

WASATCH INTEGRATED WASTE MANAGEMENT DISTRICT

17,500 Ton/Year Green Waste Composting Facility

In March 2012 Wasatch Integrated Waste Management District (WIWMD) retained Managed Organic Recycling (MOR) to design a green-waste composting facility for its new green waste “curbside” collection program. Previously, WIWMD had been operating an open windrow composting facility at its landfill site in Layton, Utah. Unfortunately, local residents complained about odors during the hot spring and summer months, especially when the feedstock contained a high percentage of grass and yard trimmings—on account of low C:N ratio materials).

MOR deigned a new recipe mix to increase the C:N ratio by adding an additional 50t/d of carbonaceous feedstock material. However, this only increased the C:N ratio to 30:1 to reduce the potential for summertime odor emissions. Total volume of the compost recipe mix therefore became 650yd³/day which meant that 13,650yd³ would be onsite in a 21d active composting phase.

The project included construction of eighteen aerated static piles with additional infrastructure to support 12 additional piles. See the Tech Specs for construction features.

By converting composting operations to the aerated static pile (ASP) technology, WIWMD will be able to eliminate turnings required to aerate the pile in conventional windrow composting. Uniform continuous aeration will maintain aerobic conditions during the active composting process. After the active composting phase, composted materials will cured for a period of 2-3 months prior to screening and sale. WIWMD also will continue to use its traveling sprinkler system to irrigate the piles during hot dry summer months to maintain optimum moisture concentration in the piles between 50 to 60 percent.

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TECH SPECS PHASE 1 PROJECT

- 3.5 acres of concrete composting pad
- Eighteen (18) AirFloor® in-slab aeration plenums by BuildWorks
- Eighteen variable-speed 5Hp blowers
- Eighteen radio frequency temperature probes for blower control and data logging
- Non-potable water supply for pile moisture conditioning
- Stormwater collection and conveyance system
- Aeration management system (AMS) for blower operation
- Human/machine interface (HMI) automating the operation and tracking of the composting process for each pile
- Control Building containing the electrical equipment in an environmentally controlled atmosphere



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