



WELCOME

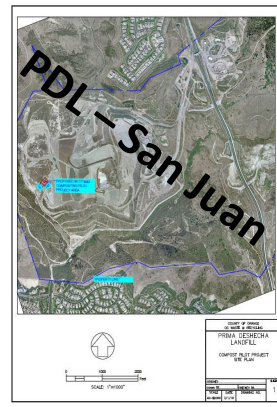


CALIFORNIA
AIR RESOURCES BOARD

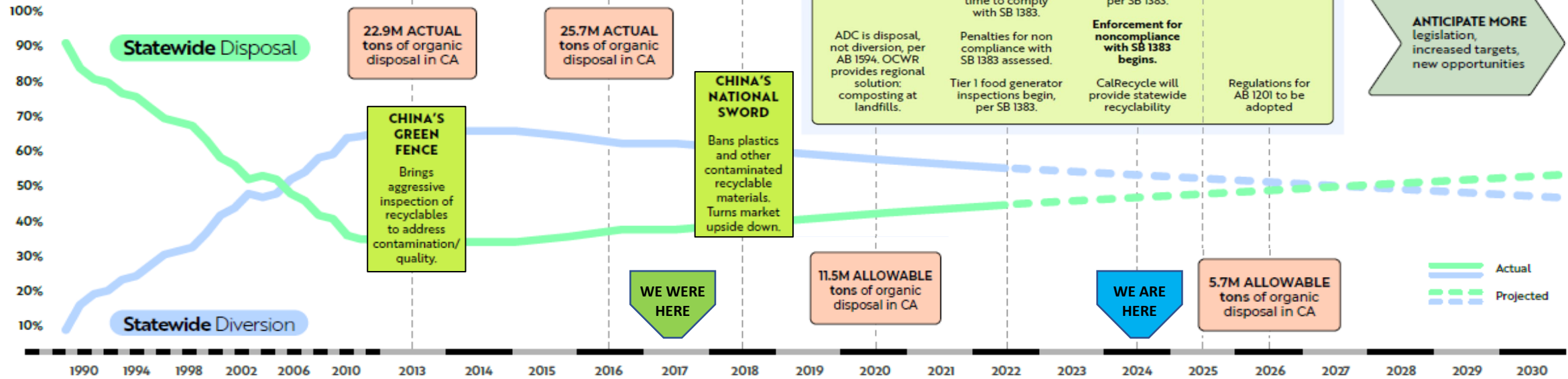
December 18, 2024 Workshop

OC Waste & Recycling – Overview

- IWMD/OCWR – Established in 1940's
- Operate 3 Active landfills (1960, 1976, 1990)
- 20 closed landfills
- 4 Household Hazardous Waste Facilities
- 11 Franchise Agreements
- Compost facilities (2021, 2022, 2023)
- Mandatory Organics Recycling SB 1383
- 75% Organics from Landfill by 2025



Industry Trend and Timeline



Key legislation milestones

1989

AB 939 passes
CA Integrated Waste Management Act requires all jurisdictions to divert 50% of waste from landfills.

2011

AB 341 passes
Commercial recycling requires 75% diversion by 2020.

2014

AB 1826 passes
Commercial organics recycling requires statewide recycling 75% goal by 2020.

AB 1594 passes
Eliminates diversion credit for green waste; changes status of PGM to disposal.

2016

SB 1383 passes
Methane reduction and edible food recovery. Recover 20% of edible food by 2022; enforcement begins in 2024.

2021

SB 619 passes
March 1, 2022, jurisdictions who met certain conditions were allowed to come into SB 1383 compliance without being subject to penalties by CalRecycle.

AB 1201 passes
Prohibits sale of plastic products labeled as "compostable" or "home compostable" unless product meets ASTM compostability standard by January 1, 2026.

SB 343 passes
Beginning January 1, 2024, only products meeting statewide recyclability criteria can utilize the chasing arrows symbol.

2022

AB 1985 passes
Implemented delayed enforcement for procurement targets and phased in organics procurement targets (35% on or after Jan 1, 2023, 65% on or after Jan. 1, 2024, & 100% on or after Jan. 1, 2025).

AB 1857 passes
Repeals the provision authorizing the inclusion of not more than 10% of the diversion through transformation.

SB 54 passes
Prohibits producers of single-use, disposable packaging or single-use, disposable food service ware products from offering for sale, distributing or importing in or into the state.

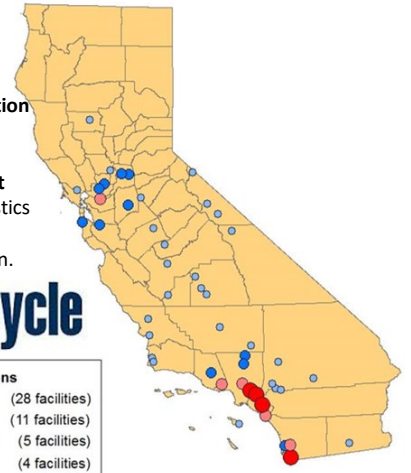
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SB 54 Plastic Pollution Prevention & Packaging Producer Responsibility Act
Compostable plastics standards & language adoption.

CalRecycle

Green Waste ADC Tons

- 1 - 15,000 (28 facilities)
- 15,000 - 50,000 (11 facilities)
- 50,000 - 100,000 (5 facilities)
- > 100,000 (4 facilities)



Orange is the New Green – System Concept

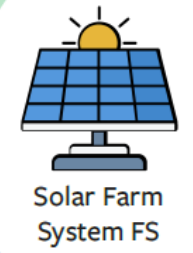
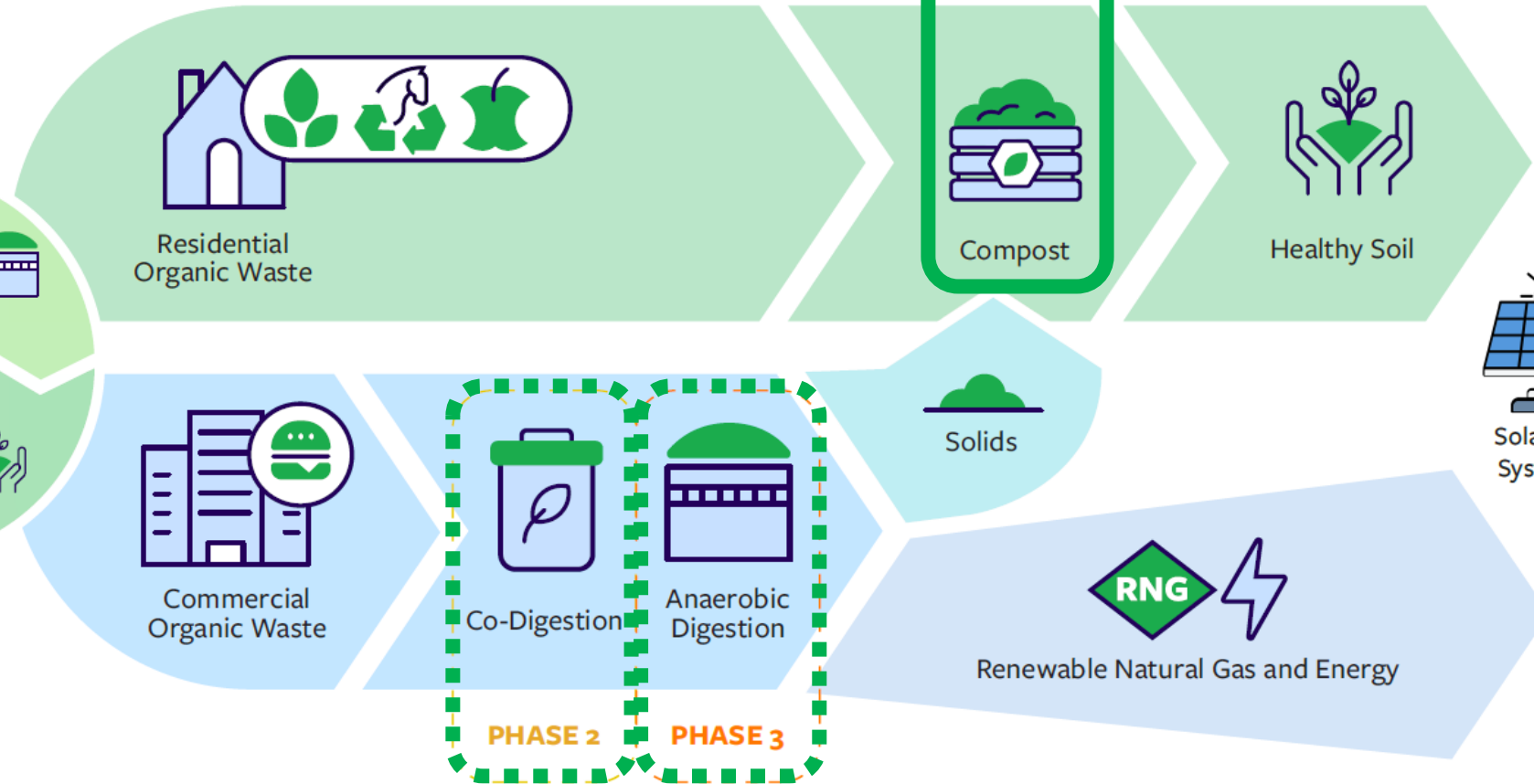
HOW ORANGE WORKS

Organics to Renewable Natural Gas and Energy

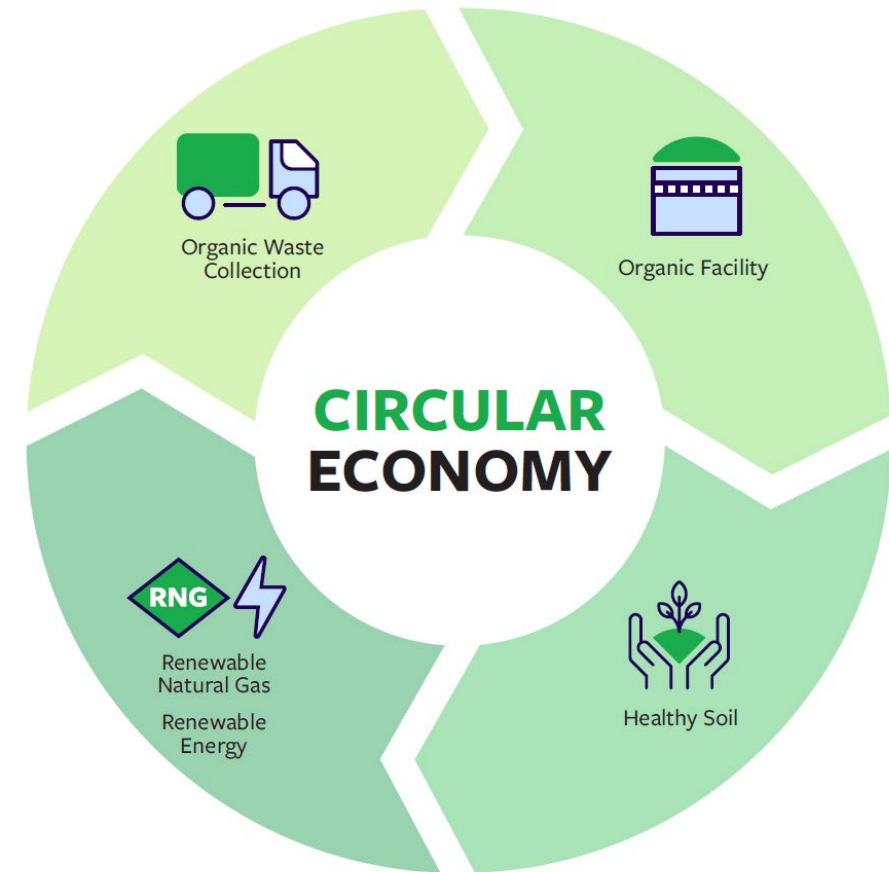
Smart Landfill Program

3 Compost Facilities Built

Next stages of growth



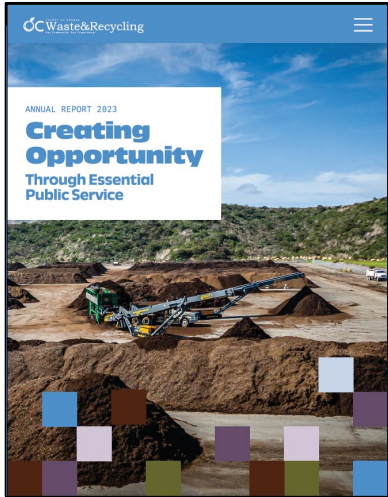
Path Forward: **O**rganics **R**enewable **N**atural **G**as **E**nergy



- Create local infrastructure
 - Minimize transportation with local infrastructure
 - Regenerating natural systems – Healthy Soils
 - Market Creation & Development
- “O.R.N.G.E.” is the new Green
 - Organic Renewable Natural Gas and Energy
 - Shift in business model as an essential public service
- Smart Landfill Program – GHG reduction
 - LFG to REG expand to LFG to RNG
 - Renewable energy – Solar & Storage Feasibility Study
 - BAT Well Field & Emissions Management/Controls

Future for OCWR: Kaizen Mindset Continues....

2023 Creating Opportunity

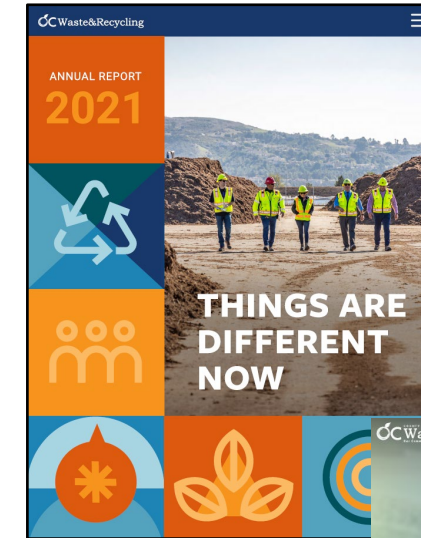


WISE Agreement:

Waste
Infrastructure
System
Enhancement

- Windrow – In Operation
- CASP – In Development
- SSO/Co-digestion – In Development
- AD – Potential for infrastructure (FS)
- Solar Farms Feasibility – SB100 (FS)
- Emerging Technologies & Processes
- Incubation for Recycling Infrastructure
- Smart Landfill Program

- WDA to WISE Agreement – In Development
 - Organics & Edible Food Regional Approach
 - Market Creation & Development
 - Procurement & Compliance
 - Regional Standardization
 - Regional Collaboration



OCWR Greener System – Phase 1A



Phase 1B – Covered Aerated Static Piles



Organic Recycling Infrastructure Plan – Phase 2

■ Co-Digestion (Food Waste)

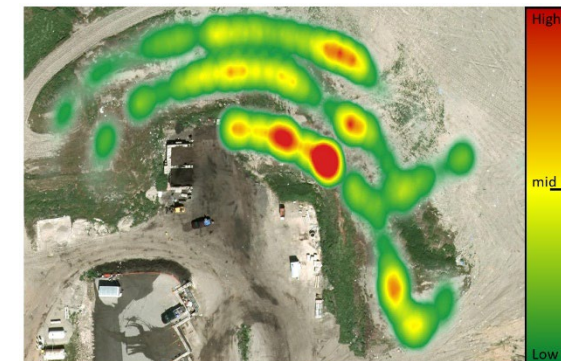
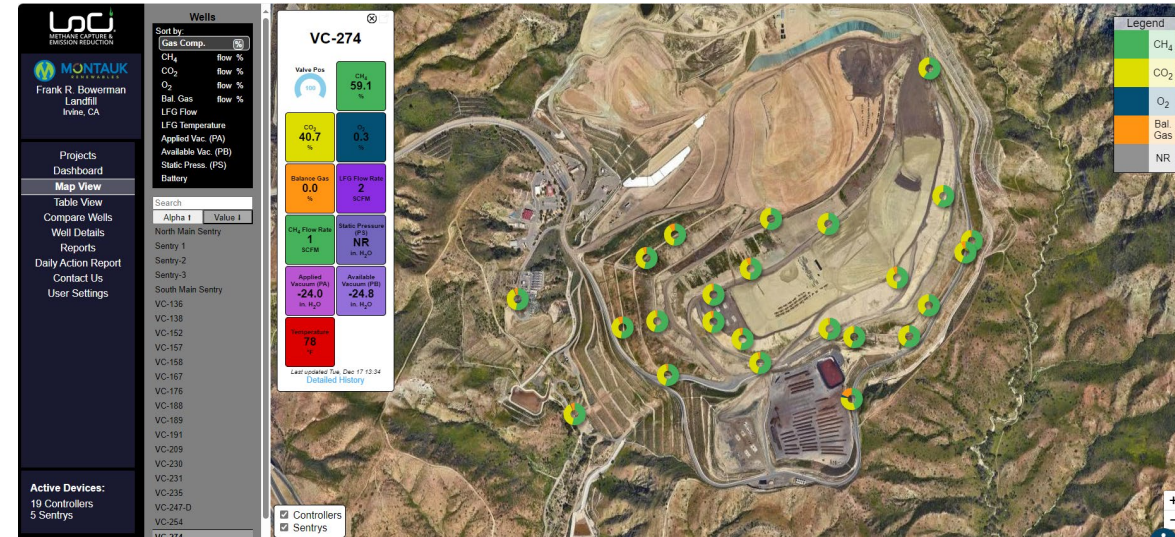
- Use of existing capacity in WWTP (OC San District)
- SSO processed to remove contamination, homogenize, direct inject into AD (**OCWR Operations**)
- Benefits of increased digester efficiency
 - Biogas production increase & biosolids destruction
- Requires SSO (commercial program)
 - Requires volume (WDA)
- Bridging Solid Waste and Wastewater Industries
 - Use of conversion technology



Optimization Through Smart Landfill Program (SLP)

Setting a New Standard with SLP

- Real-time emissions from above
- Real-time landfill gas collection system issues from below
- Anticipated 10% to 15% GHG emissions reductions and collection efficiency
- Increased landfill gas to energy to offset fossil fuels
- Increased organics throughput
- Landfill airspace optimization through grade control
- Foundation for future services (Source Separated Organics, Anaerobic Digestion, and Green Renewable Energy)



Optimization Through Smart Landfill Program (SLP)





Thank you

David Tieu, PE, CCOM™, Deputy Director