

report for VT DEC:  
**research on EPR  
programs for HHW**



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# background



Vermont has EPR laws for the following products:

- automobile switches
- batteries
- electronics
- fluorescent lamps
- paint
- mercury thermostats



# background

	estimated range of HHW materials collected (% by weight)
covered by existing VT EPR	42 – 54 %
covered by other VT programs	5 – 15 %
<b>covered under H.560</b>	<b>25 – 28 %</b>
not covered (remaining municipal cost)	15 – 16 %

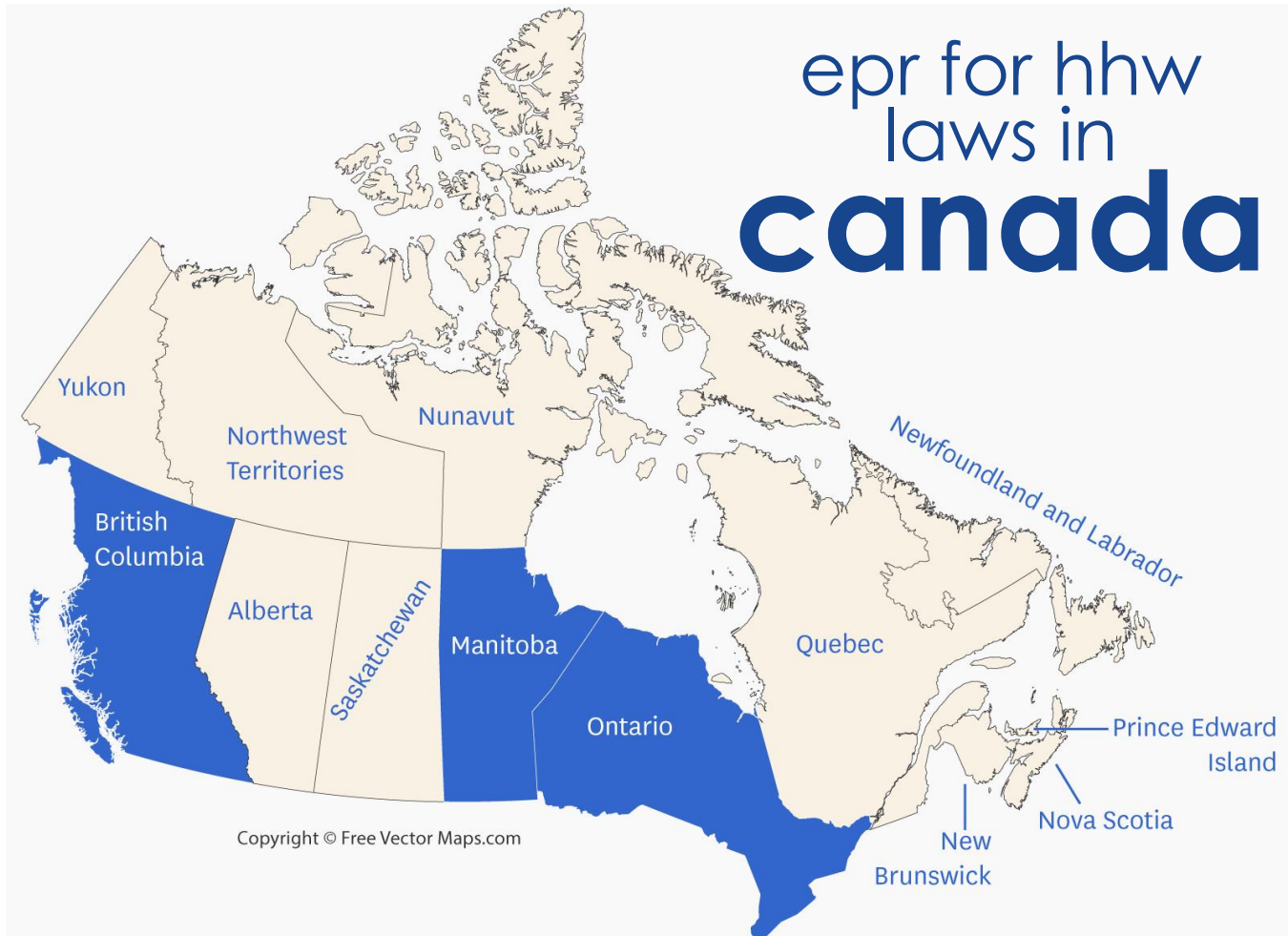
# background

H.560 includes consumer products offered for retail sale that:

- meet **RCRA** criteria for characteristic waste including ignitability, corrosivity, reactivity, or toxicity
- meet criteria for designation as certain classes of hazardous material **by U.S. DOT** under Hazardous Material Transportation Act
- are considered **marine pollutants** under federal law
- are **hazardous wastes** under VT law (Chapter 159)

# background

## epr for hhw laws in canada



# research questions



1. **manufacturers + products**
2. **implementation cost**
3. **effective + efficient program implementation**
4. **potential impacts** (on collection convenience, local government costs, material diverted)
5. **alternative program models** that could increase consumer convenience + reduce municipal costs

# manufacturers + products

likely to be covered by H.560 are estimated to include:

~ 400 to 650 manufacturers

- Approx. 10% manufacturers produce ~ 70% of products coming into VT HHW facilities

~1,800 products

- aerosols
- automotive additives
- flammable degreasers
- furniture stripper
- paint and varnish remover
- paint thinner
- pool cleaners
- and others...



# implementation **cost**

H.560 includes **two phases of increasing convenience:**

1. phase 1: **july 1, 2020 to june 30, 2023**  
permanent facilities (existing) = 5  
collection events = 119
2. phase 2: **after june 30, 2023**  
permanent facilities (1 per county) = 14  
collection events = 29





# implementation cost



## *total program costs*

phase 1 - july 1, 2020 to june 30, 2023: \$1,709,000 per year

phase 2 - after june 30, 2023

✓ satellite scenario

- annual **operating** cost range: \$1,615,000 to \$3,088,000
- **capital** cost range: \$3,440,000 to \$5,160,000

✓ stand-alone scenario

- annual **operating** cost range: \$1,616,000 to \$3,088,000
- **capital** cost range: \$7,040,000 to \$10,560,000

## *state agency costs (covered by stewardship program)*

~ \$50,000 per year, more initially

# implementation cost



## *stewardship organization costs*

phase 1 - july 1, **2020** to june 30, **2023**: \$427,000 to \$478,000/year

phase 2 - **after** june 30, **2023**

### ✓ satellite scenario

- annual **operating** cost range: \$404,000 to \$865,000
- **capital** cost range: \$860,000 to \$1,445,000

### ✓ stand-alone scenario

- annual **operating** cost range: \$404,000 to \$865,000
- **capital** cost range: \$1,760,000 to \$2,957,000

# effective + efficient implementation

H.560 **contributes** to effective/efficient implementation:

- clear **technical covered product definitions**
- **broad product scope**
- sufficient state **resources + authority** to administer + enforce
- allowing all **local government collection programs/facilities** to opt to be part of a collection plan
- collection **convenience** in all counties
- **environmentally sound** management
- performance targets + other info essential to **evaluating the program**



# effective + efficient implementation



**recommended** changes to H.560 to improve program implementation:

- to **reduce costs** while still providing **convenient collection**, consider:
  - **strategically placed regional facilities** instead of a facility per county
  - smaller **satellite facilities that feed into larger permanent facilities** (satellite scenario, possibly larger groupings of full-scale and satellite facilities)
  - **expansion of existing facilities** to serve one or more satellite facilities
  - **use of facilities not currently routinely used** as HHW collection facilities
  - allowing **rural counties to be served by a seasonal facility or rover events** that bring HHW back to a regional permanent facility

# effective + efficient **implementation**



**recommended** changes to H.560 to improve program implementation:

- require **minimum county participation** rate + minimum hours
- add a **public awareness** performance goal
- provide for **penalties**
- add **broader** environmentally sound management requirements

# potential impacts

## on VT's HHW management system

### *collection convenience:*

180 percent increase

nine new permanent collection sites

### *local government cost savings:*

*(equals stewardship organization costs)*

phase 1 - july 1, **2020** to june 30, **2023**: \$427,000 to \$478,000/year

phase 2 - **after** june 30, **2023**

#### ✓ satellite scenario

- annual **operating** cost range: \$404,000 to \$865,000
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# potential impacts

## on VT's HHW management system

### *material diverted:*

first 2 years: 197 additional tons per year diverted

by 2nd year: HHW landfilled reduced to 443 tons (from current rate of 640 tons/year)



# alternative models

Model	Reduces Municipal Cost?	Specifically Provides for Resident Convenience?	Additional Considerations
Vermont Pesticide Product Registration Program	Yes, but does not cover full costs of HHW management	No	<ul style="list-style-type: none"> <li>Allocates funding for education related to proper purchase, application, and disposal of household pesticides</li> <li>Lacks performance measures to evaluate program effectiveness</li> </ul>
Tire Fee Model	Varies- may/may not cover cost of recycling/disposal & cleanup of illegally dumped tires	No	Unlike model EPR programs, lacks: <ul style="list-style-type: none"> <li>performance measures to evaluate program effectiveness,</li> <li>education/outreach requirements to increase consumer awareness</li> <li>sustainable funding (may or may not cover the cost of recycling/disposal)</li> </ul>
State Grants/Funds	Yes, but generally does not cover full costs of HHW management	No	<ul style="list-style-type: none"> <li>Not sustainably funded</li> <li>May be intermittent</li> </ul>
Voluntary Industry Product Stewardship	Yes, but generally does not cover full costs of HHW management	May provide increased convenience	<ul style="list-style-type: none"> <li>Voluntary programs for batteries and mercury thermostats have low recycling rates. VT has found it necessary to pass EPR laws to increase recycling rates.</li> <li>Not sustainably funded</li> <li>May be intermittent, may not provide consistent recycling service to citizens throughout the state</li> <li>Does not provide level playing field</li> </ul>



thank  
**you!**

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# questions?

