

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING**

**THURSDAY, NOVEMBER 5, 2015, 5:00 PM - 7:30 PM
RDN Board Chambers**

A G E N D A

PAGES

CALL TO ORDER

DELEGATIONS

MINUTES

3-7 Minutes of the Regional Solid Waste Advisory Committee meeting held Sept. 17, 2015.

BUSINESS ARISING FROM THE MINUTES

COMMUNICATIONS/CORRESPONDENCE

8-9 Letter from NextUse Recycling Ltd. dated October 27, 2015 re. Mixed Waste Recovery Facility.

10-14 SWANA Article re. *A Comparative Analysis of Source-Separation and Mixed Waste Recycling Systems in Charlotte, NC, and Montgomery, AL.*

UNFINISHED BUSINESS

REPORTS

15-21 Curbside Collection Program – Compliance and Enforcement to Improve Diversion.
(J. Ainge – Presentation with Group Discussion to Follow)

22-24 Curbside Collection Program – Household Glass Collection.
(M. Larson - Presentation with Group Discussion to Follow)

25-30 Curbside Collection Program – Yard Waste Collection.
(S. Horsburgh - Presentation with Group Discussion to Follow)

ADDENDUM

SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING MINUTES

31-32 Minutes of the Solid Waste Management Select Committee meeting held October 7, 2015.

BUSINESS ARISING FROM DELEGATIONS OR COMMUNICATIONS

NEW BUSINESS

ADJOURNMENT

Distribution:

Alec McPherson	Chair, RDN Director	Michael Recalma	Qualicum First Nation
Jim Kipp	Deputy Chair	Chief & Council	Nanoose First Nation
Frank Van Eynde	Member at Large	Chief & Council	Snuneymuxw First Nation
Derek Haarsma	Business Representative	Bob Weir	Town of Qualicum Beach
Ed Walsh	Waste Management Industry	Fred Spears	District of Lantzville
Wally Wells	Business Representative	Charlotte Davis	City of Nanaimo
Jan Hastings	Non Profit Representative	Al Leuschen	Ministry of Environment
Jim McTaggart-Cowan	Member at Large	Karen Muttersbach	Environment Canada
John Finnie	Member at Large	Glenn Gibson	Island Health
Craig Evans	Member at Large		
Ellen Ross	Member at Large		
Gerald Johnson	Member at Large		
Michele Green	Member at Large		
Amanda Ticknor	Member at Large		
Michael Tripp	Business Representative		
Stewart Young Jr.	Business Representative		
Larissa Coser	Community Representative		

RDN Staff:

Larry Gardner	Manager, Solid Waste Services, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Dennis Trudeau	GM Transportation & Solid Waste Services, RDN
Meghan Larson	Special Projects Coordinator
Jeff Ainge	Zero Waste Coordinator, RDN
Rebecca Graves	Recording Secretary, RDN

For information only:

Regional Board Members: CAO's: Paul Thorkelsson (RDN), Brad McRae (District of Lantzville), Fred Manson (City of Parksville), Daniel Sailland (Town of Qualicum Beach), Ted Swabey (City of Nanaimo)

**REGIONAL DISTRICT OF NANAIMO
REGIONAL SOLID WASTE ADVISORY COMMITTEE MEETING
HELD ON THURSDAY, SEPTEMBER 17, 2015
BOARD CHAMBERS**

Present:

Alec McPherson	Chair, RDN Director
Craig Evans	Member at Large
John Finnie	Member at Large
Jim Kipp	RDN Director, Deputy Chair
Frank Van Eynde	Member at Large
Ellen Ross	Member at Large
Amanda Ticknor	Member at Large
Larissa Coser	Community Representative
Derek Haarsma	Business Representative
Jan Hastings	Non Profit Representative
Michael Tripp	Business Representative
Wally Wells	Business Representative
Stewart Young Jr.	Business Representative
Charlotte Davis	City of Nanaimo
Ed Walsh	Waste Management Industry
John Marsh	Town of Qualicum Beach

Also in Attendance:

Larry Gardner	Manager of Solid Waste, RDN
Rebecca Graves	Recording Secretary, RDN
Sharon Horsburgh	Senior Solid Waste Planner, RDN
Meghan Larson	Special Projects Coordinator, RDN

Regrets:

Dennis Trudeau	GM, Transportation & Solid Waste Services, RDN
Chief & Council	Nanoose First Nation
Chief & Council	Snuneymuxw First Nation
Glenn Gibson	Island Heath
Al Leuschen	Ministry of Environment
Karen Muttersbach	Environment Canada
Michael Recalma	Qualicum First Nation
Fred Spears	District of Lantzville
Gerald Johnson	Member at Large
Jim McTaggart-Cowan	Member at Large
Michele Green	Member at Large

CALL TO ORDER

The Chairperson called the meeting to order at 5:07 PM.

DELEGATES

MINUTES

MOVED F. Van Eynde, SECONDED J. Kipp, that the minutes from the meeting of the Regional Solid Waste Advisory Committee regular meeting held July 7, 2015, be adopted. CARRIED

BUSINESS ARISING FROM THE MINUTES

COMMUNICATIONS/CORRESPONDENCE

UNFINISHED BUSINESS

REPORTS

Update on Communications and SWMP Review Survey. (S. Horsburgh)

S. Horsburgh provided a presentation on the status of the Stage 2 Communications and Consultation Plan. A report outlining the Stage 2 Communications is currently being developed and will be submitted to the Ministry of Environment. The report will outline the communication activities and will demonstrate the RDN's commitment to actively engaging the public in debate with respect to the SWMP. In 2015, there will be 6 mail outs done discussing the SWMP Plan Review and Update, 2 online surveys and attendance at multiple summer and public events.

L. Coser commented on the alternatives given in the survey that financially the costs hadn't been mapped out.

L. Gardner replied that the next time the RDN goes out to the community it will be at another level of detail so that informed decisions can be made based on real numbers.

J. Hastings asked what some of the comments were from the community survey when they answered that they would pay more to maintain or increase services.

L. Gardner commented that it was more to engage with the public and the general sense indicated that they were willing to pay a bit more to have services increased.

Regulatory Authorities to Increase Diversion. (L. Gardner)

L. Gardner gave a presentation on regulatory tools to promote increased waste diversion which included providing an explanation of authorities that may be granted through a SWMP, explaining additional powers that Regional Districts may obtain and provided examples of how these additional powers may influence diversion.

C. Davies questioned why we would get haulers to work as agents but rather mandate anyone that generates waste to sort at the point of generation?

L. Gardner commented that to regulate at the source it would take an additional authority and staffing needs to do the enforcement towards people that don't behave.

J. Marsh questioned if the provisions are not in the SWMP you can't regulate or deal with it, how often does the SWMP change and how difficult is it to amend?

L. Gardner replied that about once every decade and then it takes a couple of years to complete.

M. Tripp remarked on why not put all the provisions in the SWMP and have the debate later.

J. Hastings asked what problems will all this solve?

L. Gardner commented that if the committee believes we can encourage people to do the right thing with diversion because we ask them to, then we don't need any of these provisions. If we believe there is a line and we want to cross that line to compel people to do the desired behavior, then regulatory tools are necessary. If we want diversion to increase over the next 15 years then how do we anticipate increasing diversion? Without these regulatory tools will we achieve the desired behaviour? If we do, then we don't need any of these tools.

S. Young questioned what is the RDN's opinion on the cost of diversion?

L. Gardner commented that if you were to look at mandatory waste collection, either by a single contracted hauler or municipal staff, there wouldn't be a place for you unless you had a contract to provide the service.

D. Haarsma commented that the only provision that makes sense is waste source regulation. The private sector has invested way too much to have the RDN take over collection and in regards to working with the hauler to get source separation essentially the hauler currently has to regulate the customer base.

W. Wells stated that one of the options is to include all provisions and one option is to include none of the provisions. He would like to see future discussion focusing on regulatory authority to address the systematic issues that are holding back diversion and other options that would not necessarily require new regulations.

GROUP EXERCISE

L. Gardner introduced the group exercise and the Committee broke off into groups to discuss the topic "Which regulatory authorities should be considered for inclusion in the SWMP?" and "How might additional authorities improve diversion?"

ADDENDUM

SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING MINUTES

NEW BUSINESS

L. Gardner updated committee that there would be future reports sent to them over the next few weeks to help on future discussion.

J. Hastings commented that there were many exercise options that stated further research required.

L. Gardner replied that those required research requested will be addressed in the future reports.

Next RSWAC meeting will be held October 15, 2015.

ADJOURNMENT

MOVED J. Kipp, SECONDED F. Van Eynde, that this meeting be adjourned.

CHAIRPERSON

Regulatory Option	PRO	CON
1. Mandatory Waste Collection System (MWC)	<ul style="list-style-type: none"> ➤ Source separation is mandatory ➤ Potential to use a co-op for collection like 'recology' in San Francisco ➤ Ship to MRF for processing ➤ Potential to increase diversion % through mandatory collection 	<ul style="list-style-type: none"> ➤ Shuts down competitive business ➤ Destroys Capital investment ➤ Administrative burden on business and RD ➤ Jurisdiction – City of Nanaimo is a provider ➤ Jurisdiction – City of Parksville eliminate competition & free market ➤ Jurisdiction –Town of QB a service provider ➤ Eliminates price competition ➤ Business already collecting from ICI ➤ Limits private enterprise ➤ Too authoritative ➤ Not competitive - does not allow free enterprise
2. Waste Hauler Franchise (WHF)	<ul style="list-style-type: none"> ➤ Table 2 removed it as an option ➤ Slightly better than above as more then1 hauler used ➤ Ship materials to MRF 	<ul style="list-style-type: none"> ➤ Table 2 removed it as an option ➤ As above
3. Waste Haulers as Agents (WHA)	<ul style="list-style-type: none"> ➤ Operational efficiencies & reduction of emissions ➤ Ship to MRF ➤ Retains opportunity for innovation and private investment 	<ul style="list-style-type: none"> ➤ More expensive collection ➤ Will not want to implement remittance to local govt ➤ Surcharges attached to business ➤ Lot of administration

<p>4. Flow Management (FM)</p>	<ul style="list-style-type: none"> ➤ Ship to MRF ➤ Controls material so high grading is possible 	<ul style="list-style-type: none"> ➤ Discourages cross regional coordination ➤ Too restrictive for residuals and does not aid diversion
<p>5. Waste Source Regulation (WSR)</p>	<ul style="list-style-type: none"> ➤ Promotes separation at source ➤ Enforcement by private sector is expensive but if works especially if it is done in conjunction with Flow Management. ➤ Higher diversion % from ICI ➤ Promotes high grade products 	<ul style="list-style-type: none"> ➤ Public sector responsible for enforcement & administrative costs. ➤ Moderate administrative burden ➤ High compliance through enforcement
<p>6. Other: Recycling</p>	<ul style="list-style-type: none"> ➤ Could provide stable recycling program to back up plan <p>Questions:</p> <ul style="list-style-type: none"> ➤ What is our goal? Diversion? Increase use of resources. Do we need to define 3R's? 	<ul style="list-style-type: none"> ➤ Subsidize last 30% of low value material ➤ Storage of hard to recycle material ➤ Socialize recycling cost



October 27, 2015

Alec McPherson

RDN Director, Regional District of Nanaimo
Chair, Regional District Solid Waste Advisory Committee
6300 Hammond Bay Road
Nanaimo, BC V9T 6N2

Dear Mr. Alec McPherson,

Re: Mixed Waste Material Recovery Facility

Further to our July 16, 2015 correspondence regarding mixed waste material recovery facilities (MRFs), there have been some noteworthy developments.

Firstly, in terms of the perceived poor quality of recyclables recovered from mixed waste MRFs due to contamination, we have attached the following article "*A Comparative Analysis of Source-Separation and Mixed Waste Recycling Systems in Charlotte, NC, and Montgomery, AL*" by Jeremy O'Brien, P.E., Director of Applied Research for SWANA."

The perception of poor quality does not reflect reality. As O'Brien points out in the article, the Montgomery IREP facility's buyers have been pleased with the consistency of the high quality of recoverables, including the paper and fibres which traditionally have been viewed negatively by the industry. Moreover, the quality of the PET plastics recovered from the Montgomery facility was deemed to be "superior to most of the single stream MRFs that we currently receive PET bales from".

Secondly, while the performance of the Montgomery facility has been excellent, the facility is temporarily shut down because of the very low tip fee (\$28/ton) that the facility was charging. This left no room to absorb lower commodity pricing for recyclables which has occurred over the last year. [To put their tip fee into context, it's about *one third* of the RDN's operating cost to run its landfill.]

As O'Brien alluded to in the article, the Montgomery plant was intended as a showcase facility in the Eastern United States to attract new opportunities and future similar facilities are likely to have higher tip fees. IREP representatives and the City of Montgomery officials are in talks to come to a resolution to reopen the facility given its importance to the City's long term goals of recycling and diversion.

The Montgomery facility has been under much scrutiny since its inception because it's the next generation, large scale, highly mechanized, modern MRF. However, it's performance and the performance of other modern MRFs here on the west coast is driving private companies and regional authorities to implement mixed waste processing. Monterey, California is the latest authority to announce plans to upgrade its MRF to include mixed waste processing. And other such announcements are in the works.

Incineration via mass burn, gasification, or pyrolysis is an extremely expensive proposition that destroys recyclables that new technologies like mixed waste MRFs can keep in the loop. Putting recyclables up the stack causes the need to mine the earth for raw materials and expend energy (and more emissions, especially green house gas emissions) to process the raw materials. As you heard from a proponent of incineration at your June 18th, 2015 meeting, without recyclables to burn, the economics of incineration are even more questionable.

NextUse can help the Regional District of Nanaimo achieve an overall diversion rate 84%, in conjunction with current source separation efforts, by removing 51% (27k tonnes) of the recyclables and organic matter in the MSW waste stream currently going to disposal.

Please do not hesitate to contact me if you have any questions or require any clarification.

Yours truly,



Russ. S. Black, MBA, P.Eng.
Vice President, Corporate Development

A Comparative Analysis of Source-Separation and Mixed Waste Recycling Systems in Charlotte, NC, and Montgomery, AL

By Jeremy K. O'Brien, P.E.



Jeremy K. O'Brien

Interest continues to grow in the recycling of the organic fraction of the municipal solid waste (MSW) stream. As a result, MSW managers are evaluating options for the collection and processing of organic wastes from residents and businesses.

In this regard, some communities are staying with the source-separation approach and instructing residents to place their food waste and other organics in the yard waste bin. Others, however, are starting to consider and implement other residential recycling options such as mixed-waste recycling.

The SWANA Applied Research Foundation's (ARF) Recycling Group recently decided to conduct a comparative analysis of the source-separation and mixed waste recycling approaches for residential solid waste. In FY2013, the research focused on recycling systems implemented for multi-family residents in Seattle, WA and San Jose, CA. An article was published in the Jan/Feb 2014 issue of this magazine that presented the highlights of this research.

The purpose of this article is to present the findings of additional research conducted by the ARF in FY2014 on residential recycling systems implemented in Charlotte, NC and Montgomery, AL. This research was conducted with input and support from the ARF Recycling and Collection Group Subscribers who are listed in Table 1.¹

SOURCE-SEPARATION RECYCLING—CHARLOTTE, NC

Located in Mecklenburg County, the city of Charlotte is the largest city in North Carolina. With Bank of America headquartered in Charlotte, the city has become the second largest banking center in the United States. Charlotte is home to the Carolina Panthers of the National Football League, the Charlotte Hornets of the National Basketball Association, the NASCAR Hall of Fame, and the U.S. National Whitewater Center.

In 2013, the estimated population of Charlotte was 792,862, making it the 16th largest city in the United States. The median family income in 2010 was \$61,405. With a land area of 301 square miles, the population and housing densities are 2,630 persons and 1,044 households per square mile respectively.

The city provides refuse, yard waste and recycling collection services to its residents as well as some small businesses. Single-

family residential waste, recyclables and yard waste collection services are provided with city crews and equipment while multi-family waste collection services are provided by private haulers under contract with the city.

Single-family residences in Charlotte are defined to include detached single-family houses, duplexes, and multi-family buildings with 29 or less housing units. In FY2013, the City reported that it provided residential waste collection services to 210,781 single-family residences and 113,000 multi-family residential units. The U.S. Census Bureau reported that there was an average of 2.52 persons per Charlotte household during 2009 through 2013.

Performance and cost data for the collection, processing and disposal of refuse, recyclables and yard waste from single-family residences in fiscal year (FY) 2013 are presented in Table 2 and discussed below.

The curbside collection of recyclables from single family residences is performed

Table 1		
Jurisdiction	Representative	Title
SWANA ARF Fiscal Year 2015 Recycling Group Subscribers		
Edmonton, Alberta, Canada	Christian Felske, PhD, P Eng.	Director – Engineering, Processing and Disposal
Fairfax County, Virginia	Pamela Gratton	Chief, Recycling and Administrative Services
North Vancouver, British Columbia, Canada	Kathleen O'Malley	Assistant Manager – Waste Reduction
Solid Waste Agency of Northern Cook County, Illinois	Dave Van Vooren	Executive Director
Monterey CA Regional Waste Management District	Tim Flanagan	Assistant General Manager
Tucson, AZ	Fran LaSala	Environmental Manager
SWANA ARF Fiscal Year 2015 Collection Group Subscribers		
Charlotte, NC	Victoria Johnson	Solid Waste Services Director
Manteca, CA	Rexie LeStrange	Solid Waste Superintendent
Tucson, AZ	Pat Tapia	Collections Administrator



City of Charlotte's recycling container

on an every other week basis.² From FY2011 to 2014, the city contracted with a private company to provide this collection service to all single-family residences within the city's limits. Since 2014, the city has provided this service with in-house crews and collection vehicles. The mixed recyclables are processed, separated and compacted for transportation to secondary materials markets at the County's single-stream materials recovery facility. As Table 2 indicates, the bi-weekly recycling service costs \$1.73 per household per month or \$99.60 per ton.

Yard wastes are banned from disposal in MSW landfills in the state of North Carolina. As a result, the city provides single-family residents with a weekly curbside collection service for yard wastes. The city uses rear-load compactors staffed by two-person crews (34 crews) to provide this service. In light of the weekly collection service and 210,781 residences served in FY2013, the crew productivity is calculated to be 1,240 residence served per crew per day. It should be noted that, since the county will only accept unbagged yard waste at its yard waste processing sites, leaves and grass clippings are debagged by the collectors at the curb before they are placed in the rear-load compactor. The collected yard waste is transported to the County's "Compost Central" site for processing into compost, mulch and/or boiler fuel. In FY2013, the weekly yard

waste service costs \$4.06 per household per month, or \$210.71 per ton.

Finally, the city provides weekly curbside refuse collection services to its single-family residents.³ As with yard waste and recyclables collection, this service is provided by the city using in-house collection vehicles and crews. Each single-family residence is provided with one, 96-gallon roll-out container to use in the refuse collection service.⁴

The city primarily uses automated collection vehicles staffed by one-person crews to provide this service. In FY2013, fifty-seven automated crews were deployed. In addition, three two-person crews (one driver and one collector) were deployed on semi-automated rear-load packer trucks to provide backyard collection services for citizens with disabilities.



City of Charlotte automated refuse collection

In FY2013, the city collection crews served 300 daily collection routes each week or 60 routes per day of the five-day work-week. Each crew made an average of 1.5

Table 2. Charlotte, NC – Single-Family Residential Waste Collection Services – FY2013 Costs

Service	Refuse		Recyclables		Yard Trimmings		Total	%
	Amount	%		%		%		
Collection Frequency	Weekly		Bi-weekly		Weekly			
Customer Units Served ¹	210,781		210,781		210,781			
No. Collection Crews	60		--		34			
Households Served Per Crew Per Day	703		--		1,240			
Tons Collected	168,000		43,919		48,716		263,817	
Persons/HH ²	2.52		2.52		2.52			
Annual Cost								
Collection	\$13,786,569	76%	\$4,516,310	103%	\$9,339,172	91%	\$28,524,225	83%
Processing/Disposal	\$4,872,001	24%	\$(141,970)	-3%	\$925,604	9%	\$5,747,912	17%
Total	\$18,658,571	100%	\$4,374,340	100%	\$10,264,776	100%	\$34,272,137	100%
Cost Per Household Per Month								
Collection	\$5.45	76%	\$1.79		\$3.69			
Processing/Disposal	\$1.93	24%	\$(0.06)		\$0.37			
Total	\$7.38	100%	\$1.73		\$4.06		\$14.43	
Cost Per Ton								
Collection	\$82.06	74%	\$102.83	103%	\$191.71	100%		
Processing/Disposal	\$29.00	26%	\$(3.23)	-3%	\$19.00	0%		
Total	\$111.06	100%	\$99.60	100%	\$210.71	100%		
Assumptions/Calculations								
Disposal/Processing Costs Per Ton	\$29.00		\$(3.23)		\$19.00			
Tons Per HH Per Year	0.80	64%	0.21	17%	0.23	19%	1.24	
Pounds Per HH Per Week	31		8		9		48	
Pounds Per Person Per Day	1.74		0.45		0.50		2.69	

¹ Includes residential single family housing units (210,781) but excludes small businesses (3,235) that utilize residential roll-out carts.
² US Census Bureau, Persons Per Household: 2009-2013.

trips to the landfill each day, which, on average, is 13.5 miles away from the collection routes.

In light of the weekly collection service and 210,781 collection points served, the crew productivity for residential refuse collection is calculated to be 703 collection points per crew per day. Each residence disposed of an average of 0.8 tons per year in FY2013 and set out an average of 31 pounds of waste per week for collection.

The refuse collected from single-family residences is disposed at the Charlotte Motor Speedway Landfill, which is located in Concord, NC, and owned and operated by Republic Services. The current tipping fee charged for residential waste disposal by Republic is \$29 per ton.

As indicated in Table 2, the costs for the weekly refuse collection service are estimated to be \$7.38 per household per month or \$111.06 per ton. Of this amount, 74 percent is spent on waste collection while 26 percent of the costs are incurred for waste disposal.

The city's collection services are paid for out of the city's general fund, which is supported primarily by property and sales taxes. The costs of waste disposal, as well as recycling and waste reduction services, are paid for with solid waste fees. In this regard, Charlotte single-family residences are assessed an annual solid waste fee of \$62 to offset the cost of waste disposal and waste reduction services and facilities. Of this amount, \$47 is paid to the City of Charlotte and \$15 is paid to Mecklenburg County. The city's solid waste fee is used to cover the costs of residential waste disposal while the county's fee is used to pay for recycling and waste reduction services and facilities throughout Mecklenburg County.

Finally, as shown in Table 2, 17% of the waste generated by single family residents in Charlotte in FY2013 was diverted through materials recycling while another 19% was diverted through the recovery of yard waste as mulch, compost or boiler fuel.

MIXED WASTE RECYCLING—MONTGOMERY, AL

Montgomery is the capital of Alabama as well as the county seat of Montgomery County. With a 2010 population of 205,764 and a total area of 156.2 square miles, it has the second-largest city population in Alabama and the 103rd largest in the United States.⁵

In addition to many Alabama government agencies, Montgomery has a large military presence due to the Maxwell Air Force Base and a large population of students who attend higher education institutions such as Alabama State University, Troy University (Montgomery campus), Auburn University at Montgomery, Faulkner University and Huntingdon College. Its manufacturing sector includes Hyundai Motor Manufacturing Alabama.

Solid waste collection services are provided by the city's Sanitation Department to 70,000 single-family residences. These services include twice-per-week garbage collection, weekly trash collection, and twice-monthly bulky trash collection. Recyclables and bulky waste are collected from 13 drop-off locations on a periodic basis.

Commercial waste is collected by private haulers who contract directly with individual businesses or establishments to provide collection services.

In April 2014, an 850 tons-per-day (TPD) mixed-waste



Infinitus Renewable Energy Park (IREP), Montgomery, Alabama

materials recovery facility began commercial operations in the city of Montgomery, AL.⁶ The facility is located on a 74-acre site that is called the "Infinitus Renewable Energy Park" (or IREP at Montgomery) and is the first phase of development at the park.⁷ Phase 2 will involve the installation of a dry anaerobic digestion system to process the organic materials recovered from the facility.

The 82,000-square foot facility, which cost about \$35 million to construct, is owned and operated by Infinitus Energy and was developed as a result of a Request for Proposals (RFP) that was issued by the city in December 2010. The facility's processing system was designed by Bulk Handling Systems and is operated by Infinitus Energy in conjunction with Zero Waste Energy LLC.⁸

The facility was financed with tax-exempt private activity revenue bonds and taxable bonds with 25-year bond maturity periods.⁹ The city has entered into a 25-year contract with Infinitus Energy to process the residential waste it collects at the facility at an initial tipping fee of \$28 per ton. In this regard, the city is responsible for delivering a minimum of 100,000 tons per year of waste to the facility under a "put-or-pay" arrangement. The facility is also allowed to process waste from surrounding communities within 90 miles of Montgomery as long as this does not interfere with the processing of the city's waste.

The facility employs around 115 employees for a 2-shift, 16-hour, 5-day a week operation. With a design capacity of 220,000 tons per year (TPY), the actual waste processing rate is 30 to 35 tons per hour (TPH), depending on types and characteristics of the waste being processed. The facility processes MSW from the city of Montgomery as well as source-separated recyclables from the Pensacola area and commercial and industrial wastes and recyclables from selected businesses and industries.

The residue stream left over following the materials recovery processes is separated into two substreams—less than 2 inches and greater than 2 inches in size—both of which are then composted

in windrows. The resulting compost is then screened, with the less than 2-inch fraction sold for use as an alternative daily cover at the city's North Montgomery Sanitary Landfill. In the future, Infinitus Energy plans to use the greater than 2-inch fraction as a feedstock for an anaerobic digestion facility that will produce methane gas for use as a vehicular fuel in the city's refuse collection trucks.¹⁰

Following construction, a five-day facility acceptance test was conducted by CDG Engineering of St. Louis, which reported the following results for key performance parameters:

- Average processing rate—32.3 TPH.
- Overall waste diversion rate—61.3%.
- Residue for landfill disposal—38.7%.

The following material recovery percentages were reported for the acceptance test:

- Steel/tin cans—94%
- Aluminum cans—95%
- Plastics 1 through 7—96%
- Mixed paper—95%
- Old corrugated cardboard—97%.

As indicated above, the facility processes both residential and commercial wastes generated by the residents and businesses in Montgomery. Therefore, the material recovery percentages reported above apply to the combined residential and commercial waste stream, and may not be indicative of the percentage of material recovered from just the residential waste stream.

The City is charged \$28 per ton by Infinitus Energy for the processing of MSW at the facility. In addition, the city receives 15 percent of the net revenues received from the sale of the recovered recyclables after certain volume hurdles have been achieved.

Not considering recyclables revenues and in light of the \$28 per ton tipping fee, the city incurs a cost of \$33.30 per household per year, or \$2.78 per household per month, for the processing of the residential waste it collects from its 70,000 residences. In light of the 61% materials recovery rate, this equates to \$45.90 per ton of recyclable materials recovered. It should be noted that these cost numbers are based on an assumed residential waste generation rate of 2.63 pounds per person per day, which, in turn, is derived from the national MSW generation reported by the US EPA in 2012 (4.38 lbs/per/day) and an assumption that 60% of the MSW generated is from residences.

Since no separate recyclables collection services are provided to the residents, the city incurs no additional costs with respect to the collection of residential recyclables.

Since no separate recyclables collection services are provided to the residents, the city incurs no additional costs with respect to the collection of residential recyclables.

Table 3. Source-Separation and Mixed Waste Recycling Systems: Waste Diversion Rates

Customer Group	Source-Separation Recycling Systems	Mixed Waste Recycling Systems
	Charlotte	Montgomery
Single-Family Residences		
Materials Recycling	17%	46%
Organics Diversion	19%	15%
Total	36%	61%

COMPARATIVE ANALYSIS OF SOURCE-SEPARATION RECYCLING AND MIXED-WASTE RECYCLING SYSTEMS

The residential waste diversion rates for the recycling systems in Charlotte, NC and Montgomery, AL are presented in Table 3.

As indicated, the residential waste diversion rates vary from 36% in Charlotte to 61% in Montgomery. Montgomery reports a higher materials diversion rate (46%) than Charlotte (17%) while the yard waste diversion rate for Charlotte (19%) and the organics diversion rate from mixed waste in Montgomery (15%) are comparable.

One major difference in the programs, however, is in the quality and utilization of the recovered organics. For source-separation recycling programs such as Charlotte's, the compost generally meets national standards and can be marketed as an alternative to other composts available to farmers and growers. Alternatively, the compost produced from mixed-waste recycling systems such as Montgomery's appears to have levels of contaminants that limit its use to non-compost applications, such as for alternative daily cover for landfills or as an engineered process fuel.

On the other hand, mixed-waste recycling systems allow for the recovery of recyclables from the mixed-waste generated by both commercial as well as residential sources. They also allows for the recovery of recyclables (such as durable metal products) that are not collected in curbside collection programs. For this reason, it appears that they are able to achieve higher materials diversion rates than those achieved in source-separation programs.

One of the concerns often raised with respect to mixed-waste recycling systems is the quality of the recovered recyclable materials and products. In this regard, it is generally accepted that the quality of recovered fibrous materials (such as paper and OCC) is degraded by contamination from other waste products (such as food waste and broken glass).

Table 4. Montgomery, AL Mixed-Waste Recycling Facility – Buyers of Recovered Materials

Recovered Material/Product	Buyer	Description
Plastics - PET	Custom Polymers	Global Recycler and reprocessor of post-industrial and post-consumer plastic scrap.
Plastics - HDPE	KW Plastics	The world's largest reprocessor for HDPE and polypropylene resins.
Mixed Paper	American Chung NAM (ACN)	Large local and international buyer/supplier handling a wide range of recovered paper grades.
Fiber- Old Corrugated Cardboard (OCC)	Georgia Pacific	Georgia-Pacific is one of the world's leading makers of tissue, pulp, paper, packaging, building products and related chemicals. Georgia-Pacific started out as a hardwood lumber wholesaler in Augusta, Georgia, in 1927. Today, Georgia-Pacific LLC is a wholly owned subsidiary of Koch Industries, Inc., and is headquartered in Atlanta, GA, and now has more than 300 Georgia-Pacific locations around the world
Metals	Cascades Recovery, Inc.	CRI handles over 1.5 million tons of recyclables each year, processing the material at 21 MRFs located across Canada and the U.S.

To address the question of recovered materials quality, Infinitus Energy provided a list of the buyers of the recyclables recovered by the Montgomery facility (see Table 4). As indicated, these buyers are large companies that are significant players in the secondary materials marketplace.

One of the buyers—Custom Polymers—provided the following quote regarding the quality of the PET plastics recovered by the Montgomery facility:

“Custom Polymers began developing a business relationship with IREP of Montgomery in May 2014. We have been pleased with the consistency of high quality material received from this facility. The quality of product has been superior to most of the single stream MRFs that we currently receive PET bales from.”¹¹

Infinitus Energy also reported that representatives from one of the largest paper mills in China visited the Montgomery facility and concluded that the quality of the recovered mixed paper was acceptable for their recycling process. As a result, the Chinese paper mill has contracted for the purchase of all of the mixed paper recovered at the facility.¹²

The costs of the source-separation and mixed-waste recycling systems presented in this article are summarized in Table 5. As the table indicates, the costs of source-separation recycling in Charlotte are significantly higher than the costs of mixed-waste recycling in Montgomery for single-family residences. The primary reason for this is the provision of two additional collection services—recyclables collection and organics collection—required for the source-separation recycling system.

It should be noted that the costs of the mixed-waste recycling system are still rela-

tively high since the facility must be sized to process the entire waste stream—and not just the source-separated recyclables. It should also be noted that the Montgomery mixed waste recycling facility is the first of its kind to be constructed and operated by Infinitus Energy and that company representatives have indicated that tipping fees at future similar facilities are likely to be higher.

CONCLUSIONS

Based on the analyses presented in this article, the following conclusions can be drawn with respect to the benefits and drawbacks of source-separation recycling and mixed-waste recycling systems:

- It is generally acknowledged that source-separation recycling systems recover higher quality recyclables than mixed-waste recycling systems, especially with respect to the recovery of fibrous materials. It is unclear what impact the difference in the quality of recovered recyclables has on the market prices received for the recovered recyclables. Both systems appear to be able to market the recovered recyclables.
- Source-separation recycling systems produce a higher quality compost from the recovered organics. As a result, the compost produced from source-separated organics can be utilized as an alternative to traditional compost materials while the compost produced from mixed-waste organics can only be used in non-compost applications such as an alternative daily landfill cover or an engineered process fuel.
- Based on the data provided in this article, the costs of source-separated recycling appear to be higher than mixed-waste recycling due to the need to provide additional curbside collection services to residents. However, this cost differential could be reduced or even disappear as

future mixed waste recycling systems are implemented and additional cost data for these systems becomes available.

Jeremy K. O'Brien, P.E., is Director of Applied Research, Solid Waste Association of North America (SWANA). For more information on the SWANA Applied Research Foundation, please contact him at (704) 906-7269 or JOBrien@SWANA.org.

¹The SWANA Applied Research Foundation was founded in 2001 with the purpose of conducting collectively-defined and funded applied research on pressing solid waste issues. It is funded by local governments and other organizations that contribute about “penny per ton” of waste managed to the Foundation on an annual basis. For more information on the SWANA Applied Research Foundation, please contact Jeremy O’Brien, Director of Applied Research, SWANA, JOBrien@SWANA.org.

²North Carolina Performance Benchmarking Project. Final Report on City Services for Fiscal Year 2012-13: Performance and Cost Data. Chapel Hill, North Carolina: UNC-Chapel Hill Institute of Government, February 2014.

³Ibid.

⁴An additional roll-out container may be purchased for a nominal, one-time fee.

⁵http://en.wikipedia.org/wiki/Montgomery,_Alabama

⁶Site visit memo prepared by Paul Hauck and Kevin Leo of CDM Smith based on a tour of the facility on September 15, 2014. The facility is designed to process 30 tons per hour. The tipping floor has a capacity of 1,800 tons.

⁷The MW-MRF is located on a former brownfield site that was used for creosote treatment of wood products.

⁸Zero Waste Energy LLC is owned by Bulk Handling Systems.

⁹Infinitus Energy presentation made at the 2013 Municipal Waste Management Association’s Fall Summit, October 14-16, 2013, Tampa, FL.

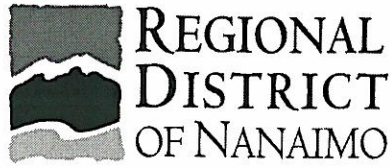
¹⁰Site visit memo prepared by Paul Hauck and Kevin Leo of CDM Smith based on a tour of the facility on September 15, 2014.

¹¹Infinitus Energy. Redefining Waste. SERDC Recycling Summit. (Nov. 11-13, 2014: Point Clear, AL).

¹²Site visit memo prepared by Paul Hauck and Kevin Leo of CDM Smith based on a tour of the facility on September 15, 2014 conducted by the facility’s manager, Mr. Daniel Carlisle.

Table 5. Source-Separation and Mixed Waste Recycling Systems: Costs

Customer Group	Source-Separation Recycling Systems		Mixed Waste Recycling Systems	
	Charlotte		Montgomery	
	\$/Ton	\$/HH/Mo	\$/Ton	\$/HH/Mo
Single-Family Residences				
Recyclables Collection/Processing ¹	\$99.60	\$1.73	\$45.90	\$2.78
Organics Collection/Processing	\$210.71	\$4.06		
Total		\$5.79		\$2.78



RDN REPORT	
CAO APPROVAL	
EAP	
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OCT 19 2015	
RHD	
BOARD	DATE: October 13, 2015
RSWAC	

STAFF REPORT

TO: Larry Gardner
Manager, Solid Waste Services

MEETING: RSWAC, November 5, 2015

FROM: Jeff Ainge
Zero Waste Coordinator

FILE: 5370-01

SUBJECT: Curbside Collection Program – Compliance and Enforcement to Improve Diversion

RECOMMENDATION

That the report be received for information.

PURPOSE

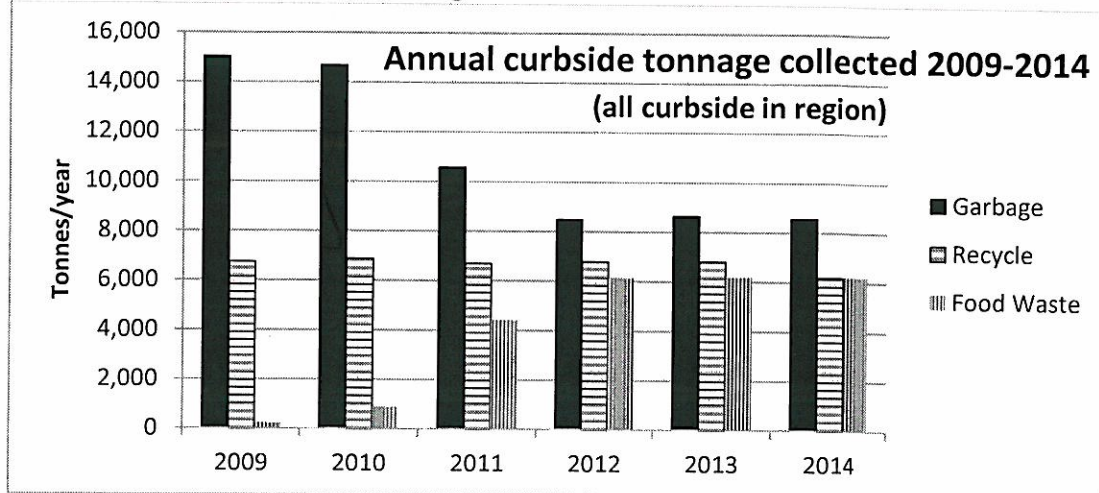
The Regional Solid Waste Advisory Committee (RSWAC) included improved enforcement of, and compliance with, existing residential collection program requirements as an option to be considered as part of the current Solid Waste Management Plan (SWMP) review.

BACKGROUND

The Regional District of Nanaimo (RDN) provides curbside collection of residential garbage, recycling and food waste to over 23,500 single family and equivalent homes located in the seven Electoral Areas, District of Lantzville and City of Parksville. A further 4,000 homes in the Town of Qualicum Beach receive garbage collection service from Town staff, with recycling and food waste collection provided by the RDN. The City of Nanaimo (CoN) provides collection services to 26,000 residences within their boundaries. In terms of the overall waste received at the Regional Landfill, the residential sector is the smallest at 17%.

Since the introduction of region-wide food waste collection in 2010 and 2011, single family homes now divert 60% of their garbage from the landfill through curbside food waste and recycling collection, as seen in Table 1. However, even with the convenience of curbside collection, the 2012 Waste Composition study calculated that compostable organic material remains the largest component of residential waste at 36% (made up of 26% food scraps + 8% compostable paper + 2% yard waste). A much smaller percentage of recyclable material also makes its way into household garbage and into the landfill as opposed to being recycled responsibly through curbside or depot programs.

Table 1 Curbside Collection Tonnages



To improve regional participation in diverting residential food waste from the landfill, the following actions could be considered for inclusion in the SWMP.

- Curbside Outreach and Education

Building on recent outreach activities undertaken by RDN Solid Waste Services staff in support of residential curbside recycling collection, a similar initiative could be made for the food waste collection.

Outreach and compliance efforts specific to curbside collection could be achieved by employing seasonal or temporary staff directly, or by creating a compliance or outreach staff position(s) which could be part-funded through the curbside utility fees. These would only apply to the RDN curbside program; the CoN program is funded and operated separately however similar actions and outreach efforts can be considered and implemented by CoN staff for their collection program.

Working with the collection staff (contracted in the case of the RDN and municipal employees in the case of the CoN), staff could assess the participation levels (set outs of green bins, or lack of green bin set outs, in particular) over a period of time, with seasonal variations accounted for, to give statistically valid data. With that data on hand, barriers to participation can be investigated, targeted compliance messages created, and varied targeted delivery mechanisms employed to promote and encourage participation. This is a methodology known as Community Based Social Marketing which has proven to be very effective in establishing social norms and encouraging positive behaviour change.

- Enforcement through a Disposal Ban

Residential food waste is considered Unacceptable Waste in the RDN and CoN collection bylaws so is not permitted to be included in the garbage container.

When launching their food waste diversion programs within the past year, both Metro Vancouver and the Capital Regional District took the step to ban this material from disposal at their facilities. The RDN did not take this step when introducing residential food waste collection, in large part because the multi-family housing sector is not serviced by local government collection programs but by commercial haulers. Commercially generated food waste is however banned from landfill disposal.

The reality of banning materials from curbside collection is that enforcement is challenging. Collection staff do not open bagged waste for curbside inspections (for health and safety reasons as well as time management constraints). Food Waste is listed as an Unacceptable Waste per RDN Bylaw No. 1591 which applies to the RDN curbside program and therefore not permitted in household garbage, but it is not actually banned from disposal so enforcement is a moot point.

Implementing a disposal ban on residential food waste can be viewed as a regulatory approach to increase use of the green bin and improve food waste diversion. For this to work, education and awareness of the existing program needs to happen – in effect a Community Based Social Marketing program to support the ban's implementation.

- Multi-Family sector collection

Given that the residential sector makes up the smallest component of the region's waste stream, and that residents receiving curbside service have made important steps in achieving 60% diversion through participation in food waste and recycling programs, the opportunity to achieve greater overall levels of diversion and compliance is attainable by having the multi-family sector receive the same level of service as the single-family housing sector. Leveling the playing field in terms of service levels and

materials collected across all housing sectors is expected to have a greater impact on landfill diversion than focusing efforts solely on curbside collection.

IMPACT ON DIVERSION

With respect to the three possibilities introduced above, the impact to landfill diversion rates would vary.

- **Curbside Outreach and Education**

Implementing targeted education and outreach efforts to improve householders' participation in the curbside collection of residential food waste would likely result in modest increased diversion rates of that material. For example, based on the 2012 Waste Composition Study findings, if a 20% improvement in curbside green bin waste capture was made, an additional 615 tonnes of food waste per annum (or eleven kilograms per household) would be diverted to an organics processing facility.

- **Enforcement through a Disposal Ban**

In terms of actively enforcing a curbside residential food waste disposal ban, while it may be somewhat effective in improving diversion rates, it is just as likely to "turn off" a percentage of residents and it will be difficult to enforce. The existing disposal ban in place for Commercial Organic Waste results in approximately 3,500 tonnes going to organics processing facilities, but there is room for greater diversion improvement in the commercial sector (a sector which generates far more waste than the residential sector). Focusing efforts on this sector, along with the multi-family housing sector is likely to have greater impact than imposing a disposal ban on food waste in the residential curbside collection.

- **Multi-Family sector collection**

Over the years this region has seen an increase in this type of housing stock. A staff report prepared in 2012 discussing recycling services available to this sector showed there were 13,430 multi-family dwelling units in the region, of which 12,300 were located in the CoN. The waste from this sector is typically collected by, and viewed as coming from, the Commercial sector. As the amount of multi-family type housing increases, so do the expectations that service levels should equate to those provided for single-family housing. Because of the inclusion of multi-family in commercial loads it is difficult to have hard numbers to work with, but the 2012 Waste Composition Study estimated 29 per cent of multi-family waste was food waste and compostable paper.

Multi-Family waste generation assumptions:

- A multi-family household would set out the same amount of garbage and food waste (excluding recyclables) as a single family household (280 kg/yr) with no allowance made for garbage use, lack of domestic livestock or backyard composter use, household size or demographic differences.
- $280 \text{ kg} \times 29\% = 81 \text{ kg/dwelling unit of green bin material a year available for capture.}$
- $81 \text{ kg} \times 13,430 \text{ households (based on the 2012 staff report)} = 1,088 \text{ tonnes of material available for capture.}$
- 75% participation rate (similar to single family curbside set-outs) = 815 tonnes of material diverted.

Creating a level playing field for all residential sectors will improve diversion rates however the biggest impact by far can be achieved by targeting the commercial sector which makes up the largest component of waste generators in the region.

FINANCIAL IMPLICATIONS

- **Curbside Outreach and Education**

Costs associated with curbside outreach and education would typically be factored into the curbside programs' operating budgets which are funded through annual utility (user) fees. Implementing an enhanced outreach program for curbside customers could be achieved through employing temporary, seasonal or Co-operative Education program students. Based on recent work completed on the RDN curbside collection program, a summer outreach team of two temporary staff employed for 16 weeks would require a budget line item of approximately \$36,000 (wages, benefits, and administrative overhead costs all included).

A financial implication related to curbside service is the reduced price differential between the landfill disposal fee and organics processing fee meaning collecting increased amounts of curbside organics material may result in slight increases in residential annual utility fees.

- **Enforcement through a Disposal Ban**

The process to implement a disposal ban for any material would require a one to two year timeframe for planning and stakeholder engagement, followed by consultation and preparation of resource materials. A longer term temporary person could be employed to spearhead the project, or the task could form part of a Compliance or Outreach position. Funding to achieve a disposal ban on compostable material from all sectors could be in the order of \$100,000 per year for the duration of the timeframe to phase it in. Following implementation, an ongoing commitment to enforcement and compliance of the ban is important for ensuring adherence and monitoring of the ban's effectiveness. An equivalent 0.3 FTE contribution to a Compliance or Outreach staff person (in the RDN), based on a CUPE level 11 classification, would require a budget line item of approximately \$27,000 (wages, benefits, and administrative overhead costs all included).

- **Multi-Family sector collection**

In this region, as with most other jurisdictions, the multi-family sector presents many challenges when it comes to collection service levels, diversity of housing types (town home strata, multi-level, multi-owner, etc.), resident engagement and participation in diversion programs, bans compliance, and service provider involvement. Food waste diversion is offered by the private haulers servicing the multi-family sector however uptake is limited and collection systems are not standardized. It is very unlikely that the existing RDN or CoN curbside collection system can change to accommodate servicing multi-family dwellings. In response to requests for assistance, work is currently underway in preparing a food waste collection tool-kit for building managers, haulers and residents to make use of when considering setting up a food waste diversion and collection program.

Reviewing the range of current service levels, and developing a strategy to include food waste (and perhaps standardized recycling) collection across the region could be accomplished with dedicated staff time. For this particular sector, with over 90% of the multi-family units located within the City, a region-wide coordination position may make sense. A temporary person could be employed for a year to spearhead the project (at an estimated total wage cost of \$85,000), or the task could form part of a Compliance or Outreach position. Ongoing program support could be accomplished by an equivalent 0.3 FTE contribution to a Compliance or Outreach staff person, based on a CUPE RDN level 11 classification, would require a budget line item of approximately \$27,000 (wages, benefits, and administrative overhead costs all included).

REGULATORY AUTHORITY

None of the three options discussed require additional authority for implementation.

With regards curbside compliance and enforcement, solid waste trade journals recently have included articles regarding the legality of garbage inspections by collectors to identify those placing food waste or

recyclable materials in garbage cans. For this reason, outreach and education can be a less contentious and softer approach to achieve the desired behaviour changes. At the time of preparing this report staff knows of one legal challenge underway in Seattle (see Attachment 1 for information).

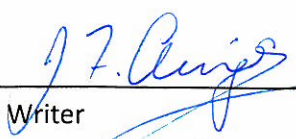
SUMMARY/CONCLUSIONS

The residential sector contributes the smallest amount of waste to landfill at 17%. Households receiving curbside collection service throughout the region are achieving a 60% diversion rate through their participation in the curbside recycling and food waste collection programs. Despite this laudable achievement, compostable organic waste still enters the waste stream.

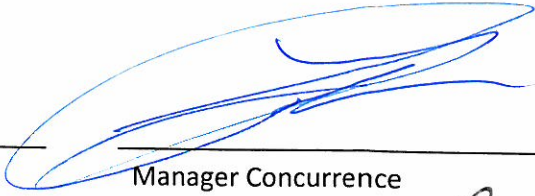
Options to improve curbside compliance and participation in diversion programs include targeted outreach and education activities focusing on organics and other recyclable materials, extending the organics disposal ban to include food waste from residential sources, and ensuring the multi-family sector receives a similar level of collection service.

Focusing efforts on the commercial sector, along with the multi-family housing sector is likely to have greater impact than targeting curbside collection.

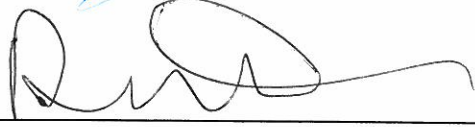
<i>Option Discussed</i>	<i>Estimated Costs to Implement</i>	<i>Diversion Impact</i>
Curbside Outreach to improve food waste diversion	\$36,000 staffing costs (annually employed seasonal staff).	Assuming capture of 20% (615 tonnes) of food waste from curbside garbage = <ul style="list-style-type: none"> ▪ 7% diversion increase for the curbside program ▪ 1.15% diversion increase for the overall region's disposed waste
Enforcement through a disposal ban	\$100,000-\$200,000 to prepare and implement a disposal ban (staffing costs and development of supporting outreach resources). \$27,000 annually (staffing costs to monitor compliance and enforcement at the curb only). To be most effective, inclusion of food waste from all sectors in a re-launch of the existing commercial sector ban along with enforcement could be considered. The above costs could be applied to this approach.	If enforcement applied to curbside collection, diversion could increase when coupled with the option above; for example capture 40% (1,230 tonnes) from curbside garbage = <ul style="list-style-type: none"> ▪ 14% diversion increase for the curbside program ▪ 2.3% diversion increase for the overall region's disposed waste The best achievable result is to enforce the current ban on commercially generated organic waste. <ul style="list-style-type: none"> ▪ 15% - 25% diversion increase possible for the region's overall diversion rate
Multi-Family sector collection	\$85,000 to prepare a region-wide multi-family collection strategy, and to commence with implementation. \$27,000 annually (staffing costs to monitor and provide ongoing support for multi-sector collection programs).	Assuming capture of 815 tonnes of food waste from multi-family garbage = <ul style="list-style-type: none"> ▪ 20% diversion increase for the multi-family sector ▪ 1.5% diversion increase for the overall region's disposed waste



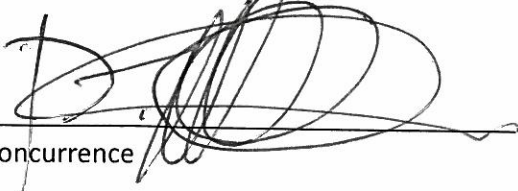
Report Writer



Manager Concurrence



General Manager Concurrence



CAO Concurrence



Courthouse News Service

Monday, July 20, 2015 Last Update: 1:34 PM PT

Seattleites Call Trash-Inspection Law Garbage

By JUNE WILLIAMS

SEATTLE (CN) - Seattle is illegally searching trash cans without warrants looking for recycling scofflaws, a group of residents claim in court.

Although Seattle has one of the highest recycling and composting rates in the nation, the city passed a law in September 2014 that fines residents for discarding food or recyclables in their personal garbage bins.

"The ordinance directs garbage collectors and Seattle Public Utilities (SPU) inspectors to search both residential and business garbage cans, without suspicion or a warrant, in order to estimate whether compostable materials or recyclables make up a 'significant amount' of a garbage can's contents," according to the complaint filed on July 16 in King County Superior Court.

Richard Bonesteel and seven other plaintiff residents contend that the city's new garbage-inspection law "violates privacy rights on a massive scale."

If garbage collectors find a can has more than 10 percent of food or recyclables, Seattle Public Utilities places a warning sticker on the can. Fines will allegedly start in 2016.

"The city's garbage inspection law violates privacy rights on a massive scale. Seattle has an estimated population of 652,500," the complaint states. "The ordinance directs garbage collectors to invade the private affairs of each and every Seattle resident and business on a weekly basis. The city and its agents began enforcing the ordinance in January 2015. From January through April 2015, the city issued an estimated 9,000 notices of violation."

Bonesteel and the other plaintiffs say that Seattle will enforce the ordinance without notice to residents and businesses or an opportunity to challenge violations resulting from the "warrantless inspections."

The residents want an injunction against the warrantless inspections, a judgment that the ordinance is unconstitutional, and damages for invasion of privacy and violation of due process.

Their attorney at Pacific Legal Foundation, Ethan Blevins, issued a statement about the lawsuit.

"Seattle can't place its composting goals over the privacy and due process rights of its residents," Blevins said in a statement. "This food waste ban uses trash collectors to pry through people's garbage without a warrant, as Washington courts have long required for garbage inspections by police."

For the City Attorney's Office, the the Seattle Public Utilities program "fully complies with the law, including the enhanced privacy protections afforded by the Washington constitution."

"SPU believes the instructions we've given to our collectors upholds the Washington state Constitution and civil liberties," SPU said in a statement. "There is no intention of opening trash bags. Containers are only tagged if the contamination is clearly visible. The guidelines state: if you can't see, don't report it and don't tag it."

- END -

Source: <http://www.courthousenews.com/2015/07/20/seattleites-call-trash-inspection-law-garbage.htm>

TO: Larry Gardner
Manager, Solid Waste Services

DATE: October 14, 2015

FROM: Jeff Ainge
Zero Waste Coordinator

MEETING: RSWAC, November 5, 2015

FILE: 5370-01

SUBJECT: Curbside Collection Program – Household Glass Collection

RECOMMENDATION

That the report be received for information.

PURPOSE

The Regional Solid Waste Advisory Committee (RSWAC) included curbside collection of household glass containers as an option to be considered as part of the current Solid Waste Management Plan (SWMP) review.

BACKGROUND

The Regional District of Nanaimo (RDN) provides curbside collection of residential garbage, recycling and food waste to over 23,500 single family and equivalent homes located in the seven Electoral Areas, District of Lantzville and City of Parksville. A further 4,000 homes in the Town of Qualicum Beach receive garbage collection service from Town staff, with recycling and food waste collection provided by the RDN. The City of Nanaimo (CoN) provides collection services to 26,000 residences within their boundaries.

Household glass containers (food and beverage jars and bottles) have not been an accepted curbside recyclable item for several years (five years for RDN program customers and many years more for the CoN program). Glass containers have largely been replaced by plastics which are cheaper to produce and transport, and are readily recyclable. British Columbia's last facility for glass recycling (producing new glass containers from old) closed in 2008, which meant locally that the cost to transport glass off the island to a recycler in the US was prohibitive. Instead, glass was being collected at a cost and sent to a facility who charged for receiving it prior to crushing it and mixing it with construction aggregate, or for use in sand blasting or fiberglass applications.

The exclusion of glass from the RDN curbside recycling program in 2010, coincided with sweeping changes to the collection program when food waste collection was introduced and split packer collection vehicles enabled single stream (co-mingled) recycling. Leading up to the 2010 change, an analysis of RDN customers' curbside recycling in 2009 estimated 220 tonnes of glass was collected at the curb; 35% of which was deposit glass which should have been returned for refund. That tonnage represented only 5% of blue box materials. Depot options were provided and funded by the CoN and RDN to provide a household glass collection alternative.

The 2012 Solid Waste Composition Study estimated that glass made up three per cent of curbside materials disposed in the landfill. The glass category included food and beverage jars and bottles as well as ceramics and non-container glass. In terms of the total amount of glass in the overall waste stream, the study estimated it made up 2.6% or 1,386 tonnes. It should be noted that the study pre-dates the May 2014 implementation of the Province's packaging and printed paper stewardship program, operated by the stewardship agency Multi-Material BC (MMBC).

- **Curbside Collection**

Clear or coloured non-deposit glass bottles and jars are now included in the Province's Packaging and Printed Paper Stewardship Program, operated by the stewardship agency MMBC. Excluded from the MMBC acceptable materials list is deposit glass (which should be returned for a deposit refund), drinking glasses, dishes and cookware, window glass, mirrors, and ceramic products. Both the CoN and RDN collection program programs operate as contracted collectors for MMBC, who pays to have recycling collected on their behalf. In this region, because glass was not part of curbside collection at the time of implementing MMBC's program, household glass is accepted for recycling at MMBC depots only.

The few MMBC affiliated collectors in the Province accepting glass as part of curbside service must do so as a segregated stream and in a dedicated container. Glass is not permitted to be comingled with other recycling materials. For the RDN or CoN to consider reinstating glass as a curbside item a formal change request would need to be made to MMBC to alter the current contractual arrangement.

In terms of costs to reinstate curbside glass collection for the RDN program (not including CoN), staff estimates two additional collection vehicles would be necessary to cover the full service area. Rotating through the current collection routes (40 routes in total), those two trucks would provide for three scheduled glass collections per household per year. Based on figures provided by Progressive Waste Solutions (the RDN collection contractor), the annual cost to add two trucks to the existing service would be approximately \$190,000 (or an additional \$7.00 per year per household).

At this time, MMBC has advised that approval to change is unlikely during the term of the current collection contract. If MMBC did approve a change to the contract and allow segregated glass collection as part of curbside service, an additional \$80/tonne would be paid for glass collected and received on top of the current payment rate.

IMPACT ON DIVERSION

Reinstating glass in the curbside recycling may improve convenience for some residents, but it may have minimal impact to the overall glass capture if curbside service is simply displacing material already being collected at depots. Overall, based on the 2012 Waste Composition Study, the 275 tonnes of glass going to landfill via curbside collection is relatively small scale. Pulling it out of the garbage stream and collecting it in recycling will have minimal effect on diversion rates, and the costs to do that could be difficult to justify. This being said, staff from the CoN report being contacted regularly by members of the public who feel curbside collection of glass is a major area missing from the current collection service. Staff have discussed the potential financial indications of curbside glass collection with residents and in the majority of cases residents have indicated that they would be prepared to pay an additional fee for this service. The CoN will be conducting some community engagement around the issue of residuals collection in Fall/Winter 2015. With the advent of automated collection in the CoN (and the potential to increase revenues via higher user rates for those opting for a larger garbage bin) staff could look to fund some now initiatives to continue to push towards zero waste. All decisions would need to be indicated as public preference and approved by Council. Highlighting disposal alternatives, such as depots or re-use options, as part of promotion and education efforts could prove to be as effective at improving diversion.

Progressive Waste Solutions currently provides curbside glass collection for the 1,100 households in the City of Duncan, on a three-weekly pickup schedule. Over the three month period June-August 2015, a total of 1.34 tonnes of glass was collected. When extrapolated for a full twelve month period, less than 5.5 tonnes would be collected (or five kg per household over a year). The collector reports very few homes place glass out for collection, a noticeable percentage is deposit container glass, and that it does pose a safety risk for collection staff and those at the receiving facility.

FINANCIAL IMPLICATIONS

The financial incentive paid by MMBC to have segregated glass collected at the curb is \$80/tonne. The cost to add dedicated collection trucks for glass collection would outstrip any financial benefit for the collection programs. A negative financial impact would also likely be felt by the local MMBC affiliated depots if curbside glass collection displaced glass they currently receive and get paid by MMBC to handle.

REGULATORY AUTHORITY

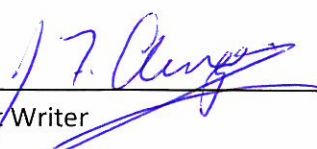
Changes to current curbside recycling contracts to amend materials collected will require Board and Council approvals along with approval from MMBC. No new authorities are required for this to happen.

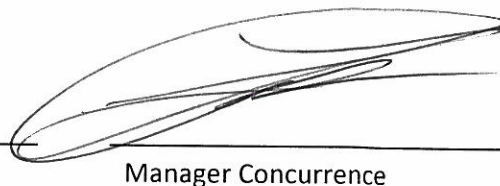
SUMMARY/CONCLUSIONS

Household glass containers have not been accepted as part of curbside recycling for several years in this region, and staff is not aware of any glass processors located in the Province who are capable of taking glass and making new glass containers. In 2009, an analysis of the RDN's curbside materials estimated glass containers made up about 5% of the overall recyclables set out for collection. With the advent of the Province's packaging and printed paper stewardship program, operated by the stewardship agency MMBC, household glass containers are considered packaging. Glass containers are accepted at no charge at six depots throughout the region that get paid by MMBC to handle the material.

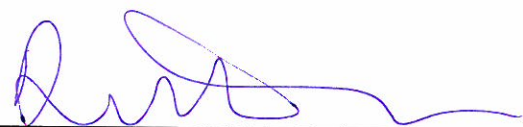
A change to the curbside recycling collection programs operated by the CoN and RDN would require approval from MMBC, as well as contract changes for the curbside collection contractor. The CoN is contemplating service level options as a new collection system is phased in; this could include glass collection for their customers.

There is limited diversion impact in reinstating glass to the curbside recycling, and any change will come with costs (i.e., two collection trucks estimated at \$190,000/year to serve the RDN curbside routes). Glass collection can be included in contract renewal discussions with the collection contractor and MMBC when the time comes, however no immediate changes as part of the SWMP action items are foreseen.


Report Writer


Manager Concurrence


General Manager Concurrence


CAO Concurrence

TO: Larry Gardner
Manager, Solid Waste Services

DATE: October 13, 2015

FROM: Jeff Ainge
Zero Waste Coordinator

MEETING: RSWAC, November 5, 2015

FILE: 5370-01

SUBJECT: Curbside Collection Program – Yard Waste Collection

RECOMMENDATION

That the report be received for information.

PURPOSE

The Regional Solid Waste Advisory Committee (RSWAC) included curbside collection of residential yard and garden waste as an option to be considered during the current Solid Waste Management Plan (SWMP) review.

BACKGROUND

The Regional District of Nanaimo (RDN) provides curbside collection of residential garbage, recycling and food waste to over 23,500 single family and equivalent homes located in the seven Electoral Areas, District of Lantzville and City of Parksville. A further 4,000 homes in the Town of Qualicum Beach receive garbage collection service from Town staff, with recycling and food waste collection provided by the RDN. The City of Nanaimo provides collection services to 26,000 residences within their boundaries.

For the purposes of this report, yard waste refers to the organic waste material produced by a residential property. This would include lawn clippings, hedge trimmings, waste from a vegetable garden and waste from flowerbeds. Not included would be kitchen waste, dimensional lumber, yard and garden tools, or other man-made products used in the yard. Currently yard waste is not collected in any of the region's local government curbside collection programs.

History

Between 1993 and 2001, the RDN distributed approximately 16,500 subsidized backyard composters to single family households in the region. Distribution was through a combination of one-day sales, sales through non-profit organizations and sales at RDN disposal facilities. When the composter distribution program was initiated there were few options available to purchase a back yard composter unit. Over time, the private sector began to offer a multitude of composter designs, available at many price points for a resident wishing to purchase a back yard composter. This raised the issue of using tax dollars to compete with the private sector which led the Regional Board to discontinue funding of subsidized composters.

In 2000, the RDN commissioned a survey to examine garbage disposal and composting habits among residents of the RDN. Slightly more than half of the respondents (53%) were in favour of a proposal to collect yard waste. This positive response was slightly higher for respondents in urban areas with the City of Nanaimo at 55%, the City of Parksville at 58% and the Town of Qualicum Beach at 48%.

In 2001, the RDN received competitive bids to collect yard waste as part of its curbside garbage and recycling collection contract tender process. Based on the results of this tender process, the Board directed staff to conduct customer surveys in the urban and suburban areas of the RDN to determine willingness to receive yard waste collection at an annual cost ranging from \$17 to \$30 per household based on collection frequency. A telephone survey of 400 homes was completed in July 2002.

Only one-third of residents polled supported the highest cost option of \$30 per year for collection every two weeks for 9 months. When the collection frequency was dropped to monthly for 9 months at a cost of \$25 per year, willingness to pay increased to 42%. When the collection frequency was dropped to four times a year at cost of \$17 per year, willingness to pay increased to 53%. The highest level of support for yard and garden waste collection was for the lowest level of service and the support was limited.

Based on these survey results the Regional Board decided not to implement a curbside yard waste collection program for residents of the urban areas served by the RDN curbside collection program.

In 2009, RDN staff issued a Request for Proposals (RFP) for the curbside collection of garbage, recycling and food waste. Similar to the 2001 tender for this service, the RFP requested costs to collect yard waste in the urban and suburban areas of the RDN (excluding the City of Nanaimo) under two service options: bi-weekly collection for nine months and monthly collection for nine months. Proponents' pricing ranged between \$18.00 to \$36.36 per household, depending upon frequency of service over nine months. Based on these collection cost proposals as well as the cost to process yard waste at a licensed composting facility, staff estimated that the user fee for nine-months of bi-weekly collection service would be \$50 annually. The Regional Board did not direct staff to proceed any further with yard waste collection at that time, but did approve the implementation of curbside collection of residential food scraps.

In the first quarter of 2015, staff promoted an online survey seeking information on a number of topics pertaining to solid waste services and the SWMP review process. In response to Question 7 "How does your household currently manage yard and garden waste?", 63% of respondents indicated they compost yard waste at home. Almost 40% reported taking their yard waste to a depot. Other responses included burning, using a collection service, and not producing yard waste. Note that respondents could check multiple boxes to cover all their yard waste management methods meaning the results add up to more than 100%.

When asked if they would be willing to pay a higher curbside user fee if it included yard waste collection service, 60% of respondents indicated no. Of the 40% who indicated they would be willing to pay, 57% of them would support an increase of less than \$30. Only 14% of respondents interested in paying for yard waste collection would support a fee increase of \$50 or more to receive it.

Current practice

With regards the findings of the 2012 Waste Composition Study, the materials in residential curbside waste received at the landfill included a small amount of yard waste (2%), or an estimated 223 tonnes. A large portion (25%) of the multi-family sample consisted of yard waste. No yard waste was found in the self-haul samples destined for disposal at the landfill. Overall, the study estimated less than 3,000 tonnes of yard waste was disposed of in the landfill in 2012.

Many residents currently self-haul this material to the Regional Landfill, the Nanaimo Recycling Exchange, and the Church Road Transfer Station as well as to several other privately operated sites in

the region, or they pay for private hauling services. These options are well used by residents and the commercial sector throughout the RDN, resulting in roughly 12,000 tonnes of yard waste diverted from disposal in the landfill each year. Unfortunately, Yard Waste is also a frequently illegally dumped item with residents tending not to understand the implications of disposing of organic material in public spaces.

Composting

The amount of yard waste composted in residential backyards has been the subject of studies in various communities however no formal research has been done in the RDN. Figures used to determine the amount of waste composted annually in the backyard range from 100 kg/home (National Solid Waste Benchmarking Initiative) to 450 kg/home (North Shore Recycling Program 2010 study). If we take a conservative 150 kg, and multiply it by the 16,500 compost units sold through the subsidized sales events, 2,475 tonnes of residential yard waste is managed on-site.

Backyard burning

Demand for yard waste collection options is related to the implementation of backyard burning bans. Within the RDN, residential backyard burning regulations vary between municipalities and electoral areas. Although land clearing and backyard burning is generally prohibited within municipal boundaries, there are few restrictions in the Electoral Areas and what restrictions are in place tend to be administered by the local Fire Protection Area, or the Ministry of Forests in the height of a dry summer.

In the Town of Qualicum Beach, where backyard burning is not permitted within the urban containment boundary, a free wood chipping program is offered to residents in the spring and fall of each year. The City of Parksville, where burning is not permitted during the period April 15 to October 15, also provides seasonal branch chipping. In the City of Nanaimo backyard burning is prohibited at all times of the year but no chipping program is offered. In Electoral Area H (Bowser, Deep Bay), where there are currently no backyard burning restrictions, staff provided two yard waste drop-off events in November 2008 and April 2009. Participation at both events was minimal with only 5 households delivering a total of 3 tonnes of material at each event which equated to a cost of \$336 per tonne.

Processing

As noted previously in this report, yard waste was not collected prior to the introduction of residential food waste collection in 2010. The privately owned processing facility which receives the curbside organics material (Nanaimo Organic Waste (NOW) formerly International Composting Corporation) was established and licensed to receive source separated organic waste. They have been able to control their process by knowing the ratios of the various feedstocks – the carbon and nitrogen components as well as the moisture content of the mix.

The waste stream management license for NOW requires all in-bound material to be tipped inside the building. Implications to accepting a yard waste/food waste blend include the need to be able to receive the material (and keep it indoors), sort it for contaminants, extract oversize items such as branches for pre-processing (shredding), and have a fair degree of confidence in the mix as it enters the composting system. Seasonal variations in the amount of yard waste available, and if collection was only provided for nine months, also create processing challenges. If yard waste was collected without being mixed with food waste, some of the receiving and processing concerns may be lessened.

Collection Considerations

Many curbside collection programs servicing urban and suburban areas provide yard waste collection service. Processing regulations for yard waste only are less onerous than those required for processing

food waste. For existing yard waste collection programs, adding food waste to their collection may require some processing infrastructure changes and capital outlay, but usually no change is needed for the collection side. It is more challenging to add yard waste to an established food waste collection program in large part due to collection vehicle capacity, collection container types and sizes, seasonal variations of material to be collected and labour considerations.

With the more restrictive backyard burning regulations of the urban areas, a municipality in the RDN could implement a yard waste collection service now without the need to involve the RDN. The challenges of collection and processing would still need to be addressed though.

Without undertaking a formal RFP for yard waste collection or exploring processing options and demand for the service, this report will assume that yard waste collection can be provided to all homes currently receiving curbside service in the region. It also assumes approximately 12,000 tonnes of residential yard waste is available for capture (material noted in the Waste Composition Study and material already diverted through RDN and other facilities). It excludes additional material that may come into the system from other sources (displaced from home composting, backyard burning, or illegal dumping activities). Based on the work done in 2009 and 2010, a collection service could include:

- Yard waste collected separately in dedicated trucks.
- Nine month service (March-November) of bi-weekly (every-other-week collection) on an add-a-day schedule.
- Same service provided to urban, suburban and rural parts of the region.
- Residents provide their own containers to an approved size and standard (such as Kraft bags or regular garbage cans with decals) suitable for manual collection.

Private collection

Subscription yard waste collection services are available to residents in the region, but to date have not seen a large uptake. In addition to one or two of the local commercial haulers who can provide collection, a Victoria based company Community Composting has provided subscription yard waste collection to this area since 2011. Subscribers are provided a wheeled container for their yard waste which is emptied every four weeks on a scheduled pickup day. Subscribers also receive a 20 litre bag of composted soil with each pick up. The company provides two size choices for the yard waste containers; the large cart has a capacity of 360 Litres (95 gallons) while the smaller cart has a capacity of 120 Litres (32 gallons). A one-time refundable container deposit of \$95.00 is required prior to the service commencing. The deposit is fully refunded upon termination of service and retrieval of the container. Subscription rates for the service levels offered are:

- 1 year subscription (12 pickups, every 4 weeks): 12 x \$22.00 (plus GST) = \$277.20
- 6 month subscription (6 pickups, every 4 weeks): 6 x \$24.00 (plus GST) = \$151.20

The company reports that they have 185 active subscribers receiving their service in this region.

IMPACT ON DIVERSION

Currently yard waste is not counted in the region's overall diversion statistics. The waste composition study completed in 2012 indicates that that roughly 80% of yard waste generated in the RDN is already diverted from landfill disposal. Consequently curbside collection of yard waste would not contribute to any significant increase in waste diversion. Although curbside collection would reduce greenhouse gas emissions by reducing vehicle trips to the various yard waste facilities, compulsory collection could also provide an incentive to produce more yard waste since residents would be paying for the service whether they used it or not. The most significant contribution to the region's sustainability goals

associated with the introduction of curbside yard waste collection would be the rationale to extend backyard burning bans to more areas in the RDN.

FINANCIAL IMPLICATIONS

Based on the work done by staff in 2010 for the RDN collection RFP, the inclusion of yard waste collection at the curb would increase the utility fee by an estimated \$50 per household (for 9 months of bi-weekly collection and processing). A formal RFP for a defined service would be required to obtain a more accurate cost. In all likelihood, the current collection vehicles utilized for the region's collection programs are fully committed so additional trucks would be required to provide the service and revised pricing may vary from the 2010 proposals.

Adding a new waste stream to curbside collection (or implementing a major change) does result in an increase in administrative support required to handle calls and enquiries from residents, and for program oversight. Staff estimates this could amount to 0.2 FTE but could probably be accommodated in the existing staff complement at the City of Nanaimo and RDN.

By capturing the yard waste currently being received at RDN and private facilities, revenues at those facilities will be impacted. This may also impact the facilities they in turn send the ground material to (private composting plants, hog fuel burners etc.).

REGULATORY AUTHORITY

No additional authorities would be required for the RDN to introduce yard waste collection as part of the curbside collection program.

SUMMARY/CONCLUSIONS

Support for introducing curbside yard waste collection hovers around 40 to 60% based on surveys completed in the region over recent years. That support drops when respondents are asked about their willingness to pay for such a service. Even without curbside collection, approximately 12,000 tonnes of yard waste is diverted from disposal each year due to residents' use of yard waste drop-off facilities coupled with backyard composting activity. Compare this with less than 3,000 tonnes estimated to enter the landfill, of which only an estimated 225 tonnes is attributed to curbside sources.

The City of Nanaimo reports their intention to conduct a public engagement and learning piece in Fall/Winter of 2015. With the advent of automated collection in Nanaimo, Council have asked staff to review the appetite of City residents for collection of Yard Waste. Staff and Council in Nanaimo regularly hear from residents that they wish to receive collection of Yard Waste, the question remains as to how much they are willing to pay. At a Council meeting in June 2015 City staff reported to Council that, of the 15 largest Cities in BC (of which Nanaimo is ninth), nine of them collected yard waste. City staff also noted as part of this report that the average user rate of the 15 largest municipalities in BC is \$197 per household per year, compared to the City rate of \$99.75 per year.


Currently yard waste is not counted in the region's overall diversion statistics however based on the 2012 waste composition study and data from facilities handling this material, roughly 80% of yard waste generated in the RDN is already diverted from landfill disposal. The collection of yard waste at the curb will not contribute significantly to the region's diversion goals, but the impression is that such a service will provide a much higher level of convenience for the resident generating the waste.

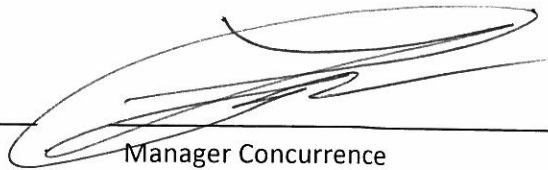
Curbside collection of yard waste would reduce greenhouse gas emissions by reducing vehicle trips to the receiving facilities, but compulsory collection could also result in more yard waste being captured since residents would be paying for the service whether they used it or not. The most significant contribution to the region's sustainability goals associated with the introduction of curbside yard waste collection would be the rationale to extend backyard burning bans to more areas in the RDN.


<i>Option Discussed</i>	<i>Estimated Costs to Implement</i>	<i>Diversion Impact</i>
Curbside collection of yard waste	An estimated additional \$50 per household/year to provide curbside collection of yard waste \$16,500 staffing costs (0.2 FTE to administer the collection of a fourth waste stream)	Assuming capture of 70% (157 tonnes) of yard waste available from the amount in the curbside waste stream = <ul style="list-style-type: none"> • 0.3% diversion increase for the overall region's disposed waste If curbside collection is introduced it is likely to capture a large portion of yard waste already diverted (12,000 tonnes) or managed through composting. The impact is weighted to convenience rather than diversion.

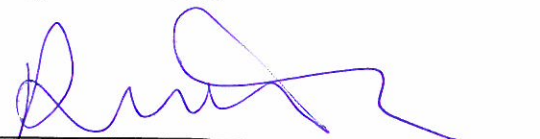
Three potential actions could form part of the focus if this item is included in the solid waste management plan:

1. Work with Electoral Area directors and planners on backyard burning ban bylaw development.
2. Formally assess the demand and willingness to pay for yard waste collection throughout the region.


 Report Writer


 Manager Concurrence


 General Manager Concurrence


 CAO Concurrence

REGIONAL DISTRICT OF NANAIMO

MINUTES OF THE SOLID WASTE MANAGEMENT SELECT COMMITTEE MEETING HELD ON WEDNESDAY, OCT. 7, 2015 AT 1:30 PM IN THE RDN COMMITTEE ROOM

Present:

Director J. Stanhope	Chairperson
Director A. McPherson	Electoral Area 'A'
Director H. Houle	Electoral Area 'B'
Director B. McKay	City of Nanaimo
Director J. Kipp	City of Nanaimo
Director T. Westbrook	Town of Qualicum Beach

Also in Attendance:

D. Trudeau	Gen. Mgr., Transportation & Solid Waste Services, RDN
L. Gardner	Manager of Solid Waste, RDN
S. Horsburgh	Senior Solid Waste Planner, RDN
R. Graves	Recording Secretary, RDN

Regrets:

Director B. Yoachim	City of Nanaimo
Director M. Young	Electoral Area 'C'
Director M. Lefebvre	City of Parksville
P. Thorkelsson	CAO, RDN

CALL TO ORDER

The meeting was called to order at 1:34pm by the Chairperson.

MINUTES

CORRESPONDENCE

ADVISORY COMMITTEE

MOVED Director McPherson, SECONDED Director Westbrook, that the following Advisory Committee minutes be received for information only.

Minutes of the Regional Solid Waste Advisory Committee meeting held Thursday, April 16, 2015.

Minutes of the Regional Solid Waste Advisory Committee meeting held Thursday, May 14, 2015.

Minutes of the Regional Solid Waste Advisory Committee meeting held Thursday, May 28, 2015.

Minutes of the Regional Solid Waste Advisory Committee meeting held Thursday, June 18, 2015.

Minutes of the Regional Solid Waste Advisory Committee meeting held Thursday, July 9, 2015.

Draft Minutes of the Regional Solid Waste Advisory Committee meeting held Thursday, September 17, 2015.

CARRIED

REPORTS

PRESENTATION

Solid Waste Management Plan Review Update – *Where Are We, How We Got Here and What Are The Next Steps?*

L. Gardner gave a presentation to provide the committee with an update of the current Solid Waste Management Plan (SWMP). L. Gardner outlined the committee's roles which are to provide political oversight of the SWMP review and to act as a liaison between the RSWAC and the Regional Board. The presentation also included the stages of the SWMP review and the next steps. Next steps includes presenting the RSWAC with a review of Technical Reports, finalize the short list of options, determine if additional regulatory authorities are required, Stage 3 consultation on preferred options and Plan adoption by the Board and draft Plan to be submitted to the Ministry for approval.

MOVED Director Westbrook SECONDED Director McKay that the Solid Waste Management Plan Review Update be received.

CARRIED

NEW BUSINESS

ADJOURNMENT

Moved Director McKay SECONDED Director Houle that the meeting be adjourned.

CARRIED

NEXT MEETING

Next SWMSC meeting will be December 2, 2015.

CHAIRPERSON