report for VT DEC: research on EPR programs for HHW

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product stewardship institute
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Vermont has EPR laws for the following products:

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

<table>
<thead>
<tr>
<th>Coverage</th>
<th>Estimated Range of HHW Materials Collected (% by Weight)</th>
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<tbody>
<tr>
<td>Covered by existing VT EPR</td>
<td>42 – 54 %</td>
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<tr>
<td>Covered by other VT programs</td>
<td>5 – 15 %</td>
</tr>
<tr>
<td><strong>Covered under H.560</strong></td>
<td>25 – 28 %</td>
</tr>
<tr>
<td>Not covered</td>
<td>15 – 16 %</td>
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<tr>
<td>(remaining municipal cost)</td>
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</table>
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
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…
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
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**
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
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
  ▪ capital cost range: $860,000 to $1,445,000
✓ stand-alone scenario
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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

<table>
<thead>
<tr>
<th>Model</th>
<th>Reduces Municipal Cost?</th>
<th>Specifically Provides for Resident Convenience?</th>
<th>Additional Considerations</th>
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</thead>
<tbody>
<tr>
<td>Vermont Pesticide Product Registration Program</td>
<td>Yes, but does not cover full costs of HHW management</td>
<td>No</td>
<td>- Allocates funding for education related to proper purchase, application, and disposal of household pesticides</td>
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<td>- Lacks performance measures to evaluate program effectiveness</td>
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<tr>
<td>Tire Fee Model</td>
<td>Varies - may/may not cover cost of recycling/disposal &amp; cleanup of illegally dumped tires</td>
<td>No</td>
<td>Unlike model EPR programs, lacks:</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>- performance measures to evaluate program effectiveness,</td>
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<td>- education/outreach requirements to increase consumer awareness</td>
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<td>- sustainable funding (may or may not cover the cost of recycling/disposal)</td>
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<tr>
<td>State Grants/Funds</td>
<td>Yes, but generally does not cover full costs of HHW management</td>
<td>No</td>
<td>- Not sustainably funded</td>
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<td></td>
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<td>- May be intermittent</td>
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<td>Voluntary Industry Product Stewardship</td>
<td>Yes, but generally does not cover full costs of HHW management</td>
<td>May provide increased convenience</td>
<td>- Voluntary programs for batteries and mercury thermostats have low recycling rates. VT has found it necessary to pass EPR laws to increase recycling rates.</td>
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<tr>
<td></td>
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<td></td>
<td>- Not sustainably funded</td>
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<td></td>
<td>- May be intermittent, may not provide consistent recycling service to citizens throughout the state</td>
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<td>- Does not provide level playing field</td>
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</tbody>
</table>
thank you!

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questions?