

**REPORT TO CAPITAL REGIONAL DISTRICT BOARD  
MEETING OF WEDNESDAY, MAY 27, 2020**

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**SUBJECT**    Environmental Resource Management – 2019 Progress Report

**ISSUE SUMMARY**

To present a summary of 2019 activities, results and accomplishments of the Capital Regional District's (CRD) solid waste function.

**BACKGROUND**

Based on the 5R hierarchy of Reduce, Reuse, Recycle, Resource Recovery and Residual Management, the CRD's solid waste services strive to minimize waste generation and disposal needs and maximize diversion and recovery opportunities. Work in the first three areas focuses on conserving airspace in an effort to ensure enough landfill capacity to meet the residuals disposal needs of the region in the future.

Highlights for 2019 include:

**Developing a New Solid Waste Management Plan**

- Building on the goals, objectives and guiding principles for the new Solid Waste Management Plan endorsed by the Board in 2018, the Solid Waste Advisory Committee developed a number of proposed strategies, associated actions and targets in 2019.
- Public consultation took place in fall 2019. The results of the public consultation will be provided in a staff report to the Environment Services Committee later in 2020.

**Diversion Services (Reduce, Reuse, Recycle)**

- Following a successful 2018 pilot where 3R programs were offered to the general public, eight events were held in 2019. A total of 146 individuals participated in either adult only or family focused programs, held in the Hartland Learning Centre, followed by a tour of the landfill. Participants learned how waste is managed in the region, what diversion opportunities exist, and families discussed food waste and made their own beeswax food wraps. In total, the Hartland Learning Centre received 2,431 visitors in 2019.
- Involvement in the national Love Food Hate Waste Canada campaign continued in 2019. Activities continued to focus on raising awareness locally about food waste and transitioned toward engaging the public to share their food-saving tips and tricks through social media.
- 19,030 tonnes of material was collected at the Hartland Depot for transport to recycling and composting facilities on and off the island.
- Work to secure regional organics processing capacity continued into 2019. A separate staff report on this subject is being presented at this meeting.

**Energy Recovery Services (Recovery)**

- In 2019, landfill gas collection efficiency was 66%, compared to a target of 75%, and has remained largely consistent for the past three years. To support improved accuracy in landfill gas generation modelling and collection efficiency reporting, field-level landfill gas quantification is planned for 2020.

- The volume of landfill gas collected at Hartland has exceeded the capacity of the current landfill gas utilization plant and the equipment is reaching its end of life. On April 22, 2020, the CRD announced approval in principle of an agreement where FortisBC will purchase renewable natural gas generated from Hartland's landfill gas. The CRD and FortisBC are currently working together on a supply contract that will be submitted to the British Columbia Utilities Commission for approval. If approved by the commission, the CRD will continue to be responsible for the ownership and operation of Hartland Landfill, the landfill gas collection system and the upgrade facility. FortisBC will pay the CRD a fixed price per gigajoule for the renewable natural gas.

### **Disposal Services (Residual Management)**

- The region's per capita disposal rate climbed slightly from 380 to 382 kgs/capita in 2019, well under the provincial average of 506 kg/capita (2017).
- The pre-approval process associated with both commercial and residential renovation waste disposal, in order to meet WorkSafeBC regulatory requirements and ensure staff and public safety, was fully implemented in 2019.
- Hartland's compaction rate continues to exceed 950 kg/m<sup>3</sup> and all refuse is covered daily with synthetic tarps and aggregate quarried on site to cover the side slopes and vehicle access areas.
- In 2019, a new master filling plan was finalized, including analysis and design to better optimize site capacity over the long term; understand aggregate removal and stockpile mass balances; plan progressive closures and stormwater diversion; maximize gas and leachate collection systems; evaluate construction and compaction methods that will help achieve lifespan goals.

### **IMPLICATIONS**

#### *Environmental & Climate Implications*

The environmental monitoring program for Hartland confirms that regulatory requirements were met. Monitoring results confirm that effective measures are in place to ensure environmental impacts are mitigated and that leachate is effectively being controlled and contained on site. The project is expected to reduce the region's greenhouse gas emissions by approximately 264,000 tonnes of carbon dioxide equivalent over the 25-year project life.

#### *Intergovernmental Implications*

The responsibility for how solid waste is managed in BC and across the region includes all levels of government: municipal, regional, provincial and federal. The private and non-profit sectors play a key role in delivery of services, as do the consumers of materials themselves. Disposal services for solid waste generated in the region are conducted by the CRD. The CRD also operates transfer stations at Hartland Landfill (Hartland Depot) and in Port Renfrew as a local service funded by that community. Collection of commercial garbage, kitchen scraps and recycling is conducted by the private sector, as is residential garbage and kitchen scraps, with the exception of single family dwelling services offered by six of the region's 13 municipalities. The CRD also, under agreement with Recycle BC, provides a combination of curbside and depot recycling services across the region for packaging and printed paper.

*First Nations Implications*

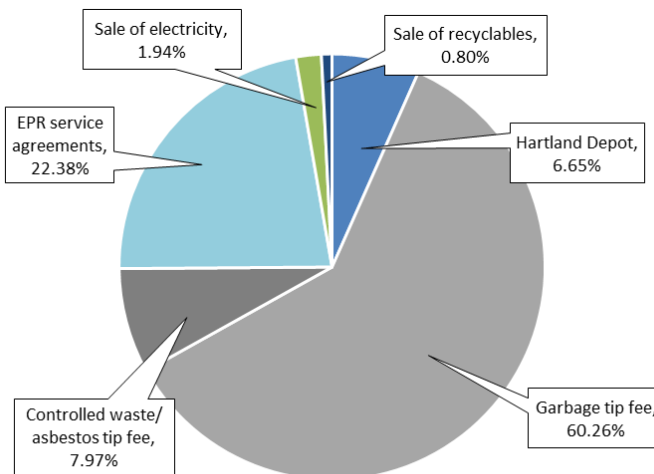
In addition to the outreach students hired annually to deliver environmental sustainability and waste reduction programming across the region, the CRD also hires a student whose focus is to work specifically with First Nations communities, spending time building relationships and identifying areas that will assist the CRD with future work. In the summer of 2019, the CRD had an opportunity to work with a youth from Songhees Nation to continue this work of sharing education with First Nations and understanding better what the needs are in reducing our shared waste diversion challenge.

*Financial Implications*

Solid waste services continued to be self-funded in 2019. All costs associated with CRD solid waste disposal and diversion programs are funded through tipping and user fee revenues at Hartland Landfill, service delivery agreements with producers for provincial recycling programs, sale of electricity and sale of recyclables.

**2019 Revenue Sources for Self-funded Solid Waste Service**

<b>DIVERSION</b>	
EPR service agreements	\$6,186,704
Food waste tip fee	\$1,747,984
Sale of recyclables	\$222,054
Recycling user fees	\$89,140
<b>DISPOSAL</b>	
Garbage	\$16,514,687
Controlled waste	\$1,598,870
Asbestos	\$605,009
Fines and miscellaneous	\$145,464
<b>RECOVERY</b>	
Sale of electricity	\$536,639
<b>\$27,646,551</b>	



**Reserve Balances**

Surplus funds are held in reserve for future capital works, operating shortfalls and closure/post-closure work. The balance at the end of 2019 of these reserve funds is as follows:

Fund	Balance
Sustainability Reserve	\$33,724,173
Landfill Closure:	\$10,658,112
Capital Reserve:	\$6,908,979
Equipment Replacement:	\$3,173,611
Airspace Reserve:	\$1,000,000
Gulf Island Depots:	\$26,774
Compost Education Centre:	\$26,817

**CONCLUSION**

The roles and responsibilities for managing solid waste include a combination of government, private and non-profit sectors and the consumers themselves. The CRD continues to safely operate and maintain Hartland Landfill and meet its regulatory commitments to protect human health and the environment from potential impacts associated with solid waste disposal services. Staff have prepared an annual progress report with updates on solid waste programs, operations, capital projects, environmental monitoring and other activities. Based on the 5R hierarchy, the CRD's solid waste services continue striving to minimize waste generation and disposal needs and maximize diversion and recovery opportunities.

**RECOMMENDATION**

That the Environmental Resource Management 2019 Progress Report be received for information.

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Concurrence:	Robert Lapham, MCIP, RPP, Chief Administrative Officer

**ATTACHMENT**

Appendix A: Environmental Resource Management – 2019 Progress Report