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<b>TO:</b>	Larry Gardner Manager, Solid Waste Services	<b>DATE:</b>	May 10, 2016
<b>FROM:</b>	Sharon Horsburgh Senior Solid Waste Planner	<b>MEETING:</b>	RSWAC, May 19, 2016
		<b>FILE:</b>	5365-00
<b>SUBJECT:</b>	Options for the Management of Household Hazardous Waste (HHW)		

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### RECOMMENDATION

That the report on Options for the Management of Household Hazardous Waste be received for information.

### PURPOSE

This report has been prepared in response to the RSWAC requesting a report regarding funding household hazardous waste collection events.

### BACKGROUND

Household hazardous waste (HHW) is any waste from your home that is considered dangerous. It includes any leftover household product that is marked flammable, corrosive, explosive or poisonous. Common examples are pesticides, varnishes, paints, cleaners, and batteries.

In British Columbia, HHW is primarily managed through Provincial government established Extended Producer Responsibility programs (EPR). These programs cover the following materials: paint, oil, household lighting, CO and smoke alarms, small appliances, cell phones, batteries, thermostats, and pharmaceuticals, among others. These EPR programs are designed to ensure these materials which are or contain hazardous waste is handled, stored, transported, treated and disposed of properly.

Typically HHW materials are dropped off at depots where they are packed into containers, placed in a truck and transported to a warehouse. The waste is re-sorted and sent to the appropriate facilities for treatment or disposal. The disposal method depends on the type of product: some is sent to Swan Hills, Alberta for incineration; PCBs go to Quebec; some pesticides are incinerated, while others go to secure landfills in BC; solvents and waste oils are recycled or reused in heat recovery fuel in Alberta.

**RDN HHW Management**

In the RDN, HHW management has been left to the private sector. Currently, there are several for-profit and non-profit depots in the Nanaimo and Parksville areas where EPR items are accepted. The RDN is one of the highest subscribers to EPR programs in the Province and this is an important consideration when evaluating the effectiveness of the existing programs. The RDN does not provide HHW drop off programs at its facilities as many items are covered by EPR programs. A number of depots throughout the RDN accept the majority of EPR materials in the region and they have indicated that non EPR materials are prevalent and can pose a financial burden on the organization if abandoned at these depots. In 2015, the Nanaimo Recycling Exchange (NRE) spent \$12,000 on handling and disposal of non-stewarded HHW items.

The Province’s strategy to manage HHW is through industry-led EPR programs. These programs place the responsibility to provide end-of-life recycling and appropriate disposal on the producers and retailers of the product. This system shifts the cost burden from the general taxpayer or local government on to the producer and consumer. At the RDN’s regional facilities, staff advise customers to take materials not accepted at the landfill to appropriate locations for safe disposal. Hazardous waste companies like Terra Pure, Hetherington, and Arrowsmith Environmental will accept hazardous waste which is not part of the EPR programs at a cost.

RDN staff have indicated they do occasionally set aside HHW material that has been left at the landfill or transfer station. Those materials are stored securely until there is sufficient quantity for transportation. There are usually 2 shipments per year and the RDN budgets approximately \$1,000 per annum for abandoned HHW.

The RDN’s 2012 Waste Composition Study identified that HHW consisted of less than 1% of the waste stream and the majority of the materials found were covered by EPR programs. Table 1 below categorizes the materials considered HHW:

Table 1: Categories of Household Hazardous Waste in Residual Waste Stream

<b>HOUSEHOLD HAZARDOUS WASTE</b>	<b>EPR PROGRAM (Residential Products Only)</b>
Batteries	✓
Medical/Biological Waste	No program
Stains	✓
Preservatives	✓
Latex Paint	✓
Oil-based Paint	✓
Aerosols	✓
Solvents	✓
Pesticides	✓
Herbicides	Some items
Fungicides	Some items
Motor Oil	✓
Oil Filters	✓
Anti-Freeze	✓
Pharmaceuticals	✓
Flammable Products Other Petroleum based Products	✓
Mercury Containing items Thermostats & lightbulbs	✓



## **JURISDICTIONAL SCAN ON HHW MANAGEMENT OPTIONS**

Some Regional Districts with limited access to drop off depots work collaboratively with EPR organizations and local government to provide mobile collection events. EPR organizations determine the site requirements, which could include secure storage, protection from weather, supervised collection, and paved surfaces for safe pickup of large bins. Typically, if the EPR organizations determine there is adequate collection coverage in an area, they decline the expansion of depot services or participating in mobile collection events.

### **Columbia Shuswap Regional District (CSRD)**

The CSRD conducts Household Hazardous Waste Round-up events in the communities of Salmon Arm, Revelstoke and Golden to collect a backlog of hazardous household material. These events take place every two years. This program provides an opportunity for residents to safely dispose of materials that are toxic, corrosive, reactive or ignitable.

In 2016, the CSRD has budgeted \$80,000 to provide this services to residents at no charge. The CSRD offers residents this opportunity because this material is not accepted in the landfill but it requires safe disposal. While some products such as pesticides and herbicides are regulated through an Extended Producer Responsibility Program administered by Product Care, not every community has a Product Care depot, and not all products are accepted as part of the stewardship program, so this program helps consumers with their non-conforming leftovers.

### **Capital Regional District (CRD)**

The Hartland recycling area accepts almost all types of household hazardous waste from residents only. The program does not include industrial waste from commercial businesses. The Capital Regional District recently issued a contract for Household Hazardous Waste Management and Hazmat Services, in the amount of \$382,544.69. It is estimated that the CRD handles 65 tonnes per year of HHW previously managed through a private depot. In addition to the Hartland Landfill, there are several for-profit and non-profit depots that accept EPR items at more convenient drop off locations across the Capital region.

### **Thompson-Nicola Regional District (TNRD)**

The TNRD host HHW events in cooperation with the City of Kamloops as well as a few events in some of the smaller municipalities. Events are typically held in larger towns/cities (Kamloops/Merritt) every year and other smaller communities every two or three years. The Region's hazardous waste contractor receives all materials not covered by Product Care. Product Care also sends their contractor to accept their materials. The cost of the events greatly depends on the amount of material received. The event costs range from \$8,000 - \$20,000 for one day events.

TNRD have indicated they are starting to phase out the drop off events as they are working towards accepting HHW year round at their full service eco-depots. They have found a significant amount of the material that comes into the events is paint and oil that are already covered through EPR stewardship programs. There is minimal non-EPR material and it is proposed this can be collected for a fee by their contractor. Depot service provides much better service to residents as the service is year round opposed to one day a year.

### **Regional District of North Okanagan (RDNO)**

RDNO have introduced a full service Eco Depot at a cost of \$200,000. The stewardship agencies pay to participate in the Eco Depot. However the costs to run the regional roundup events was approximately \$75,000 per year.

### **Regional District of Okanagan Similkameen (RDOS)**

RDOS's Penticton landfill accepts hazardous waste at their landfill and provides a round up service for approximately \$80,000.

### **Regional District of Central Okanagan (RDCO)**

The RDCO has a contractor in the City of Kelowna that runs a year round depot. The contractor receives material directly from the public at the contractor's facility, and then the contractor invoices the RDCO for all non-program materials. The Annual budget for this service is approximately \$80,000.

### **City of Chilliwack**

HHW annual service is approximately \$35,000 per year.

### **District of Mission**

Newalta HHW annual service is approximately \$30,000 per year.

## **OPTIONS FOR CONSIDERATION**

There are a number of options that can be introduced to manage HHW drop off events in the Regional District. These could involve going out for an RFP to determine the costs associated with hosting a Regional Round up Event and involving existing service providers of HHW services that currently offer EPR programs as well as managing non EPR material.

## **IMPACT ON DIVERSION**

By changing how HHW programs are administered it is not expected to significantly impact diversion of the 297 metric tonnes or >1% of the waste stream as the majority of this material is already captured by EPR programs. Furthermore, the RDN's waste composition is generally reflective of other regional districts with more expensive means of managing HHW. However, by offering a service to handle this material annually may generate a higher percentage of material. Based on data from other programs the range is from 50 – 500 tonnes over 2 – 5 yrs.

## **FINANCIAL IMPLICATIONS**

Currently the RDN budgets \$1,000 to manage orphaned HHW that is left on site at regional facilities. In 2015, the NRE spent \$12,000 on disposal of non-stewarded HHW items. Based on the information gathered from other regional districts, if the RDN was to consider taking on the role of managing non-stewarded HHW region it would like be best done through a contracted service and to allocate \$80,000-\$100,000 for budgeting purposes to cover two bi-annual HHW collection events.



Table 2 summarizes the Projected Costs to manage Non-EPR materials.

Table 2: Projected Costs to manage Non-EPR materials

Projected Costs to manage Non-EPR materials	Yearly Budget
Contractor	\$70,000
Communications & Advertising	\$5,000
Rentals	\$5,000
<b>Total</b>	<b>\$80,000</b>

### REGULATORY AUTHORITY

No new regulatory authority would be required by the RDN to enhance the existing EPR programs in place. The programs current in place are well subscribed and provide a safe option for collection. Adding collection events would potentially reduce material following to these drop off depots and could potentially drive more material to community based HHW Round up events shifting the costs to the RDN.

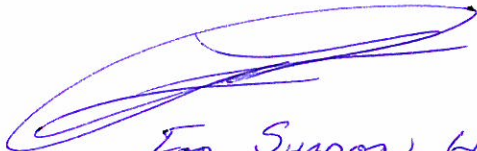
### STRATEGIC PLAN IMPLICATIONS

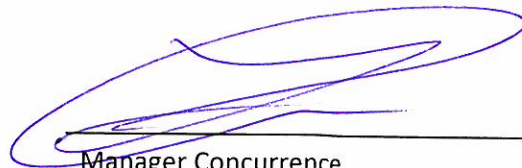
There are no strategic plan implications.


### SUMMARY/CONCLUSIONS

In the RDN, HHW management is carried out by the private sector and there are currently several for-profit and non-profit depots in the Nanaimo and Parksville area where EPR items are accepted. The RDN is one of the highest subscribers to EPR programs. The RDN does not provide HHW drop off programs at its facilities as many items are covered by EPR programs and based on our waste stream analysis there are minimal non EPR material that requires special handling. The NRE accepts the majority of EPR materials in the region and they have indicated that non EPR materials are prevalent and they are financial burden on the organization. In 2015, the NRE spent \$12,000 including handling on disposal of non-stewarded HHW items.

While the mandate for this material rests with the Provincial government there are numerous regional districts that have taken on the role of managing HHW collection in order to protect the environment as there are no convenient programs available. It is estimated that if the RDN to takes a more active role in HHW management similar to other regional districts we should budget between \$80,000-100,000 annually. This would augment existing service levels and round up events could be carried out in different areas of the RDN.

  
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For Sharon Horsburgh  
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