

PROGRESS ON CALIFORNIA SB 1383

Update on Excess Digester Capacity Analysis & Water Boards Perspective

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State Water Resources Control Board



CALIFORNIA Water Boards

California Bioresources Association Symposium | November 19, 2021

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State Water Board climate change priorities




Co-Digestion Analysis & Update | CBA Symposium 2021

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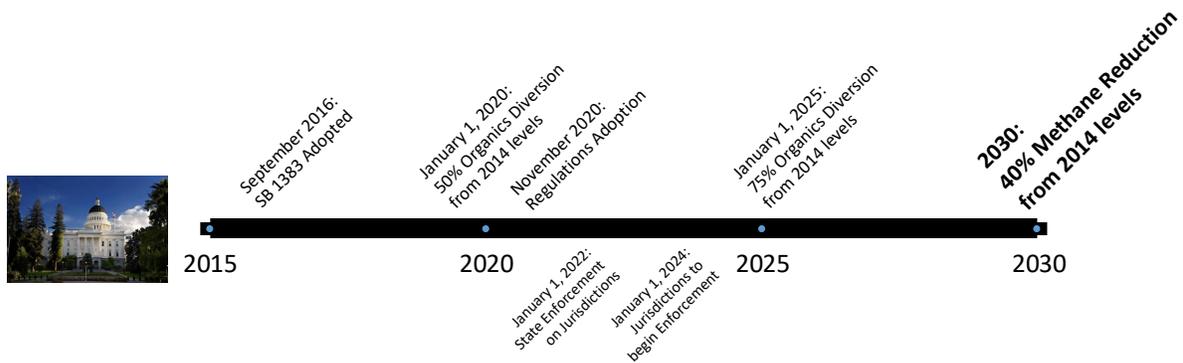
Today's Presentation

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



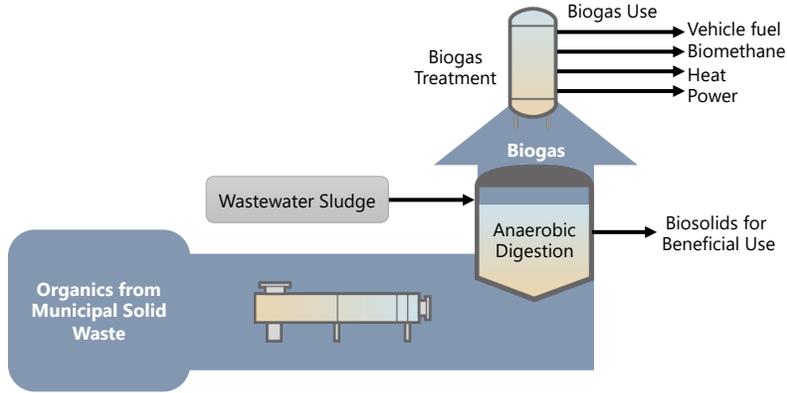
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// California's Senate Bill 1383 — Methane Reduction



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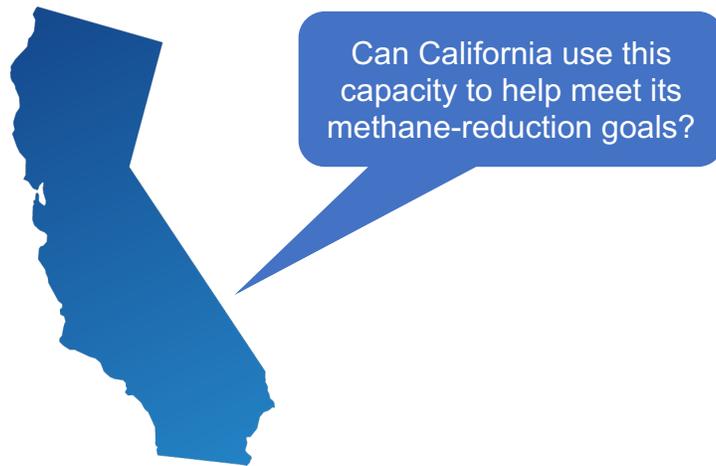
// Co-digestion at WWTPs could play a major role



WWTPs: wastewater treatment plants

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



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

CO-DIGESTION CAPACITY IN
CALIFORNIA

FINAL | June 2019



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

- ***≥ 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



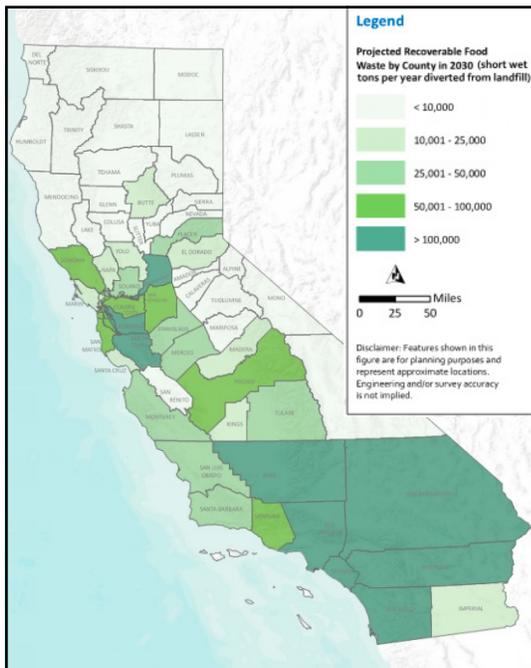

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**CO-DIGESTION CAPACITY IN
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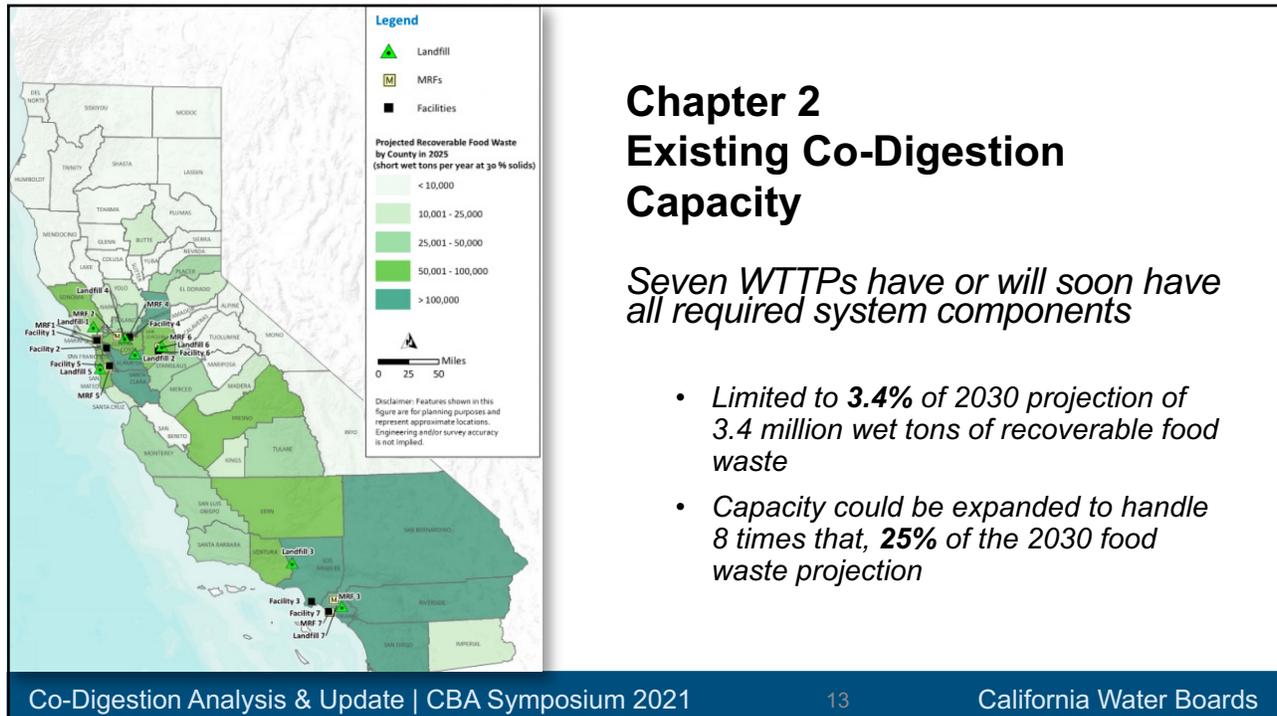
Chapter 1 Food Waste Disposal

Food waste comprises

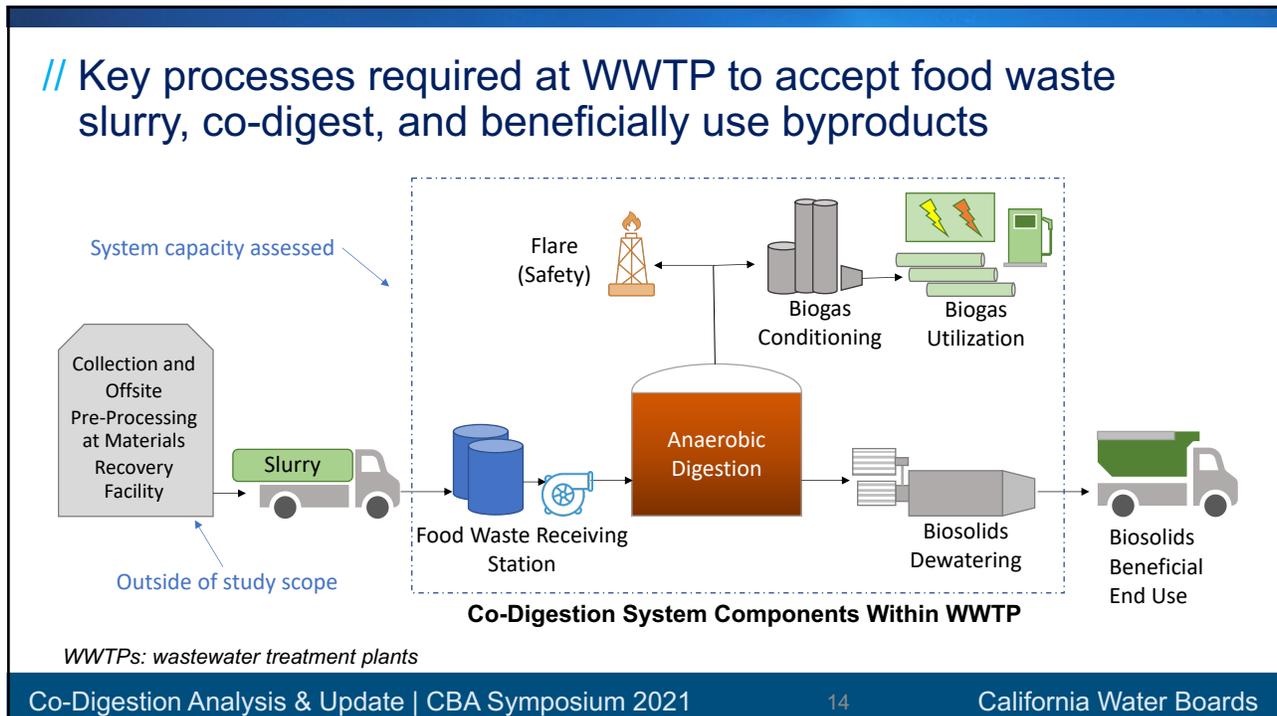
- 18% of municipal solid waste
- 30% total organics disposal

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

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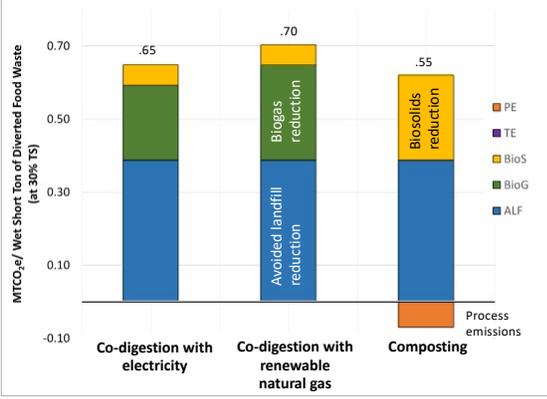
Chapter 3 Investments for Co-Digestion

*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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GHG Emissions Reduction Potential



Scenario	Total Reduction (MT CO ₂ e / Wet Short Ton)
Co-digestion with electricity	0.65
Co-digestion with renewable natural gas	0.70
Composting	0.55

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

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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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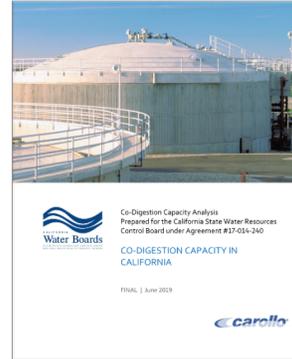
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Upcoming

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

- Project Team
 - Elizabeth Charbonnet
 - Sarah Deslauriers
 - Rashi Gupta
 - Chelsea Ransom
 - Rob Williams
- State Water Resources Control Board
 - Jelena Hartman
 - Charlotte Ely
 - Max Gomberg
- Facilities who participated in survey and case studies
- Technical reviewers and advisors - Greg Kester



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