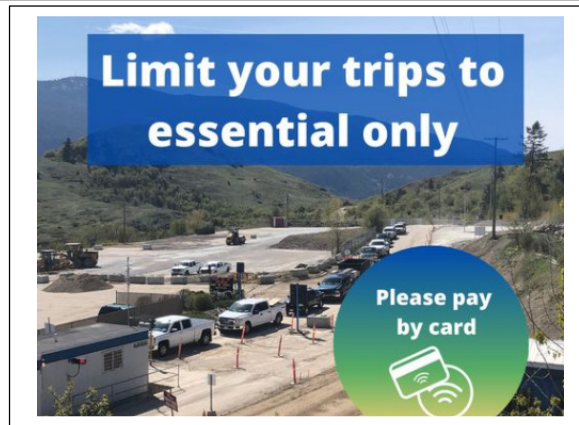


Regional District of North Okanagan

2020 ANNUAL REPORT Summary, Waste Management Plan Status and Performance Monitoring

Messaging in response to high DDF traffic during COVID-19 and encouraging use of offsite diversion & disposal options.



ReTHINK Waste Grant Recipient Testimonial

“
We are very grateful for the support!

The funds we received from the RDNO have really helped Habitat for Humanity Okanagan to accelerate the launch of the kitchen salvage program. The service this program offers to our community ultimately helps drive our mission to provide affordable home ownership.

ANDREA MANIFOLD
CEO Habitat for Humanity



RDNO Household Hazardous Waste Program

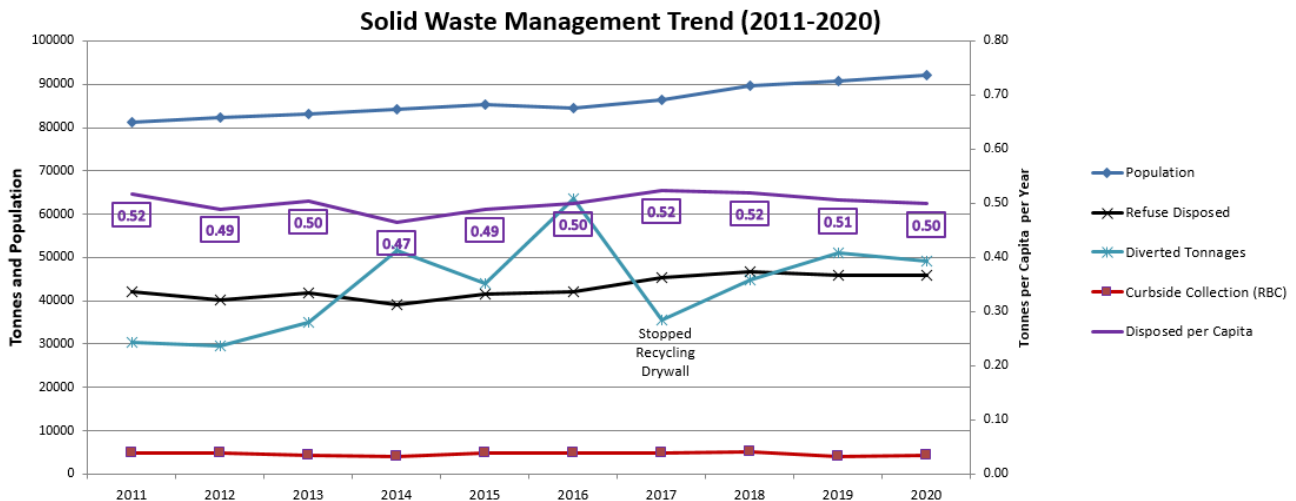


SUMMARY

The purpose of this Report is to help the Regional District of North Okanagan (RDNO) and the Board of Directors plan solid waste management programs, review consistency with the Solid Waste Management Plan, and to assist with planning, reporting on Operational Certificates and budgeting.

The following are some highlights from 2020:

- The total amount of material entering RDNO Diversion and Disposal Facilities (DDF) decreased;
- The amount of material collected, processed and marketed (recycled) or utilized onsite at DDFs decreased;
- The population growth was estimated to have increased by 1.4% based on BC Stats; and
- The per capita disposal rate decreased from 0.51 tonnes/capita/year (t/c/y) to 0.50 t/c/y and is now 0.15 t/c/y above the new target.



WASTE MANAGEMENT PLAN STATUS

The Solid Waste Management Plan (the Plan) Update 2017 was submitted to the Ministry of Environment & Climate Change Strategy (MOE&CCS) in June 2018. In 2017 and 2018 the RDNO hired a consulting firm to help update the Solid Waste Management Plan with the assistance of a Regional Solid Waste Advisory Working Group consisting of elected officials, stakeholders and members of the general public. The following is a list of initiatives recommended by the Working Group and approved by the Board of Directors, including their expected implementation year. The status of the listed initiatives to the end of 2018 is included below. Since this list has been developed Recycling and Disposal Facilities (RDFs) have been renamed to Diversion & Disposal Facilities (DDFs).

Proposed Implementation Schedule	2018	2019	2020	2021	2022
REDUCE, REUSE, RECYCLE					
Increase organics diversion					
Adopt Organics Diversion Strategy and develop Implementation Plan					
Reduce Disposal from SF Residential Households					
Determine best options for collection service adjustments					
Design and implement behavior change and education program					
Reduce Disposal for Sectors Served by Commercial Haulers					
Develop disposal bans					
Plan and implement an illegal dumping prevention and enforcement program					
Support level playing field and market development					
Design and implement behavior change and education programs					
Develop Programs to Active Promote Waste Reduction and Reuse Initiatives					
Compost demonstration and backyard composting programs					
Continue to administer the Waste Reduction Initiatives Fund					
Design and implement behavior change and education programs					
Establish staff positions to develop, implement and provide ongoing efficiency for program effectiveness					
Re-establish a Waste Reduction Program Planner to oversee expansion to universal collection and organics diversion					
Establish a staff position that collaborates with key stakeholders including haulers and businesses, provides educational support and other services, including providing support for organics program development and implementation					
RESIDUAL MANAGEMENT					
Develop centralized disposal plan with additional landfill capacity					
GVRDF Lateral Expansion					
ASRDF Transfer Station Development					
LRDF Transition to C&D Landfill					
Hesperia Landfill (City of Vernon)					
Prepare a Disaster Response Plan					
PLAN MONITORING AND EFFECTIVENESS					
Five Year Review					
Waste Composition study					

REDUCE, REUSE, RECYCLE

INCREASE ORGANICS DIVERSION:

1. **Adopt Organics Diversion Strategy and develop Implementation Plan**

- Proceeded with the implementation timeline for the Industrial Commercial & Institutional (ICI) Food Scraps Ban in early 2020 by presenting to members of the Vernon Chambers of Commerce and by producing a database of medium-large food waste generators and contacting them to advise of the proposed ban.
- Due to the immense changes faced by many organizations from the impacts of COVID-19, a Board of Directors resolution was passed to delay the implementation of the Food Scraps Disposal Ban by 6 months.
- RDNO Staff notified Board Members and Municipalities about the Provincial Organics Infrastructure & Collection Program Funding Opportunity. This notification confirmed the potential for adequate Organic Processing Infrastructure in the private sector determined by a 2019 Request for Expression of Interest (RFEOI). It informed that because member municipalities have differing approaches to curbside collection that they may wish to consider applying for funding that meets the need of their jurisdiction.
- Continued to compost yard and garden waste at the Greater Vernon Diversion & Disposal Facility (GVDDF) (no tipping fee imposed and Class A compost given away to the public)
- Increased the amount of the rebate for backyard composters to cover 50% of the cost of a composter up to a maximum of \$60.
- Continued to segregate yard and garden waste, wood waste and logs and stumps at all DDFs (chipped and used on site or composted).

REDUCE DISPOSAL FROM SINGLE FAMILY RESIDENTIAL HOUSEHOLDS:

2. **Determine best options for collection service adjustments**

- No changes for curbside collection in terms of RDNO providing service. RDNO does not provide curbside collection. Recycle BC continues to administer curbside collection of Packaging & Paper Products.
- Staff responded to the BC MOE&CCS Recycling Regulation Policy Intentions Paper to encourage Extended Producer Responsibility program expansion for mattresses, hazardous waste and electronic and electrical products.
- Developed and implemented a five (5) year partnering agreement with Interior Recycling for Household Hazardous Waste Collection and Management Services stipulating requirements for Host and Technician positions that collect and manage incoming household hazardous waste.

3. **Design and implement behaviour change and education program**

- Waste Reduction E-Newsletter distributed quarterly.
- Facebook campaigns for Earth Week, Waste Reduction Week, Holiday Waste Reduction tips.
- The Board of Directors passed a resolution to not proceed with a ban on single-use plastics because the Province could not approve or reject RDNO's checkout bag bylaw. A legal review confirmed that RDNO does not have clear authority to regulate single-use checkout bags.
- Staff responded to the Government of Canada's Proposed Integrated Management Approach to Plastic Products to Prevent Waste & Pollution and supports a ban on single-use plastics. The response suggested more focus at higher levels of the Pollution Prevention Hierarchy (ie. Reduce and Reuse initiatives).

REDUCE DISPOSAL FOR SECTORS SERVED BY COMMERCIAL HAULERS:

4. **Develop disposal bans**

- Staff determined that the ICI Food Scraps Disposal Ban has opportunities for revisions for its name, scope and implementation as a bylaw amendment which is planned for development in 2021 or 2022.

5. **Plan and implement an illegal dumping prevention and enforcement program**

No activity in 2020.

6. **Support level playing field and market development**

- Staff responded to the BC (Ministry of Environment and Climate Change Strategy Recycling Regulation Policy Intentions Paper and urged that ICI generated Packaging & Paper products should be included in the Recycling Regulation.

7. **Design and implement behaviour change and education programs**

No activity in 2020.

DEVELOP PROGRAMS TO ACTIVELY PROMOTE WASTE REDUCTION AND REUSE INITIATIVES:

8. **Compost demonstration and backyard composting programs**

- Continued rebate program for backyard composters and also increased the amount of the rebate.

9. **Continue to administer the Waste Reduction Initiatives Fund**

- Awarded \$21,163.27 in funding through the ReTHINK Waste Project Grant program to a diverse range of projects that included: food scraps diversion, producing reusable bags, zero waste workshops, a kitchen fixture salvage program, source separation and presenting historical approaches to conserving resources and waste reduction.

10. **Design and implement behaviour change and education programs**

- Encouraged use of RCBC Recycling Hotline and Recyclepedia for callers to the Solid Waste Operations Office, website and E-Newsletter communications.
- Implemented first year of a five year rate schedule at Diversion & Disposal Facilities to encourage waste diversion.

ESTABLISH STAFF POSITIONS TO DEVELOP, IMPLEMENT AND PROVIDE ONGOING EFFICIENCY FOR PROGRAM EFFECTIVENESS

11. **Re-establish a Waste Reduction Program Planner to oversee expansion to universal collection and organics diversion**

No activity in 2020.

12. **Establish a staff position that collaborates with key stakeholders including haulers and businesses, provides educational support and other services, including providing support for organics program development and implementation**

Environmental Coordinator position is currently active.

RESIDUAL MANAGEMENT

DEVELOP CENTRALIZED DISPOSAL PLAN WITH ADDITIONAL LANDFILL CAPACITY

13. **Greater Vernon Diversion & Disposal Facility (GVDDF) Lateral Expansion**

No activity in 2020.

14. **Armstrong/Spallumcheen Diversion & Disposal Facility (ASDDF) Transfer Station Development**

No activity in 2020.

15. **Lumby Diversion & Disposal Facility (LDDF) Transition to C&D Landfill**

No activity in 2020.

16. **Hesperia Landfill (City of Vernon Initiative)**

- The City of Vernon applied for a permit amendment as planned.

PREPARE A DISASTER RESPONSE PLAN
No activity in 2020.

PLAN MONITORING AND EFFECTIVENESS

FIVE YEAR REVIEW – Scheduled for 2023.

WASTE COMPOSITION STUDY – The study planned for 2020 waste postponed until 2021 due to COVID-19.

DIVERSION TARGETS

During the 2017 Plan Update it was recommended that the target be reduced to 0.35 tonnes per capita in line with the Province's target. The RDNO Board of Directors approved this diversion target to be met by 2028. The diversion potential from each sector is outlined below listing the programs as described in the 2017 Plan Update.

Material Grouping by Hauler Type	Hauler Contribution to Landfill	Diversion Potential out of Landfill (%)	Diversion Potential out of Landfill (kg/capita)
Residential	30%		
EPR-PPP*		60%	12
EPR-non-PPP		40%	5
Other recyclables		30%	3
Compostable		90%	48
Building Material		20%	2
Residential Diversion Potential Total			69
ICI	60%		
EPR-PPP		60.0%	16
EPR-non-PPP		40.0%	10
Other recyclables		30.0%	6
Compostable		30.0%	31
Building Material		33.0%	10
ICI Diversion Potential Total			74
Self-Haul	10%		
EPR-PPP		50%	2
EPR-non-PPP		40%	2
Other recyclable		30%	0
Compostable		20%	0
Building Material		20%	3
Self-Haul Diversion Potential Total			7
Potential Additional Diversion from Landfill			150
Estimated Annual Disposal (assuming 500 kg/capita/year)			350

*EPR-PPP means Extended Producer Responsibility Packaging & Paper Products (administered by Recycle BC)

PLAN MONITORING COMMITTEE

A call for volunteers for the Solid Waste Management Plan Monitoring Working Group was issued in October 2019. Fourteen applications were received and reviewed prior to presentation to the Board for approval. The Working Group was expected to meet in March 2020 for the first time, but this was cancelled due to the COVID-19 pandemic.

WASTE DIVERSION CONTINGENCY PLAN

There are no formal contingency plans for waste diversion. Continual and detailed monitoring of the Solid Waste Function by staff is expected to ward off any adverse impacts of program changes. For example, contractors responsible for diverting materials from disposal communicate market changes with staff on a regular basis and staff informs the Board of Directors when a decision is required to resolve program issues (e.g. plastics markets collapse). The RDNO plans to conduct the recommended five year effectiveness reviews as outlined in the Province's guidance documents.

PLAN FINANCING AND LANDFILL CLOSURE RESERVE

The annual transfer to the statutory Landfill Closure and Post Closure Reserve was \$1,506,681 to ensure sufficient funds are available for closure and post-closure activities at all the solid waste facilities. The liability is approximately \$22 M. The Five-Year Solid Waste Management Financial Plan is available through the RDNO Finance Department.

PERFORMANCE MONITORING

Waste disposal and diversion is monitored in accordance with Provincial requirements and best practices.

DISPOSAL RATE

The disposal rate in 2020 (**45,988** tonnes divided by the RDNO population of **92,183**) is estimated to be **0.499 tonnes per capita**. The tonnage listed in the following tables is taken from a report generated from the data base compiled using Auto Scale, the software used at the three scaled RDNO facilities. The new target of 0.350 tonnes per capita per year set for 2018 – 2028 has not been achieved, however the disposal rate declined slightly from 0.519 tonnes per capita (2.6%) in 2019.

REFUSE DISPOSED BY SOURCE AND TYPE

The quantities of refuse disposed presented in the following tables are derived from what customers tell the scale attendants/gate attendants when they use the DDFs as well as from invoices and reports provided by RDNO contractors managing recyclable material collected and processed at the DDFs.

Table 1 – Tonnes Disposed by Source and Type - 2020				
	Residential	Industrial Commercial & Institutional (ICI)	Construction & Demolition (C&D)	Total
ARMSTRONG				
Electoral Area F	224	3	16	244
Spallumcheen	2,070	2,427	144	4,641
Armstrong	2,509	1,215	72	3,796
Electoral Area C	680	10	9	699
Enderby	1,073	91	45	1,210
Indian Band Lands	689	17	2	708
Coldstream	1,134	0	0	1,134
Cherryville Transfer Station	167	0	0	167
Electoral Area B	58	17	15	89
Vernon	46	23	7	76
Out of RDNO	2	0	0	3
Electoral Area D	84	2	0	86
Electoral Area E	1	0	0	1
Lumby	13	0	0	13
Kingfisher	0	0	0	0
Kingfisher Transfer Station	3	190	0	193
Silver Star Transfer Station	0	208	0	208
Sub Totals	8,753	4,203	311	13,267
VERNON				
Vernon	14,258	14,411	686	29,354
Coldstream	1,359	215	31	1,605
Electoral Area C	361	10	18	390
Indian Band Lands	47	3	1	51
Out of RDNO	26	0	2	28
Spallumcheen	7	2	5	15
Electoral Area B	61	0	4	65
Electoral Area D	1	0	0	1
Lumby	20	49	4	72
Cherryville Transfer Station	83	0	0	83
Armstrong	2	7	0	10
Enderby	22	10	0	32
Electoral Area E	1	0	0	1
Cherryville	7	1	0	8

Electoral Area F	1	0	0	1
Silver Star Transfer Station	0	50	0	50
Sub Totals	16,256	14,759	750	31,765
LUMBY				
Coldstream	47	6	0	53
Electoral Area D	569	5	8	582
Lumby	1,145	38	46	1,228
Cherryville	1	0	27	28
Cherryville Transfer Station	28	0	0	28
Electoral Area F	1	0	0	1
Vernon	1	0	0	1
Enderby	0	0	0	0
Kingfisher Transfer Station	0	3	0	3
Sub Totals	1,793	52	81	1,925
Grand Totals	26,801	19,013	1,142	46,957

Table 2 - Tonnes Disposed by Jurisdiction – 2020

Source	Residential	ICI	C&D	Total
Armstrong	2,511	1,223	73	3,806
Cherryville	8	1	27	36
Coldstream	2,540	221	31	2,792
Enderby	1,095	101	45	1,241
Lumby	1,177	87	50	1,313
Spallumcheen	2,077	2,429	150	4,656
Vernon	14,306	14,434	693	29,432
Electoral Area B	119	17	19	154
Electoral Area C	1,041	20	27	1,089
Electoral Area D	655	6	8	669
Electoral Area E	2	0	0	2
Electoral Area F	226	3	16	245
Indian Band Lands	736	20	3	759
Out of RDNO	29	0	2	31
Totals	26,521	18,562	1,142	46,225

Table 3 - Tonnes Disposed through Transfer Stations (Not included in table above)

Source	2019 Total Tonnes	2020 Total Tonnes
Cherryville Transfer Station	273	277
Kingfisher Transfer Station	150	196
Silver Star Transfer Station	366	258

DIVERSION OF MATERIALS AT RDNO DDFS

Diversion at RDNO DDFs is summarized in the following table:

Material	2019	2020
Asphalt Roofing	1,011 tonnes	1241 tonnes
Crushable Material (e.g. concrete)	9,588 tonnes	5,092 tonnes
Expanded Polystyrene	13.11 tonnes	0 tonnes
Gypsum (Drywall)	0 tonnes	0 tonnes
Household Hazardous Waste (HHW)	207 drums, 614 containers	241 drums, 500 containers
Mattresses & Boxsprings	5,887 units	7,692 units
Metal (Scrap)	2,450 tonnes	3,571 tonnes
Packaging & Printed Paper (Drop Centres)	307 tonnes	318 tonnes
Propane Tanks	13.4 tonnes	20.9 tonnes
Refrigeration Units (Ozone Removal)	3,387 units	4,037 units
Tires	5 tonnes	5.9 tonnes
Wood (Clean and Dirty)	24,137 tonnes	22,073 tonnes
Yard and Garden Waste	12,227 tonnes	15,817 tonnes
Logs and Stumps	1,633 tonnes	1,455 tonnes

Expanded Polystyrene stopped being collected at RDNO DDFs in 2019, as it is a product collected in the Recycle BC Program at local depots.

For HHW, materials are collected in drums and containers which have respective capacities of 205 and 20 litres. Actual volumes of material will vary in each drum or container due to contents and how much it is filled.

Gypsum drywall is currently being stockpiled for isolated disposal in a monocell to reduce hydrogen sulphide omissions that occur from landfilling this material. Recycling this material will be considered once a process is implemented to ensure that the recyclable drywall pile meets the recycler requirements of less than 0.5% asbestos content.

NON-DDF DIVERSION OF MATERIALS

The quantities of material diverted from disposal through other reduce, reuse, recycle programs outside the RDNO's jurisdiction and responsibility include Extended Producer Responsibility (EPR) programs managed by the following agencies. Thrift or second hand stores (more than 25 stores), private and community garage sales and other charity programs also provide a good source of reuse and recycling options.

	Steward	Product
1	AlarmRecycle	Smoke and Carbon Monoxide Detectors
2	BC Used Oil Management Association	Oil, Oil Filters, Antifreeze, Containers

3	Brewers Association of Canada	Beer Bottles and Cans
4	Call2Recycle	Cell Phones, Single Use & Rechargeable Batteries
5	Canadian Battery Association	Lead Acid Batteries
6	Canadian Electrical Stewardship Association	Small appliances, power tools and bulky exercise equipment.
7	Electronic Products Recycling Association	Computers, Toys, Audio/Visual Equip., Medical Equipment, etc.
8	Encorp Return-it	Beverage Containers (except beer)
9	Major Appliances Recycling Roundtable*	Fridges, Freezers, Water Coolers, Stoves, Washers, Dryers, etc.
10	Recycle BC	Packaging and Printed Paper (PPP) (Residential)
11	Tire Stewardship BC	Tires
12	HRAI Thermostat Recovery Program	Thermostats
13	Recycle My Cell	Mobile Devices
14	Product Care	Paint, Pesticides, Solvents, Flammable Liquids, Light Bulbs, Aerosols
15	Outdoor Power Equipment Institute of Canada	Electronic/Electrical Mowers, Snow Throwing Equipment and Gardening Tools - Corded and/or Battery Powered
16	LightRecycle	Light bulbs and fixtures
17	Health Products Stewardship Association	Medication

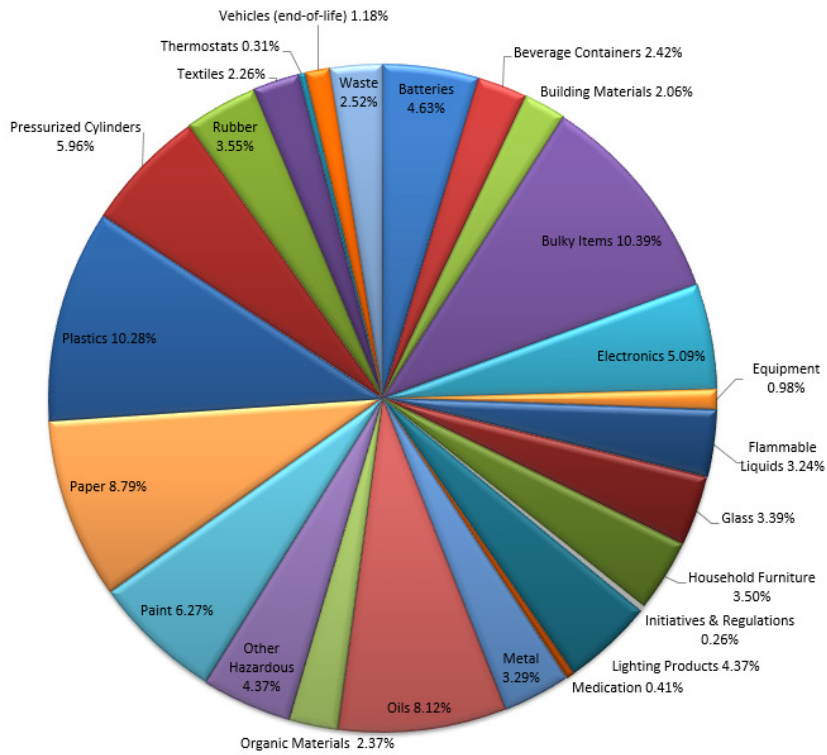
*The Major Appliances Recycling Roundtable is the one Extended Producer Responsibility program operated at RDNO DDFs as it is not offer at other locations in the regional district. The program provides a source of revenue for the RDNO.

Stewardship agencies listed above are required to report annually by regional district. Annual reports can be accessed through the Government of BC [Extended Producer Responsibility Plans and Annual Reports Webpage](#).

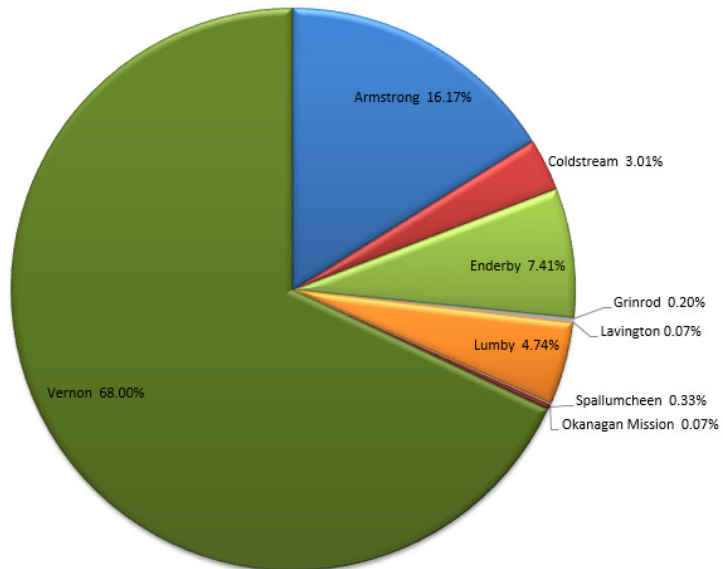
RECYCLING COUNCIL OF BC HOTLINE AND RECYCLEPEDIA INQUIRY DATA

The Recycling Council of BC (RCBC) provides the Recycling Hotline and Recyclepedia online search tool to assist residents with safe and responsible reuse, recycling and disposal information. In 2020 RCBC received a total of 1,945 Hotline and Recyclepedia inquiries. This included 299 calls to the Recycling Hotline for 747 material inquiries and 1,198 unique web searches. Information for these services are summarized in the following graphics provided by RCBC:

Summary of Material Requests for the RDNO - 2020



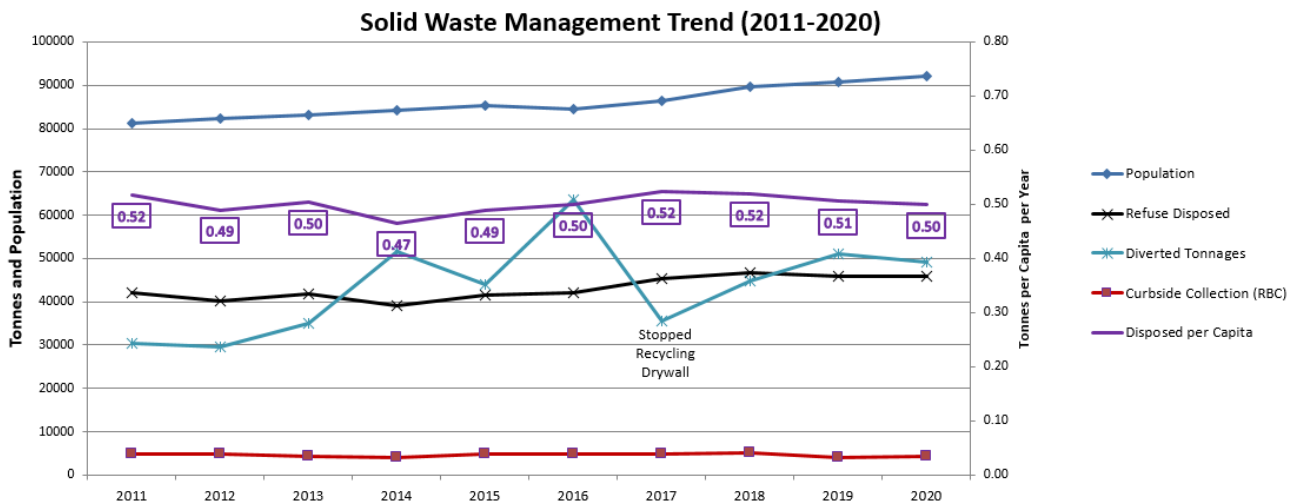
Distribution of Enquiries by City - RDNO - 2020



SOLID WASTE MANAGEMENT TRENDS

Trends in solid waste management in the RDNO have been tracked for 19 years. The following chart shows the last 10 years of disposed and recycled waste quantities in graphic format. The total 'Materials Over Scales' includes Refuse Disposed plus Diverted Tonnages at all sites.

Over the last few years there has been a slight trend downward in Materials Over Scales and amount Disposed Per Capita. The sharp variation in amount of diverted tonnages is primarily due to the timing of processing the inventory of yard and wood waste at the sites and the method used for measuring the chipped material. The amount of material diverted can vary dramatically from year to year depending on when the inventory is processed. Roofing and scrap metal leave the sites on a frequent basis, chipped wood waste is mixed with cover soils and applied to the waste, and yard and garden waste is chipped and composted (at the GVDDF only). Population data is sourced from BC Stats.



Prepared by: RDNO Solid Waste Management Staff
 July 2021, Revised October 2021