

IERCA

*A Regional,
Cost-Effective Approach
to Sustainable Organics
Management*

Publicly Owned Treatment Works in southern California face ever-increasing challenges to biosolids management. Landfill capacity is diminishing, land application is effectively banned in much of California, and local air quality rules make it difficult to dry or compost biosolids. To overcome these obstacles, the Inland Empire Utilities Agency and the Sanitation Districts of Los Angeles County formed a Joint Powers Authority, called the Inland Empire Regional Composting Authority (IERCA), to develop a local solution that is both environmentally sound and cost-effective.

IERCA determined that recycling biosolids into a high quality compost product, in a fully enclosed, local facility was the best approach to overcoming the challenges of biosolids management. IERCA purchased a 413,000-ft² vacant warehouse that was identified as a viable site for the largest completely enclosed, aerated static pile composting facility in the United States.

PROCESS

Compost is produced, using the aerated static pile composting method, by mixing biosolids with other organic materials. The facility processes 150,000 tons of biosolids and 60,000 tons of wood and green waste per year. The composting process takes approximately 60 days. At the end of the process, the resulting compost meets all the requirements for unrestricted use. Both the biosolids and wood/green waste are received indoors in the receiving and mixing area of the facility. The material is blended and conveyed to the active composting area, where loaders place it onto the concrete floor. Underlying the floor is a matrix of air intake openings that facilitate the movement of air through the piles. The air that is pulled down through the piles is sent to a biofilter, along with the air ventilated from the entire enclosed building, resulting in effective air emissions treatment and reduction of odors. Air is exchanged within each area of the building at least 6 times per hour to maintain a safe working environment.

CLOSING THE LOOP

A critical factor in the success of the project was the branding and marketing of the finished product, called SoilPro, which began two years before startup. The marketing effort included a pilot project to optimize the composting process and create finished product samples for evaluation. Several companies purchase SoilPro compost for a variety of direct and retail uses. Other customers use the product to prepare soil for turf and other plant materials. Demand for the high-quality product has exceeded expectations, ensuring that the facility can maintain its throughput goals.



Trucks enter the building through high-speed roll up doors that close after each entry, preventing odors or dust from escaping.



The biofilter contains over 50,000 cubic yards of chipped wood material piled onto a perforated floor. The facility exhaust air slowly travels through the 8-foot deep x 3-acre biofilter where odors and regulated compounds are removed.



Sales of SoilPro Compost average 20,000 cubic yards per month – about 350 truck loads.



Inland Empire Regional Composting Facility
12645 6th Street
Rancho Cucamonga, CA 91739
Phone (909) 993-1500
www.ierca.org

Facility: Largest Fully Enclosed Composting Facility in North America
Purpose: Recycling of Biosolids, Wood Waste, and Manure
Owned by: Inland Empire Regional Composting Authority
Partnership: Sanitation Districts of Los Angeles County and Inland Empire Utilities Agency

Project: Compost Manufacturing Facility
Location: Rancho Cucamonga, CA
Site: 24 Acres
Building: 445,275 Square Feet
Project Cost: \$95 Million
Construction: Start 2004, Completion 2007
Start-up Date: April 2007
Product Storage Facility: 3 acres-covered



Type of Process: Aerated Static Pile Composting

Features: Fully Enclosed Composting Process, largest in North America
Subsurface aeration system
Biofilter (3 acres) for Odor and Air Emission control (per South Coast Air Quality Management District)
Solar Panels Generate 1 megawatt - 50% of the power required to operate IERCF at peak production
Fans for Pile Aeration and indoor air quality
Variety of Automated Conveyor Systems

Capacity: Biosolids - 150,000 Tons/Year (75,000 tons each from LACSD and IEUA)
Bulking Agents & Feedstocks (manure, wood waste, etc.) – 60,000 Tons/Year

Product: SoilPro Premium Compost Products
More than 1 million cubic yards sold to landscapers, nurseries, and farms to date