Green Finance Impact Program

Pilot Project Case Study

Partner
Salinas Valley Solid Waste Authority

Sector
Municipal Waste

Project Type
Diversion of Organic Waste for Composting

Project Cost
$2.5 million

Project Stage
Operational

Background

The Salinas Valley Solid Waste Authority, dba Salinas Valley Recycles (SVR), is a joint powers agency made up of the following local governments: Monterey County (eastern half of the unincorporated county) and the cities of Gonzales, Greenfield, King City, Salinas, and Soledad. SVR is responsible for providing secure long-term solid waste disposal and resource recovery service to all of its members in an environmentally sound and cost-effective manner.

SVR is adapting to the new mandate for organics recovery established by SB 1383 and the associated regulation. SVR contributes to the statewide target of reducing organic waste sent to landfills by 50 percent from the 2014 level by 2020 and by 75 percent by 2025. SVR commissioned a report to estimate the additional organics recycling capacity required to divert 100% of organics disposed of by Member Agencies and determined the need to be 104,000 tons of organics per year (109,682 tons including biosolids). SVR is considering an array of diversion and utilization mechanisms, including food waste reduction and food recovery programs, expansion of composting and anaerobic digester capacity, and implementation of recovered organic waste procurement targets.

Johnson Canyon Landfill Composting Facility

One such project is the new state-of-the art organics composting and processing facility co-located at the Johnson Canyon landfill. The facility includes a 1-acre extended aerated static pile compost facility, agricultural and food waste de-packaging system, portable mixing system, new 7,500 square foot enclosure and pad for receiving and processing organic materials, and a wood waste sorting line for advanced recovery of lumber and mixed organics. The facility was designed to process up to 75,000 tons of organic material per year and began full scale operation in June 2020.

The $2.5 million facility upgrades were funded through a combination of state grants and the SVR capital budget. SVR utilized ACR's standardized Methodology and Calculator Tool to quantify the expected environmental benefits of the project, accounting for the diversion of food, yard, and agricultural waste from the landfill, waste hauling and facility operations, and compost application.

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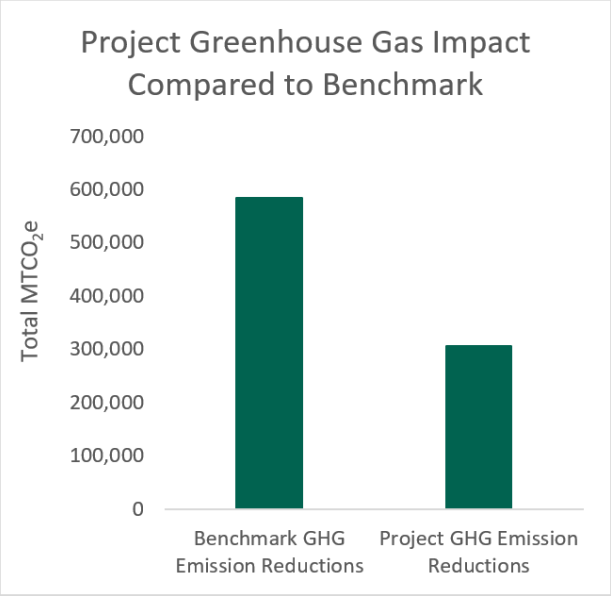
Environmental Key Performance Indicators

The Green Finance Impact Program enabled the quantification of environmental key performance indicators (KPIs) for the composting project. ACR calculated the KPIs according to the approach and process documented within the Methodology for Diversion of Organic Waste for Composting Projects and using data inputs provided by SVR and their operational partner, Vision Recycling. A sample of the calculated KPIs are displayed below.

Total Greenhouse Gas (GHG) Emission Reductions:	221,243	$MTCO_2e$
Carbon Return:	4.717	$MTCO_2e$/$1,000/year
GHG Cost Effectiveness:	165	$MTCO_2e$/$1,000
Social Cost of Carbon Benefit:	$11,283	$
Project GHG Impact Compared to Benchmark:	33%	% relative to benchmark
Organic Material Diverted from Landfill:	2,560,856	short tons
Compost Produced:	1,485,296	short tons
Project Operational Life:	35	years



The composting project is expected to result in a net emission reduction of 221,243 $MTCO_2e$ over the project life. While substantial, this is below the benchmark for similar projects. The Johnson Canyon Landfill has an efficient landfill gas collection system, consistent with state requirements, leading to a significantly lower benefit from landfill diversion compared to the national average. Another contributing factor is the composition of the diverted organic material. The benchmark assumes a mix of 53% food and 47% yard waste while SVR will be composting a mix more heavily weighted toward yard waste (52%).

Pilot Project Contacts

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