

EBMUD

Landscape Advisory Committee  
General Meeting

CA's Organics Recycling Law  
SB 1383

Dec 6, 2021



Kristin Bowman  
EBMUD Water Conservation Representative

Kelly Schoonmaker, Stopwaste Project Manager  
Ron Alexander, Ron Alexander Associates President

# Announcements



## Events

- Qualified Water Efficient Landscaper - Morning Series  
Dec. 7, 2021 for 2 weeks, Tues. – Fri. 8am – 10:30am
- MWELo Enforcement for Local Agencies  
Dec. 8, 2021 8:30am-12:30pm (ReScape and PG&E)
- Compost Best Management Practices  
Jan. 19 – 20, 2022 9am-Noon
  - CalRecycle and Caltrans are hosting a webinar on compost best management practices. [Registration \(gotowebinar.com\)](https://gotowebinar.com)
  - Looking for a landscape professional willing to provide about a 10 min. presentation on working with compost while complying with MWELo. Please contact [heather.williams@calrecycle.ca.gov](mailto:heather.williams@calrecycle.ca.gov)

**Richmond Dry Garden – Ready for visitors!**

**Irrigation Rebate - \$3/high efficiency nozzle**

**For today's meeting - CEU's eligible for Irrigation Association, QWEL, ReScape, Master Gardeners and AWWA**



Richmond Dry Garden, Civic Center Plaza  
27<sup>th</sup> Street and MacDonald Ave



# New - Super Landscape Rebate

\$1.50/sf

Compost

Sheet mulch

50% CA natives

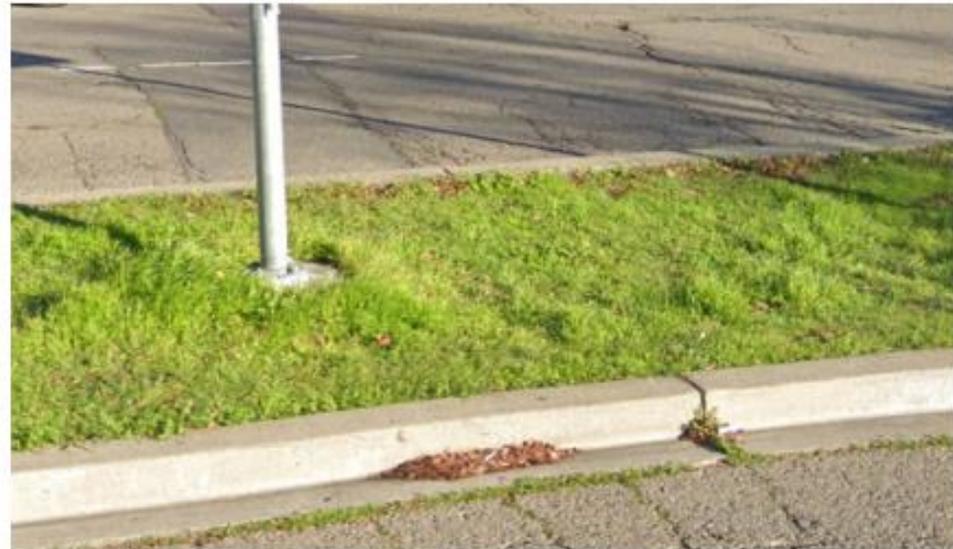
Plant in cool season

(residential and commercial properties)

# New - Median Strip Rebate \$1.50/sf



- Commercial customers only (includes multi-family over 4 units)
- Lawn must be currently irrigated by an overhead spray irrigation system.
- Project area must be a narrow strip of irrigated lawn surrounded by hardscape (i.e. sidewalk, street, parking lot).
- California Native Plant Society - Parkway Design Templates  
<https://www.cnps.org/gardening/parkways>



# Precipitation



## PRECIPITATION (INCHES)

STATIONS	THIS YEAR			AVERAGE YEAR		
	Today	This Month	Season to-Date	% of Avg.	Season to-Date	Season Total
<b>LOCAL AREA</b>						
USL WTP	0.00	0.00	9.23	158%	5.84	25.33
Orinda WTP	0.00	0.00	12.91	191%	6.77	32.06
Lafayette Reservoir	0.00	0.00	8.24	140%	5.88	28.18
Walnut Creek WTP	0.00	0.00	9.12	192%	4.76	23.02
<b>MOKELUMNE AREA</b>						
Camp Pardee	0.00	0.00	8.95	193%	4.64	21.56
*Salt Springs PH	0.00	0.03	12.65	125%	10.12	45.51
*Tiger Creek PH	0.00	0.00	12.86	130%	9.92	46.08
*Calaveras Big Trees	0.00	0.00	15.54	136%	11.39	54.71
*Caples Lake	0.00	0.00	13.97	127%	11.00	46.75
Snow On Ground			0	0%	17	
Water Content			0.0	0%	4.1	
*4-Station Average	0.00	0.01	13.82	130%	10.62	48.28

# Water Supply (Nov 23<sup>rd</sup> Board Meeting)



## Early precipitation improved water supply

- Pardee and Camanche reservoirs are 78% of average and 54% of capacity
- East Bay reservoirs are 96% of average and 72% of capacity

## Freeport Diversion

- Since October 4, 10,900 AF of Freeport water diverted through 11/14
- Diversions will continue until February 2022

## Water Production

- October 2021 was 15% lower than October 2020
- Fiscal year-to-date reduction compared to 2020 is 11%.

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# Water Production 2021 vs 2020 Comparison



	Gross Water Production (mgd)											
	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21
<b>Actual</b>	126	126	136	165	182	192	193	193	187	158	125	-
<b>WOH 2021</b>	99	99	103	115	123	127	125	126	124	113	98	-
<b>EOH 2021</b>	27	27	33	50	59	65	68	67	63	45	27	-
<b>Last Yr</b>	123	141	143	148	175	201	210	211	200	185	153	-
<b>WHO 2020</b>	98	108	109	109	121	134	137	137	133	125	111	-
<b>EOH 2020</b>	25	33	34	39	54	67	73	74	67	60	42	-
<b>% Change</b>	2%	-11%	-5%	11%	4%	-4%	-8%	-9%	-6%	-15%	-18%	-



# STOP WASTE

at home • at work • at school



## SB 1383 Regulations: Effects on the Landscape Industry

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Kelly Schoonmaker, RLA, LEED AP

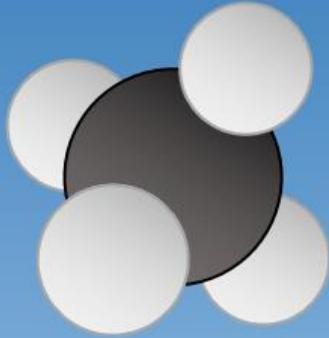
Program Manager, StopWaste

December 6, 2021

# What is SB 1383?

- Short-Lived Climate Pollutant Strategy
- Requires a plan to reduce statewide methane emissions by 40% by 2030
- Specifically directs CalRecycle to:
  - Divert 75% organics from landfill by 2025 statewide
  - Recover 20% edible food for human consumption statewide
  - Cities/counties are primary entities responsible
- Regulations take effect on January 1, 2022
  - Signed into law in 2016
  - Final regulations adopted November 2020

# Why regulate methane?

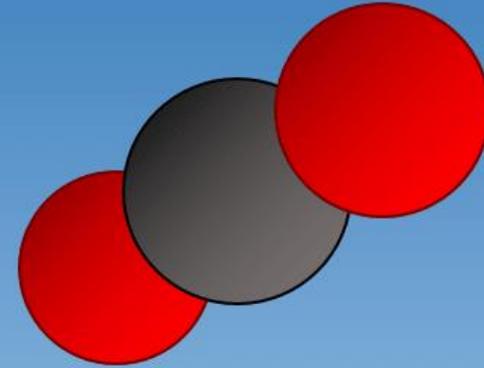
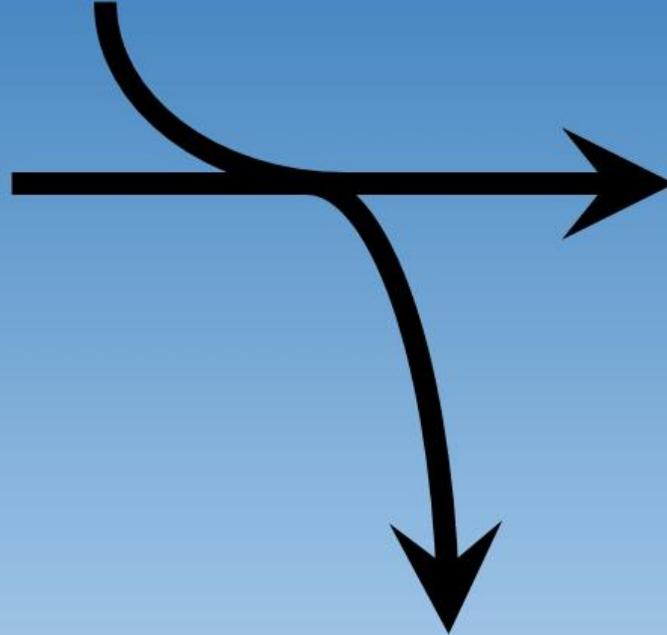


## methane

20-year GWP: 86

100-year GWP: 34

- shorter-lived, but more potent greenhouse gas
- reactions in atmosphere can produce toxic chemicals



## carbon dioxide

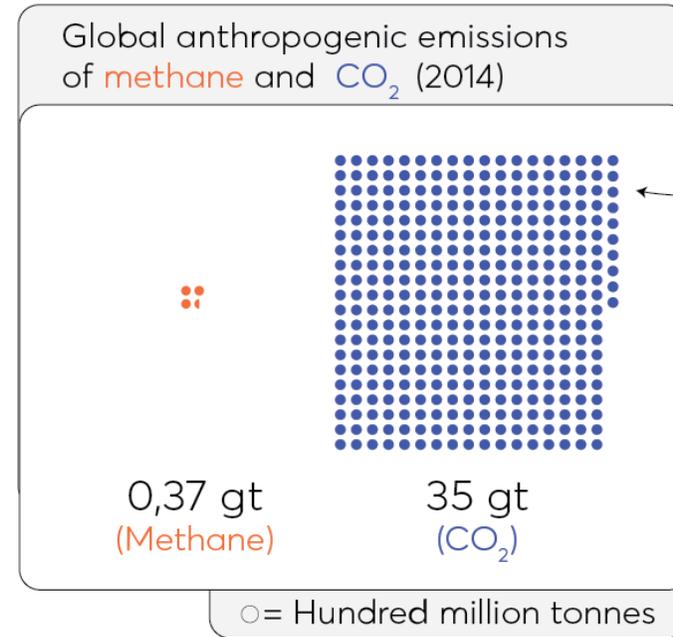
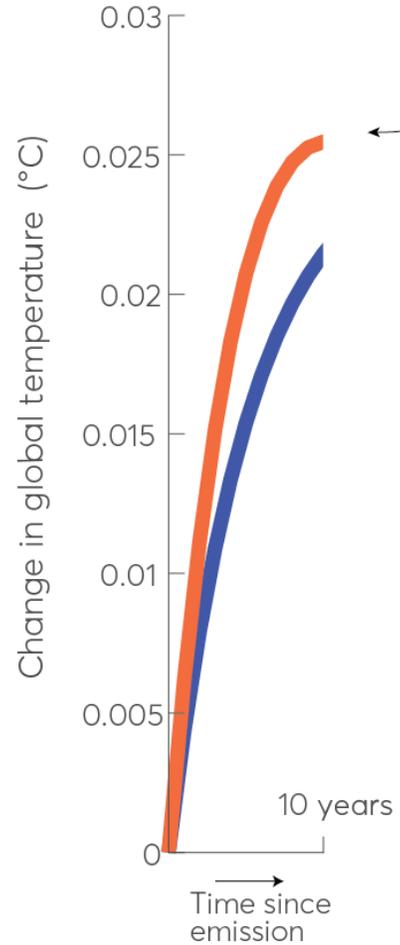
- longer-lived, but less potent greenhouse gas



volatile  
organics

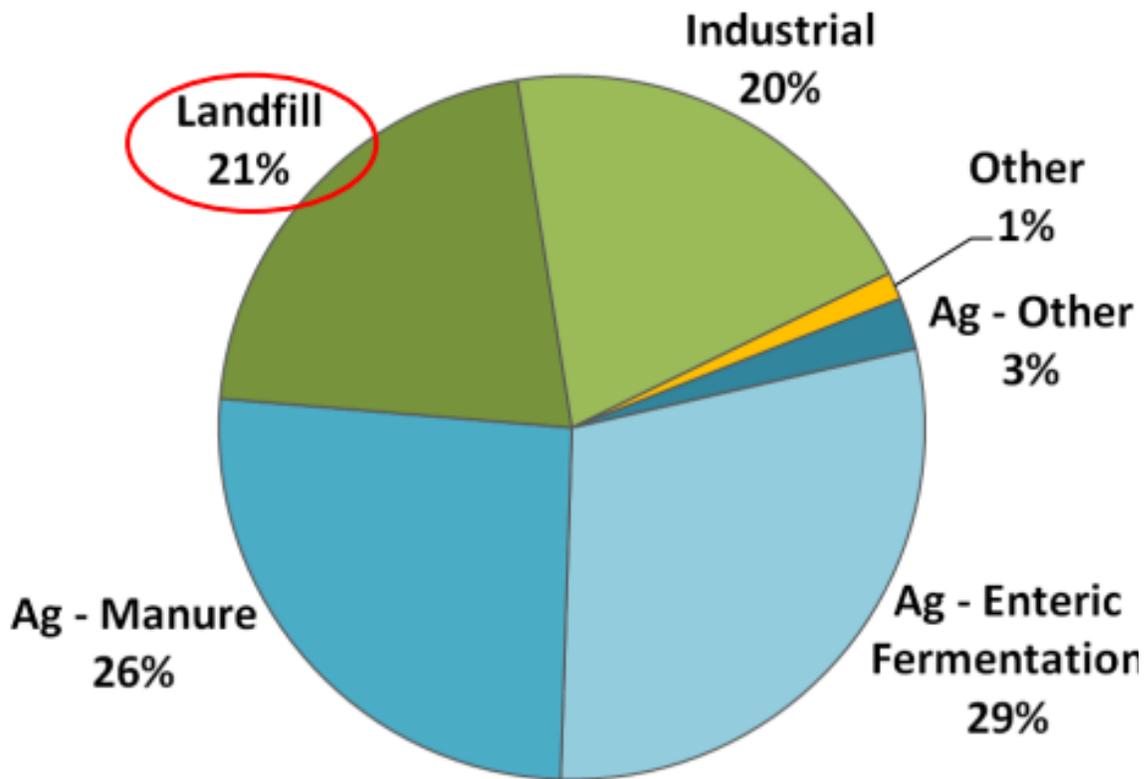
After 10 years, the warming from methane is almost 25 percent stronger than for CO<sub>2</sub> ...

...even though annual CO<sub>2</sub> emissions are nearly one hundred times greater

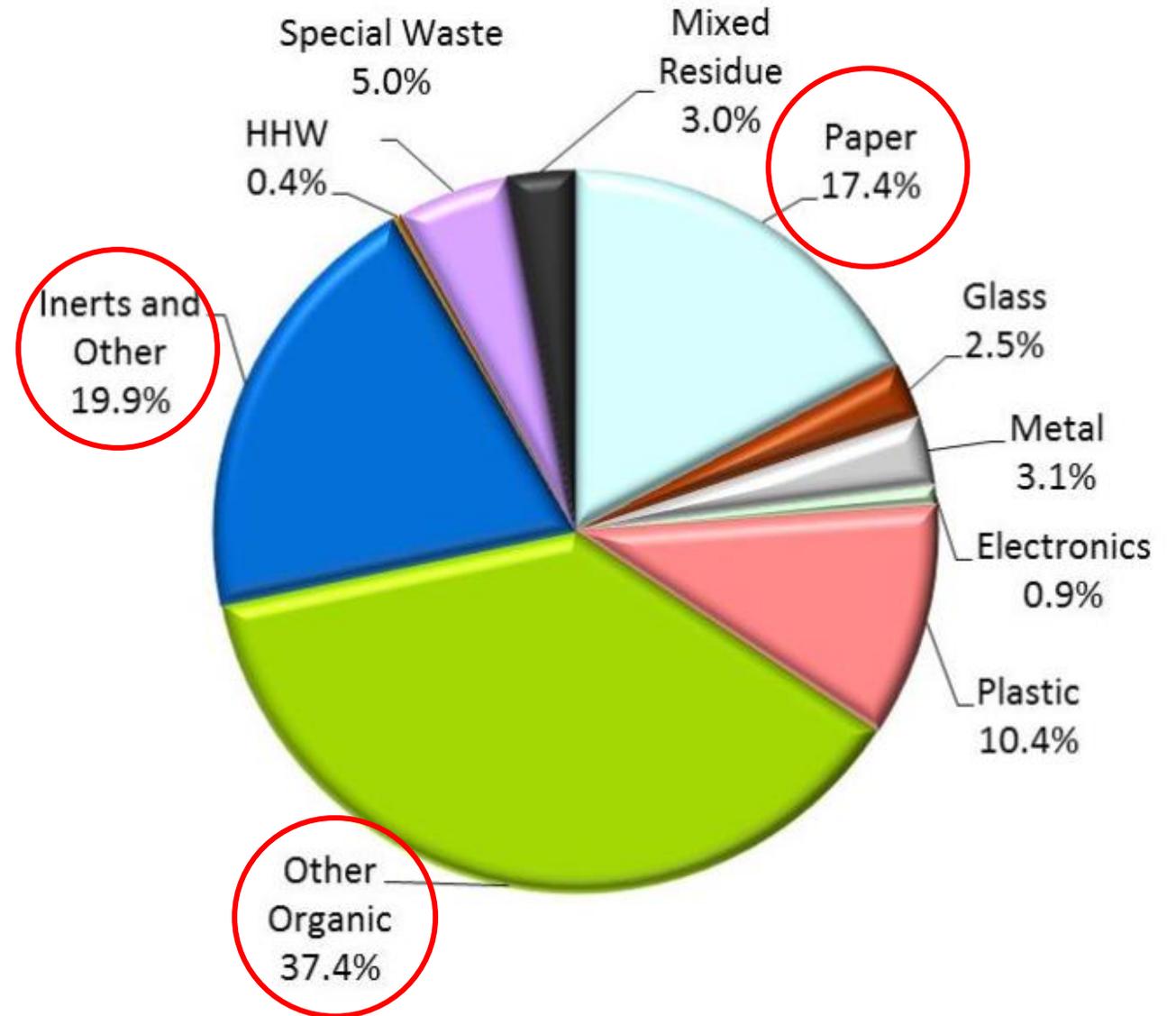


# Why is it important to get organics out of landfill?

- Landfills significant source of methane
- Methane comes from anaerobic decomposition of organics



**2015 Total Methane Emissions**  
39.6M mtons CO<sub>2</sub>e



**Material Classes in California's Overall Waste Stream (2014)**  
31M tons

# What is included in “organics”?



# SB 1383 regulations address almost all aspects of the organics cycle



- Education
- Reporting
- **Enforcement\***



## Requires enforcement of *some measures* of other state regulations

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- **CalGreen (Title 24, Part 11):**

- 4.410.2 and 5.410.1: Recycling by Occupants
- 4.408.1 and 5.408.1: Construction Waste Management
- Affects residential and non-residential construction

- **WELO**

- 492.6(a)(3)(B): Follow soil report recommendations
- 492.6(a)(3)(C): Incorporate compost at 4 CY / 1,000 sf
- 492.6(a)(3)(D): Apply 3 inches mulch
- 492.6(a)(3)(G): Use organic recycled mulch if locally available

## SB 1383 - WELO requirements

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- No new requirements in the ordinance itself
- Must adopt ordinance or other enforceable mechanism (e.g., permits)
- Must report annually to CalRecycle.
- CalRecycle can issue financial penalties on jurisdictions for non-compliance.
  - \$500 – \$10,000 per day – at local assistance staff discretion

# Procurement Requirements



# Procurement Requirements

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- Cities and counties must procure a minimum amount of recovered organic waste products every year.
- Target based on:
  - Population size
  - 0.08 tons organic waste *disposed* per person (statewide average)
- Procure = obtain for use or to give away
- Can meet this directly or via a “direct service provider”
- Annual tracking and reporting requirements
- Fines for non-compliance (\$500 - \$10,000/day)

# What are the “Recovered Organic Waste Products”?

## Compost

From permitted facility  
Where to put it?  
Is there enough?

## Mulch

Must be recycled  
From permitted facility only  
Must comply with  
contamination standards to  
be counted toward target\*

## Renewable Gas

Not much produced  
Must come from food scraps

IBA

## Biomass

Very little produced  
Can not count biomass  
electricity from forest/ag  
feedstock

DTE Energy

# How much would a city of 100,000 need to procure?

- 8,000 tons recovered organic waste products
- **Compost:**
  - 4,640 tons (0.58 tons compost/ton organics)
  - 11,600 CY (1.45 CY compost/ton organics)
  - About 254 sports fields (1/2"/year)
- **Mulch**
  - 8,000 tons (1 ton mulch/1 ton organics)
  - ~26,700 CY (1 CY mulch/ 0.3 ton mulch)\*
  - 133 acres of new landscape construction

		Cost	Notes
City	Total Alameda County*		Does not include CV San and Oro Loma
Population	1,562,578		Based on 2017 data
Organics target (tons)	125,062		
Organics procured (tons)	8,731	\$ 976,359.00	From worksheet
Percent toward target	7%		
Organics needed (tons)	116,272	see individual products	
How do you want to meet your target?			
0%	<	>	100%
Compost			Mulch
Compost needed (CY)			This assumes no RNG and electricity of biomass are available or have already applied to total below.
Mulch needed (CY)	387,572	\$ 18,378,586.78	0.45 CY compost / 1 ton organics (per regulations); assumes 1 ton organics ton compost, and bulk density of 800 lb/CY
Enter \$/CY Compost	\$ 50.00		Assumes average bulk density of 800 lb/CY; \$15/CY delivered including delivery and application
Enter \$/CY Mulch	\$ 50.00		including delivery and application
Total Additional Cost:		\$ 18,378,586.78	
Days out of compliance/Penalty low	340	\$ 180,753.38	\$500/day; value will appear once city is selected
Days out of compliance/Penalty high	340	\$ 3,395,067.57	\$10,000/day; value will appear once city is selected

CY: cubic yard

# How to meet the **recovered organic materials** procurement requirements?

- Procurement of compost or mulch by **jurisdiction**
  - Landscape maintenance
  - Compost giveaways
  - New construction – including WELO projects done by city or Direct Service Provider
- Procurement by **Direct Service Providers**
  - Any entity using compost/mulch with a written agreement to use compost or mulch on behalf of the city (e.g., school districts, farms, water agencies)
  - Receipts or invoice to track for record-keeping requirements
- Can be sourced from and applied anywhere in the state
  - Carbon farming



# What else can you expect at home and at work?

- Increased monitoring of green waste loads for contamination (contractors)
- Inspections of curbside garbage, recycling, organics
- Increases in rates
  - Best way to save money and avoid hassles is proper sorting



# Discussion – break out rooms

\*Introduce yourself\*

How will you integrate SB 1383 requirements in your work?



# How will SB 1383 affect me?

## • Contractors

- Increased documentation required for city projects
- Increased focus on soil req's in WELO

## • Landscape Architects and Designers

- Need to incorporate documentation and submittal requirements into specs for city projects (WELO)

## • Everyone

- Increased demand for compost and mulch
- Potential declines in quality
- Opportunity to meet climate goals, etc.
- More info: <https://www.stopwaste.org/resource/sb-1383-annual-procurement-requirements-january-2021>

**Overview of the Annual Procurement Requirements for Recovered Organic Waste Products in SB 1383**

Starting on January 1, 2022, cities and counties in California ("affected jurisdictions") will be required to procure a minimum amount of products made from recycled organic waste each year. Affected jurisdictions can meet the requirement by procuring products for their use or to give away. They can also meet this requirement through **direct source providers**. Special districts are not affected, but will still need to comply with SB 1383 recycled content paper purchasing requirements.

The procurement target is based on 0.08 tons of organic waste per resident. For example, a city of 100,000 people would have an organics procurement target of 8,000 tons. The conversion factors used to calculate how much of a given product is needed to equal 'one ton of organic waste' are listed below.

Affected jurisdictions can meet their procurement target from any combination of the following materials:

### Compost

Compost must be produced at a permitted composting facility. Digestate, biosolids, manure, and mulch are not compost.

1 ton organics = 1.45 cubic yards (CY) of compost.

To meet the 8,000-ton organics target, a city of 100,000 would need to procure 11,600 CY of compost.

This would cover:<sup>1</sup>

- 127 sports fields, twice a year,
- 67 acres of new landscape construction, or
- 8.3 acres of new stormwater biotreatment area.

### Mulch

Eligible mulch must be derived from organic materials and be produced at a permitted transfer station, landfill, or composting facility. Examples include pallet mulch, arbor mulch, and composted mulch. The following materials are NOT eligible to meet procurement target: Material from a chip and grind facility, tree trimmings dumped at or generated by the affected jurisdictions, bark mulch, and mulch created from non-organic material, such as tires.

1 ton organics = 1 ton of mulch. In our example city, 8,000 tons of mulch could be used for:<sup>2</sup>

- 133 acres of landscape maintenance and new construction, or
- 110 miles of street medians.

**Additional Note on Compost & Mulch:** In addition to procurement requirements, SB 1383 also requires cities and counties to enforce the compost- and mulch-related measures in the [Water Efficient Landscape Ordinance \(WELo\)](#). Tracking and reporting is required, with penalties for non-compliance.

### Biomass Electricity

Eligible biomass electricity must be produced by a facility that receives feedstock directly from a transfer station, landfill, and/or composting facility. This excludes electricity from biomass from forestry or agriculture sources.

1 ton of organics = 650 kWh of electricity.

**Challenge:** Availability of biomass electricity is limited. [East Bay Community Energy \(EBCE\)](#) includes <1% eligible biomass in its lowest tier (Bright Choice); however, for their own operations, cleaner power mixes, which include zero electricity from biomass.

Based on energy use by operations for member agencies, a city of 100,000 enrolled in Bright Choice could achieve 30-120 tons of organics toward their 8,000-ton target.<sup>3</sup>

### Renewable Gas (RNG)

Eligible uses are fuel for transportation, electricity, or heating applications.

RNG must be derived from organic waste that has been diverted from a landfill and processed at a permitted in-vessel digestion facility. This excludes landfill gas, gas generated from wastewater, natural gas, dairy methane, and renewable diesel.

1 ton organics is equivalent to the following:

- Transportation fuel: 21 diesel gallon equivalents (DGE)
- Electricity: 242 kWh
- Heating: 22 therms

**Challenge:** RNG production in California is very limited, with 13 facilities in operation.

Statewide, about 270,000 tons of organics – less than 5% of the total amount processed – are processed using anaerobic digestion, and most of the gas/ electricity produced is already used or sold.<sup>4</sup>

1. Assumes top-dressing field with 1.0 inch (67 CY/ac), twice per year; 1 football field = 1.36 ac. Assumes 4 CY/1,000 sq ft (174 CY/ac), per Water Efficient Landscape Ordinance requirements. Assumes 40% compost mix in 18-inch deep biotreatment soil mix, or 0.6 cfm/ or 968 CY/ac.

2. Assumes 3-inch layer of mulch applied at install, plus every two years for ongoing maintenance. Assumes bulk density of 600 lb/CY.

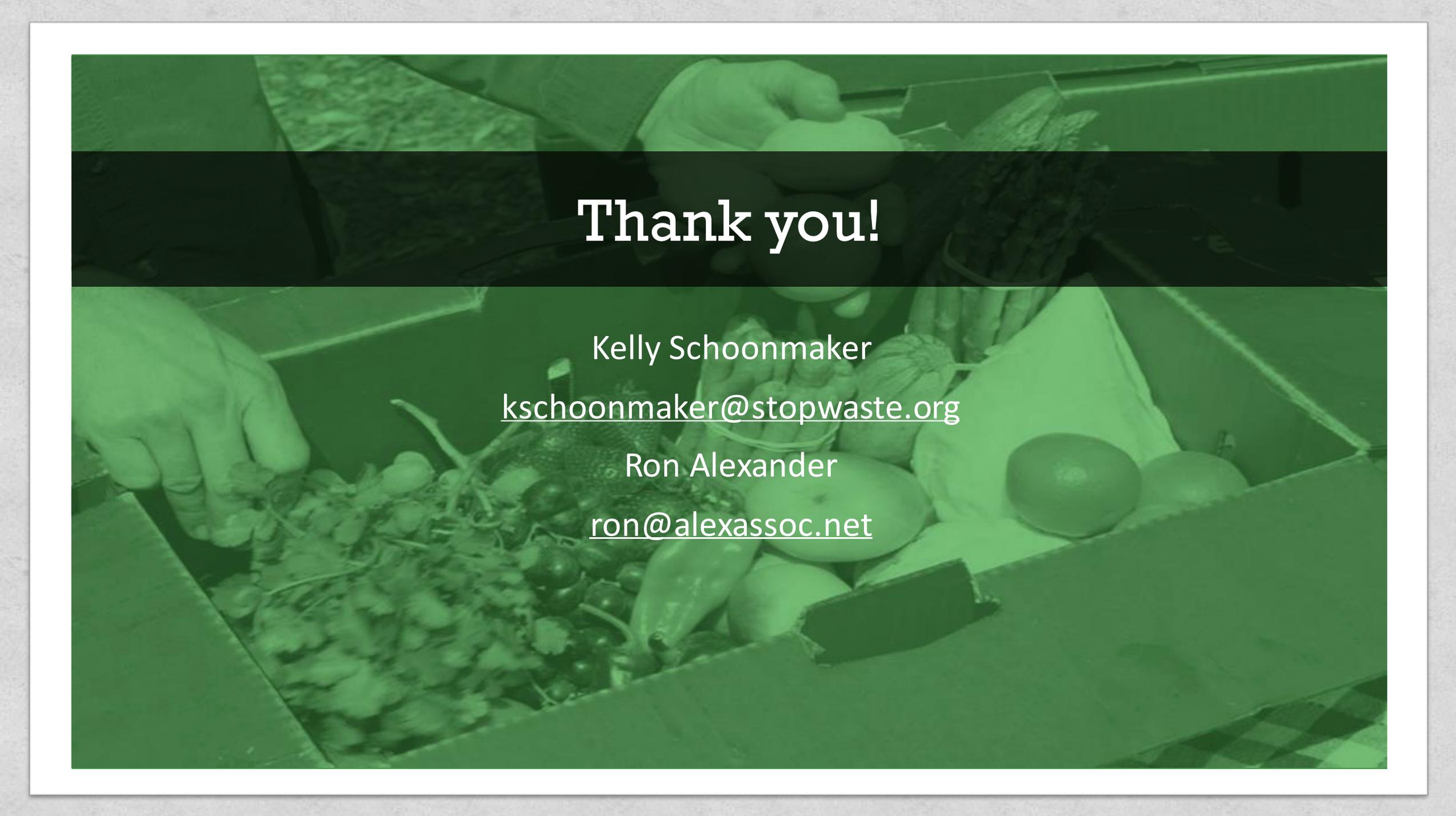
3. Based on 2019 aggregated data from [East Bay Community Energy](#).

4. Based on [California's 2019 Infrastructure and Markets Analysis](#).

## Questions and ideas on how to reduce organic waste

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- How will this affect mulch and compost costs and availability to the public? Will this hurt existing mulch providers?
- How to engage residents in multifamily buildings
- Free compostable bags and countertop bins likely will be necessary to get the public to participate
- Leave the leaves, landscape maintenance trainings
  - <https://www.rescapeca.org/>
- Establish community compost areas with local governance and oversight by RecycleSmart?
- Provide free arbor mulch to residents in each Bay Area city to pick up at a convenient location like the recycling centers.
  - <https://lawntogarden.org/marketplace>
- Composted wood mulch for bioretention areas!



**Thank you!**

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