

PROGRESS ON CALIFORNIA SB 1383

Update on Excess Digester Capacity Analysis & Water Boards Perspective

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State Water Resources Control Board



California Bioresources Association Symposium | November 19, 2021

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State Water Board climate change priorities




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Today's Presentation

1. Motivation of the report
2. Key takeaways
3. State Water Boards rollout & update



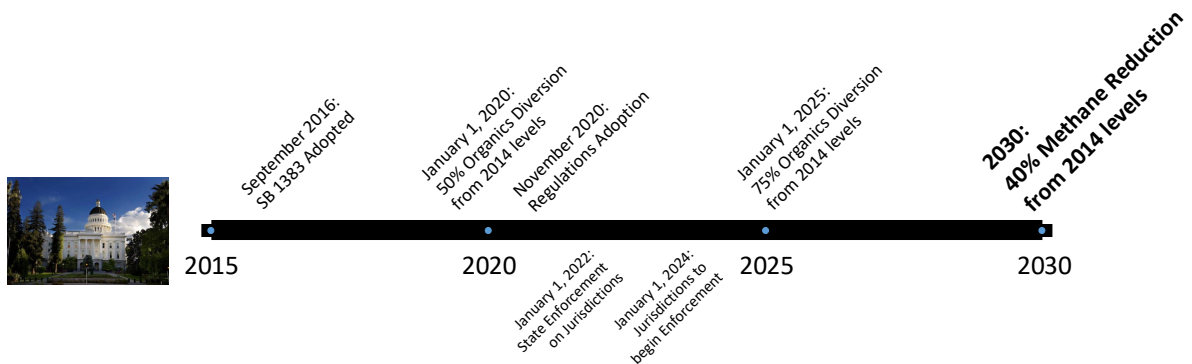
Co-Digestion Capacity Analysis
Prepared for the California State Water Resources
Control Board under Agreement #17-014-240

CO-DIGESTION CAPACITY IN
CALIFORNIA

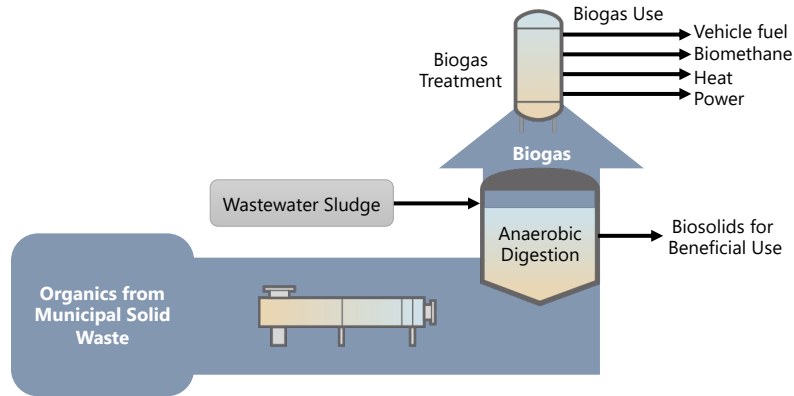
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// California's Senate Bill 1383 — Methane Reduction



// Co-digestion at WWTPs could play a major role





WWTPs: wastewater treatment plants

// Lots of talk in the last few years about excess digester capacity and producing renewable energy at WWTPs



Can California use this capacity to help meet its methane-reduction goals?






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Co-Digestion Capacity in California

6-Chapter Report with Appendices

- *Finalized June 2019*
- *Multi-agency review at State level*
- *Published August 2020*


Find the report at:
www.waterboards.ca.gov/climate


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Key takeaways of report

- **$\geq 50\%$ of food waste in California could be recovered**
- **Maximizing co-digestion is a net positive investment**
- **Diversion of food waste for co-digestion could reduce up to 2.4 million MT CO₂e by 2030**

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// Chapter takeaways

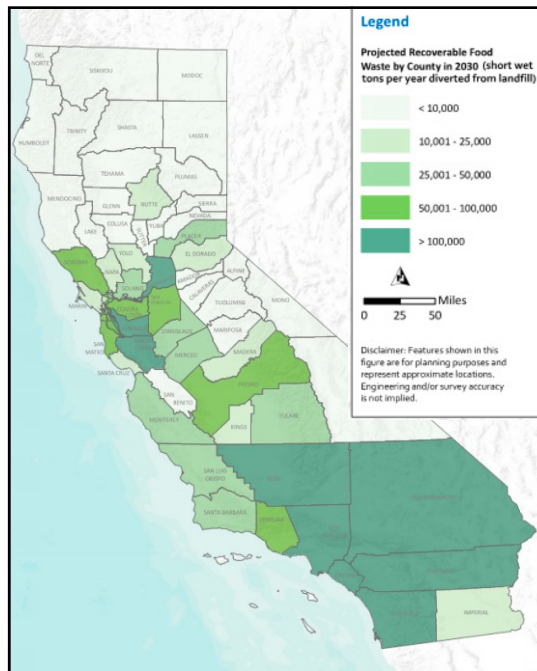
1. Projected food waste
2. Existing co-digestion capacity
3. Investments
4. GHG reduction
5. Small to medium WWTPs
6. Large WWTPs



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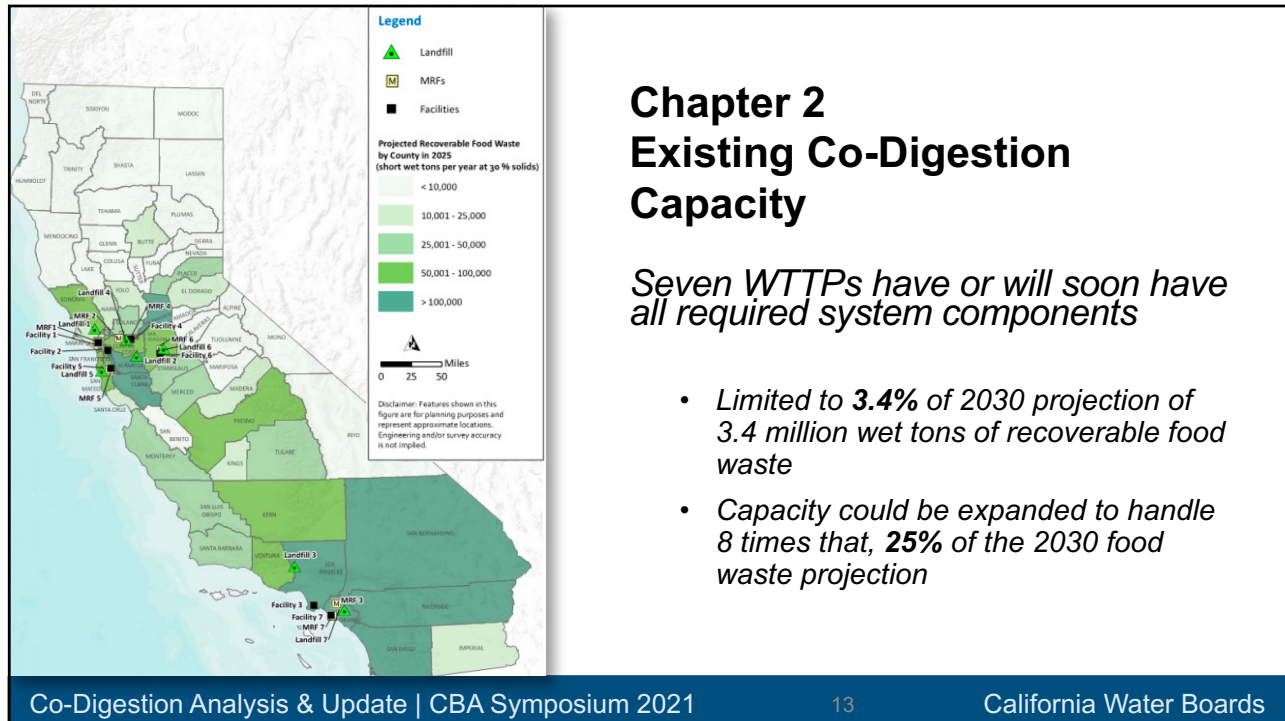


Chapter 1 Food Waste Disposal

Food waste comprises

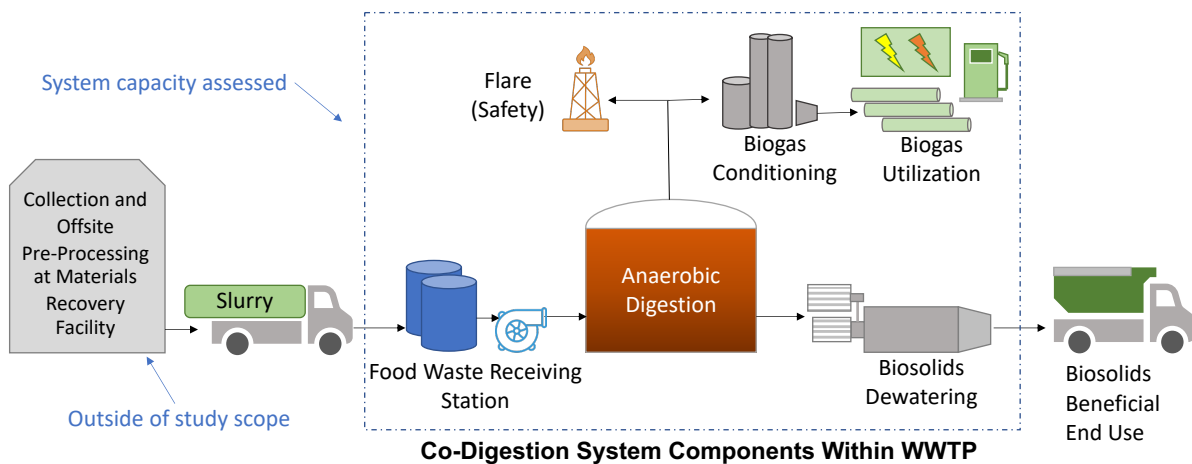
- 18% of municipal solid waste
- 30% total organics disposal

*Diversion can play a major role in
meeting state's SB 1383 goals*



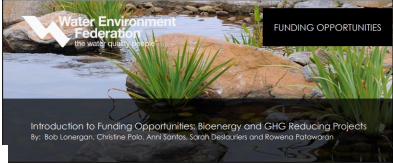




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// Key processes required at WWTP to accept food waste slurry, co-digest, and beneficially use byproducts



WWTPs: wastewater treatment plants

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Chapter 3 Investments for Co-Digestion

Revenue projected to cover 15-year capital and O&M costs

- Renewable energy incentives currently favor CNG/RNG and positive economic outcomes more likely for higher-capacity facilities
- Other considerations: individual facilities, jobs, noise, odor, regulations

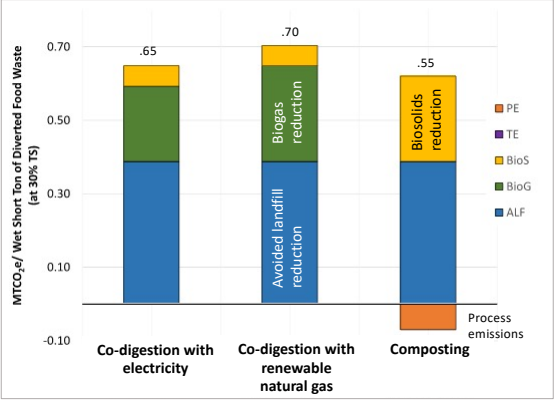
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Chapter 4 GHG Emissions Reductions from Co-Digestion

Up to 2.4 MMT CO₂e reduction from diverted food waste in 2030

- Slightly more GHG reduction than composting



Scenario	GHG Reduction Potential (MT CO ₂ e/ Wet Short Ton)
Co-digestion with electricity	.65
Co-digestion with renewable natural gas	.70
Composting	.55

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Chapter 5 Small to medium size WWTPs



- *Central Marin Sanitation Agency – 10 mgd*
- *Manteca Wastewater Quality Control Facility – 9.9 mgd*
- *Delta Diablo – 19.5 mgd*
- *Silicon Valley Clean Water – 29 mgd*

Chapter 6 Large WWTPs



- *East Bay Municipal Utility District – 120 mgd*
- *Sanitation Districts of Los Angeles County – 400 mgd*

Report roll out plan

1. Report press release ✓
2. Webinars ✓
3. Interagency planning ✓
4. Focused calls with key stakeholders ✓
 - Wastewater industry
 - Environmental justice organizations



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Report as a roadmap

Where are we going?

3.4 million tons of organics diverted and co-digested

What's in the way?



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Barriers identified

1. Financing
2. Regulation/permitting
3. Pre-processing
4. Economic viability
5. Novelty
6. Other



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Opportunities identified

1. Alignment with **climate goals** (SB 1383)
2. **Solid waste programs** in development
e.g. for food waste separation
3. **Precedent**
tech, skills, lessons learned
4. Willing **partnerships**
solid and liquid waste
5. **Available digester capacities**



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Industry priorities identified

1. **Financing** strategies for facilities to expand
2. Increased access to **markets** for energy products
3. High quality and regular supply of **feedstock**
4. Plan for navigating **regulation** and **permitting**
5. **Feasibility** assessments of individual facilities



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Environmental justice concerns

1. Surfactants/PFAS in wastewater sludge, truck traffic dust, and other impacts on communities already at greater health risk near WWTPs
2. Report does not include—and should have included—a more **detailed assessment of community impacts**

CO-DIGESTION READINESS (out of 6)	CAL ENVIROSCREEN SCORE (v 4.0)
5	52
4	70
4	86
5	71
6	92
5	79
4	36
2	27
4	96

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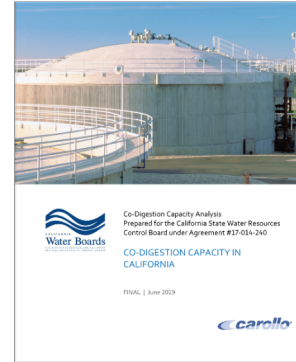
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Upcoming

State Water Board, CalRecycle & CalEPA discussions

\$20M CalRecycle for co-digestion

- Projects
 - Greenhouse gas reduction
 - Design and construction
 - Food waste processing
 - Anaerobic digestion
- Guidelines early 2022
- Sign up for *Greenhouse Gas Reduction Programs* updates at calrecycle.ca.gov/listservs



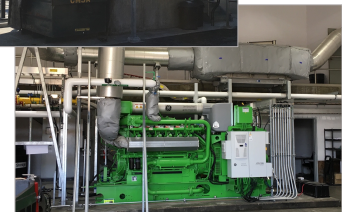
www.waterboards.ca.gov/climate

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// Thank you to the Carollo, participating California facilities, SWRCB, and CASA

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