



**LOS ANGELES COUNTY  
SANITATION DISTRICTS**

*Converting Waste Into Resources*

# LACSD's FOOD WASTE RECYCLING PROGRAM

Will Chen

Supervising Engineer

Solid Waste Energy Recovery Engineering

SEPTEMBER 28, 2021



OUR SERVICE AREA



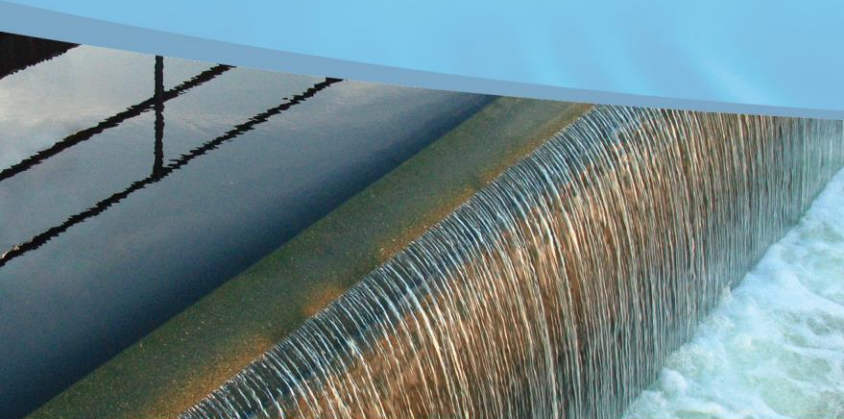


**LOS ANGELES COUNTY  
SANITATION DISTRICTS**

*Converting Waste Into Resources*

# OUR MISSION

To protect public health and the environment through innovative and cost-effective wastewater and solid waste management and, in doing so, convert waste into resources such as recycled water, energy, and recycled materials.



WATER RECYCLING



GREEN ENERGY



MATERIALS RECYCLING



LA Co. generates 21 million tons of waste a year.



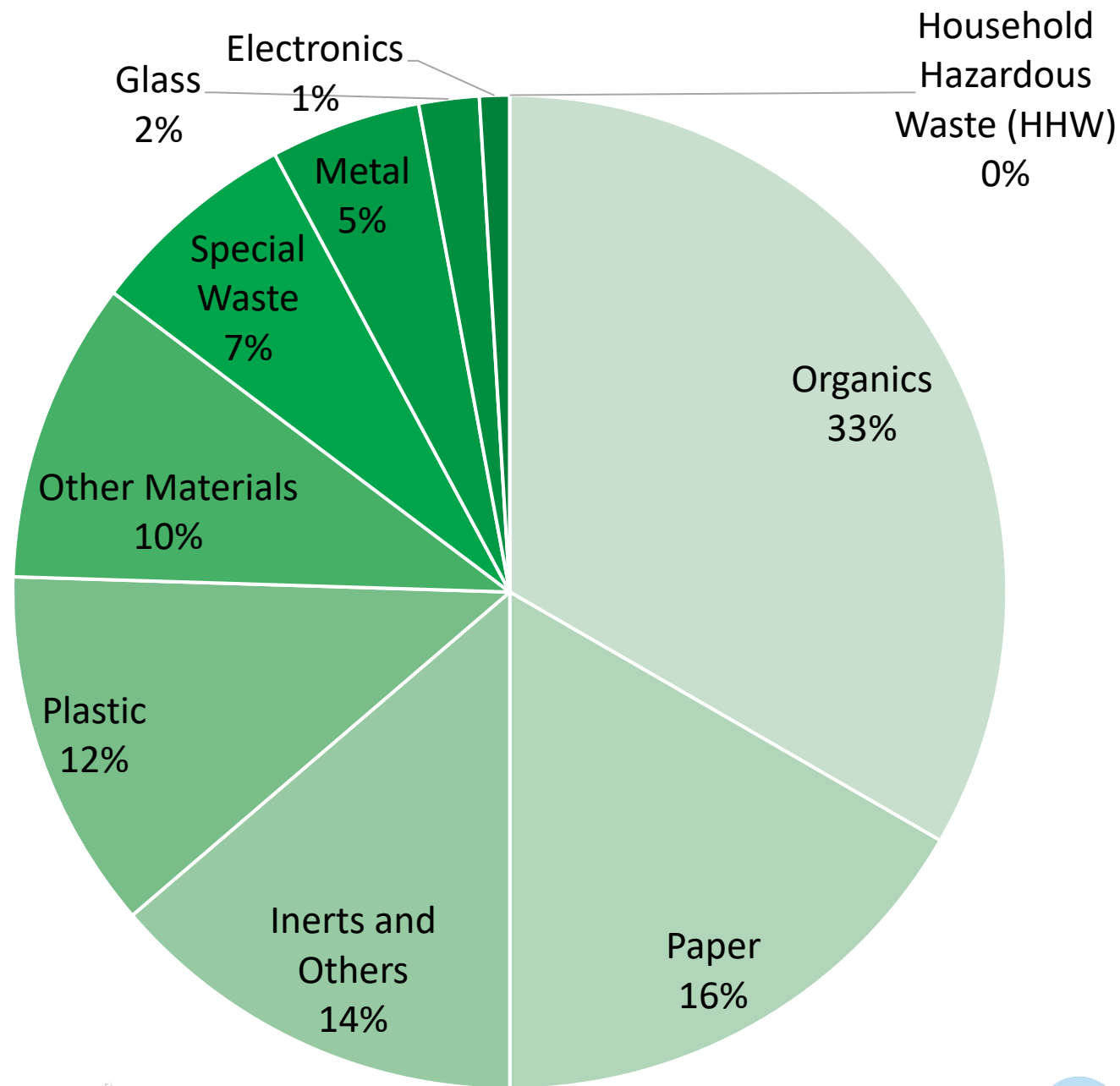


About 9 million tons a year is buried in landfills.





One third of the  
landfilled waste is  
organic.



Source: CalRecycle





4,000 tons of food waste is thrown out each day.





# The State requires organics be diverted from landfills.

## AB 1826



- Mandatory commercial organics recycling
- Composting or anaerobic digestion if more than 4 cubic yards per week is generated

## SB 1383



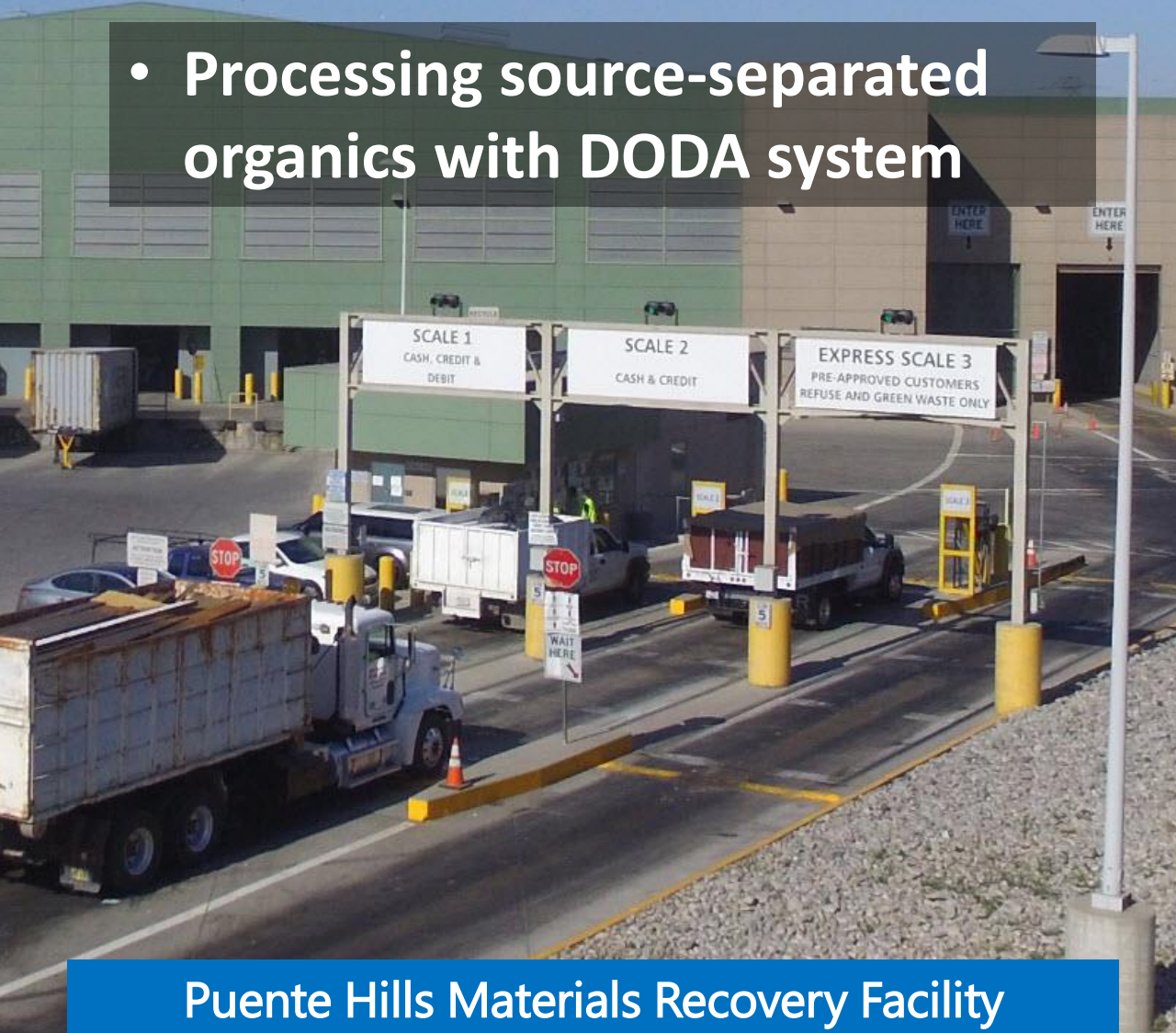
- 50% reduction in landfilled organic waste by 2020
  - 75% reduction in landfilled organic waste by 2025
- Compared to 2014 levels*





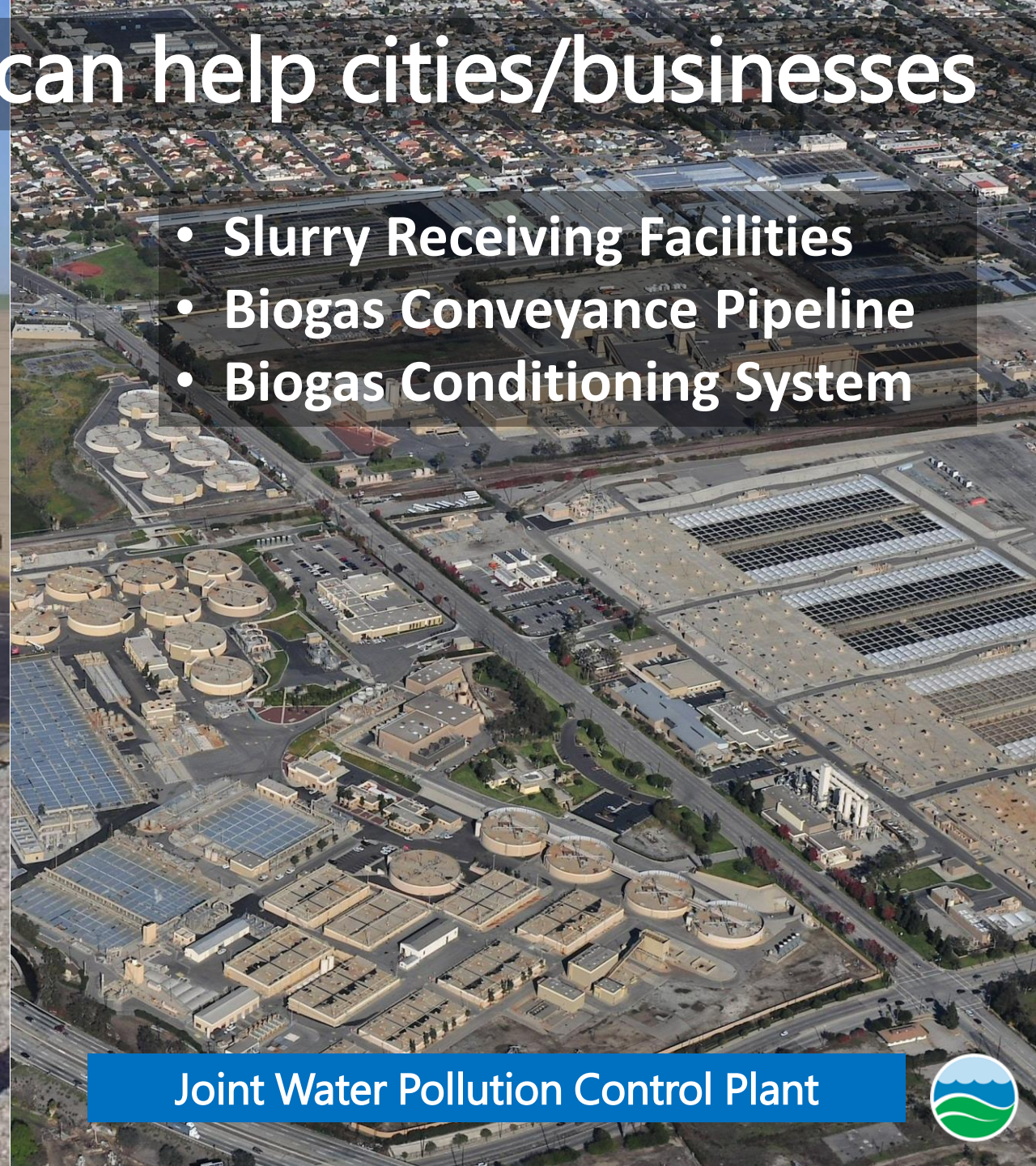
# Our food waste program can help cities/businesses

- Processing source-separated organics with DODA system



Puente Hills Materials Recovery Facility

- Slurry Receiving Facilities
- Biogas Conveyance Pipeline
- Biogas Conditioning System

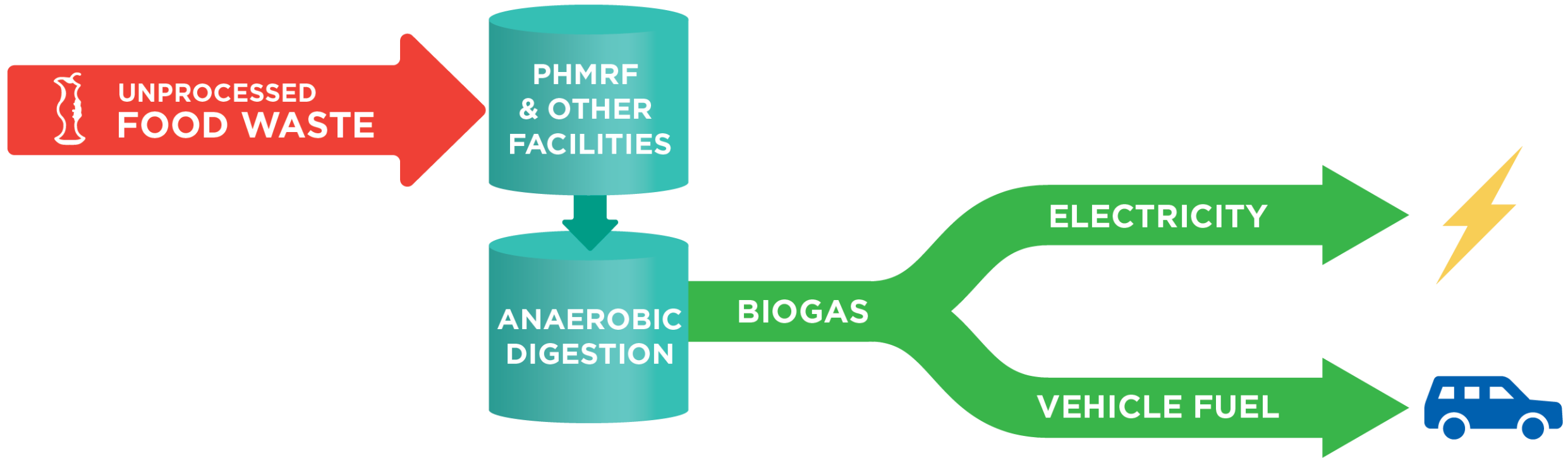


Joint Water Pollution Control Plant





# Food Waste Recycling Program





First source-separated food is collected.





Food waste is brought to PHMRF.





30 tons/day of food waste is slurried at PHMRF.





The slurry is pumped into tanker trucks.





# Food waste slurry is then transported to JWPCP.

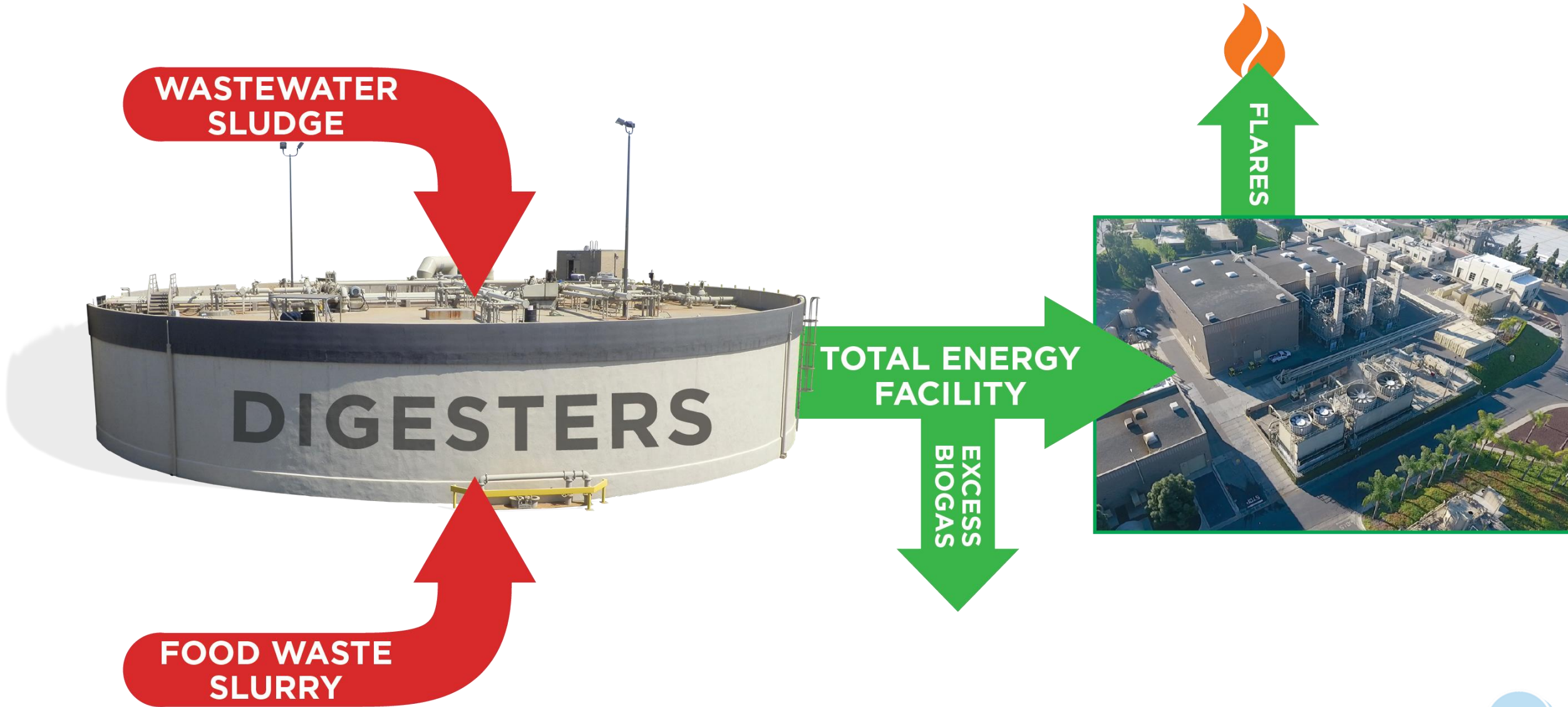






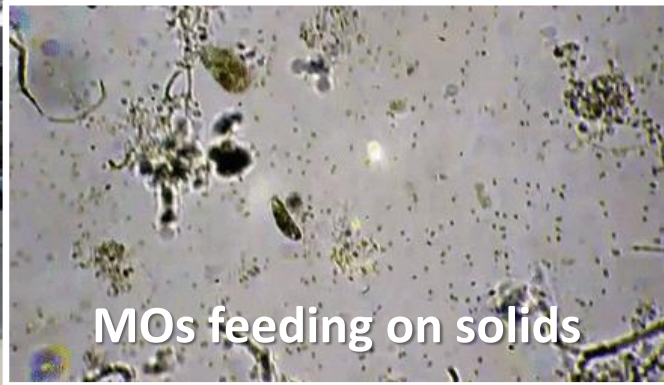


# Increased biogas production with food waste





# Food waste and wastewater solids are digested.



MOs feeding on solids

24 Digesters  
Kept at 96 °F for 15-16 Days





Food waste and wastewater solids are digested.





# Our power plant produces 20 MW of energy.



Renewable Energy

**20 MW**

Enough for 20,000 homes









# Biogas Conveyance Pipeline





# BCS facility layout

Fueling Station

Chiller Skid

Storage Tank

BCS Skid

Inlet Biogas Flow: 400 scfm

RNG Flow: 160 scfm

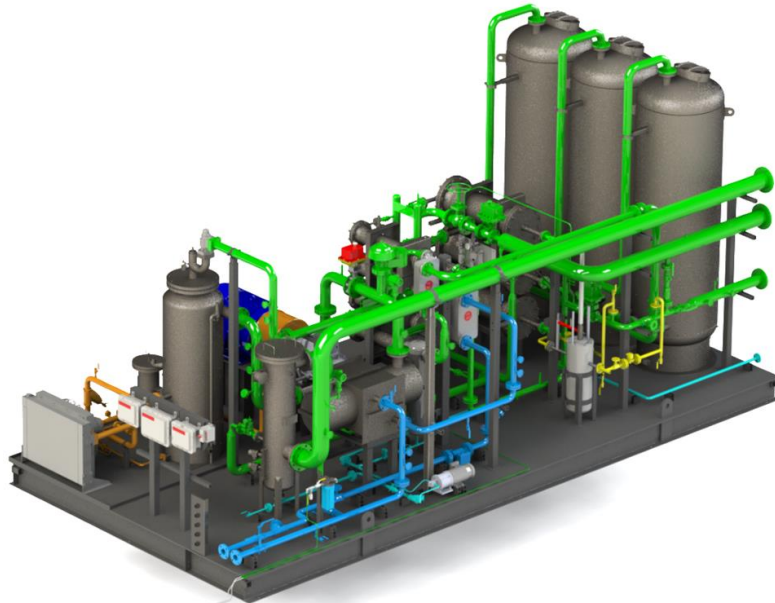
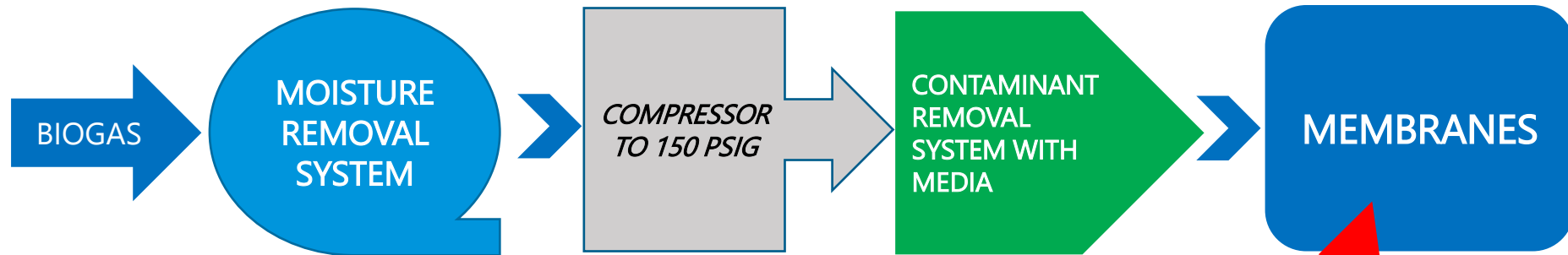
Tailgas Flow: 140 scfm



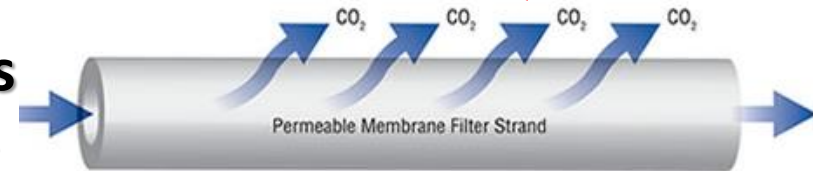


# How **BioCNG™** Equipment Creates RNG

A TETRA TECH COMPANY



**Biogas**  
62% CH<sub>4</sub>



**RNG**  
Min. 88% CH<sub>4</sub>  
Typical 98% + CH<sub>4</sub>





It will supply our existing fueling station.





Digested solids (biosolids) are dewatered.





... producing a biosolids cake.





Biosolids are trucked to reuse facilities.





# Biosolids Composting





Our goal is 600 tons/day of food waste slurry.



Generation of electricity



Vehicle fuel



Injection into natural gas pipelines







**LOS ANGELES COUNTY  
SANITATION DISTRICTS**

*Converting Waste Into Resources*

# For more information:

William Chen, Supervising Engineer

562-908-4288 ext. 2431; [wchen@lacsds.org](mailto:wchen@lacsds.org)

[www.lacsds.org/foodwaste](http://www.lacsds.org/foodwaste)



OUR SERVICE AREA