SB 1383

Short-Lived Climate Pollutants (SLCP): Organic Waste Methane Emissions Reductions

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SB 1383: The Road Ahead

- What does SB 1383 Require?
- What is Organic Waste?
- Why Organic Waste
- How Many Tons?
- Where Are We Today?
- What Is Needed?
- How Do We Get There?
  - Regulations
  - New Facilities (Permitting/Capital Investment)
- How Does This Impact You?

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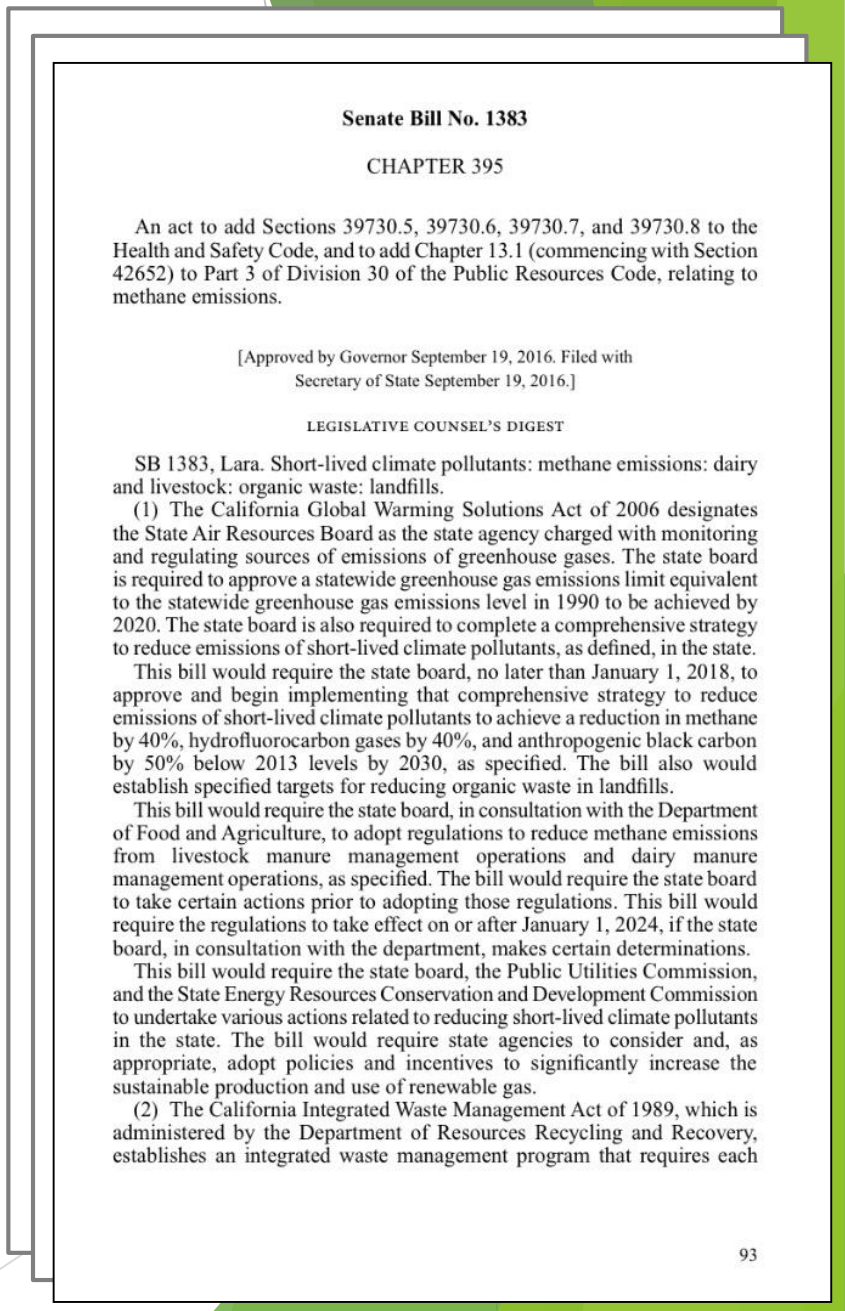
What does SB 1383 Require?

- ARB must present plan by January 1, 2018 to reduce short-lived climate pollutant emissions below 2013 levels by 2030 of:
  - Methane by 40%
  - Hydroflourocarbons by 40%
  - Anthropogenic black carbon by 50%
- Plan was approved March 2017
- ARB work with other agencies to meet goals
  - CDFA
  - PUC, CEC
  - CalRecycle



Senate Bill No. 1383

CHAPTER 395

An act to add Sections 39730.5, 39730.6, 39730.7, and 39730.8 to the Health and Safety Code, and to add Chapter 13.1 (commencing with Section 42652) to Part 3 of Division 30 of the Public Resources Code, relating to methane emissions.

[Approved by Governor September 19, 2016. Filed with Secretary of State September 19, 2016.]

LEGISLATIVE COUNSEL'S DIGEST

SB 1383, Lara. Short-lived climate pollutants: methane emissions: dairy and livestock: organic waste: landfills.

(1) The California Global Warming Solutions Act of 2006 designates the State Air Resources Board as the state agency charged with monitoring and regulating sources of emissions of greenhouse gases. The state board is required to approve a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions level in 1990 to be achieved by 2020. The state board is also required to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants, as defined, in the state.

This bill would require the state board, no later than January 1, 2018, to approve and begin implementing that comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40%, hydrofluorocarbon gases by 40%, and anthropogenic black carbon by 50% below 2013 levels by 2030, as specified. The bill also would establish specified targets for reducing organic waste in landfills.

This bill would require the state board, in consultation with the Department of Food and Agriculture, to adopt regulations to reduce methane emissions from livestock manure management operations and dairy manure management operations, as specified. The bill would require the state board to take certain actions prior to adopting those regulations. This bill would require the regulations to take effect on or after January 1, 2024, if the state board, in consultation with the department, makes certain determinations.

This bill would require the state board, the Public Utilities Commission, and the State Energy Resources Conservation and Development Commission to undertake various actions related to reducing short-lived climate pollutants in the state. The bill would require state agencies to consider and, as appropriate, adopt policies and incentives to significantly increase the sustainable production and use of renewable gas.

(2) The California Integrated Waste Management Act of 1989, which is administered by the Department of Resources Recycling and Recovery, establishes an integrated waste management program that requires each

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What does SB 1383 Require?

Waste Sector Targets

- *50% reduction* in the level of the statewide disposal of organic waste from the *2014 level by 2020*.
- *75% reduction* in the level of the statewide disposal of organic waste from the *2014 level by 2025*.

HSC 39730.6(a)

SEC. 3. Section 39730.6 is added to the Health and Safety Code, to read:
39730.6. (a) Consistent with Section 39730.5, methane emissions reduction goals shall include the following targets to reduce the landfill disposal of organics:
(1) A 50-percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020.
(2) A 75-percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2025.

- *20 percent improvement in edible food recovery by 2025*.

PRC 42652.5(a)(2)

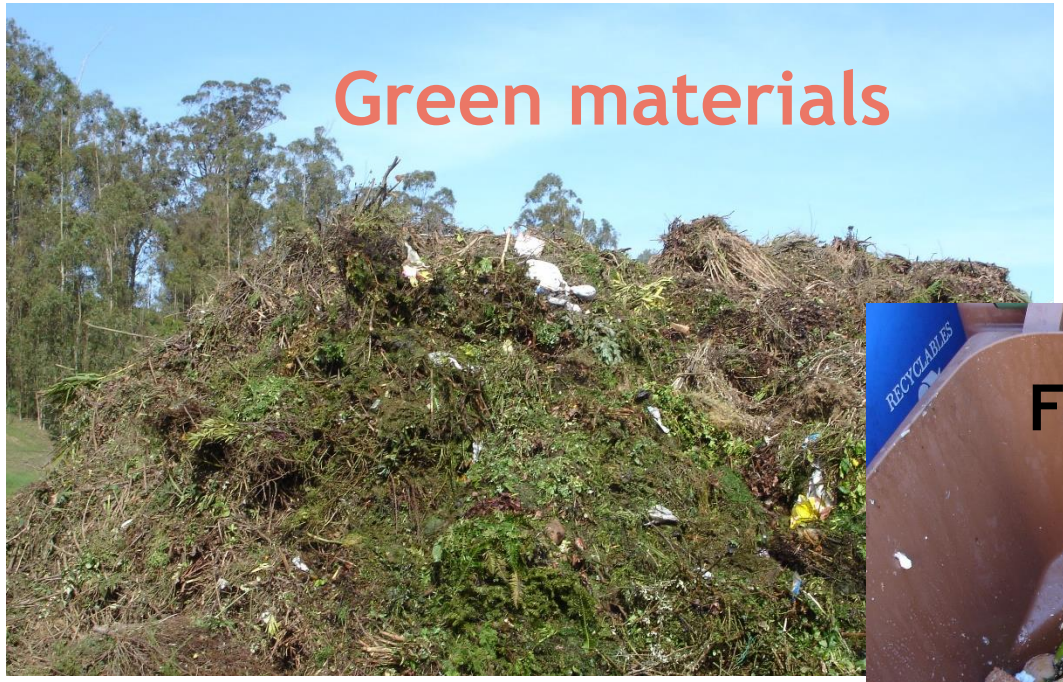
(2) Shall include requirements intended to meet the goal that not less than 20 percent of edible food that is currently disposed of is recovered for human consumption by 2025.

What Is Organic Waste?

SB 1383 Draft Regulatory Definition

“Organic Waste” means solid wastes containing material originated from living organisms and their metabolic waste products, including but not limited to food waste, green waste, landscape and pruning waste, applicable textiles and carpets, wood, lumber, fiber, manure, biosolids, digestate and sludges.

What Is Organic Waste?

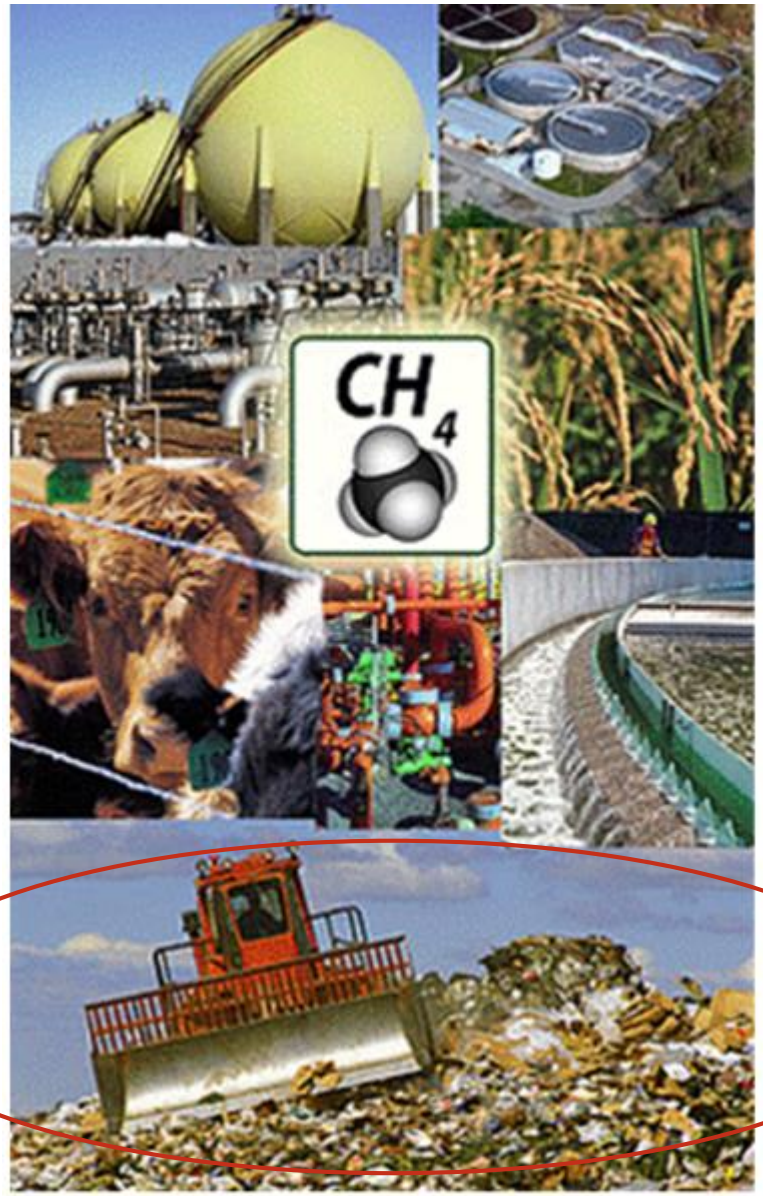


Fiber (Paper and Cardboard)

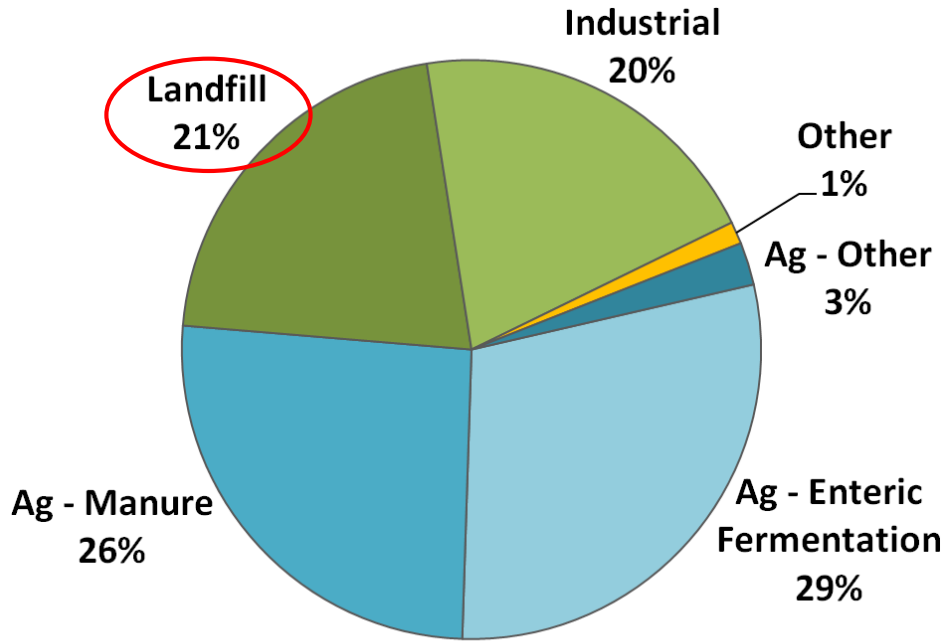
Why Organic Waste?

SLCP Requires a 40% Reduction in Methane Emissions Across California

Landfilling of Organic Waste Creates Methane



Why Organic Waste?



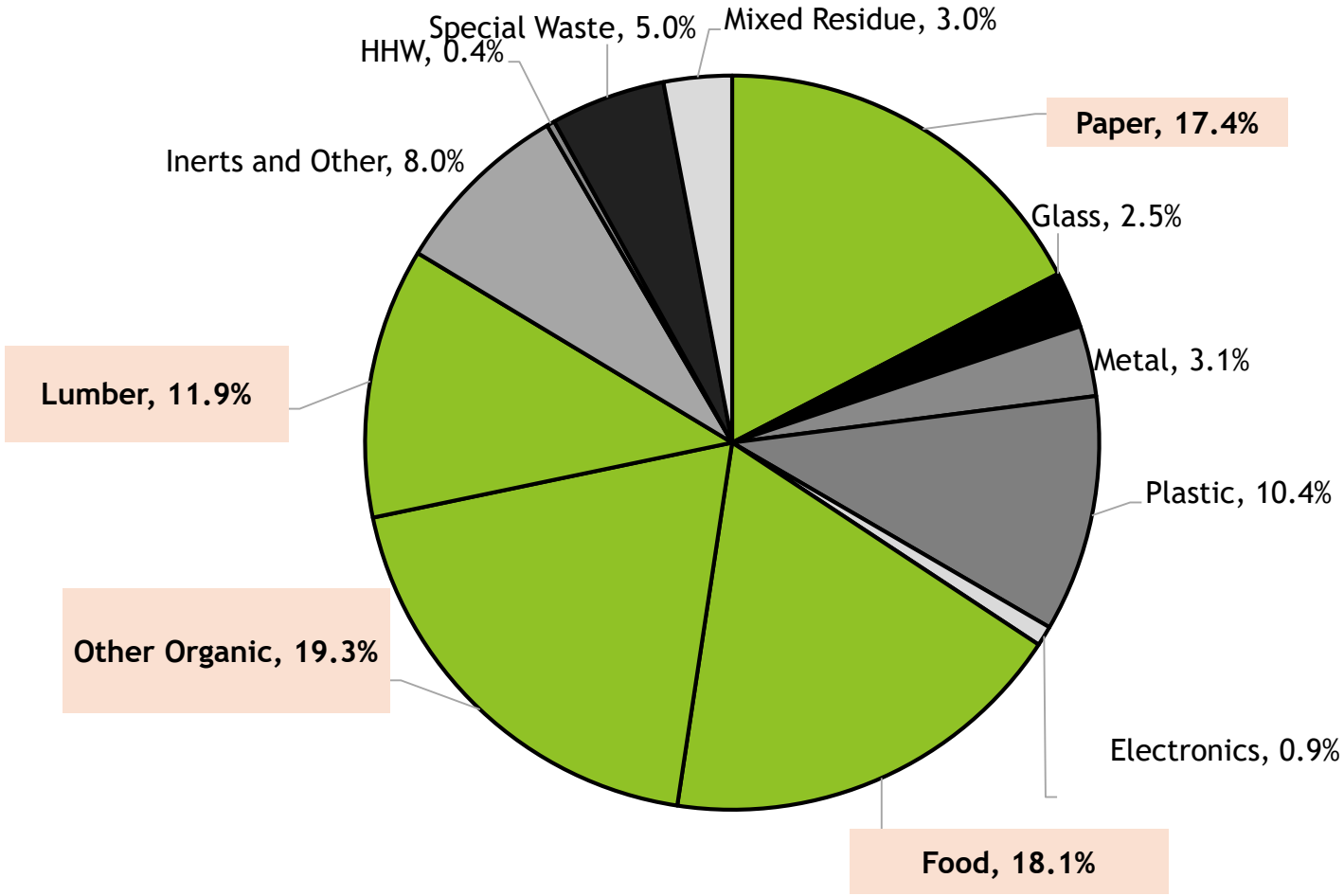
2015 Total CH4 Emissions: 39.6 MMTCO2e

- **Achieving SB 1383 Organic Waste Reductions**
  - Reduces landfill emissions by ***4 MMTCO2e in 2030***.
  - Avoids ***14 MMTCO2e*** emissions over the lifetime of waste decomposition.

Help reduce your CH4 emissions by reducing waste to landfills!

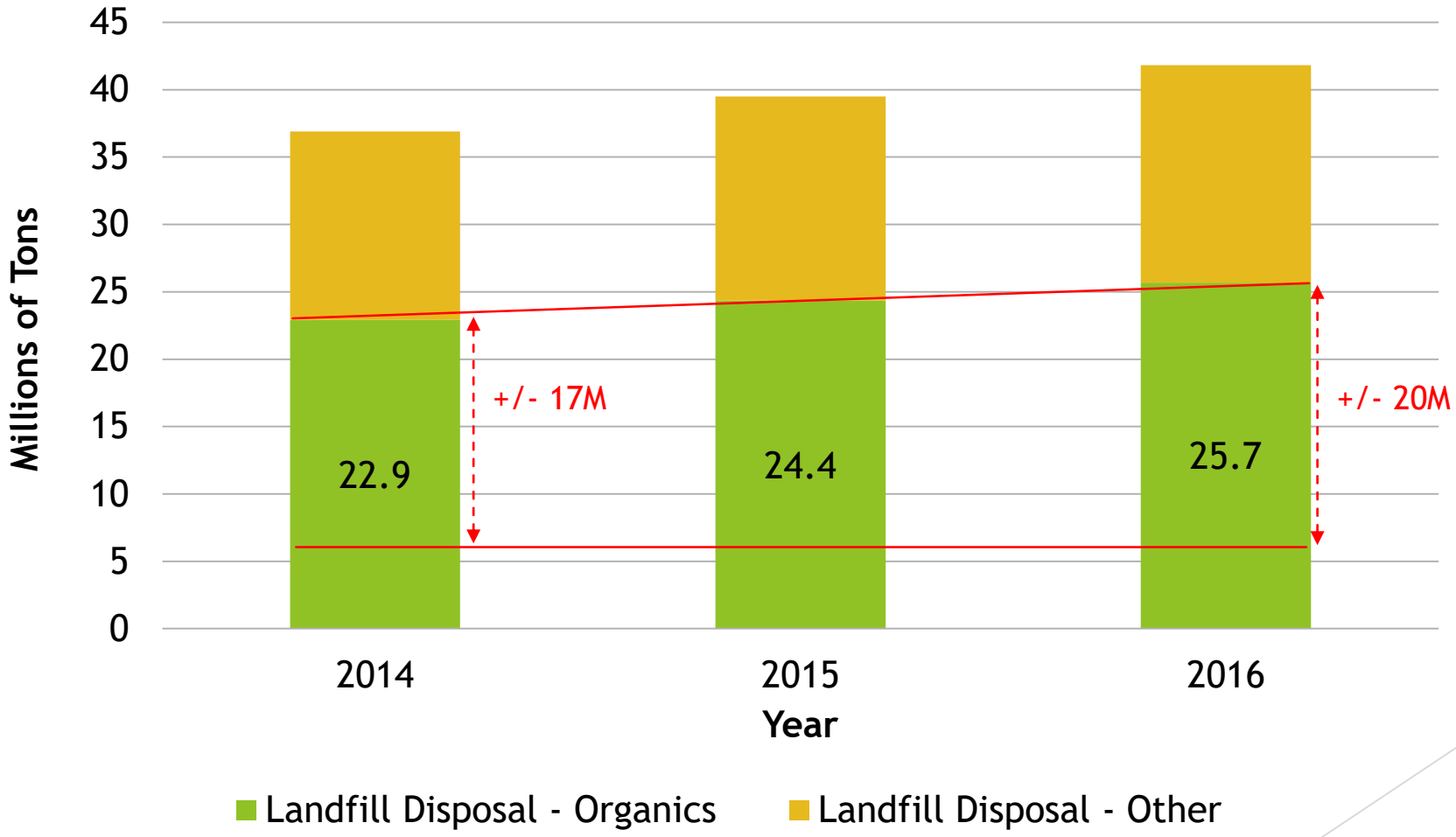
How Many Tons?

- +/- 23 Million Tons Of Organic Waste
- +/- 66% of Total Disposal



*CalRecycle and ARB are currently in the process of determining activities that count as disposal for the purposes of SB 1383.

How Many Tons?

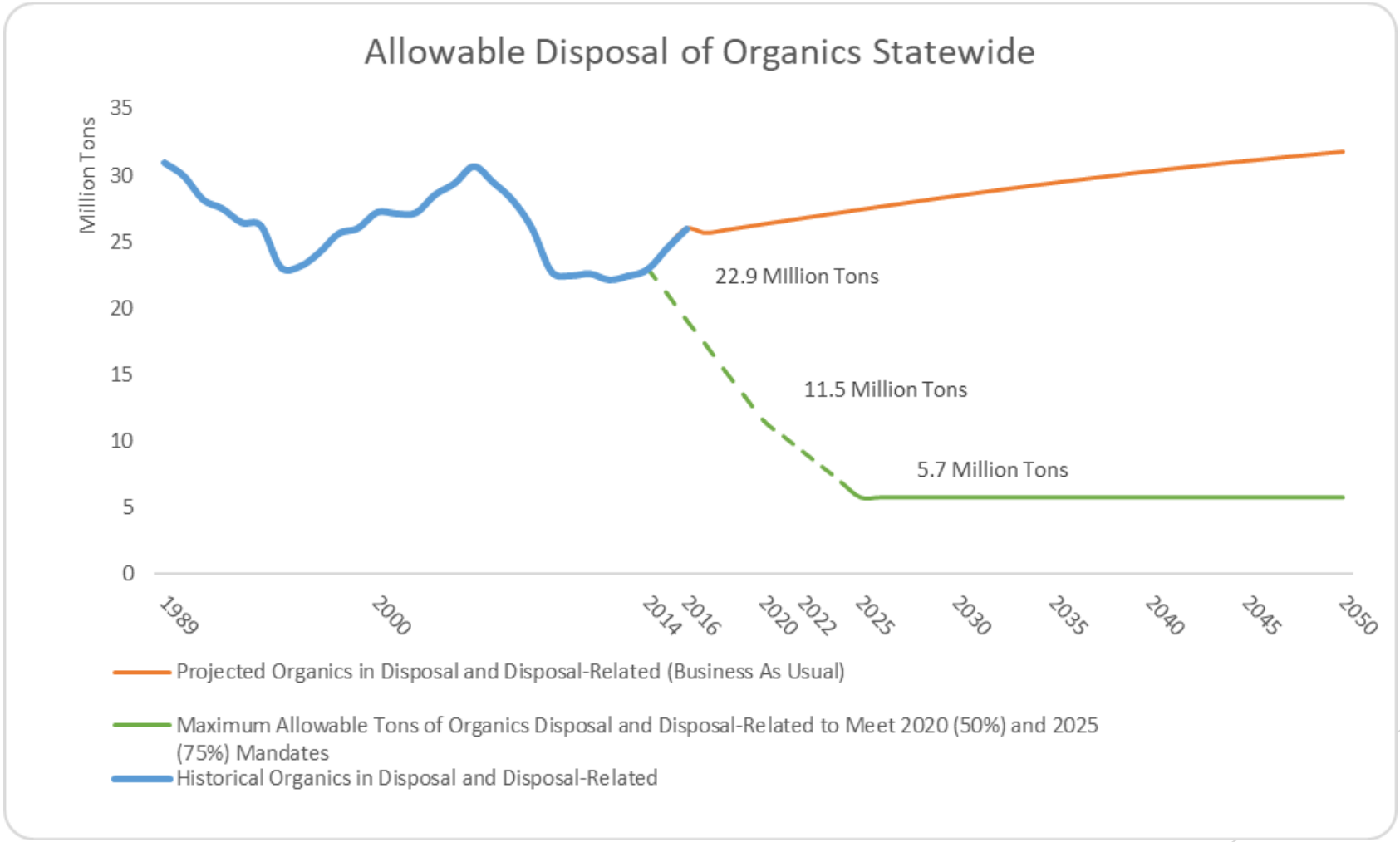


Where Are We Today?

- Existing Organics Recycling Infrastructure
  - Recycles (+/-) 6 Million Tons Annually
- Existing Statutes
  - AB 341 (Chesbro 2011) -75% & Mandatory Commercial Recycling
  - AB 1826 (Chesbro, 2014) Mandatory Commercial Organics Recycling (phased in through 2020)
  - AB 1594 (Williams, 2015) Green Waste Landfill Cover
  - AB 876 – (McCarty, 2015) Organics Capacity planning
  - AB 901 (Gordon, 2015) Recycling Tracking
- Existing Local Policies and Ordinances
- Cap and Trade Funding For Organics Recycling Infrastructure
  - $39 Million - Organics Recycling Infrastructure Grants
- “Green Sword” China’s New Recycling Import Standards

Where Are We Today?

SB 1383 Organic Waste Reduction Target



What Is Needed?

NEW RECYCLING INFRASTRUCTURE & CAPACITY

- **Organics Recycling Capacity**
  - **2020** *Additional 10 Million TPY*
  - **2025** *Additional 20 Million TPY (growing each year thereafter)*

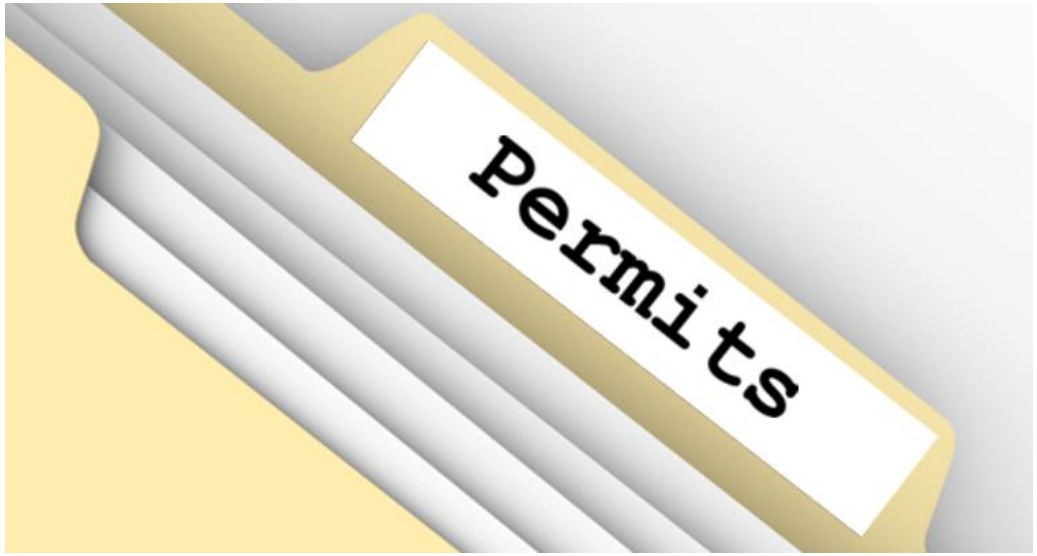
Facilities Needed to Handle Additional 10 million tons

- At 500 TPD ➔ 180,000 TPY ➔ ~50 expansions or new
- At 300 TPD ➔ 100,000 TPY ➔ ~ 100 expansions or new
- At 1000 TPD ➔ 365,000 TPY ➔ ~ 30 expansions or new

30-100 expansions or new facilities needed

How Do We Get There?

1. SB 1383 Regulations
2. Capital Investments (Public and Private)
3. Collaboration on Cross-Media Regulatory Issues



How Do We Get There? Regulations

SB 1383 Rulemaking Schedule

- 2017 informal rulemaking workshops
- 2018 formal rulemaking and adoption of regulations –*Regulations adopted in 2018/2019*
- **2020 50 Percent Reduction in organics disposal (< 10M tons)**
- 2020 Analysis on Waste Sector Progress
- 2022 Regulations Take Effect
- **2025 75 percent reduction in organics disposal (< 5M tons)**

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How Do We Get There? Regulations

Entities Included In SB 1383 Regulations

- Cities and Counties
- Local Enforcement Agencies
- Generators*
- Haulers
- Solid Waste Facilities and Recyclers
- Food Recovery Organizations
- End-users of Recycled Organic Products

*Generators also includes entities that are outside of the authority of a jurisdiction such as state entities, federal facilities, and school districts.

How Do We Get There? Regulations

Key SB 1383 Regulatory Concepts

- Methane Based Disposal and Recycling Quantification
- Collection Requirements
  - Required Source-Separated Collection
  - Grandfathered Mixed Waste Collection
- Edible Food Recovery
- Planning Requirements
- **Market Development, Market Barriers, and Procurement**
- Solid Waste Facility Standards
- Enforcement
- Reporting

How Do We Get There? Capital Investments

Investment of $2-3 Billion to handle 10 M TPY

- Composting → $8-15 M for 100,000 TPY facility
- Anaerobic digestion → $3-$50 M for 100,000 TPY
- Upgrade WWTP facility ➔ $1.3-$35 M

Public and Private Sector Investments Are Critical

How Do We Get There? Collaboration

Permitting of 100+ New Facilities Requires Collaboration

Statewide Entities	Local Entities
CalEPA	Air Districts
CalRecycle	Regional Water Board
ARB	Local Planning Agencies
SWRCB	Local Enforcement Agencies
CDFA	

What Else?

- **The Good News**
  - The waste sector accomplished a similar goal in AB 939 (50 percent jurisdiction diversion requirement)
  - Many of the practical challenges are similar
    - New collection systems are needed
    - New recycling and processing capacity is needed
    - New markets are needed for recycled products
- **What is different about SB 1383?**
  - SB 1383 decouples waste generation and disposal. >>> *The target is a statewide cap based on 2014 disposal of organic waste*
  - Success is not solely based on tons diverted >>>*The state must reduce disposal and methane*
  - Jurisdictions are not subject to an individual diversion mandate
  - There is not “good faith effort” compliance

How Does This Impact You?

How Does SB 1383 Market Development

- Local governments directly oversee local waste management (contracts, franchise agreements, permits, enforcement, etc.)
- Achieving SB 1383 targets requires new markets for recycled organic products
- CalRecycle is considering and seeking feedback on what regulatory procurement mechanisms can help build markets
- What measures outside of the regulations can help develop organic waste recycling capacity.

SB 1383 Regulatory Process

Tell us what YOU think

- Webpage: http://www.calrecycle.ca.gov/climate/slcp/
- Listserv: http://www.calrecycle.ca.gov/Listservs/Subscribe.aspx?ListID=152
- Inbox: **SLCP.Organics@calrecycle.ca.gov**