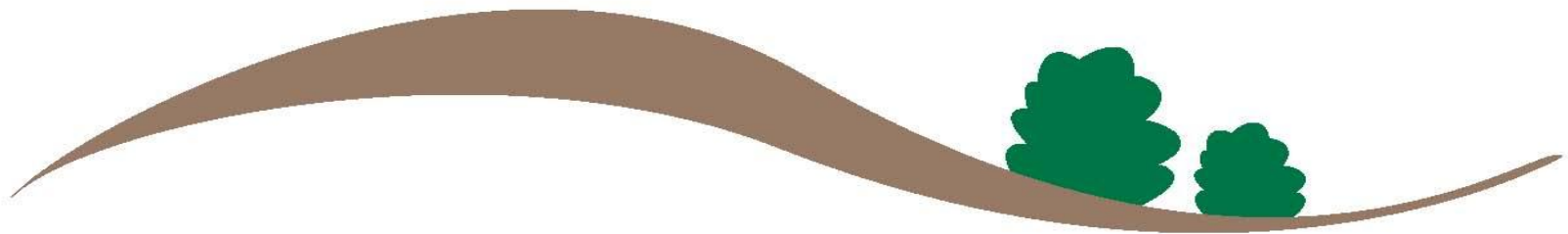


Inland Empire Regional
Composting Facility



INLAND EMPIRE REGIONAL

COMPOSTING






A U T H O R I T Y

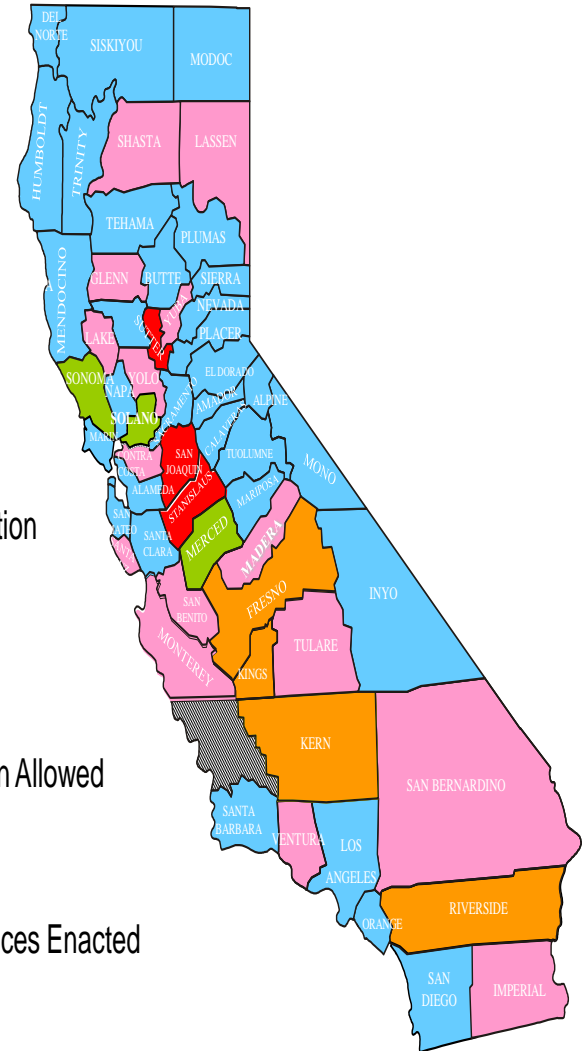
Project Need

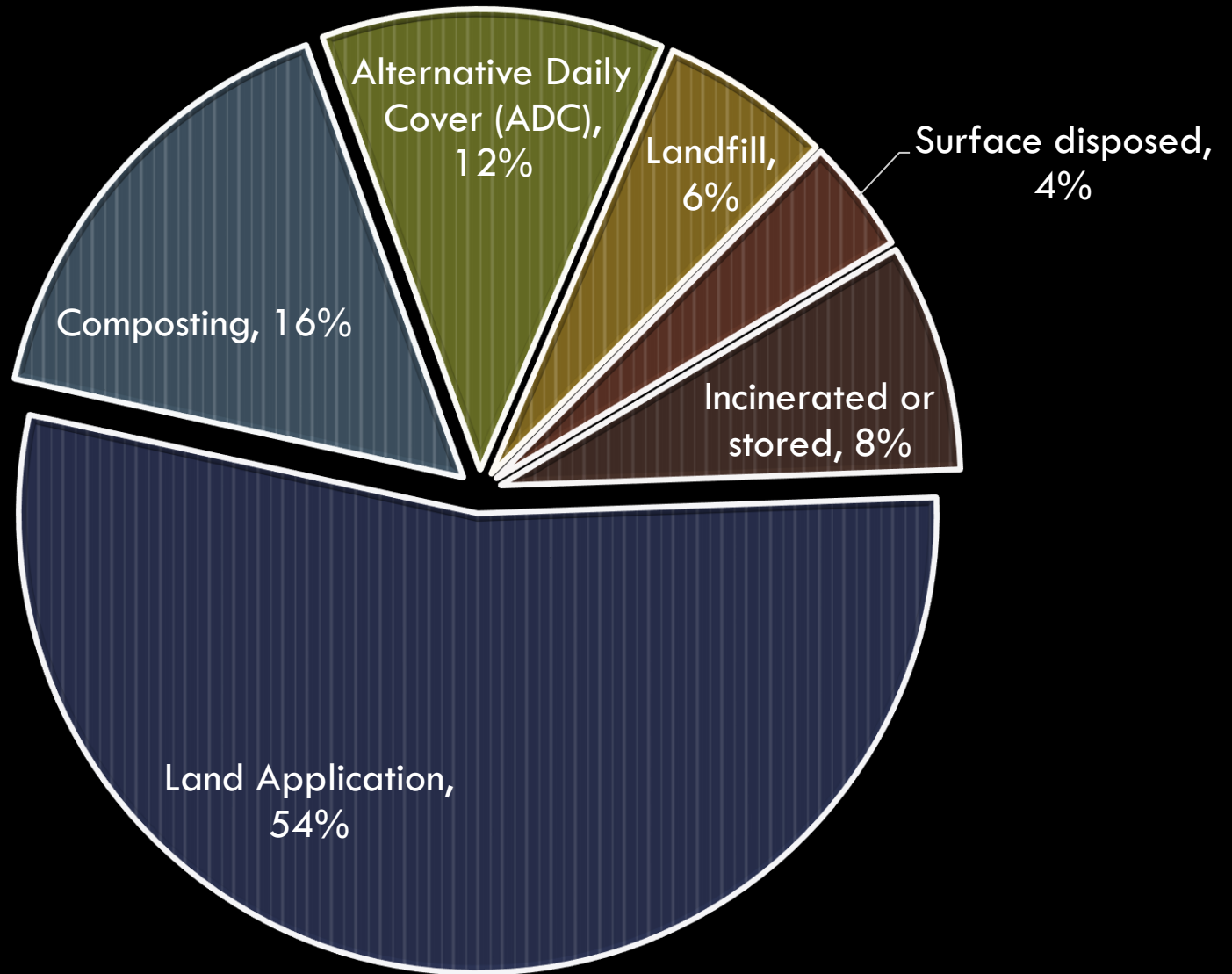
- Cost going Up
- Options going down
- Regulations
 - SCAQMD 1133.2
- Urban Encroachment

Biosolids Land Application in California

Status of County Ordinances

-  Ban on All Land Application
-  Practical Ban
-  Ban on Class B
-  Class B Land Application Allowed
-  Developing Ordinances
-  No Regulations/Ordinances Enacted

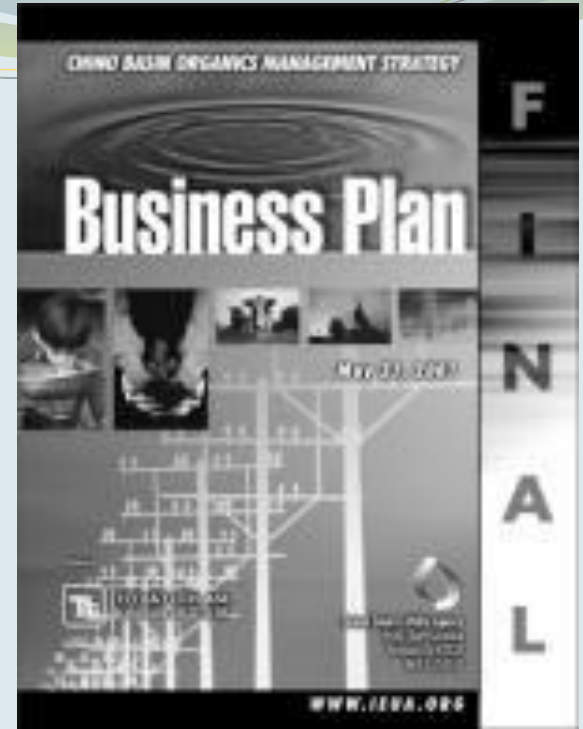






Inland Empire
UTILITIES AGENCY *

The Organics Management Strategy Final Business Plan August 2002



“A comprehensive strategy for implementing a coordinated, cost-effective approach to managing organics in a phased incremental manner consistent with sound public works engineering principles”

The Key Business Plan Policy Objectives

- Reduce biosolids handling and transportation costs
- Reduce reliance on out-of-agency solutions;
- Cost effectively recycle organic wastes using environmentally safe enclosed facilities;
- Local use of the fertilizer products will be a first priority;
- Reduce local air and water pollution;
- Implement strategies that minimize diesel truck trips

Out with the Old

**Existing IEUA Composting Facility
Decommissioned in 2006**

**IERCF – Constructed to Meet Rule 1133.2
Commissioned in 2007**



Inland Empire Regional Composting Authority

- 50/50 partnership with IEUA/LACSD
- Formed to gain control of biosolids management
- Gain control of costs and options



IERCF Overview

- 2002 - IEUA Develops Organics Plan
- 2002 – IEUA/LACSD form Partnership (JPA)
- 2004 – Purchased IKEA warehouse and started construction
- April 2007 – began daily operations

Facility Overview

Indoor Composting Facility – The Green Project

- Provides an Essential Public Service for IEUA/LACSD
 - 100% IEUA Biosolids
 - 20% of LACSD Biosolids
- Largest Enclosed Facility in United States
- Designed to Meet (or Beat) AQMD Rule 1133.2
- Only AQMD Permitted Facility (1st of its Kind)
- 10-Acres of Fully Enclosed Composting Operations
- 3.1-Acre Biofilter for Emission Control



Facility Benefits

- Regional Environment
- Local Community Organic Recycling
- Reduced Truck Traffic
- Elimination of Landfill and Land Application of Biosolids
- Compost to local communities
- Alternative local green waste diversion
- Powered by 1-MW of Renewable Solar Energy
- Recycled Water Used for all Industrial and Irrigation
- No Odor Issues or Complaints



I-15

IERCF

**RELIANT ENERGY
POWER PLANT**

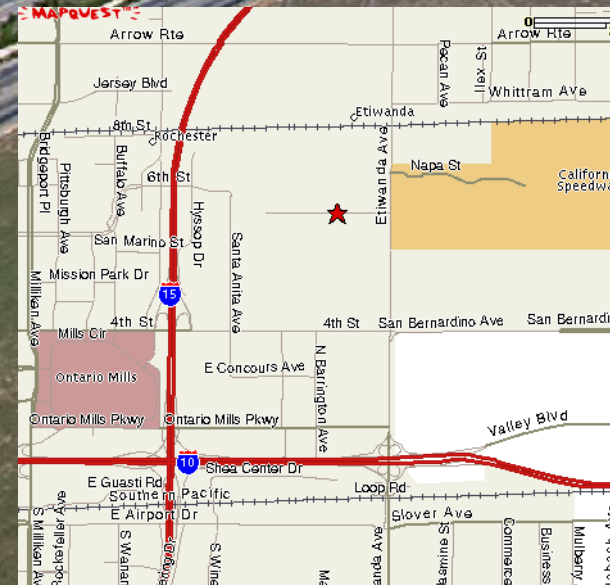
**WEST VALLEY
DETENTION CENTER**

**Inland Empire Utilities Agency
Water Reclamation Plant**

6TH ST

ETIWANDA BLVD

1.4 MILES TO I-10



An aerial photograph of a large, modern industrial building, identified as an IKEA Warehouse. The building has a long, rectangular footprint with a grey, corrugated metal roof. It is surrounded by a large, paved parking lot with several white semi-trailers parked. To the right of the building, there are several large, circular, white storage tanks. The surrounding area includes other industrial buildings, roads, and some undeveloped land. A blue callout box with white text and a downward-pointing arrow is centered over the building.

IKEA Warehouse



IERCF

Biofilter

IKEA Before and After



Construction Started 2004





Pug Mills in Receiving Building





Clockwise from top left, Building interior, screw conveyors, pug mill mixer in receiving pit, exhaust fan, exhaust system piping, and construction of biofilters.



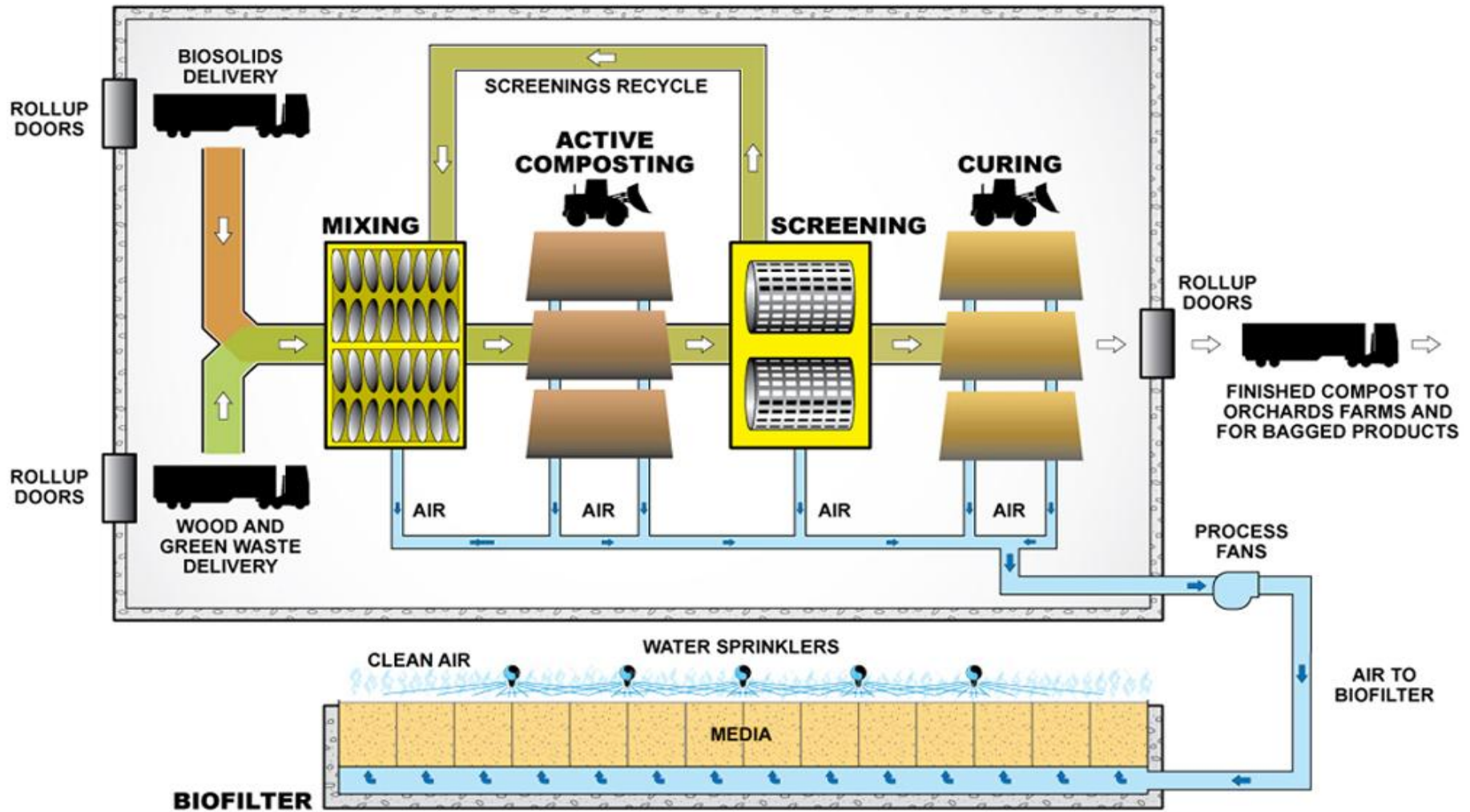
Operations

- Full throughput since December 2008
- ~590 tons/day biosolids from IEUA and LACSD along with other woody amendments
- Storage facility for seasonal fluctuations

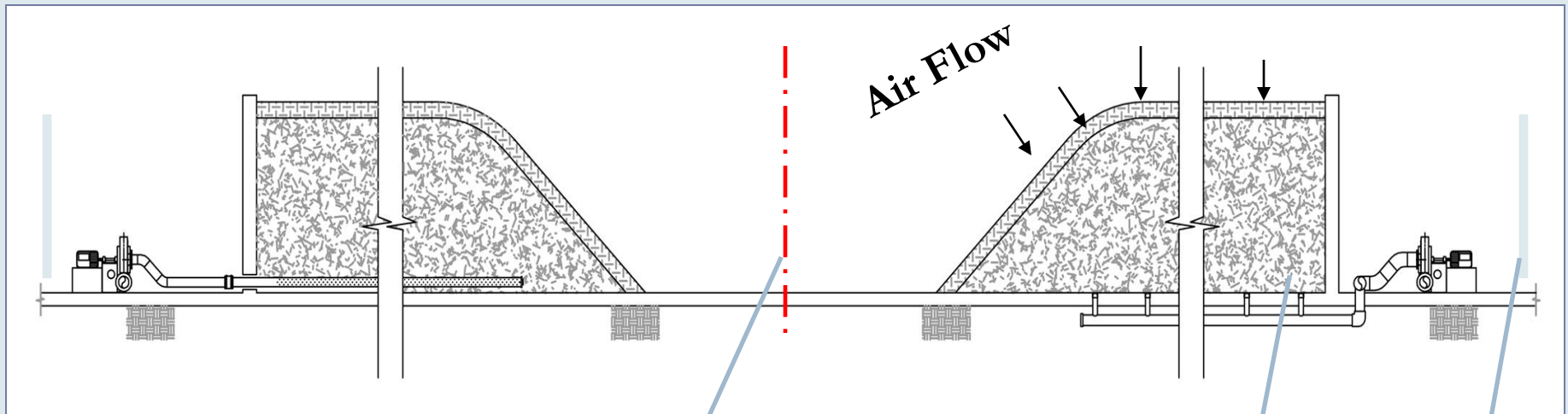


Facility Description

INLAND EMPIRE REGIONAL COMPOSTING FACILITY (IERCF)
SCHEMATIC



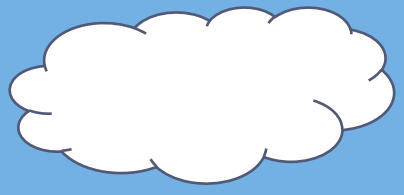
Aerated Static Pile Composting



Interior wall

**Building centerline
and equipment
corridor**

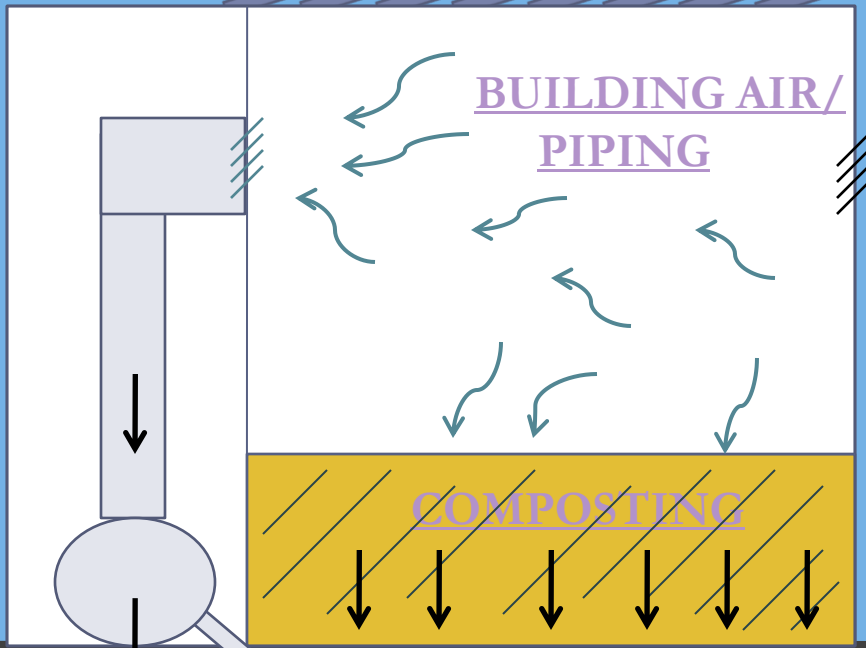
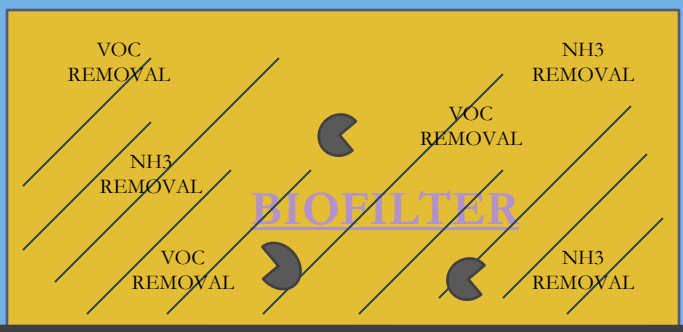
Exterior wall



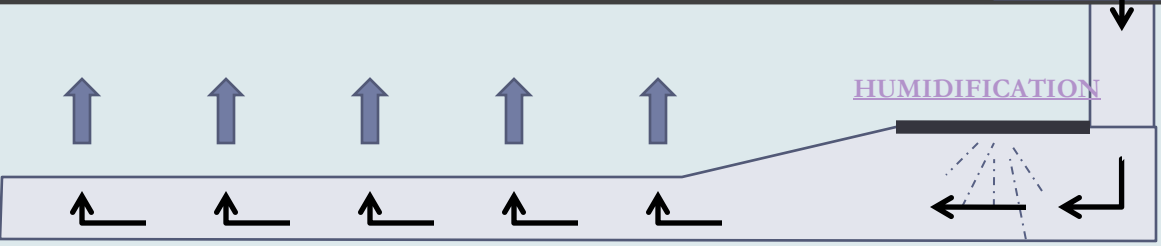
SOLAR PANELS

CLEAN
AIR

BUILDING AIR/
PIPING



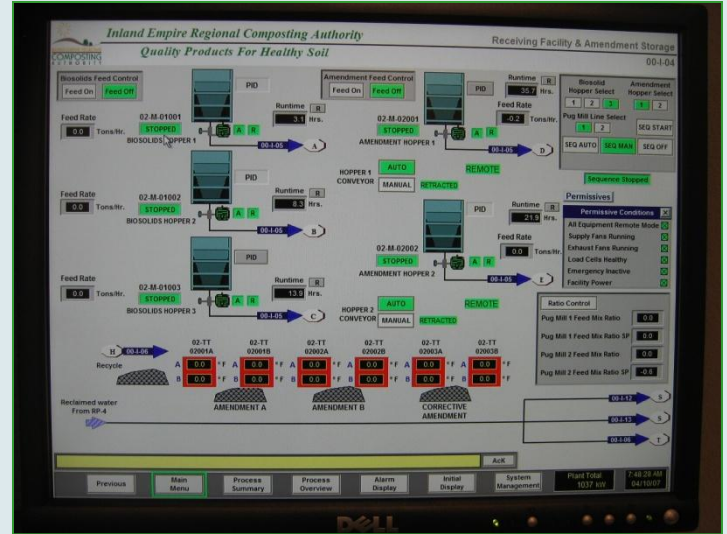
HUMIDIFICATION



Facility



Facility



Facility

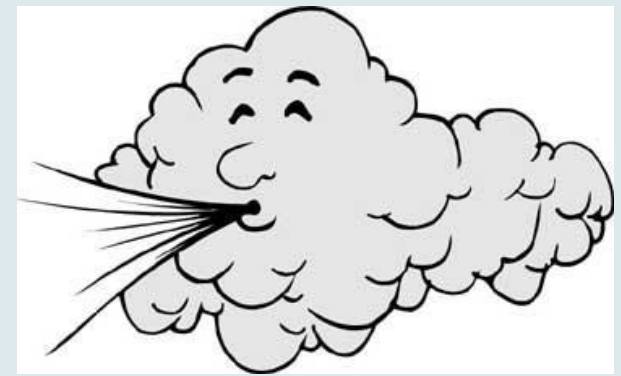
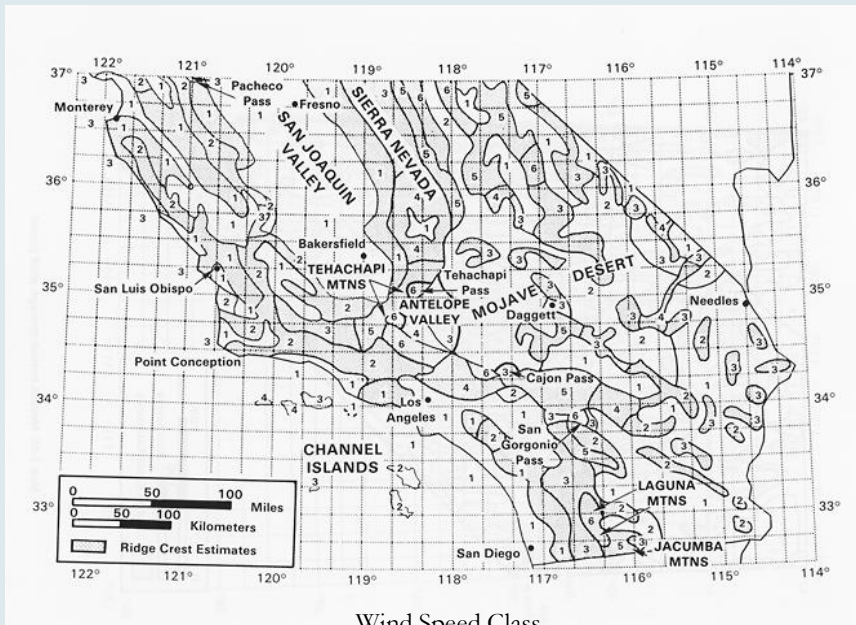


Solar Panels generate 1 megawatt – 50% of the power required to operate the IERCF

12/18/2008 09:13

Wind Power

- Minimum cut-in wind speed 8 mph for turbine power generation
- Local area wind speed averages 13 mph



*IERCF/RP4 in Class 3 Area
(Avg. speed 13 mph)*

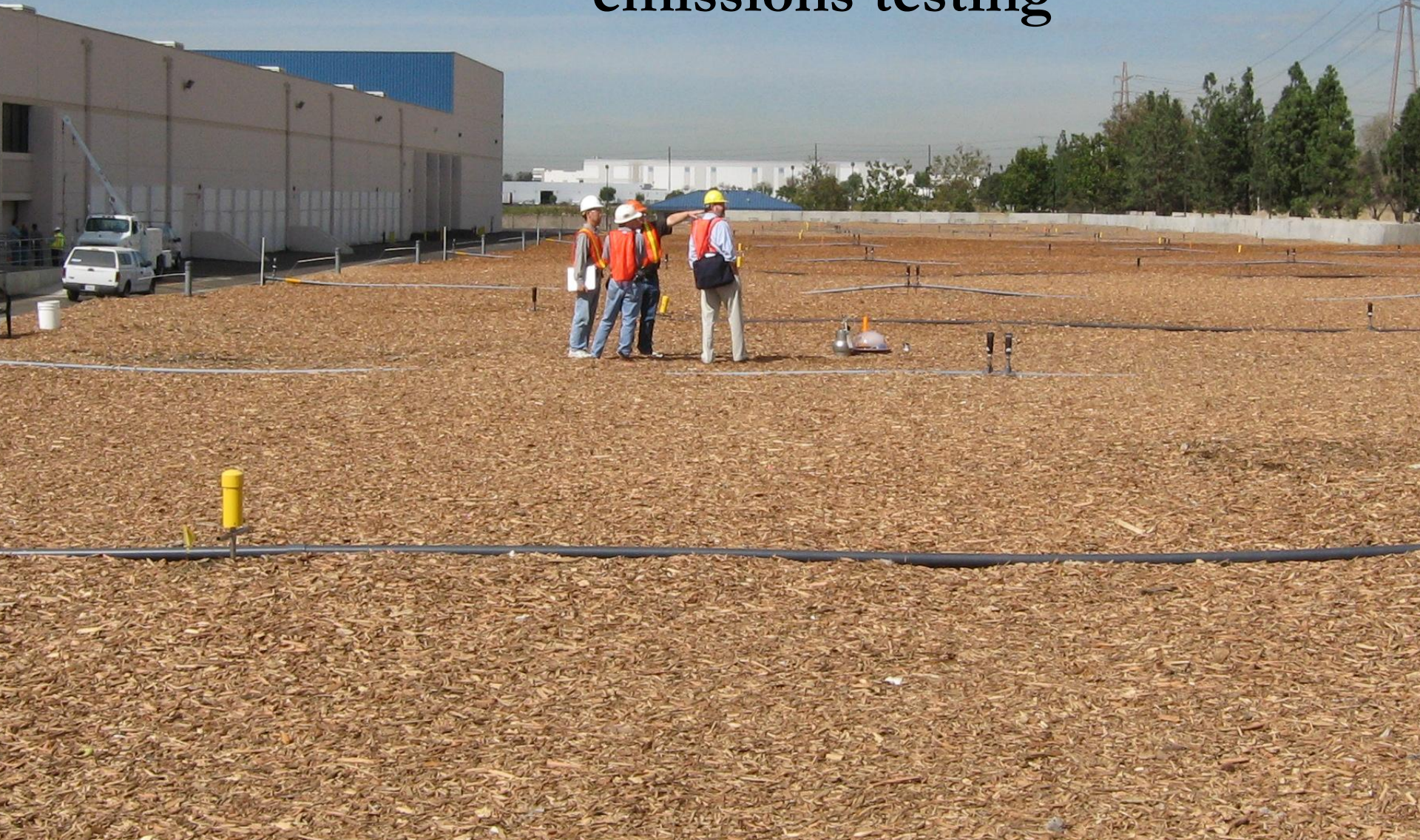


Source Test Scope & Methods

- Biofilter Sampling
 - 150+ Samples Collected
 - Testing Over 5-days
 - High & Low Flow
- Testing Methods
 - Ammonia – Method 207.1
 - VOC – Method 25.3
 - Complicated & Timely Test Process



IERCF Biofilter emissions testing



Branding

- IERCA's SoilPro™ brand has been filed for trademark
- Launched website www.ierca.org





PREMIUM COMPOST BENEFITS

- Adds valuable organic matter - improving soil structure
- Improves the moisture holding capacity of light, sandy soils
- Reduces the bulk density of heavy, clay soils – increasing moisture infiltration and aeration, slowing soil compaction
- Reduces soil erosion and nutrient leaching
- Provides plant nutrition, improving plant vigor

HOW MUCH PREMIUM COMPOST DO I NEED?

ONE CUBIC YARD OF COMPOST COVERS:



648 sq. ft.	↔	1/2" depth
324 sq. ft.	↔	1" depth
162 sq. ft.	↔	2" depth
108 sq. ft.	↔	3" depth

CUBIC YARDS REQUIRED TO COVER 1,000 SQUARE FEET

1/2" layer	↔	1.5 yd ³
1" layer	↔	3 yd ³
2" layer	↔	6 yd ³
3" layer	↔	9 yd ³

GUARANTEED MINIMUM NUTRIENT ANALYSIS

Total Nitrogen (N)	0.75%
Water Insoluble Nitrogen*	0.75%
Available Phosphate (P2O5)	1.0%
Soluble Potash (K2O)	0.25%
Iron (Fe)	1.0%

Nutrients are derived from composted biosolids (treated sewage sludge).

*Slow release nitrogen

Soil Amendment Ingredient List
Composted biosolids (treated sewage sludge), forestry products, yard trimmings, and stable bedding.

Information regarding the contents and levels of trace elements in this product is available on the internet at <http://www.aapfco.org/metals.htm>.

SoilPro Products Premium Compost is sold in bulk form, by the cubic yard or ton.

MANUFACTURED BY:



12645 Sixth Street, Rancho Cucamonga,
CA 91739 Telephone (909) 993-1500
www.ierca.org



Quality Products for A Healthy Soil

COMPOSTING PROCESS

The Inland Empire Regional Composting Authority (IERCA) manufactures SoilPro Products Premium Compost at its indoor state-of-the-art composting facility. At this high tech facility, advanced engineering principles are used to accelerate the natural degradation process – enabling a finished product to be produced in just 2 to 3 months. Ongoing monitoring of the system allows for a consistently high quality soil amendment to be produced.



SoilPro Products Compost Products are rich in organic matter and nutrients, both of which are essential components of productive soils. SoilPro™ Products Compost Products are excellent for amending depleted soils, enriching planting mixes, and enhancing the growth of turf and ornamental plant species.

The enclosed composting process, essentially “pasteurizes” the product, allowing SoilPro Products Premium Compost to boast that it is free of viable weed seeds and plant pathogens.

DIRECTIONS FOR USE:

Flower and Ornamental Garden Beds: Apply a 1 to 2 inch layer of SoilPro Products Premium Compost to the soil and incorporate it to a depth of 6 to 8 inches. Plant flowers and water. Condition the soil this way every year 2 to 3 years.

Trees & Shrubs: Dig a hole to the approximate depth of the root ball and two to three times as wide. Mix 1 part SoilPro Products Premium Compost with 3 parts soil obtained from the planting hole. Place the tree or shrub in the planting hole and apply amended soil around the root ball. Firm the soil occasionally and water.



New Turf Areas: Apply 1 to 2 inches of SoilPro Products Premium Compost to the soil and incorporate it to depth of 6 to 8 inches, apply seed, then rake and water.

Topsoil Manufacturing / Upgrading: Mix 1 part SoilPro Products Premium Compost with 3 parts existing or purchased soil and blend uniformly.

Mulching: Spread a 2 to 3 inch layer around trees, shrubs, and flowers.

**NUTRIENT RICH, WEED-FREE,
CONSISTENT, EASY TO USE...**



**...COMPOST PERFECT
FOR YOUR LANDSCAPE,
GARDEN, OR TURF**



Outreach



SoilPro Premium on a Park in the City of Paramount



Fontana



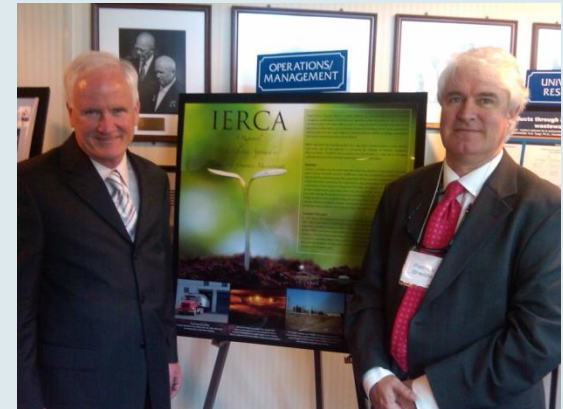
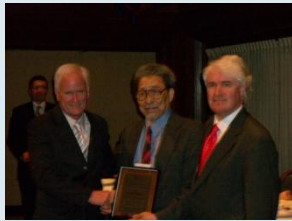




04/02/2008 14:18

AMERICAN ACADEMY OF ENVIRONMENTAL ENGINEERS®

*Proudly Serving the Environmental
Engineering Profession since 1955*





Questions or Comments?