

Memorandum

Public Works Department



Date: November 2016

To: City of Tempe Council

From: Steven Pietrzykowsky, Solid Waste Services Manager (480-350-8051)
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Thru: Tony Miano, Deputy Public Work Director, Field Operations
Don Bessler, Public Works Director

Subject: Diversion Update
December 8, 2016 City Manager's Announcements

PURPOSE

The Public Works Department endeavors to accomplish the programmatic/sustainability goals set forth by the City Council. In accordance with The Solid Waste Diversion (Attachment 1) and Multi-Family Recycling (Attachment 2) resolutions adopted on October 22, 2015 and June 11, 2015 respectively, the department has worked diligently to increase overall city diversion. The purpose of this memo is to provide an update to the City Council on the status of our Solid Waste diversion programs.

BACKGROUND

City Council approved the following diversion goals by 2020:

40% residential

25% commercial

9% multi-family

70% voluntary participation rate of multi-family complexes serviced by the City of Tempe

Commercial diversion

The fiscal-year-to-date (FYTD) commercial recycling rate for 2016-2017 increased to 5.9%, compared to 5.1% in FY 2015-2016. For the remaining FY, staff will focus on increasing recycling by adding new commercial accounts and decreasing contamination within our existing customer base. We are hiring a Program Coordinator who will seek out new customers and help manage our existing accounts. Two new interns, with guidance from the Recycling Coordinator, are currently talking with commercial property staff about the do's and don'ts of recycling to help reduce contamination and increase participation rates.

Staff has launched a pilot program with GlassKing to divert glass from bars and restaurants in Tempe using a separate collection process. If the pilot is a success, it will help increase commercial diversion while also separating this material from traditional single stream, which means less contamination.

Sustainable World Business Development, a business comprised of ASU graduate students, is currently working with Tempe Academy of International Studies and Laird School to recycle and compost a significant portion of their waste streams as part of low waste and zero waste case studies that they are conducting. Gililand Middle School and Desert Vista High School will likely become part of their case

studies next year, with the goal of eventually rolling out the program to other schools in both the Tempe Elementary and Tempe Union High School Districts over the next couple of years.

In conjunction with ASU, Dairy Tech Environmental and NatureWorks, Tempe will be doing a commercial pilot in-vessel composting program for a limited amount of time beginning in the next couple of months. A stream of food from ASU, select commercial properties and some City of Tempe special events, along with compostable service ware and other organic material will be fed into one end of a hollow horizontal drum which is continuously rotated at a slow speed. Over the course of about one week, the material moves down the length of the drum, is removed from the other end and added to the compost in the Priest yard.

To capture more commercial green waste, staff will be launching a drop off program for commercial landscapers in 2017.

Multi-family diversion and programs

During the first half of fiscal year (FY) 2016-2017, staff focused heavily on retaining existing multi-family recycling accounts, particularly those that were vulnerable by the passing of SB1079, which opened the commercial market to private haulers within city limits. Despite the new legislation, the city increased its multi-family recycling rate from 3.08% to 5.3%. Additionally, the current multi-family voluntary recycling participation rate is 45%, with a goal of 70% by 2020.

Despite several challenges to increasing our diversion rates in multi-family complexes, we have solutions that will boost diversion. One is providing multi-family residents with seven-gallon recycling containers and signage to create an in-home recycling experience. We will also work with facilities staff at multi-family complexes to ensure that there are clear and large signs placed on both trash and recycling front loads and roll-offs. Currently approximately 45% participation rate

We will continue to distinguish recycling and trash containers by painting them blue and copper respectively. At a few off-campus properties, we will pilot move-out reuse and recycling programs and we will work with property managers to add recycling information into the lease agreements. With the assistance of Solid Waste staff, the customer service representative will do customized needs assessments of the properties.

Residential diversion

So far in FY 2016-2017, the City of Tempe has recycled 24.2% of all residential waste generated through our blue barrel curbside program, in comparison to 25.3% in 2015-2016. We generally see slightly higher recycling rates during the second half of the fiscal year (January to June). So far this fiscal year, we have diverted 8.7% of all green waste generated during bulk pickups compared to 7.1% during 2015-2016. When you include all waste from self-hauls, the Household Products Collection Center, residential curbside and uncontained (bulk trash and green organics), we have a 20.3% residential diversion rate for this fiscal year in comparison to 20.7% for 2015-2016.

The first half of FY 2016-2017 has been dedicated to the development of a voluntary pilot curbside green organics program that launched the first week of December. The areas chosen for the pilot have very dense green organic material, large amounts of mature vegetation, or consist of properties with multiple waste containers. Participating residents in the pilot areas will receive a green, 96-gallon container that can be utilized for weekly green organics curbside collection, including grass clippings and horse manure. The first container is free, additional containers are \$5 throughout the year-long pilot program. To date,

nearly 500 Tempe homes have signed up to participate. Staff will utilize data from the pilot program to develop a long term recommendation for curbside green organics collection.

During the next rate study, staff will also explore pay-as-you-throw options, which would look at pricing structures that would incentivize diversion based on container size. The study will also analyze the impacts of future cost increases as they relate to inflation/consumer price index and tipping fees.

In an effort to reduce waste and promote reuse, we are encouraging residents to not only host community or individual yard sales, but to arrange for a nonprofit to pick up items after the yard sale. Current nonprofits that we work with include Arc of Tempe, Arizona Humane Society, Big Brothers Big Sisters, Goodwill of Central Arizona and Salvation Army. In addition, we have a pilot program with Stardust Building Supplies to remove usable building supplies from bulk trash piles. Several tons have been diverted through these programs.

Challenges created by current tracking methods

As the recycling industry changes, the way that we currently calculate diversion will also need to change. The current measurement of tons diverted from the landfill divided by total tonnage will not accurately represent diversion in the long term. . Large retailers are changing the way materials are packaged, requiring less packaging material, resulting in less tonnage. Second generation recycled plastics are also lighter. Additionally, cities are now focusing on reuse and reduction initiatives, which reduce the amount of material that goes in the blue container. For example, we are increasingly promoting reuse initiatives for yard sales by encouraging residents to contact non-profits to pick up gently used items. Next year, we are launching a move-out program for apartment complexes in the vicinity of ASU, which will result in diversion that can't be tracked within our current methodology. ..

Ideally, future diversion rates should be based on trash produced monthly per household. This would more accurately account for recycling, green organics, reuse and waste reduction programs. Regardless of the tracking methods that are used going forward, we will continue to track reduced carbon emissions and other savings as a result of our programs.

Other Challenges

Some of the challenges we currently face are directly related to the recycling markets, including the change in the weight of recyclable items, packaging and the pricing of recyclable materials. Plastic bottles and containers, glass and cardboard have decreased in weight, affecting recycling rates. The diversion rate is calculated by tonnage; as materials become lighter, and the recycling rate remains steady, the diversion rate decreases. In addition, over the last several years, there has been an increase in food and product packaging that can't be recycled in the commingled recycling containers, including soft plastic/wrap and drink and food pouches. This further contributes to the decrease in commingled recycling numbers.

For a number of reasons, the money we make from recycling has decreased and future projections show a continuation of today's devalued commodity markets. As a result, we are receiving far less money than what we did at the beginning of this year (although it's still cheaper than landfilling). Changes in recycling commodities are partially attributed to a decrease in oil prices. New plastics are made from the byproducts of oil, so when oil prices are cheap, the manufacturers of plastic bottles and containers simply buy new plastics instead of recycled plastics. Also, a slowdown in China's growth has decreased demand for the recyclable materials coming from the United States, especially in the southwest and west where we still rely heavily on China's recycling imports.

One of the biggest challenges to establishing successful diversion programs is the lack of local or state recycling ordinances. The vast majority of states have mandates, bans or both. Arizona is one of the only states that has no law stipulating recycling or preventing recyclables from being landfilled. While House Bill 2131 prevents any city, town or county from enacting mandates or bans concerning recyclables, Senate Bill 1487 enables a state legislator to engage the Arizona State Attorney to order the withholding of state-shared revenue from cities that pass ordinances that don't comply with state laws. Municipalities are therefore forced to rely on voluntary recycling programs, which are significantly less effective than mandated ones.