

# Memo



**Metro**

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Date: Thursday, June 18, 2020  
To: Pam Peck, Policy and compliance program director; Jennifer Erickson, Interim policy manager  
From: Sara Kirby, Senior solid waste planner  
Subject: Multifamily Color Standard Cost Analysis

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## **Overview and recommendation**

Metro is proposing substantive changes to the Residential Service Standard Administrative Rule for people living in multifamily homes. These changes are part of larger multifamily service improvements informed by the 2017 Multifamily Recycling Report and actions under Goal 10 of the 2030 Regional Waste Plan.

A color standard is proposed for receptacles used to collect multifamily garbage and recycling. The term "receptacles" in this memo refers to containers, roll carts and bins used to collect garbage and recycling. A color standard would require that all garbage receptacles are provided in a single color, all recycling receptacles in a different single color and glass receptacles in a different single color. A color standard was identified as essential by people living in multifamily homes and is also a common practice of high performing multifamily programs. A color standard serves as a powerful visual indicator of what materials belong in the receptacles for speakers of all languages. To understand the cost implications of this proposal, Metro contracted with Bell and Associates to assist with an analysis of costs and implementation timelines. This analysis utilized composite cost and operational information from franchised areas in the greater Portland area. Costs for the competitive areas (City of Portland's commercial market and Multnomah County) are assumed to be similar.

Based on the information provided by Bell and Associates, the most cost-effective timeline is to require the color standard to be fully implemented over a period of seven years after the approval of the administrative rule. Metro staff recommends moving forward with this seven-year timeline.

## **Analysis and documentation**

The following sections document franchised commercial rate structures, collection receptacles, costs related to implementing the color standard, and the respective timelines to complete.

### Franchised commercial rate structures

Many jurisdictions in the greater Portland area have multiple companies providing garbage and recycling collection services to residential and commercial franchised customers. Collection rates are set at the local jurisdiction level. The rates include collection costs such as labor, truck/receptacle depreciation (expensed over seven years), maintenance, fuel, insurance, facilities, as well as disposal costs, operating margin and franchise fees. When collection rates are adjusted, prior-period data is adjusted for known and measurable costs to recalibrate the rate at the cost of service for the current and future period(s).

Commercial collection rates include both business and multifamily customers. There are approximately 60,000 businesses in the greater Portland area and about 6,000 multifamily properties. For garbage and recycling collection purposes, multifamily is defined as apartment and condominium buildings with five or more units and may also include retirement communities and

mobile home parks. Costs used to set collection rates are typically allocated over the total commercial customer base.

Commercial collection rates are established based on the level of garbage service provided to the customer. Most commercial rate structures provide for an equivalent level of recycling service included as part of the garbage service rate. For example, if a customer has a one-yard garbage container collected twice a week, they are also entitled to a recycling container of an equivalent volume collected twice a week. According to the annual rate reports submitted by the franchised haulers to local governments, most commercial customers have a one-to-one ratio of collection service<sup>1</sup>.

### Garbage and recycling receptacles

Multifamily garbage and recycling is collected in a variety of containers, roll carts and bins (i.e., “receptacles”). Regular replacement of collection receptacles is standard practice for collection companies. Receptacles are purchased and provided for new customers or replaced for existing customers when they become unserviceable. Most plastic roll carts have a manufacturer’s warranty of 10 years, but a majority of the carts will last longer if properly maintained. The cost of a 64 gallon roll cart is approximately \$50.00<sup>2</sup>, which includes the cost of shipping and distribution. A larger 96 gallon roll cart costs about \$5.00 more<sup>3</sup>.

Steel yardage containers are the other main receptacle type used in multifamily collection. The life of the container is primarily affected by the type of material it stores. If the container is collecting garbage and is regularly exposed to leachate from wet garbage it will require a rebuild, at a minimum, in its seventh year. The life of a steel yardage container can be extended up to 20 years with regular maintenance. Additionally, the container’s life can be extended by storing dry materials, such as recycling. Average costs of front load steel containers used in multifamily collection are provided in Table 1. As mentioned previously, expenses related to receptacle purchases are included in rate calculations.

<b>Container volume</b>	<b>Average cost</b>
2 yards	\$567
3 yards	\$659
4 yards	\$749
6 yards	\$999
8 yards	\$1,180

Tracking of receptacles varies hauler to hauler. Franchised haulers are required to report container purchases and counts but are not required to track roll carts in the same way. To understand the total receptacle count for multifamily properties in the greater Portland area, Metro’s Data

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<sup>1</sup> Metro’s 2017 Multifamily Recycling Report found that multifamily commercial customers do not have a one-to-one ratio of service. The analysis of 72 percent of apartments and condos found a service ratio of 0.4, or only 40 percent of recycling service volume provided to multifamily properties compared to the garbage service volume provided.  
[https://www.oregonmetro.gov/sites/default/files/2017/06/16/AppendixA\\_Multifamily\\_Recycling\\_ServiceLevelData.pdf](https://www.oregonmetro.gov/sites/default/files/2017/06/16/AppendixA_Multifamily_Recycling_ServiceLevelData.pdf)

<sup>2</sup> Non-standard colors, such as orange have an added charge of \$5.00 and minimum order quantity from Toter.

<sup>3</sup> Estimated costs provided to Bell and Associates from Toter.

Resource Center used receptacle counts from the 2017 service level data project and extrapolated that information to the total number of multifamily properties present in Metro’s Regional Multifamily Housing Inventory in fall of 2019. Estimates of receptacle types by material stream are shown in Table 2.

**Table 2. Estimated count and percent of receptacle type by stream**

Stream	Container count	Container percent	Roll cart count	Roll cart percent	14-gallon bin count	14-gallon bin percent
Garbage	5,500	44 percent	7,000	56 percent		
Recycling	2,500	18 percent	11,500	82 percent		
Glass <sup>4</sup>			6,000	55 percent	5,000	45 percent

To meet the proposed standard, the majority of receptacles will need to be refurbished or replaced. A small number of existing roll carts and containers will currently meet the proposed standard and steel containers can be repainted at a reduced cost to meet the standard.

Receptacle type, color, and condition vary widely from hauler to hauler; therefore, a broad generalization about the impact in any one franchised collector’s area is not realistic.

One modeled scenario using actual multifamily container counts from Gresham coupled with the ratio of containers and rolls carts from Table 2 calculated a rate increase<sup>5</sup> range of \$0.03 to \$0.05 per collected yard of waste. The increase varied by the number of receptacles purchased or refurbished. Applying this modeled scenario out further, if refurbished containers are utilized, a commercial customer in Gresham with a six yard container collected once a week<sup>6</sup> could potentially pay an additional \$0.76 per month (\$0.03 x 6 yards x 4.33 pickups per month). New receptacles could increase the rate by \$1.30 per month (\$0.05 x 6 yards x 4.33 pickups per month) as a result of implementing the multifamily color standard. The current rate for a six yard collected weekly is \$440.22<sup>7</sup>. The increases represent a two-tenths to three-tenths of a percent rate increase as a result of implementing the multifamily color standard.

Implementation scenarios for multifamily receptacles to meet the color standard

Bell and Associates was asked to provide information on three implementation scenarios.

- Determine the most cost-effective replacement timeline.
- Determine the cost-neutral replacement timeline.
- Model rate impacts of a phased implementation scenario where interim deadlines to meet the color standard occur every three years over a nine year period.

The **cost-effective replacement timeline** is to require the color standard be met within seven years of initial implementation of the administrative rule. This timeline allows for the full seven year depreciation period for receptacles already established in local government commercial collection rates. This timeline also provides collection companies with maximum flexibility to meet the standard and reaches full implementation in the shortest timeline of the three scenarios

<sup>4</sup> Glass is collected in roll carts and 14-gallon bins, not containers.

<sup>5</sup> Rate per Yard is the Cost per Yard. Eighty five percent to account for the 10 percent hauler profit margin and 5 percent franchise fee. This is the amount, per collected yard of garbage that the container collection rates would increase.

<sup>6</sup> This also assumes the commercial customer receives six yards of recycling collected once a week.

<sup>7</sup> Gresham commercial rates <https://greshamoregon.gov/Haulers-and-Rates/> accessed 6/10/2020

analyzed. Receptacle type, color and condition vary widely from hauler to hauler. A seven year deadline allows haulers to make planned purchases to fit the unique needs of the company. It also allows the rate impact to be more consistent year to year.

A **cost-neutral timeline** will vary for each hauler from seven to an undetermined number of years. Particularly, for the replacement of containers and roll carts used to collect recycling. As noted earlier, a garbage container's useful life is approximately seven years, but a recycling container and roll cart's life could be longer due to the dry nature of the materials. Therefore, a hauler could have one container matching the color requirement within seven years while other containers do not for an undetermined amount of time. This does not meet the goal of color standards and clarity for the users of these containers.

Additionally, collection company cash flow from profits affect capital purchases. Smaller purchases between \$500 and \$5,000 are typically made from cash in the bank. Trucks and large receptacle purchases are typically financed. Financing is related to profitability. If a company is having a difficult time generating adequate cash flow due to low profits, financing receptacles may be delayed. If the containers are serviceable, then replacing to change the color becomes a low priority. This is another reason that container replacement could take longer for some companies in a cost-neutral timeline.

The **phased implementation**, with interim deadlines to meet the color standard occurring every three years for nine years, both increases rate impacts and the timeline for full implementation when compared to the cost-effective timeline. The phased implementation also reduces flexibility for collection companies given their currently variable receptacle inventory and creates fluctuations in rate impacts year to year during the nine year period.

#### Lid-only color standard

Feedback from collection companies received through the Regional Waste Advisory Committee public comments indicated a preference for changing lid colors only, as a cost saving measure. Bell and Associates found the cost to replace just the lid is approximately \$22.00<sup>8</sup> per lid plus labor. Once labor is added, the cost to replace the lid is almost the same as a new cart. This assumes that the cart is in good condition. There is no data source for the percent of carts in good condition or that need near term replacement. Lids are often left open by users, rendering the color signal ineffective. If children or people with limited mobility are using the carts, the cart body is likely at eye-level, and colored lids are not. Cart bodies are not currently a standard color, and a lid-only standard will increase the possible color combinations—this does not meet the goal of clarity for users.

#### Conclusion and recommendation

Based on the information provided by Bell and Associates, Metro staff recommend the cost-effective replacement timeline. The cost-effective timeline is to require the color standard be met within seven years of the initial implementation date of July 1, 2021, as proposed in the draft administrative rule.

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<sup>8</sup> Toter cost per lid is \$22 and includes new strapping and locking bolts. The cost of a new 64 gallon cart is approximately \$42.