

State of Oregon

Department of Environmental Quality

Memorandum

Date: June 20, 2008

To: John Kopetski, Chair, Oregon Bottle Bill Task Force

From: Peter Spendelow, DEQ Phone (503) 229-5253 Fax (503) 229-6977

Subject: Glass Recycling Under Curbside Collection and Bottle Bill

Attached is a report that looks at glass recycling in curbside and other collection programs compared to collection of glass under the Oregon Bottle Bill. This is in response to information requested by Task Force member Eric Forrest at the May 13 meeting of the Bottle Bill Task Force. The main conclusions of the report are as follows:

- 1) Glass collected under the Bottle Bill is usually very clean. People do not include ceramics, Pyrex, light bulbs, and other serious glass contaminants with their beer and soft drink bottles when they return glass under the Bottle Bill.
- 2) Glass collected separately through curbside recycling programs has more contamination, but usually still can be cleaned up to quality standards for making glass containers.
- 3) Glass collected color-mixed cannot be used by the local glass plant to make glass bottles. Instead much of it is shipped to California where it is cleaned up and mainly sold as feedstock for fiberglass manufacture, which is also a high-value use, as well as glass container manufacturing.
- 4) An increasing amount of curbside glass is being used for very low-grade uses such as for drainage material around leachate collection systems in landfills or for making road beds for temporary landfill roads. In 2005, close to 10,000 tons, or about 25% of all curbside glass collected in Oregon was used for these low grade uses such as aggregate or drainage material, almost always in landfill operations. In 2006, these low-grade uses climbed to 17,000 tons of curbside glass. Less than 25% of Oregon curbside glass was used to make glass containers in 2005, and that percentage has been falling since then. Unlike use of glass for containers or fiberglass, these low-grade uses provide very little in terms of energy or greenhouse gas savings.
- 5) In contrast, the large majority of bottle bill glass that is recycled is used to make new beverage containers. A small amount is used to make fiberglass, and only about 1 percent of Oregon bottle bill glass is known to be used in low-grade uses such as aggregate.
- 6) Even though programs that collect commingled recyclable materials in Oregon are supposed to exclude glass from the commingled collection, as much as 20% of the curbside glass has ended up in the commingled material. This glass becomes broken in the processing facilities, and small shards of glass remain in with newspaper, where they cause significant damage and expense to the paper mills. The glass shards wear out conveyors, gears, screens, and other equipment very quickly, adding significantly to the cost to the paper manufacturers. This is a major problem not only in Oregon, but increasingly world-wide as commingled collection of recyclables spreads.

Please let me know if you have any questions or would like further information.