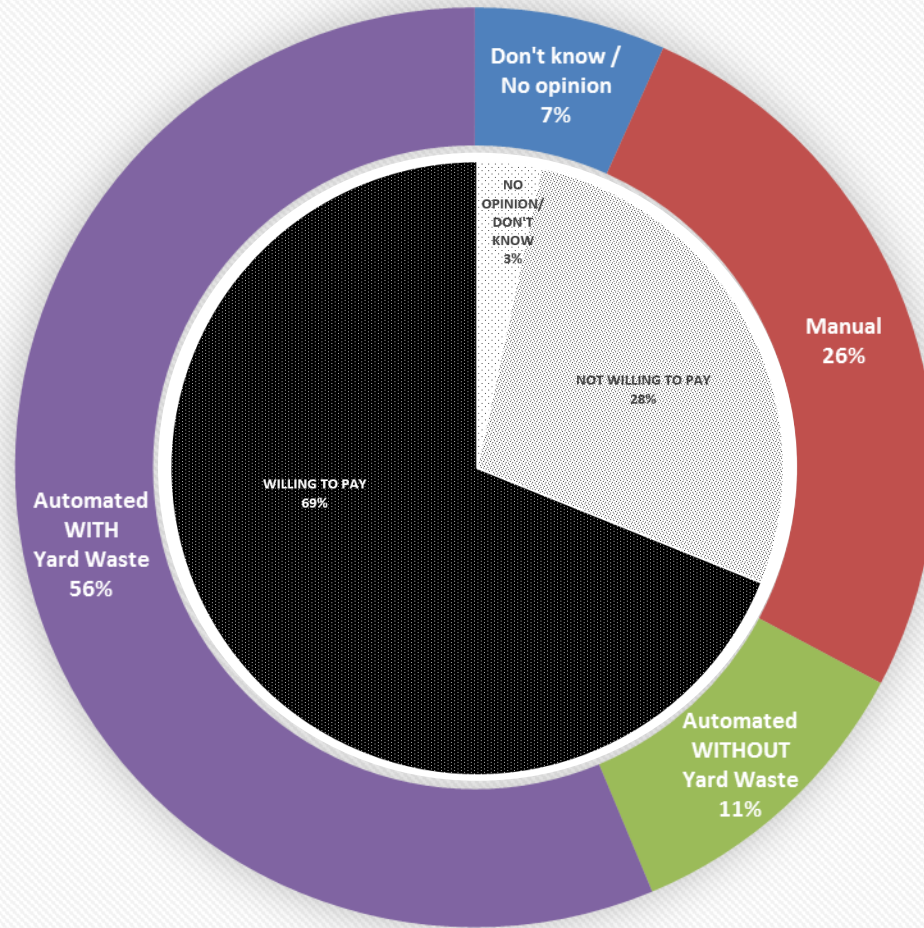
Legend
Outer Ring – All respondents’ collection preferences including cost considerations
 ■ Do not know / No opinion ■ Manual Collection ■ Automated Collection WITHOUT Yard and Garden Waste ■ Automated Collection WITH Yard and Garden waste
Inner Circle – All respondents’ willing to pay for automated collection with consideration for yard waste if offered at an additional cost

Area H - Shaw Hill, Qualicum Bay, Deep Bay, Bowser



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

City of Parksville



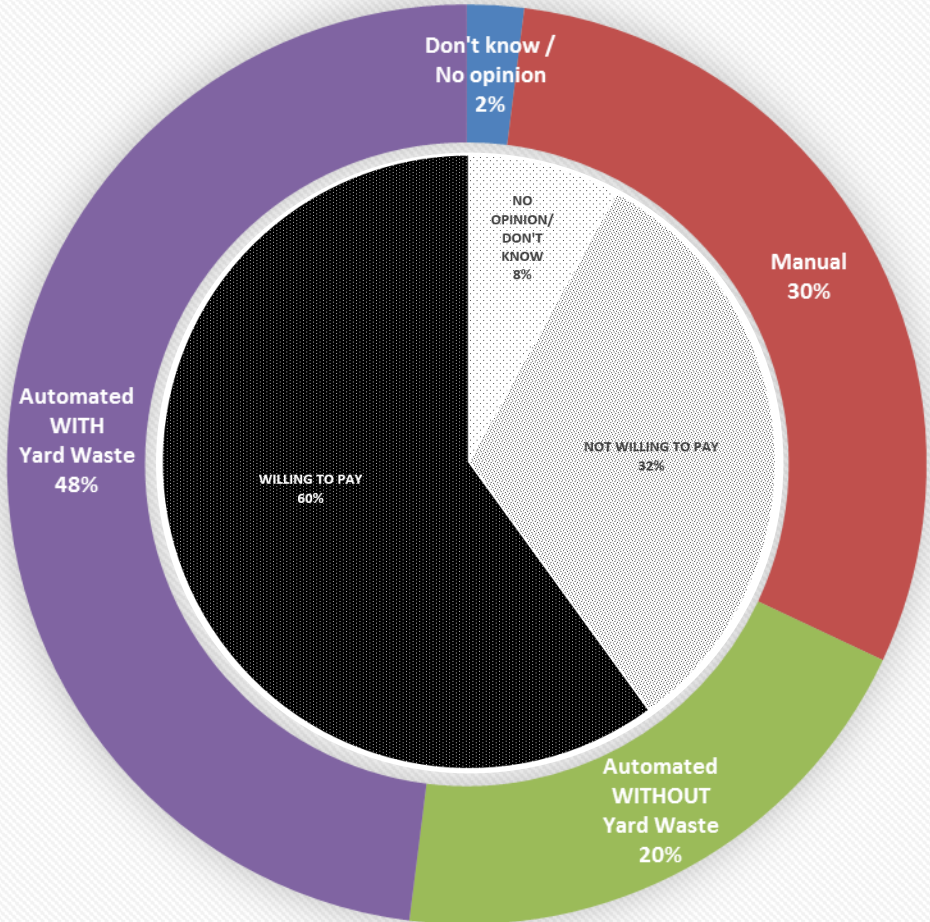
Legend

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

District of Lantzville

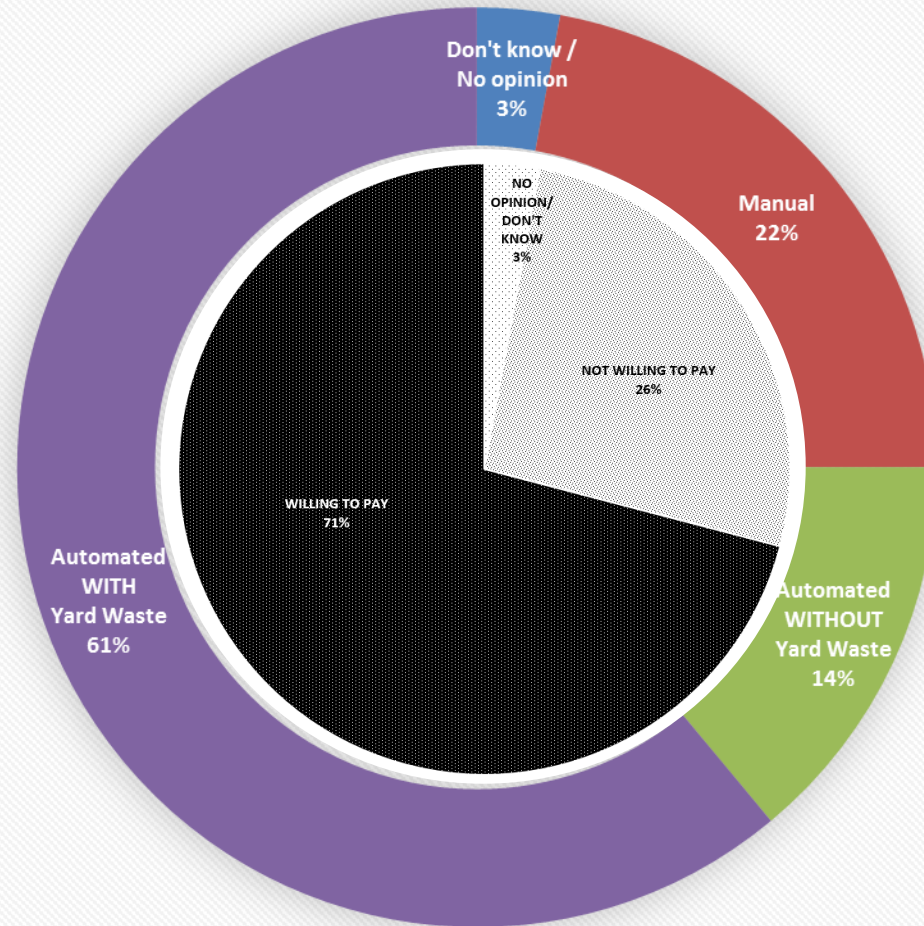


Legend
Outer Ring – All respondents’ collection preferences including cost considerations

- 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

Town of Qualicum Beach



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

Participant Distribution Breakdown

Catchment Area	Population	% of Total Population	# of Participants
City of Parksville	5302	19%	3
District of Lantzville	1428	5%	1
Town of Qualicum Beach	4046	14%	2
Electoral Area A	2915	10%	1
Electoral Area B	2533	9%	1
Electoral Area C	1108	4%	1
Electoral Area E	3192	11%	2
Electoral Area F	2578	9%	1
Electoral Area G	2655	9%	1
Electoral Area H	2864	10%	1
Total	28621		14

1. Manual vs. Automated

- 75% of participants were inclined to switch to automated service
 - 42% of participants in favor of yard waste collection
 - Predominately city residents with limited access to yard disposal facilities
 - Resident in favour for comingled food and yard waste to reduce odour and maggots
 - 58% against yard waste collection
 - Predominately rural residents that either self-hauls to disposal facilities or backyard compost/backyard burn
 - Strata residents already pay for yard waste disposal through their strata fees and should have the ability to opt out of the yard waste collection
 - Wood chipping programs are offered at both City of Parksville (once per year) and Town of Qualicum Beach (twice per year) which are heavily utilized by residents
- 75% of participants were willing to pay additional cost to improve worker safety
 - Participants that were not willing to pay the additional cost associated to improve worker safety were of the opinion that it is the responsibility of the RDN, and residents should not be burdened with the added cost
- Consideration for lawn maintenance companies in the region that will be affected if yard collection is made available , especially for strata properties
- 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
 - The ideal cart size is either 80 or 100 L per household
 - Larger cart sizes will likely encourage more waste
 - There should be an option for residents to purchase larger carts to accommodate their household needs
- Recycling
 - The ideal cart size should be 100 L per household
 - There should be an option for residents to opt for large carts at no charge
- Organics
 - The ideal cart size should be 80 L per household without yard waste collection, and 120 L per household with yard waste collection
 - Participants noted residents will likely still put grass clippings in the organics cart even if they are not subscribed to the yard waste collection service, may require extra staffing for enforcement
- With the RDN/contractor taking ownership of the carts, residents taking ownership of a new property should have the opportunity to swap out cart sizes to best suit their household needs
- 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.
- Bear proof kits should be an option, only on an as needed basis, as it is cost prohibitive for many at \$65 per kit

Size Delta	Container Size (Gallons)	Cart Size (L)	Current Manual Program		Estimated # of Households	Estimated Annual Fee*			
			100L Container Equivalent	User Fee		Option 1	Option 2	Option 3	
						Manual Collection	Automated Collection without Yard Waste	Automated Collection with 80L Yard Waste	Automated Collection with 120L Yard Waste
-20%	21	80	0.8		4350		\$ 160	\$ 175	\$ 205
							-6%	3%	21%
Default Size	26	100	1	\$ 145	21750	\$ 170	\$ 200	\$ 215	\$ 245
							18%	26%	44%
20%	32	120	1.2		1840		\$ 240	\$ 255	\$ 285
							41%	50%	68%
140%	64	240	2.4		600		\$ 480	\$ 495	\$ 525
							182%	191%	209%
260%	96	360	3.6		460		\$ 720	\$ 735	\$ 765
							324%	332%	350%

Example Fee Schedule for Proposed Financial Incentive

Size Delta	Container Size (L)	Annual Fee (12 lifts)	Additional Lift (ea)
-20%	80	\$ 137.60	\$ 1.60
Default Size	100	\$ 172.00	\$ 2.00
20%	120	\$ 206.40	\$ 2.40
140%	240	\$ 412.80	\$ 4.80
200%	360	\$ 516.00	\$ 6.00

Number of Pickups Per Year	Container Size				
	80 L	100 L	120 L	240 L	360 L
12	\$ 137.60	\$ 172.00	\$ 206.40	\$ 412.80	\$ 516.00
13	\$ 139.20	\$ 174.00	\$ 208.80	\$ 417.60	\$ 522.00
14	\$ 140.80	\$ 176.00	\$ 211.20	\$ 422.40	\$ 528.00
15	\$ 142.40	\$ 178.00	\$ 213.60	\$ 427.20	\$ 534.00
16	\$ 144.00	\$ 180.00	\$ 216.00	\$ 432.00	\$ 540.00
17	\$ 145.60	\$ 182.00	\$ 218.40	\$ 436.80	\$ 546.00
18	\$ 147.20	\$ 184.00	\$ 220.80	\$ 441.60	\$ 552.00
19	\$ 148.80	\$ 186.00	\$ 223.20	\$ 446.40	\$ 558.00
20	\$ 150.40	\$ 188.00	\$ 225.60	\$ 451.20	\$ 564.00
21	\$ 152.00	\$ 190.00	\$ 228.00	\$ 456.00	\$ 570.00
22	\$ 153.60	\$ 192.00	\$ 230.40	\$ 460.80	\$ 576.00
23	\$ 155.20	\$ 194.00	\$ 232.80	\$ 465.60	\$ 582.00
24	\$ 156.80	\$ 196.00	\$ 235.20	\$ 470.40	\$ 588.00
25	\$ 158.40	\$ 198.00	\$ 237.60	\$ 475.20	\$ 594.00
26	\$ 160.00	\$ 200.00	\$ 240.00	\$ 480.00	\$ 600.00

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

FROM: Jane Hamilton **FILE:** 1240-20-SW
Superintendent, Disposal Operations

SUBJECT: Crawler Dozer Purchase

RECOMMENDATION

That the Board approve the purchase of a 2018 Case 2050M Crawler Dozer with a Waste Handling Package from The Inland Group for \$434,520 (exclusive of taxes).

SUMMARY

The 2018 Solid Waste Services approved budget contemplates the purchase of a new tracked machine for waste processing. A Request for Proposals (RFP) was issued on August 17, 2018 and was publicly advertised on the RDN and BC Bid websites. Six responses were received by the September 11, 2018 closing date.

The Inland Group's submission was the highest ranked proposal as well as the lowest cost proposal of the submissions that met the technical specifications within the published budget.

BACKGROUND

Tracked heavy-equipment is relied on heavily in a landfill environment due to their versatility to both provide strength in pushing power as well as ability to traverse land surfaces that cannot be maneuvered with rubber tires. The RDN Regional Landfill currently owns and operates a waste-handling track-loader with approximately 9600 hours of usage, which is scheduled and budgeted for replacement in 2018 in accordance with our asset management plan and 2018 capital budget. The tracked equipment works in tandem with the waste compactor to distribute and compact the waste. The tracked equipment is also used for other earthworks including road building and application of landfill cover material.

The RFP specified requirements including minimum operating weight, track-width and a guard system that allows efficient work in solid waste. The RFP also identified preferences for components such as a six-way blade, Tier 4 engine and HEPA cab-air filtrations system. These criteria set out a tracked machine that offers sufficient push power and wide enough tracks for machine flotation and ability to crawl on side-slopes in saturated conditions.

The RFP closed on September 11, 2018 and six submissions were received. Of the six submissions, two proposals met all of the technical specifications and were within the published budget:

- The Inland Group - \$434,520; and
- Finning - \$540,000.

Proposals were evaluated against the point-rated criteria provided in the RFP, and it was determined that the proposal with the highest ranking score was submitted by The Inland Group for a 2018 Case 2050M Crawler Dozer with a Waste Handling Package. Of the submissions that meet all of the technical specifications and were within the published budget, the Inland Group's proposal offers:

- the best warranty at 3 years/3000 hours full factory warranty;
- the first 3 years of the telematics subscription package at no cost;
- the lowest 6-year scheduled maintenance cost;
- the lowest field rate for a heavy-duty mechanic;
- no minimum charge or fees for calls to the RDN Landfill;
- the widest track width at 36";
- the lowest capital cost; and
- the shortest delivery lead time.

ALTERNATIVES


1. That the purchase of a 2018 Case 2050M Crawler Dozer with a Waste Handling Package from the Inland Group for an amount of \$434,520 (exclusive of taxes) be approved.
2. Provide alternate direction to staff.

FINANCIAL IMPLICATIONS

The current financial plan has scheduled replacement of the tracked loader in 2018. The cost of the proposed waste handling track-type tractor is \$143,780 less than the approved budget amount of \$578,300 (\$467,300 plus the trade-in value).

STRATEGIC PLAN IMPLICATIONS

The purchase of a 2018 Case 2050M Crawler Dozer from the Inland Group is consistent with the Strategic Plans focus on funding infrastructure in support of our core services employing an asset management focus.



Jane Hamilton, Superintendent, Disposal Operations
jhamilton@rdn.bc.ca
September 18, 2018

Reviewed by:

- L. Gardner, Manager, Solid Waste
- K. Felker, Purchasing Manager, Finance
- R. Alexander, General Manager, RCU

- J. Beauchamp, Director of Finance
- G. Garbutt, Acting Chief Administrative Officer