



2022 SOLID WASTE QUANTITIES REPORT

*Annual Summary of Diversion, Disposal and Solid Waste Management Plan
Progress*

Prepared by RDNO Solid Waste Management Staff



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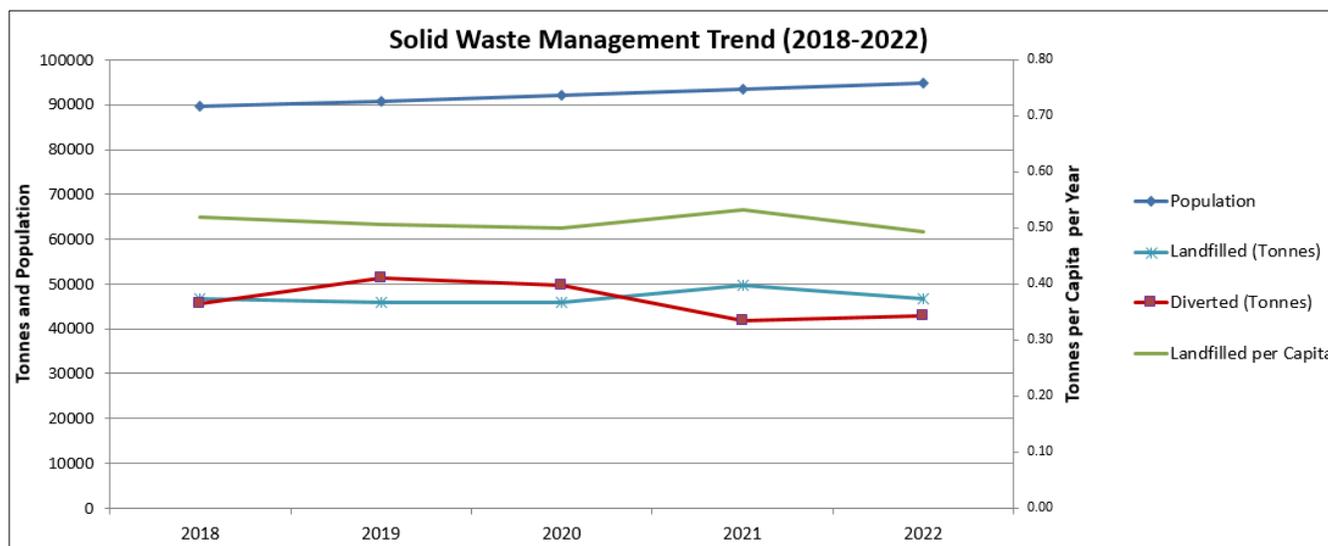
SUMMARY

This report summarizes the solid waste management activities undertaken and results achieved by the Regional District of North Okanagan (RDNO) in 2022 and is intended to assist with solid waste management planning. It also, summarizes waste reduction initiatives that are having a regional impact that are provided by other organizations in the region including municipal collection programs and provincial extended producer responsibility programs. In 2022 there were decreases in the overall quantity of waste landfilled and the quantity of waste landfilled per capita and an increase in the amount of materials diverted at RDNO DDFs compared to the previous year.

SOLID WASTE MANAGEMENT TRENDS

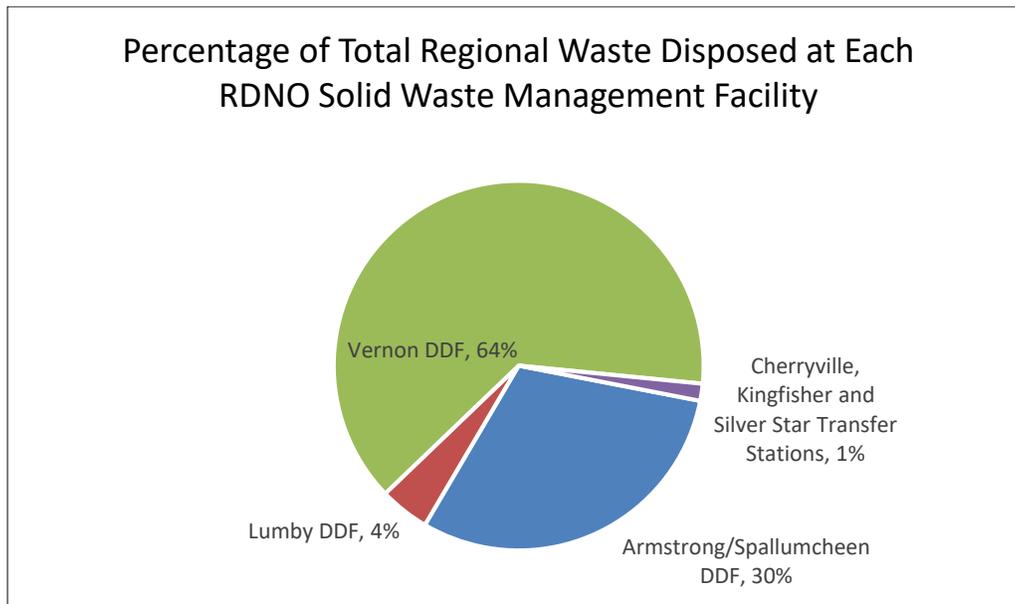
The following are the 2022 regional solid waste diversion and disposal trends compared to 2021:

- The total quantity of waste landfilled decreased by 6% to 46,807 tonnes
- The total quantity of materials collected, processed and marketed (recycled) or utilized onsite at RDNO Diversion & Disposal Facilities (DDFs) increased by 3% to 42,947 tonnes;
- The RDNO population was estimated to have increased by 1.5% to 94,853 based on BC Stats; and
- The per capita waste disposal rate decreased by 8% from 533 kilograms/capita/year (kg/c/y) to 493 kg/c/y and is now 143 kg/c/y above the current Solid Waste Management Plan target of 350 kg/c/y.



The decrease in 2022 in waste disposed landfilled and waste disposed per capita may be attributed to a couple of developments. The implementation of municipal residential organics collection programs in three RDNO municipalities is effectively reducing household waste. 2022 was the first full year for municipal curbside organics collection in Armstrong and Lumby after these municipalities started collection programs in the spring of 2021. In May 2022 the City of Vernon started a curbside organics collection. The RDNO Solid Waste Management Bylaw amendment on July 1, 2022 making Commercial Food Waste a regulated material also may have resulted in increased uptake of organics collection in the commercial sector. Also, reverse impacts from the COVID-19 pandemic are likely occurring. During the pandemic there were well known instances of increases in household and garage cleanups, as well as online shopping activity. The impacts from this activity likely peaked in 2021 and there is likely a return to more pre-pandemic levels of activity. Further, after a surge in mixed Construction & Demolition (C&D) waste at DDFs in 2021 (a 49% increase from 2020) there was a 4% decrease in mixed C&D waste in 2022 compared to 2021.

The following chart shows the proportion of waste received at the six RDNO Solid Waste Management Facilities. Waste tonnage by facility and sector can be found in APPENDIX A.



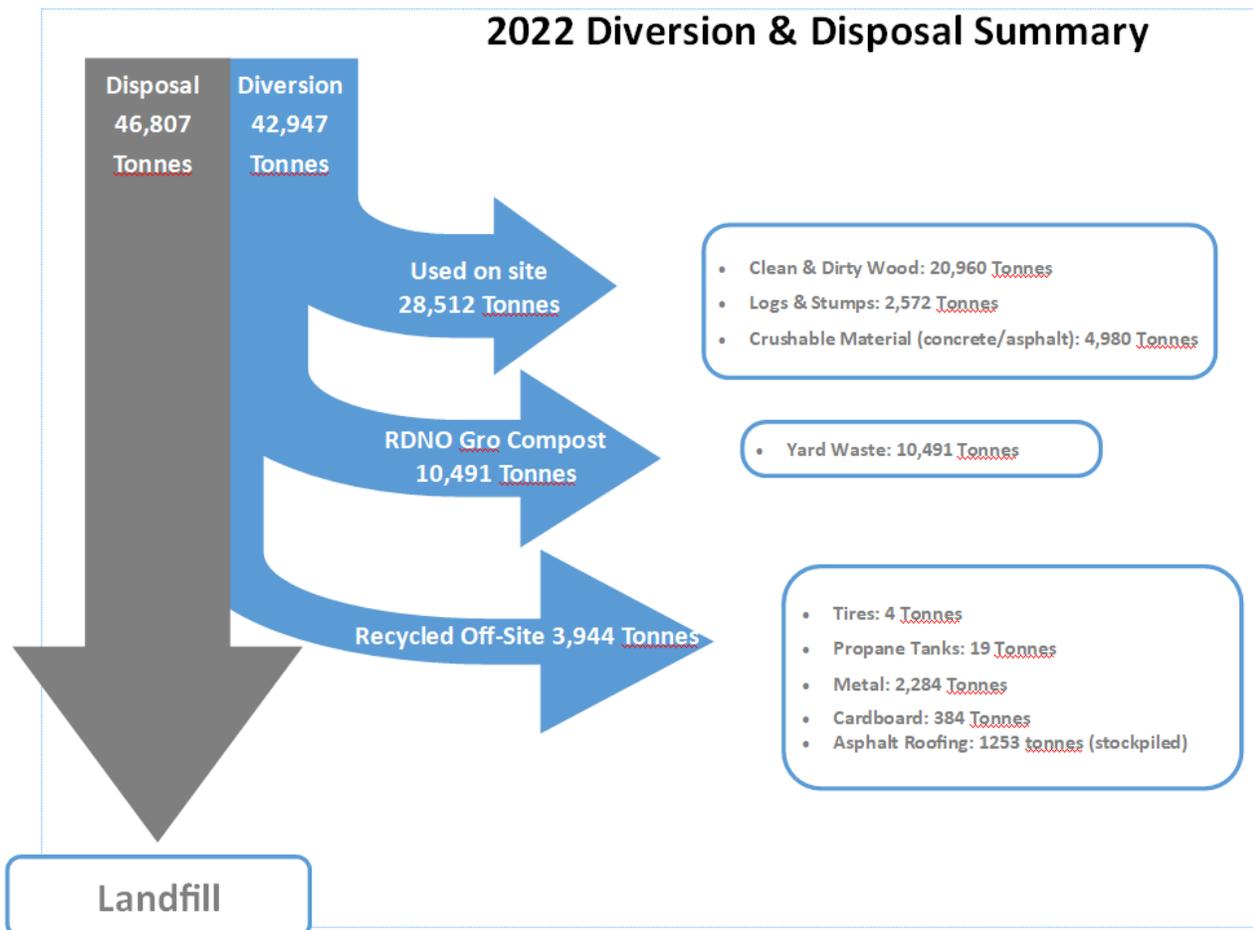
DIVERSION OF MATERIALS AT RDNO DDFS

Almost half of all materials brought to RDNO DDFs are diverted from landfill and either utilized onsite, used to produce compost or shipped off site to recycling markets. For example, wood waste is ground up and used for cover, odor mitigation and improvement of finished slopes; concrete and asphalt are crushed and used for roads and tipping pads onsite. Utilizing materials readily available onsite reduces the need to purchase and transport materials to facilities for operational purposes. Yard & Garden Waste makes up over 25% of materials diverted and is used to produce RDNO-Gro Compost. In 2022 a quantity of chipped Yard & Garden Waste was provided to Spa Hills for use in their compost. Residents can access RDNO-Gro Compost for free for beneficial use in their yards and gardens. Shipping materials off site for processing in recycling markets such as with scrap metal is a source of revenue for the RDNO.



Scrap metal recycling area at Greater Vernon DDF

The following diagram summarizes diversion and disposal activities at RDNO DDFs.



Wood and concrete are divertible materials that are processed and utilized at DDFs for operational purposes.

Diversion at the RDNO DDFs and the Household Hazardous Waste (HHW) Program is summarized in the following table:

Materials Diverted from Disposal at DDFs

Material	2020	2021	2022
Asphalt Roofing	1,239 tonnes	1,598 tonnes	1253 tonnes stockpiled*
Cardboard	318 tonnes	327 tonnes	383 tonnes
Crushable Material (e.g. concrete)	5,092 tonnes	6,162 tonnes	4980 tonnes
Mattresses & Boxsprings**	7,692 units	11,345 units	7570 units
Metal (Scrap)	3,571 tonnes	2,753 tonnes	2284 tonnes
Propane Tanks	20 tonnes	23 tonnes	19 tonnes
Refrigeration Units (Decommissioned)	4,037 units	4,308 units	4488 units
Tires	6 tonnes	2 tonnes	4 tonnes
Wood (Clean and Dirty)	22,073 tonnes	18,147 tonnes	20,960 tonnes
Yard and Garden Waste	15,817 tonnes	12,511 tonnes	10,491 tonnes
Logs and Stumps	1,455 tonnes	223 tonnes	2,572 tonnes
Household Hazardous Waste Program (Interior Recycling)	241 drums, 500 containers	283 drums, 668 containers, 337 units	234 drums, 550 containers, 112 units

Green text denotes an increase in materials collected from the previous year and red represents a decrease.

*The recycler for asphalt shingles stopped collecting them in 2021 and the material is being stockpiled and is anticipated to resume collecting and processing this material in 2023 or 2024.

**Mattress springs are removed and are recycled with Metal (Scrap). The mattress fluff, fabric and box springs are compacted and landfilled to conserve landfill airspace.

Some variation can occur, year to year, in the diverted tonnages because of the timing of stockpile processing or transportation offsite. Tonnages in this report are based on the respective calendar year that the materials are processed or transported off site. Tonnage for Wood, Yard and Garden Waste, and Logs and Stumps is determined by using a conversion factor once the material is grinded. Scrap metal is processed and shipped on a periodic basis.

A HHW Program operates at the Interior Freight & Bottle Depot in Vernon. Materials are collected in drums and containers which have respective capacities of 205 or 20 litres. Actual volumes of materials will vary in each drum or container due to contents and how much it is filled. Materials classified as units are most often pressurized cylinders, primarily fire extinguishers. Single use propane and butane cylinders accepted at RDNO DDFs and HHW Program are included in the Propane Tanks category.



Interior Freight & Bottle depot operates the Household Hazardous Waste Program for RDNO residents.

NON-DDF DIVERSION OF MATERIALS

ReTHINK Waste Resources

The RDNO encourages residents to ReTHINK Waste and consider Reduce, Reuse and Recycle options first, before planning a trip to a DDF. Information resources can be found at www.rdno.ca/rethink and www.rdno.ca/whatgoeswhere. For reuse options, thrift and secondhand stores, private and community garage sales, and online marketplaces are also playing important roles in preventing waste.

REGIONAL DISTRICT NORTH OKANAGAN
What Goes Where?
Greater Vernon Service Area

Greater Vernon Diversion & Disposal Facility (DDF) accepts the following materials separated to minimize landfill impacts:

- Asphalt & Concrete
- Asphalt Shingles
- Drywall
- Logs & Stumps
- Major Appliances
- Mattresses & Box Springs
- Scrap Metal
- Propane Tanks
- Wood
- Yard & Garden Waste

Please sort & separate these items before you come to a DDF to save on disposal fees and to help extend the life of our landfills.

Before you go to a DDF, please consider some tips to reduce waste and perhaps save the trip:

- Keep food waste out of your garbage. Find more at: lovefoodhatewaste.ca & rdno.ca/organics.
- Recycle most Packaging & Paper Products through Recycle BC. For curbside collection and depot drop off information go to: recyclebc.ca/north-okanagan.
- Recycle batteries, lightbulbs, electronics, oil, paint, tires and much more at local recycling depots. See back of page for program information.
- Donate reusable items in good condition. For potential options call the Recycling Council of BC Hotline (1-800-667-4321) or search the BC Recyclepedia online search tool and downloadable app at rcbc.ca.

For more information, contact:
RDNO Solid Waste Management: 250-550-3785
W: www.rdno.ca E: solidwaste@rdno.ca

REGIONAL DISTRICT NORTH OKANAGAN
ReTHINK Waste
Prioritize and Minimize Pollution and Waste

REDUCE (Most Sustainable)

- Plan ahead, and consider waste impacts of what you buy.
- Make the most out of your food, don't waste it.
- Avoid excess packaging and single-use items.
- Choose items that are durable and built to last.
- Use what you already have.

REUSE

- Pack reusable items (bags, bottles, cutlery).
- Find multiple uses for items.
- Consider Repair, Rent & Share options before buying items you don't often use.
- Consider purchasing used instead of new.
- Donate reusable items (search reusable on RCBC Recyclepedia)

RECYCLE, COMPOST AND DIVERT

HOW TO KEEP UNWANTED ITEMS OUT OF LANDFILLS

- Recycle Packaging & Paper Products with Recycle BC.
- Use What Goes Where and Recyclepedia to find local depots.
- Compost Food, Yard, and Garden Waste.
- Divert separated C&D, Metal and Yard Waste at RDNO DDFs.

LANDFILL (Least Sustainable)

There is no "away." Items you put in the garbage go to landfills within our region.

RETHINK WASTE RESOURCES

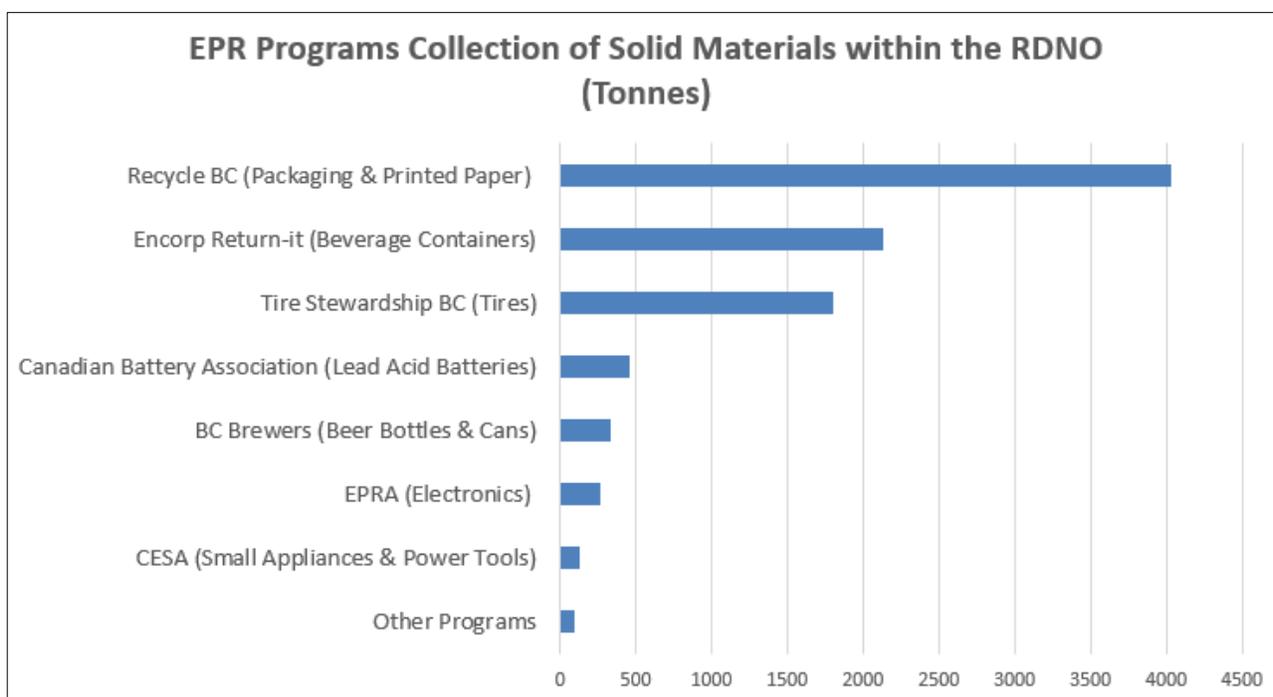
- Recycle BC Curbside & Depot Guide: recyclebc.ca/north-okanagan
- What Goes Where: rdno.ca/whatgoeswhere
- RCBC Recycling Hotline: 1-800-667-4321
- RCBC Recyclepedia App: rcbc.ca
- Avoid Food Waste: lovefoodhatewaste.ca
- Composting information: rdno.ca/composting
- RDNO Diversion & Disposal Facilities: rdno.ca/ddf

Online resources and tips for reducing waste can be found on the RDNO website.

Provincial Extended Producer Responsibility Programs

Provincial Extended Producer Responsibility (EPR) Programs support many recycling programs including curbside recycling for packaging and paper as well as depot programs for a wide range of other products including electronics, select household chemicals and automotive products.

A full list of EPR programs and quantities of materials collected can be found in APPENDIX B. In 2022 provincial EPR programs in the RDNO collected over 9,237 tonnes (99.11 kg per capita) of solid products and over 1,328,646 litres (14.01 litres per capita) of liquid products for recycling or responsible end of life management. Collection programs for these products are at private recycling depots, participating retailers and take back events arranged by product stewards. Recycle BC curbside and depot programs for packaging and paper products (4,029 tonnes collected), Return-it Beverage (2,129 tonnes collected) and Tire Stewardship BC (1,798 tonnes collected) are the three programs with the largest tonnage of materials collected in the RDNO among these programs.



RDNO Staff are members of the BC Product Stewardship Council which is a coalition of regional districts that contribute to the success of EPR programs. A key part of this process is participating in the product stewardship plan review process, which is open for public feedback, prior to provincial approval every 5 years.

The RDNO is a member of the Recycling Council of British Columbia (RCBC) and supports the RCBC Recycling Hotline and Recyclepedia online search tools with annual funding. These services are invaluable to guiding residents through a complex and extensive range of EPR programs that provide additional support on the RDNO What Goes Where Webpage. RCBC reports their inquiries to each regional district annually and the results for the RDNO are listed in APPENDIX C.

Municipal Curbside Organics Collection

Three RDNO municipalities have implemented curbside household organics collection programs. These programs have the potential to substantially reduce waste in our region as over 1/3 of residential waste can come from kitchens and yards. The following quantities collected in 2022 have been reported by the respective municipalities:

- City of Armstrong Weekly Food and Bi-Weekly Green (Yard) Waste Collection: 330 Tonnes
- City of Vernon Weekly Residential Organics Collection (partial year as program started in May 2022): 2,421 Tonnes
- Village of Lumby Weekly Food Waste Collection: 86 Tonnes

Three municipalities in the RDNO had curbside organics collection programs that collected over 2,800 Tonnes in 2022!

Amounts collected in seasonal yard waste programs (i.e. Vernon Fall Leaf Pick Up) are not included in the numbers in this section as they are included in the Yard & Garden Waste Tonnage Diverted at RDNO DDFs.



City of Vernon started weekly curbside organics collection in May 2022.

ReTHINK Waste Project Grant Program

The RDNO ReTHINK Waste Project Grant Program supports innovative projects that reduce waste. Some of these projects directly reduce waste and have reportable metrics, whereas others may provide waste reduction education and may not have measurable waste reduction during their project year.

The following is a summary of 2022 projects:

- The Brain Garden Reusable Pocket Ashtray program is an initiative that works to inform about responsible management of tobacco waste. Pocket ashtrays are distributed to smokers to provide a convenient option for extinguishing cigarette butts and the program includes a process for collecting and recycling cigarette butts. Due to shipping issues for pocket ashtrays, the project was granted an extension for completion in 2022.



Reusable pocket ashtrays from Brain Garden can reduce tobacco litter and risk of wildfires.

- Men's Shed Vernon started a project during the Spring of 2022 to reclaim wood before it comes to RDNO DDFs. From this wood they produce useful, repurposed items for other community non-profit organizations, while creating educational opportunities concerning waste reduction. The project was completed in April 2023 and was successful in producing and reclaiming a number of materials including 50 cedar planter boxes, 2 boardroom tables, 6 outdoor libraries, 20 pine cabinets and more.



Men's Shed Vernon salvaging and repurposing discarded wood to produce a variety of products that can benefit communities.

- Vernon Compost Gang provided a weekly compost pickup to a 36 unit townhome complex which resulted in the complex reducing their garbage pickup in half. They also established biodiversity areas to compost leaves onsite and avoid plastic bag waste and reduce fuel consumption needed to transport leaves to a compost facility.



Vernon Compost Gang worked to link waste reduction with biodiversity initiatives.

SOLID WASTE MANAGEMENT PLAN INITIATIVES

The following section presents work completed in 2022 on initiatives outlined in the RDNO Solid Waste Management Plan Update completed in 2018. The implementation schedule for these initiatives can be found in APPENDIX D.

REDUCE, REUSE, RECYCLE

INCREASE ORGANICS DIVERSION:

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

- Commercial Food Waste Disposal Regulation was implemented with an amendment to RDNO Municipal Solid Waste Management Bylaw (No.2960, 2022) on July 1, 2022 that added Commercial Food Waste as a Regulated Material and defined materials included and organizations affected. A six month implementation period occurred prior to enforcement for loads coming from large grocer and food processors.
- Three municipalities (Armstrong, Lumby and Vernon) provide residential curbside organics collection programs.
- GVDDF continued to receive and compost yard and garden waste (no tipping fee imposed and Class A compost given away to the public).
- Yard and garden waste, wood waste and logs and stumps were segregated at all DDFs (except for Silver Star Transfer Station) and were chipped and used on site or composted.



Resources for preventing commercial food waste are on the RDNO website.

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 and municipalities determine the level of service they provide. Recycle BC continues to administer curbside collection of Packaging & Paper Products in all RDNO Municipalities with partial service in Electoral Areas.

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

- Waste Reduction E-Newsletter distributed quarterly that local media utilized to amplify waste reduction messaging.
- Operated waste reduction information tables at the Vernon Community Expo and Armstrong, Enderby, Lumby and Vernon Farmers Markets.
- Ongoing waste reduction information resources issued on Facebook and local radio stations focusing on What Goes Where, Household Hazardous Waste and ReTHINKING Waste through Reduce and Reuse actions.



Local high school students touring Greater Vernon Diversion & Disposal Facility.



Waste Reduction Information Table at Vernon Farmers Market.

REDUCE DISPOSAL FOR SECTORS SERVED BY COMMERCIAL HAULERS:

4. *Develop disposal bans*

- Commercial Food Waste Disposal Regulation was implemented in 2022.

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

- No activity in 2022.

6. *Support level playing field and market development*

- Staff provided input on Canada's proposed *Single-Use Plastics (SUP) Prohibition Regulations and Guidance on Alternatives* suggesting additional regulation for more SUPs categories, prohibiting the export of problematic SUPs and opportunities for more clear and practical solutions for alternatives in the guidance documents.

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

- Established a Notification Card program for applicable commercial haulers informing about the Commercial Food Waste Disposal Regulation and about the higher fees for loads found to contain food waste.

DEVELOP PROGRAMS TO ACTIVELY PROMOTE WASTE REDUCTION AND REUSE INITIATIVES:

8. *Compost demonstration and backyard composting programs*

- Continued rebate program for backyard composters.
- Provided extensive composting information resources on rdno.ca/composting webpage.

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

- Awarded \$13,355 in funding through the ReTHINK Waste Project Grant program to three projects that included compost collection, wood recovery and reuse, and responsible tobacco waste disposal. 2022 was a particularly low activity year for this grant program, which was considered the result of the status of COVID-19 activity during the application period in 2021.

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 and through the RDNO website, E-Newsletter communications and in person outreach.
- Continued five year rate schedule (2020-2024) at RDNO's Diversion & Disposal Facilities with fees intending to incentivize waste diversion.
- Promoted reuse with the continuation of the Propane Tank Adapter Hose Rebate Program established in 2021 to promote reusable propane cylinders as a more sustainable option than single-use cylinders. More information at: www.rdno.ca/propane.
- Developed a Make Memories, Not Garbage webpage based on Metro Vancouver resources to promote waste reduction during the Christmas season.
- Established a guided tour format of GVDDF and provided tours for six Grade 11 & 12 classes.
- Staff participated as a project judge and mentor in the Climate Action Ripple Effect (CARE) program offered at local schools by the Fresh Outlook Foundation and School District 22. Designed a project for students on the circular economy and highlighted the links between waste reduction and the circular economy being a solution to address climate change.

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*

- Position currently not being pursued, currently municipalities are proceeding with varying levels of service for curbside collection, including organics programs in Armstrong, Lumby and Vernon.

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*

Consultant was retained to provide a conceptual design for lateral expansion of the GVDDF fill area in preparation for a potential application to the BCMOE&CCS for amendments to the GVDDF Operational Certificate. No further work on the potential lateral expansion is underway at this time.

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

Consultant was retained to develop a conceptual design for a new transfer station at the ASDDF. Public consultation on the design took place in Armstrong, Enderby and Spallumcheen in 2022.

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

Not being currently pursued, service levels consistent with other RDNO DDFs are maintained at this site.

16. *Hesperia Landfill (City of Vernon Initiative)*
No Activity in 2022.

17. *Prepare a Disaster Response Plan*
No activity in 2022.

PLAN FINANCING AND LANDFILL CLOSURE RESERVE

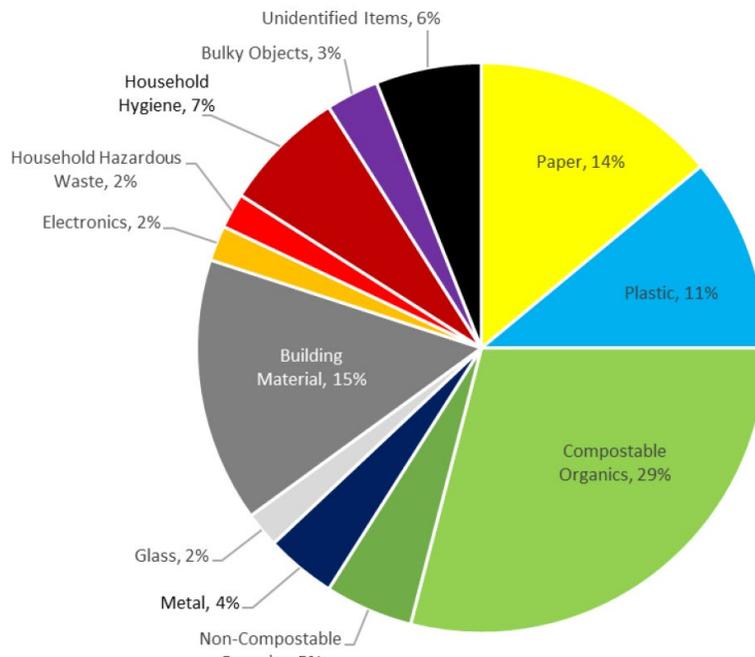
The annual transfer to the statutory Landfill Closure and Post Closure Liability was \$1,611,879 to ensure sufficient funds are available for closure and post-closure activities at all the solid waste facilities. The estimated future closure costs (NPV) for all facilities are approximately \$28.0 M. The Five-Year Solid Waste Management Financial Plan is available through the RDNO Finance Department.

PLAN MONITORING AND EFFECTIVENESS

FIVE YEAR REVIEW – Scheduled in 2023.

WASTE COMPOSITION STUDY

Waste Composition Studies provide valuable benchmark data and analysis for evaluating the success of existing solid waste programs and planning future initiatives. Previous studies were completed in 2005 and 2012. In 2021, a consultant was retained to complete a Waste Characterization Study over two sampling sessions, Fall 2021 and Spring 2022. A final report was completed in 2022 with the following chart providing a summary of the study findings. The 2021-22 Waste Composition report can be found at: <https://www.rdno.ca/rdno-services/solid-waste-management/solid-waste-planning-reports>



Proportional composition of waste (by weight) for all sectors of the Waste Composition Study completed at Greater Vernon DDF in Fall 2021 and Spring 2022

LOOKING AHEAD IN 2023

- Findings from the Waste Characterization Study done at GVDDF during 2021/22 are being communicated in E-Newsletters, Public Outreach, Social Media Posts and Media Releases to support waste reduction education.
- Enforcement of Commercial Food Waste Disposal Regulation will continue and progress will continue to be monitored.
- A commercial drywall recycling program is planned for implementation once the current stockpile has been moved and buried.
- Six (6) ReTHINK Waste Grant projects that focus on the areas of food waste prevention, recycling and resource conservation education and construction waste are proceeding.
- Public outreach opportunities including public events, farmers markets and at RDNO facilities will continue to be developed and implemented.
- Further development of online information resources including a video tour of GVDDF are being planned.
- Design work for the ASDDF Transfer Station Development will continue.
- Further refinement of the preliminary design for the GVDDF landfill expansion, so that it is suitable in preparation for an application to the BCMOE&CCS.
- A Five Year SWMP Effectiveness Review is scheduled for 2023.

APPENDIX A: REFUSE DISPOSAL BY FACILITY

Table 1: Disposed Tonnage By Sector and Facility				
	Residential	ICI, C&D and Mixed Residential	Total Disposed	Proportion of RDNO Landfilled Waste by Facility
Armstrong	8,960	5,198	14,158	30.82%
Lumby	2,265	57	2,322	5.05%
Vernon	13,085	16,376	29,461	64.13%
Grand Total	24,310	21,631	45,942*	

*Disposed Tonnage quantities are based on data collected from scale transactions by sector and location and provide a representative proportion of materials dropped off at each facility. Quantities can differ slightly from reported landfilled tonnage depending on the final outcome of materials.

Table 2: Disposed Tonnage at RDNO Transfer Stations (quantities included in Landfilled Tonnage in Table 1)		
	Waste Tonnage Transfer	Proportion of RDNO Landfilled Waste
Cherryville	315	0.69%
Kingfisher	188	0.41%
Silver Star	182	0.40%

APPENDIX B: NON-DDF DIVERSION OF MATERIALS

The quantities of materials 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 agencies in the following table. Amounts collected are from annual reports issued by each steward in June.

Table 1: BC Extended Producer Responsibility Program Amounts Collected and Amounts per RDNO Resident

Steward	Product	Amount Collected	Amount Collected Per Capita
BC Used Oil Management Association	Oil	1,053,116 Litres	11.10 L/Resident
BC Used Oil Management Association	Oil Filters	133,077 Units	1.40 Units/Resident
BC Used Oil Management Association	Containers	39 Tonnes	0.41 Kg/Resident
BC Used Oil Management Association	Antifreeze	52,369 Litres	0.55 L/Resident
BC Brewers Recycled Container Collection Council	Beer Bottles and Cans	334 Tonnes	3.52 Kg/Resident
Call2Recycle	Household Single Use & Rechargeable Batteries	17 Tonnes	0.18 Kg/Resident
Canadian Battery Association	Lead Acid Batteries	460 Tonnes	5.02 Kg/Resident
Canadian Electrical Stewardship Association	Small appliances, power tools and bulky exercise equipment.	132 Tonnes	1.44 Kg/Resident
Electronic Products Recycling Association	Computers, Toys, Audio/Visual Equip., Medical Equipment, etc.	264 Tonnes	2.78 kg/Resident
Encorp Return-it	Beverage Containers (except beer)	2129 Tonnes	22.43 Kg/Resident
Health Products Stewardship Association	Medication	2 Tonnes	0.03 Kg/Resident
HRAI Thermostat Recovery Program	Thermostats	59 Units	0.00 Units/Resident
Major Appliances Recycling Roundtable*	Fridges, Freezers, Water Coolers, Stoves, Washers, Dryers, etc.	9818 Units	0.10 Units/Resident
Outdoor Power Equipment Institute of Canada	Electronic/Electrical Mowers, Snow Throwing Equipment and Gardening Tools - Corded and Battery-Powered	7 Tonnes	0.08 Kg/Resident
Product Care	Aerosols (Paint)	1,750 Litres	0.02 L/Resident
Product Care	Aerosols (Other)	875 Litres	0.01 L/Resident
Product Care	Flammable Liquids	7,344 Litres	0.08 L/Resident
Product Care	Lamps (Light Recycle)	129,450 Units	1.41 Units/Resident
Product Care	Light Fixtures	26 Tonnes	0.28 Kg/Resident
Product Care	Paint	212,544 Litres	2.24 L/Resident

Product Care	Pesticides	648 Litres	0.01 L/Resident
Product Care	Smoke and Carbon Monoxide Detectors	1,170 Units	0.01 Units/Resident
Recycle BC	Packaging and Printed Paper (PPP) (Residential)	4029 Tonnes	43.98 Kg/Resident
Tire Stewardship BC	Tires	1,798 Tonnes	18.96 Kg/Resident
Total Weight Reported for Solids Collected	Total	9,237 Tonnes	99.11 Kg/Resident
Total Volume Reported for Liquids Collected	Total	1,328,646 Litres	14.01 L/Resident

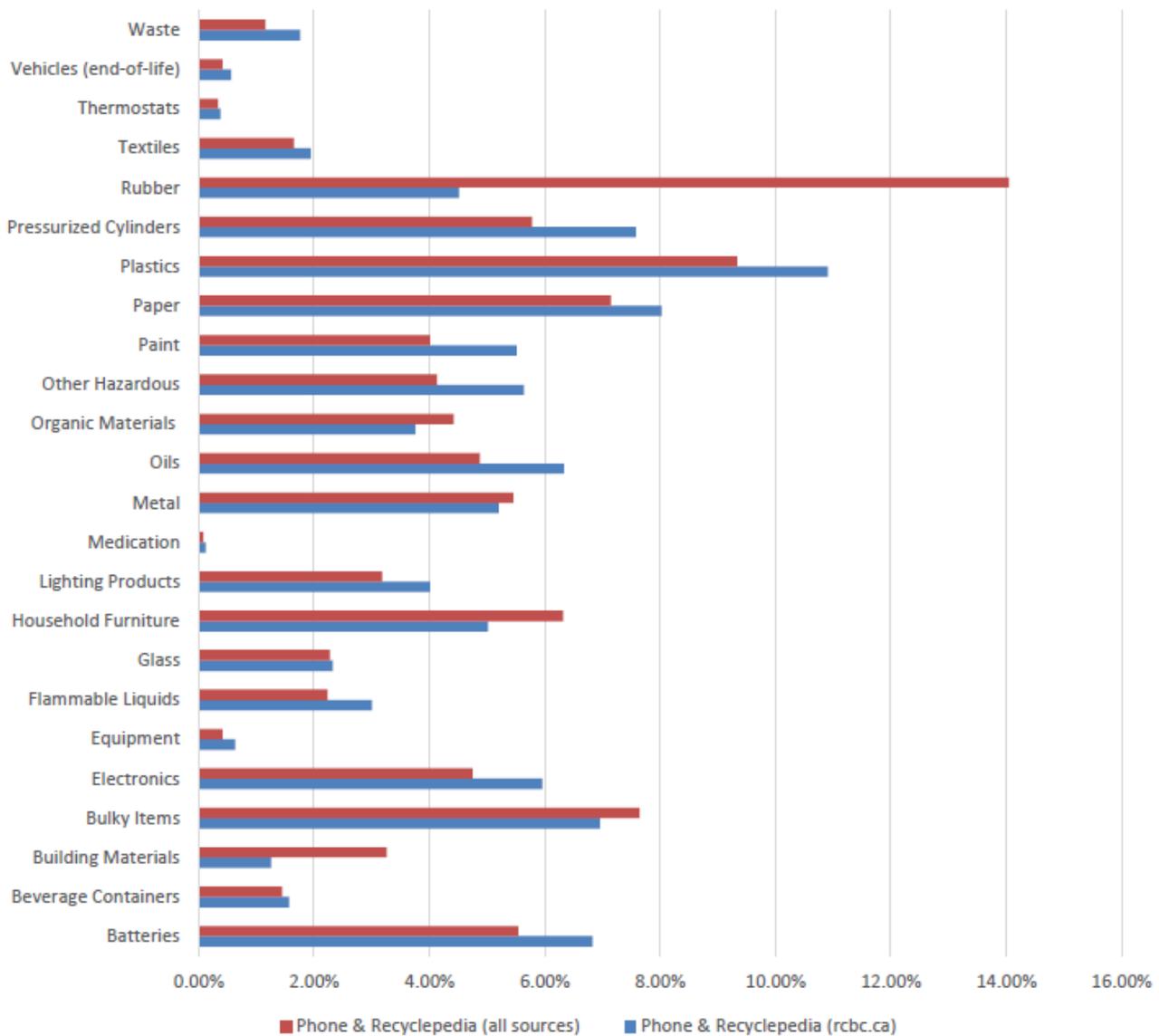
*The Major Appliances Recycling Roundtable is the one Extended Producer Responsibility program operated at RDNO DDFs, as it is not offered at other locations in the regional district. The program provides a source of revenue for the RDNO.

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](#).

APPENDIX C: RECYCLING COUNCIL OF BC INQUIRY DATA

The Recycling Council of BC (RCBC) provides the Recycling Hotline and Recyclepedia online search tools to assist residents with safe and responsible reuse, recycling and disposal information. In 2022 RCBC received a total of 2,421 Hotline and Recyclepedia inquiries, which was a 22% increase from the previous year. This included 223 calls to the Recycling Hotline for 505 material inquiries and 1,916 unique web searches. In 2022 the RDNO embedded the Recyclepedia search tool on its rdno.ca/whatgoeswhere webpage to provide more convenient access to this waste prevention tool. Information for these services are summarized in the following graphics provided by RCBC:

Summary of Material Requests for the RDNO - 2022



Appendix C (continued): Recycling Council of BC Inquiry Data

Date Range: January 1st, 2022 to December 31st, 2022

Material Request in RDNO -- Combined Media (Phone & Web Data)

Material	Phone	Web (rcbc.ca)	Web (all sources)
Batteries	3	106	131
Alkaline Batteries	1	41	55
E-Bike & E-Scooter Batteries	0	0	1
Lead Acid Batteries	2	55	62
Other Batteries	0	2	3
Rechargeable Batteries	0	8	10
Beverage Containers	12	13	23
Beer Containers	0	3	8
Milk/Soy/Rice Containers	1	1	4
Non Alcoholic Refundable	11	8	9
Other Alcoholic Containers	0	1	2
Building Materials	8	12	71
Asbestos	0	1	2
Asphalt	0	0	1
Carpet	2	0	7
Concrete	0	0	6
Creosote Treated Lumber	0	0	1
Bricks	0	0	1
Gypsum	1	2	9
Lumber	0	1	3
Mixed Construction Waste	0	1	1
Pallets	0	1	6
Resuable Building Materials	4	2	9
Roofing Shingles	0	0	1
Rubble	0	1	12
Toilets	1	3	12
Bulky Items	30	81	155
Air Conditioners	1	2	7
Appliances Large	7	13	38
Appliances Small	4	18	31
Exercise Equipment	1	4	6
Fridge/Freezer	14	17	37
Outdoor Power Equipment	1	20	28
Smoke Alarms	2	4	5
Tools	0	3	3
Electronics	12	83	103
Car Electronics	0	1	1
Cartridges	0	12	13

Appendix C (continued): Recycling Council of BC Inquiry Data
Date Range: January 1st, 2022 to December 31st, 2022
Material Request in RDNO – Combined Media (Phone & Web Data)

CDs and DVDs	4	15	18
Cell Phones	0	2	2
Computers	1	10	14
Electronic Musical Instruments	0	3	3
Home Audio and Video Systems	0	2	3
Personal Electronic Products	0	3	4
Photographic	0	1	1
Storage Media	7	24	27
Toy (Electronic/Electrical)	0	1	2
TV	0	9	15
Equipment	10	n/a	n/a
Blue Box/Bags	10	n/a	n/a
Flammable Liquids	7	41	47
Flammable Liquids	7	1	5
Gasoline	0	18	19
Solvents	0	22	23
Glass	7	30	48
Eye Glasses	0	11	12
Glass Containers	3	8	15
Plate/Window Glass	4	11	21
Household Furniture	29	51	124
Child Car Seats	26	34	37
Furniture Non Reusable	1	2	25
Furniture Reusable	1	2	20
Hot Tub	0	0	2
Mattress Non Reusable	0	7	24
Mattress Reusable	0	3	7
Reusable Household Items	1	3	9
Lighting Products	1	63	76
Commercial-use fixtures	0	3	3
Commercial-use lights	0	4	5
Christmas Light Strings	0	10	14
Non PCB Ballasts	1	3	3
PCB Ballasts	0	2	4
Residential-use fixtures	0	6	9
Residential-use lights	0	35	38
Medication	0	2	2
Natural Health Products	0	2	2
Prescription Medications	0	8	6
Metal	47	36	85

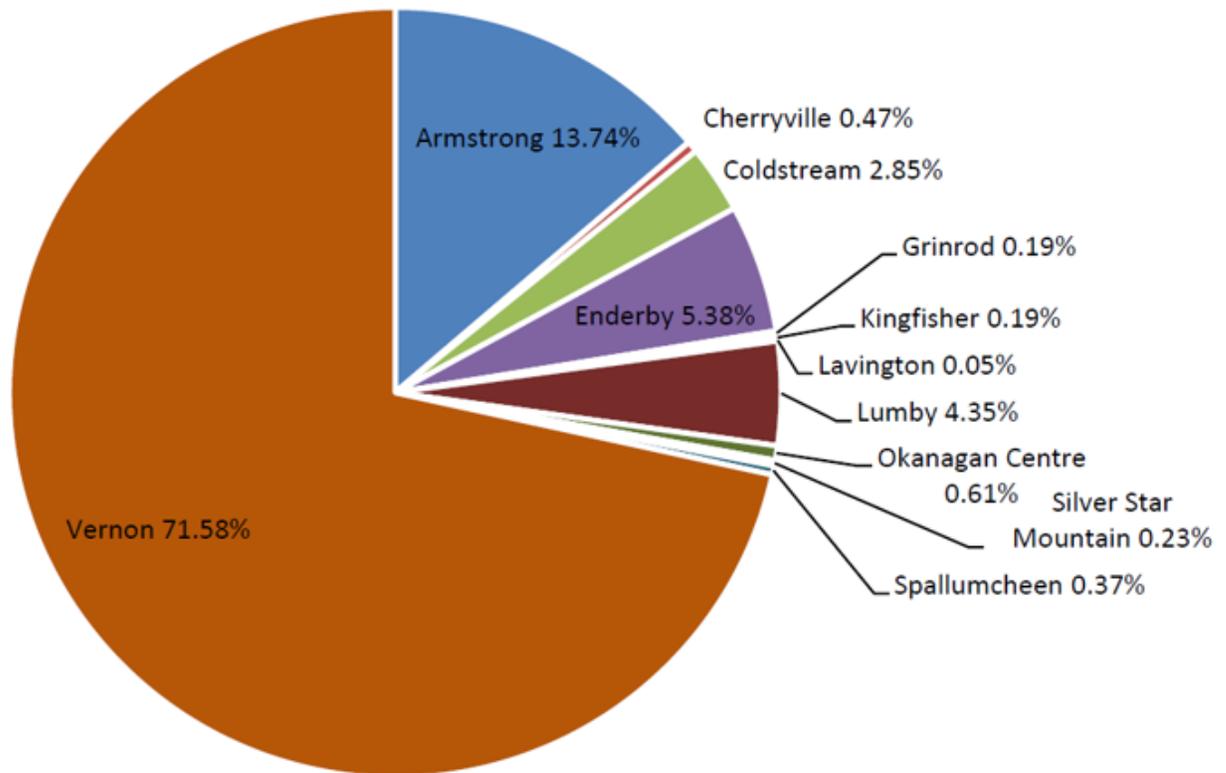
Appendix C (continued): Recycling Council of BC Inquiry Data
Date Range: January 1st, 2022 to December 31st, 2022
Material Request in RDNO – Combined Media (Phone & Web Data)

Aluminum Cans	0	0	1
Aluminum Scrap	0	1	4
Car Parts	5	7	8
Ferrous Metals	26	15	43
Mercury	4	2	4
Non-Ferrous Metals	3	7	18
Tin Cans	9	4	7
Oils	22	79	96
Fuel Oil	2	n/a	n/a
Oil	16	72	85
Oil Filters	0	3	4
Other Oil	0	2	3
P2 Oil Containers	4	2	4
Organic Materials	33	27	74
Animal Waste	0	0	1
Christmas Trees	0	1	2
Fat/Grease	26	17	17
Food Scraps	1	2	4
Soil	0	0	13
Toxic or Invasive Plants	0	0	1
Wood Material	3	5	15
Yard Trimmings	3	2	21
Other Hazardous	52	38	48
Antifreeze	3	27	28
Explosives	0	0	2
Hazardous	13	0	0
Household Hazardous Waste	28	6	6
Pesticides	2	1	2
Pesticides-No Regulation	4	n/a	n/a
Photographic	2	n/a	n/a
Pool Chemicals	0	0	1
Sharps	0	4	9
Paint	12	76	85
Paint	10	72	79
Paint Aerosols	1	4	6
Paint - No Regulation	1	n/a	n/a
Paper	75	53	98
Books Hard Cover	5	9	14
Books Soft Cover	6	6	6
Corrugated Cardboard	16	21	52
Mixed Waste Paper	43	6	8
Other Paper	1	n/a	n/a

Appendix C (continued): Recycling Council of BC Inquiry Data
Date Range: January 1st, 2022 to December 31st, 2022
Material Request in RDNO – Combined Media (Phone & Web Data)

Paper Packaging	4	11	18
Plastics	80	94	146
Car Parts (Plastic)	0	5	5
Other Flexible Plastic Packaging	11	5	6
P1 PET	1	1	1
P2 HDPE	0	1	1
P3 PVC	9	8	10
P4 LDPE	0	0	1
P5 PP	2	0	0
P6 PS	0	1	1
P6 Expanded PS	6	9	16
P7 Other	22	13	14
Plastic (Packaging) Foam	10	23	41
Plastic Bags and Overwrap	3	5	14
Plastics Drums (>25L)	0	4	4
Plastic Packaging Containers	14	19	32
Soft Plastics	2	n/a	n/a
Pressurized Cylinders	21	100	119
Aerosol Cans (empty)	0	5	5
Butane Canisters	4	n/a	n/a
Fire Extinguishers	2	3	6
Oxygen and Acetylene Containers	1	n/a	n/a
Propane Tanks Disposable	3	64	72
Propane Tanks Refillable	11	28	36
Rubber	6	66	334
Bicycle Tires	0	2	22
Car and Light Truck Tires	4	58	304
Other Rubber	2	6	8
Textiles	5	26	35
Clothing Non Reusable	5	13	17
Clothing Reusable	0	8	12
Textile Rags	0	5	6
Thermostats	1	5	7
Mercury-containing Thermostats	1	5	7
Vehicles (end-of-life)	4	5	6
Cars	1	5	6
Trucks	3	0	0
Waste	28	n/a	n/a
Grand Total – 2022	Phone	Web (rcbc.ca)	Web (all sources)
	505	1,091	1,916

Distribution of Recycling Hotline and Recyclepedia Inquiries



APPENDIX D – SOLID WASTE MANAGEMENT PLAN IMPLEMENTATION SCHEDULE

The Solid Waste Management Plan Update 2017 was submitted to the BC Ministry of Environment & Climate Change Strategy (BCMOE&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.

Proposed Implementation Schedule	2018	2019	2020	2021	2022
<i>REDUCE, REUSE, RECYCLE</i>					
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					
<i>RESIDUAL MANAGEMENT</i>					
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					
<i>PLAN MONITORING AND EFFECTIVENESS</i>					
Five Year Review					
Waste Composition study					

Figure 1: Solid Waste Management Plan 2017 Proposed Implementation Schedule

Since this list has been developed, Recycling and Disposal Facilities (RDFs) have been renamed to Diversion & Disposal Facilities (DDFs).