MEMO

Presentations
Item #: 6c

Meeting Date: April 19, 2024

To: Board of Directors
From: Senior Engineer, David Ramirez
Approved by: General Manager, Felipe Melchor

Subject: 2023 Waste Characterization Study

RECOMMENDATION: That the Board accept the 2023 Waste Characterization Study Report by SCS Engineers (April 2024).

BACKGROUND

ReGen Monterey has participated in the implementation of solid waste reduction, recycling, and diversion programs on behalf of its Member Agencies since the early 1970's. The passing of AB939 required all jurisdictions (e.g., Cities and Counties) in California to divert at least 50% of their solid waste from landfill disposal by the Year 2000. ReGen's Member Agencies reached that goal and are now aiming to reach the State of California's current standard of 75% diversion. Implementation of SB 1383 regulations require a 75% reduction in organic waste landfill disposal by 2025 (relative to the baseline year, 2014). Given these regulatory goals, ReGen and its Member Agencies embarked on a waste characterization study to obtain a current "snapshot" of the distribution of materials in the waste stream. This information is intended to serve as a status check for upcoming regulatory deadlines.

Additionally, ReGen Monterey and Monterey One Water embarked on a Joint Feasibility Study which evaluated areas where the two agencies can mutually benefit from partnerships and study the available organic wastes that exist in the neighboring communities. This waste characterization study enables staff to assess assumptions made in the study to ensure accuracy and assist staff in its future planning activities related to SB 1383 requirements.

In 2012, ReGen conducted a waste characterization study of commercial Municipal Solid Waste (MSW) to assist in the design process of the new, dual Single Stream Recyclable or Municipal Solid Waste Materials (SSR/MSW) sort line for the MRF 2.0 (2018). Since the 2012 waste characterization study, ReGen had not directly measured the composition of the waste coming from its Member Agencies; however, CalRecycle has visited the facility several times in the past

10 years to do a limited, Statewide waste characterization study. The general trend of the characterization study data had been of decreasing presence of organic materials in the waste stream.

This current study was performed at ReGen's Material Recovery Facility (MRF) over two separate two-week study periods: one in September and one in October of 2023.

DISCUSSION

Implementation of SB 1383's organics diversion regulations began in January of 2022. Since then, ReGen's Member Agencies residents have been instructed to dispose of household 'food scraps' in their yard debris bin ('green bin'). These organic materials are then diverted from the landfill and processed in the compost facility. ReGen staff has been giving the rollout of the 2022 residential curbside organics diversion program a chance to 'gather steam' before embarking on a waste characterization study to accurately gauge participation in the rollout program. In theory, there should be a decrease in organic material in the waste stream (e.g., 'grey bin') and an increase in both:
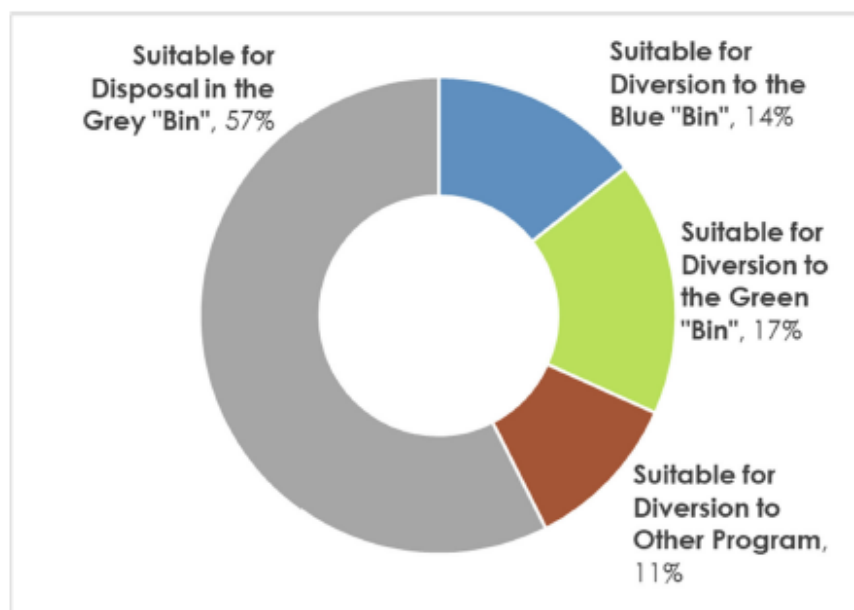- food scrap organic materials in the 'green bin' being processed at the compost facility and
- paper/cardboard organic materials in the recycle bin ('blue bin').

Given the fluctuations in yard debris generation, it can be difficult to determine if changes in tonnages are the result of increased organics diversion or if they result from fluctuations in yard debris generation rates. This waste characterization study allows ReGen staff and Member Jurisdiction staff to evaluate 'what materials are where' and to what extent the organics diversion program is operating.

The enclosed report includes detailed information on the methods, timeframe, and data collected. A representative pie chart of the diversion data is presented below. Of note is that 57% of the material from residential sources is waste (aka trash or garbage) and is being placed in the correct waste bin ('grey bin'). The other 43% of the materials could be diverted or directed to other programs. This indicates that there are significant opportunities for greater diversion and recycling of materials away from the 'grey bin' and thus, away from being disposed of in the landfill. For all graphs and detailed data, please see the attached waste characterization report by SCS Engineers (April 2024).

Exhibit 1.   Overall In-District Residential Material Segregation Assessment

Suitable for Disposal in the Grey "Bin", 57%

Suitable for Diversion to the Blue "Bin", 14%

Suitable for Diversion to the Green "Bin", 17%

Suitable for Diversion to Other Program, 11%

Note: Composition may not add to 100 percent due to rounding.

The information collected in the waste characterization study is valuable and will be used for several purposes including, but not limited to, the following:

- Identify the recyclable items in the waste stream that need to be diverted to the recycling can ('blue bin')
- Identify the percentages of the various recyclable material types in the waste stream
- Identify the organic items in the waste stream that need to be diverted to the 'green bin' (food scraps & yard debris organics) and the 'blue bin' (paper/cardboard organics)
- Identify potential hazards in the waste stream
- Assess diversion efforts within specific jurisdictional areas
- Inform ReGen's and the hauler's outreach campaigns and subsequently, the quality of the recycling stream
- Fine tune ReGen's landfill operations

The characterization study was designed to collect a sufficient number of samples of a representative size (e.g., weight) to characterize the waste stream that the materials came from (e.g., various municipal areas and/or source types such as 'residential' versus 'commercial/multi-family' collection routes).

Each sample consists of 220 lbs. of material that is weighted and sorted into its components. The components are then weighed individually and documented to determine the contents of the load. The number of samples represents a statistically significant sample size for ReGen's member agencies. The result of the study is a defensible set of data that can be used to incentivize proper diversion and design public information campaigns.

Per direction from the Board ,this study was performed on member jurisdiction waste materials *only*, and an invitation to regional customers who are not Member Agencies to participate in the study at their own expense was extended; however, none chose to participate.

FINANCIAL IMPACT

None. Receiving the waste characterization is for "Information Only" at this time. Further evaluation of the data will be completed in the future and will enable ReGen and its member jurisdictions to make data driven decisions as they relate to diversion efforts and infrastructure planning. At that time, any financial impacts or considerations will be presented should they exist.

CONCLUSION

The study to characterize the materials in the waste stream being received at ReGen's landfill has multiple benefits of informing how well recyclables are being diverted to the 'blue bin', how well the diversion of organics is tracking relative to SB 1383 requirements, informing improvements in the public outreach of diversion programs, customer engagement by the haulers, and reducing undesirable items in the waste stream or not in the appropriate collection bin. Staff therefore recommends that the Board accept the 2023 Waste Characterization Study Report by SCS Engineers (April 2024).