

# Memo

Date: March 5, 2021  
To: Roy Brower, Director, Waste Prevention and Environmental Services  
From: Sabrina Gogol, Senior Solid Waste Planner & Hila Ritter, Senior Solid Waste Planner  
Subject: Metro staff's executive summary of Compost Facility Standards by Jacobs Engineering Group

---

## Background

In January 2019, Metro hired the independent firm Jacobs Engineering Group (Jacobs) to provide a report on compost facility regulation in other jurisdictions across the United States and internationally to inform Metro's future regulatory requirements. The report was intended to build on the lessons learned from an earlier assessment of Grimm's Fuel Company and propose recommendations for regional compost facility standards. The four topic areas researched were:

### Topic 1: Site operation standards and facility tier structures

*Odor management, dust control, throughput capacity and design housekeeping, litter and track-out minimization; vector control; water management; operations equipment exhaust.*

### Topic 2: Compost pile size standards

*Height, width and overall mass.*

### Topic 3: Finished compost quality standards

*Metals and additional contaminant minimization; pathogen management; testing frequency; biosolids; stability and maturity; bioaerosol; pesticide management.*

### Topic 4: Methods for supporting compost market development

*Compost use incentives; sales and marketing; unnecessary barriers posed by regulation.*

## Report Recommendations

Jacobs' report recommendations aligned with Metro's existing regulations and also proposed several new recommendations, including implementing a tiered approach to regulation that mirrors the Oregon Department of Environmental Quality (DEQ) compost permitting requirements. If Metro were to dedicate resources toward implementing the recommended tiered approach, all compost facilities currently in operation in the region would be categorized in the same tier. Within the recommended tiered system, a facility could have requirements specific to that facility, such as a tailored odor mitigation plan. Based on the report

recommendations, compost facilities currently operating in this region would experience the same Metro regulations as they experience today for site operation standards (such as: dust control, housekeeping, litter and track-out minimization, vector control, operations equipment exhaust, bioaerosol and pesticide management).

Jacobs researched whether other jurisdictions have established odor thresholds, and if so, how they are monitored. Jacobs found that nearly all jurisdiction require an odor management plan of some kind and each has processes for investigating odors. However, they did not find any uniform odor thresholds or monitoring practices in use across jurisdictions.

The recommendations that promote a meaningfully new regulatory requirement for Metro are summarized as follows:

#### Topic 1: Facility tier structures and standards for site operations

- Sort facilities into the regulatory tiers used by DEQ. A tier structure provides some level of progressive controls with increasing risk while maintaining the ability to enact facility-specific regulation.
- Develop and require qualifying facilities to follow a more comprehensive Odor Management Plan that Metro would review for approval annually.
- Consider creating or implementing a standardized nuisance odor complaint response protocol based on the multi-characteristic protocol used by the Texas Commission on Environmental Quality.
- Develop and require formal Metro/DEQ reporting protocol for water/leachate impacts.
- Develop and require a minimum pond sizing requirement.
- Develop a method for determining daily and annual tonnage/volume limits and pile size and appropriate odor control requirements as part of design and then apply the requirement to all facilities.

#### Topic 2: Compost pile mass standards

- Require compost facilities to submit pile size design, including evidence that pile size and engineering controls will manage aerobic conditions, temperature, fire, and nuisance conditions.
- Include facility-specific pile size dimensions as a condition within the license. Utilize the following compost pile sizing as a guideline: Height – 14 feet; Width – 25 feet; Length – 150 feet; Distance between piles – 20 feet.

#### Topic 3: Finished compost quality standards

- Require qualifying facilities to meet or exceed the United States Composting Council (USCC) Seal of Testing Assurance (STA) program requirements or similar and to report results to Metro. If quality standards for pathogens, contamination, and stability are not met, require a review and/or modification of the operations

plan/practices.

- Work with the USCC to create a customized contamination report on the amount of plastic, metal, glass, stones, and sharps present (percent by dry weight) at each facility and require facilities to report results to Metro.
- Periodically review STA program when it is modified to ensure that it aligns with Metro's testing objectives.
- Develop and then require qualifying facilities to implement a general sampling program for per- and polyfluoroalkyl substances (PFAS).
- Require all facilities accepting food to avoid packaging feedstocks.
- Do not allow biosolids composting until additional research assesses the risk from this feedstock.

#### Topic 4: Methods for supporting compost market development

- Develop and adopt minimum soil specifications and construction/soil amendment programs, regular training, learning sessions and marketing practices to promote the use of compost produced in the Metro region.

While these new recommendations are worth additional exploration, the report findings include a variety of competing practices, performance standards and enforcement mechanisms. Two areas of concern covered in the report—odor management and contamination— contain an especially wide range of best practices, and would likely require additional research. Finally, the report includes Jacobs' perspective on the level of effort to implement its recommendations which does not reflect the staff time and resources necessary for a legislative code or administrative rule making process with full public and industry engagement.

#### Staff Recommendations and Next Steps

Based on the findings described in the Jacobs' report, staff does not recommend implementing any changes to Metro's current regulatory procedures or odor-monitoring practices at this time.

This research project did not identify any uniform odor standards or other regulatory practices used by other jurisdictions that could be readily adopted by Metro. In addition, the research did not adequately demonstrate why Metro should move to a tiered-facility oversight approach similar to that used by DEQ. Metro's regulatory oversight and jurisdictional boundary is different than that of DEQ's and it would require additional research to determine how Metro might apply such a tiered approach to yard debris reload facilities and out-of-region compost facilities.

The report demonstrates that the scope and complexity of regulatory practices varies by jurisdiction and additional research would be needed to further evaluate which practices would be most effective and applicable to Metro's solid waste system. Staff finds that Metro's

# Memo



**Metro**

600 NE Grand Ave.  
Portland, OR 97232-2736

current regulatory approach is effective and consistent with that of other jurisdictions. As such, staff recommends that Metro maintain the status quo and not take any further action on establishing odor standards unless Metro allocates additional resources to fund further research related this matter.

As for next steps, staff recommends that Metro should continue its current regulatory approach and closely coordinate with DEQ and other agencies to implement best management practices to control and minimize odors at compost facilities.

cc: Pam Peck (Policy and Compliance Director)  
Warren Johnson (Standards and Compliance Manager)