INFRASTRUCTURE LA

SWARM Committee Teleconference
Tuesday, June 25, 2024, 2:00–3:30 p.m.

Summary

Mr. Fahim Rahimi, Senior Civil Engineer at Los Angeles County Public Works (PW) Environmental Program Division, welcomed everyone to the call. Mr. Rahimi introduced Mr. Will Chen as the new Chair of the Infrastructure Los Angeles Sustainable Waste and Recycling Management (SWARM) Committee. Mr. Chen led the meeting which focused on infrastructure development. He introduced Ms. Emiko Thompson as the new Vice Chair. Ms. Thompson highlighted the committee's work in providing a platform to discuss waste management issues in the region.

Attendance:

- 45 participants joined the call:
  - Participants included representatives from PW, other Los Angeles County departments, cities, waste haulers, technology developers, and environmental groups.
  - Cities in attendance included: Alhambra, Commerce, La Canada-Flintridge, Long Beach, Glendale, Gardena, Oceanside, Palmdale, Paramount, San Diego, Signal Hill, South Pasadena, and Torrance.

Infrastructure Development:

- Presentations were provided by:
  - Mr. Eugene Tseng, Technical/Regulatory Advisor, City of Los Angeles' Local Enforcement Agency
  - Mr. Steve Jimenez, Director of Sales and Marketing, Olympic Wire and Equipment
  - Mr. Tom Fang, Supervising Engineer, Los Angeles County Sanitation Districts

- Mr. Tseng presented an Overview of Senate Bill (SB) 1383 Infrastructure.
  - There is an overlap in laws that govern targeted waste stream materials (e.g., cardboard is collected under Assembly Bill 939 or other mandatory recycling laws and is also subject to SB1383.)
  - There are seven regional organic waste processing facilities.
  - Processing facilities may have strict requirements for the types of waste that they accept based on the end destination of the waste. The current black bin, blue bin, and green bin collection systems present some challenges to collecting/providing acceptable waste.
    - Green bin includes green waste with bagged food waste or commingled green/food waste.
    - Black and blue bins also contain SB 1383 targeted organic waste, such as cardboard, paper, and textiles.
    - There is a need for facilities that can separate and process waste types from all three bins.
  - Even clean source separated organic waste (i.e., food waste from supermarkets and restaurants) is contaminated with plastics and cardboard.

- Reporting requirements can also be onerous and may involve manually picking out small pieces of plastic and other contamination to report how much is diverted and how much is disposed.
- In a typical European Material Recovery Facility (MRF), waste that cannot be composted or digested goes to produce energy. The integrated approach can achieve over 70 percent diversion.
- In Japan, solid waste, wastewater, and energy interests work together to process waste into energy. The remaining material from digestion makes a suitable feedstock for composting.
- Education and outreach are critical to developing an integrated approach to waste processing.
- Landfills are one of the largest sources of methane, and it is very expensive to mitigate methane migration from landfills. Reducing organic waste disposal is a more effective way to reduce methane emissions.
- Compost operations can also be a significant source of methane depending on how the facility is operated.

- Mr. Jimenez provided a presentation on Food Organics Diversion SB 1383 and the Equipment Infrastructure to Be Successful.
  - Facility developers need to understand the collection system, waste stream, and feedstock.
  - From experience, Olympic has developed three pillars for source-separated organics planning.
  - Organic waste is typically processed the same day that it is brought into the facility.
  - Equipment selection is important because some facilities were built before organic waste processing was considered and there may be issues with:
    - Available space
    - Layout
    - Drainage (food waste is wet and needs proper drainage)
  - Collection programs change and evolve and as the programs mature the level of contamination increases.
  - Specifications for animal nutrition are stringent. Compost and digestion specifications can be more forgiving but microplastics and grit can impede processing.
  - Processing facilities need to provide slurry or cake to the end destination facility that will not impede operation due to contamination.
  - End users of material and specifications are critical for the design of the system.
  - Cleanliness of material will affect the tipping fee (cost).
  - More contaminated material requires more pre- or post-processing so the cost will be higher.
  - Facility developers should consider a food waste receiving system that does not require staff to manually separate food waste because it can be challenging and expensive to handle.

- Belt-driven de-packagers with simple hydraulics can be easier to operate and maintain.
- Equipment is capable of processing organic waste to less than 1 percent contamination. The equipment produces a cake-type material and water can be added to create a slurry if desired.
- New organic waste processing systems at transfer stations and MRFs should be developed with:
  - A transporter that drops food waste into a liquids management and de-packaging process.
  - A pre-sort process to pull out major contaminants.
  - Trucks or holding tanks at the end of the processing line.
  - A compactor that can handle wet residuals.
- Residential food waste is usually collected in the green waste bin in a separate bag. Processing residential food waste requires a system to separate green waste and food waste into two streams, remove contamination, and de-package bagged waste.
- Different types of de-packagers may be needed for different levels of contamination.
- After waste is de-packaged, additional equipment can remove small plastics and reduce plastic to a 0.1 percent level of contamination.
- Pre-consumer source separated organic waste is very easy to handle but post-consumer organic waste can have 50 percent contamination or more, including car parts, rope, lumber, scrap metal, appliances, etc.
- Specifications for different feedstocks and end destination facilities might vary.

- Mr. Fang presented on Infrastructure for Organics Co-Digestion.
  - Los Angeles County Sanitation Districts (LACSD) is using existing infrastructure for organic waste processing and digestion.
  - LACSD is a special district, not a jurisdiction as defined by SB1383.
  - LACSD does not collect or haul solid waste.
  - LACSD is partnering with PW to serve jurisdictions that must comply with SB 1383.
  - LACSD is creating electricity and fuel from waste through co-digestion at their wastewater treatment plan (WWTP) called the AK Warren Water Resource Facility in Carson.
  - Food waste is pre-processed into a slurry at the Puente Hills MRF and transported to the WWTP for digestion.
    - The WWTP is a 400 million gallons per day (mgd) facility with 24 anaerobic digesters.
    - Food waste is co-digested with sewage sludge in 5 dedicated digesters.
    - The digesters can process up to 600 tons per day (tpd). They are currently operating at 400-450 tpd including 80 tpd from PHMRF.
  - A portion of the tipping floor at the Puente Hills MRF is reserved for food waste pre-processing.

    - The preprocessing equipment has a capacity of 160 tpd and they are currently receiving about 80 tpd of food waste.
    - The food waste is screened to remove packaging.
    - Recycled water is added to the food waste slurry to meet the specifications of the WWTP.
  - There are about a dozen haulers that have contracts to bring food waste slurry directly to the WWTP.
  - LACSD is building additional infrastructure to process the additional gas created from co-digestion. Currently, they are producing vehicle fuel and they are working on a project to increase the storage capacity of vehicle fuel.
  - LACSD plans to install equipment to produce biomethane to inject into SoCal gas pipeline as well as a plant to produce hydrogen.
  - LACSD is also generating SB 1383-compliant compost.
  - The net capital expenses are about $30 million and LACSD has received $20 million in grants from CalRecycle and the California Energy Commission. They have also received over $1 million in sales tax exemptions.
  - Wet co-digestion at a wastewater treatment plant allows for use of existing infrastructure. Many digesters have excess capacity and are also located near sources of food waste.
  - Co-digestion can result in odors, so cleaning and polishing equipment might be needed.

Questions and Answers:

- An attendee asked the presenters how many organic waste processing facilities there are in the county. Mr. Tseng stated that there are seven.

- An attendee asked what local jurisdictions can do to encourage infrastructure development, besides dedicating feedstock. Mr. Tseng further stated that jurisdictions need to monitor and begin enforcement of SB 1383, as well as supplement organic waste collection efforts with education and outreach to address waste stream contamination. Mr. Fang echoed the need for education and outreach along with enforcement, explaining how they are necessary to ensure quality feedstock. Mr. Jimenez highlighted the need for education and outreach in multi-family dwellings and commercial generators due to high turnover.

After the Q&A session, Mr. Chen expressed that SWARM would continue to host regular meetings to engage stakeholders, and informed attendees that the next meeting will focus on SB 1383 procurement strategies.

Infrastructure LA looks forward to continuing discussions related to waste management and recycling through the Infrastructure LA platform.

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Links to the meeting presentations and resources can be found on our website at: www.infrastructurela.org/key-initiatives/swarm.

If you have questions regarding Infrastructure LA, you may contact us at ILASWARM@pw.lacounty.gov.