



## **Economic Impact Analysis Virginia Department of Planning and Budget**

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**9 VAC 20-60 – Hazardous Waste Regulations**  
**Department of Professional and Occupational Regulation**  
March 20, 2015

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### **Summary of the Proposed Amendments to Regulation**

The Virginia Waste Management Board (Board) proposes to amend its regulation to set criteria for private businesses and governmental entities (known collectively as universal waste handlers) to safely crush mercury containing lamps (fluorescent bulbs). The Board also proposes to make the rules for entities that recycle mercury containing lamps more specific.

### **Result of Analysis**

Benefits likely outweigh costs for all proposed changes.

### **Estimated Economic Impact**

Currently neither the Environmental Protection Agency (EPA) nor the Virginia Department of Environmental Quality (DEQ) has rules in place that allow businesses and governmental entities (military bases, local governments or state government agencies) to crush mercury containing lamps. Currently both EPA and DEQ rules require these entities to box up spent fluorescent lamps and ship them to recycling centers. Because the EPA has been working with DEQ to formulate acceptable rules for universal waste handlers to be able to safely crush such lamps for several years, entities in the Commonwealth currently do crush this waste with the tacit approval of the EPA. Universal waste handlers are, however still currently subject to punishment (if the EPA chooses to change its non-enforcement policy) until these regulatory changes are promulgated and have become effective.

Currently, universal waste handlers crush mercury containing lamps using equipment that crushes the lamps, while filtering out any mercury vapor that is released, and then drops the crushed lamps into a drum. Costs associated with this activity include the costs of the bulb

crushing unit(s) - \$4,100 per unit, drums (which are reusable and are returned to the entity producing the waste after they are emptied at a recycling center) and HEPA filters - \$177 per filter. The number of filters used per year will vary directly with the volume of lamps crushed by any particular universal waste handler. Costs also may include the cost of buying or renting monitoring equipment for universal waste handlers that crush large volumes of lamps. Board staff estimates that fewer than 100 entities will be required to monitor mercury vapor levels and that the costs of monitoring will likely range between \$500 and \$1,500 per year. Board staff also reports that effected entities that crush very large volumes of lamps may incur costs for writing a closure plan and costs associated with obtaining financial assurance. The one-time cost of preparing a closure plan will likely be less than \$5,000 and obtaining financial assurance will likely be less than \$500 per year. Board staff estimates that only about 10 affected universal waste handlers in the Commonwealth will crush enough lamps to meet the threshold for requiring a closure plan and financial assurance and that all of those will likely be governmental entities. Affected entities may also incur some additional bookkeeping costs that may range up to \$1,000 for entities that have very large volumes of waste lamps that they crush.

If affected entities choose to crush, the costs of crushing will almost certainly be outweighed by savings universal waste handlers will experience on account of not having to box up spent bulbs whole and ship the boxes to recycling facilities. Board staff reached out to affected entities who report that crushing lamps and then sending the much less bulky drums to recycling facilities costs them 50% less (on average) when compared to conventional recycling. In particular, these entities report that crushing saves up to 20 hours of labor per 1,000 bulbs crushed and takes up 80% less space. Savings are also realized because drums are very sturdy and reusable but the boxes used to store and ship intact lamps rarely survive a trip to the recycling center and back to the universal waste handler and so, in effect are one time use storage that must be replaced at some cost.

## **Businesses and Entities Affected**

Board staff estimates that approximately 500 entities will be affected by this proposed regulation. These entities will likely include local governments, state agencies, military facilities and medium to large businesses that would have large numbers of mercury containing lamps to

dispose of. Board staff estimates that less than 10% of these entities would qualify as small businesses.

### **Localities Particularly Affected**

No localities will likely be disproportionately affected by this proposed regulatory change.

### **Projected Impact on Employment**

This regulatory action will likely have little impact on employment in the Commonwealth.

### **Effects on the Use and Value of Private Property**

To the extent that these regulatory changes lower some expenses for businesses, the value of those businesses will likely increase slightly.

### **Small Businesses: Costs and Other Effects**

Since the crushing requirements in this regulation represent an alternative to EPA and DEQ rules for recycling mercury containing lamps, no small businesses is likely to choose to crush lamps under these rules unless such a choice has more utility (is cheaper or more convenient or both) than recycling. Thus, these small businesses are unlikely to incur any net costs on account of this proposed regulation.

### **Small Businesses: Alternative Method that Minimizes Adverse Impact**

Since the crushing requirements in this regulation represent an alternative to EPA and DEQ rules for recycling mercury containing lamps, no small businesses is likely to choose to crush lamps under these rules unless such a choice has more utility (is cheaper or more convenient or both) than recycling. Thus, these small businesses are unlikely to incur any net costs on account of this proposed regulation.

### **Real Estate Development Costs**

This regulatory action will likely have no effect on real estate development costs in the Commonwealth.

### **Legal Mandate**

**General:** The Department of Planning and Budget (DPB) has analyzed the economic impact of this proposed regulation in accordance with § 2.2-4007.04 of the Code of Virginia and Executive Order Number 17 (2014). Section 2.2-4007.04 requires that such economic impact analyses determine the public benefits and costs of the proposed amendments. Further the report should include but not be limited to:

- the projected number of businesses or other entities to whom the proposed regulation would apply,
- the identity of any localities and types of businesses or other entities particularly affected,
- the projected number of persons and employment positions to be affected,
- the projected costs to affected businesses or entities to implement or comply with the regulation, and
- the impact on the use and value of private property.

**Small Businesses:** If the proposed regulation will have an adverse effect on small businesses, § 2.2-4007.04 requires that such economic impact analyses include:

- an identification and estimate of the number of small businesses subject to the proposed regulation,
- the projected reporting, recordkeeping, and other administrative costs required for small businesses to comply with the proposed regulation, including the type of professional skills necessary for preparing required reports and other documents,
- a statement of the probable effect of the proposed regulation on affected small businesses, and
- a description of any less intrusive or less costly alternative methods of achieving the purpose of the proposed regulation.

Additionally, pursuant to § 2.2-4007.1, if there is a finding that a proposed regulation may have an adverse impact on small business, the Joint Commission on Administrative Rules (JCAR) is notified at the time the proposed regulation is submitted to the *Virginia Register of Regulations* for publication. This analysis shall represent DPB's best estimate for the purposes of public review and comment on the proposed regulation.

AMH

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