

# Meeting California's Waste and Climate Goals

How to Achieve and Manage a Safe and Sustainable Future

# What We Do



Enforce waste reduction mandates



Promote waste reduction and diversion from landfills



Oversee recycling programs



Ensure safe management of non-hazardous waste



Provide local assistance and public education



# California's Goals



- 75% Recycling by 2020
- CA Climate Strategy
  - 2020
  - 2025
  - 2030

# Governor's Climate Pillars

## CALIFORNIA CLIMATE STRATEGY

*An Integrated Plan for Addressing Climate Change*



### VISION

**Reducing Greenhouse Gas Emissions  
to 40% Below 1990 Levels by 2030**

### GOALS



**50%  
renewable  
electricity**



**50%  
reduction  
in petroleum  
use in vehicles**



**Double energy  
efficiency savings  
at existing buildings**



**Carbon  
sequestration  
in the land base**



**Reduce  
short-lived  
climate pollutants**



**Safeguard  
California**

# CalRecycle Funding

Beverage Container Program

Used Oil Program

Electronic Waste Program

Tire Program

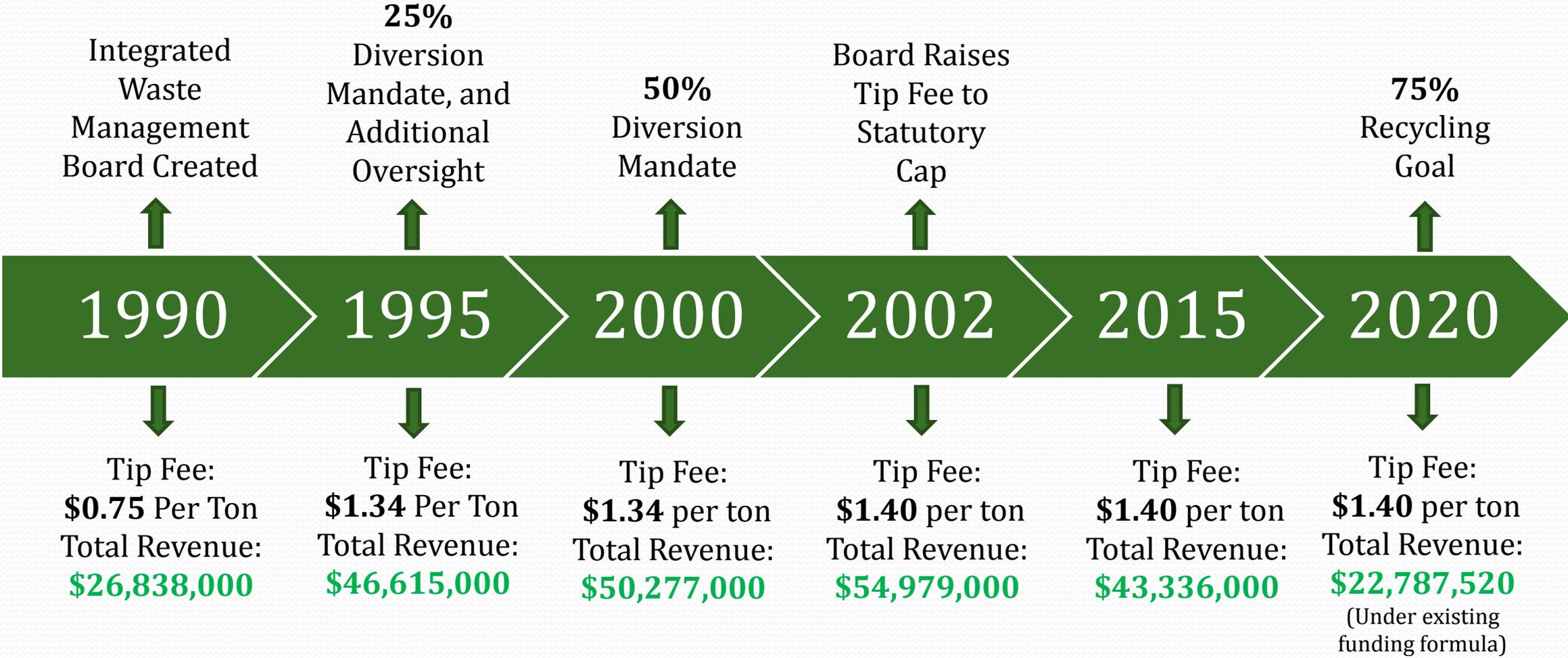
Architectural Paint Program

Carpet Program

Mattress Program

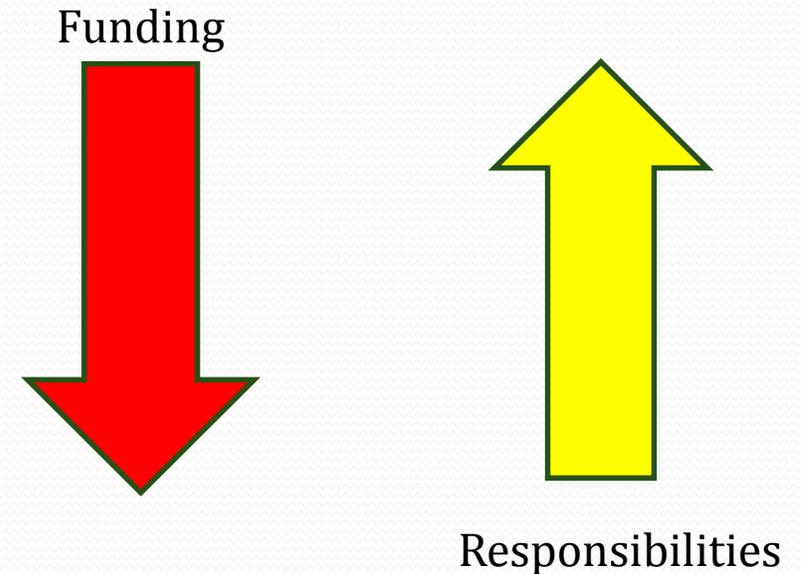
INTEGRATED WASTE  
MANAGEMENT FEE

# IWMA History and Revenue



# Trend in Disposal & IWM Funds

- Revenue ↓ 29 %
- Purchasing power ↓ 40%
- Solid Waste Facilities ↑ 12%
- Statutorily mandated programs ↑ 20%



Achieving 75 % goal will further increase oversight responsibilities and revenue decline.

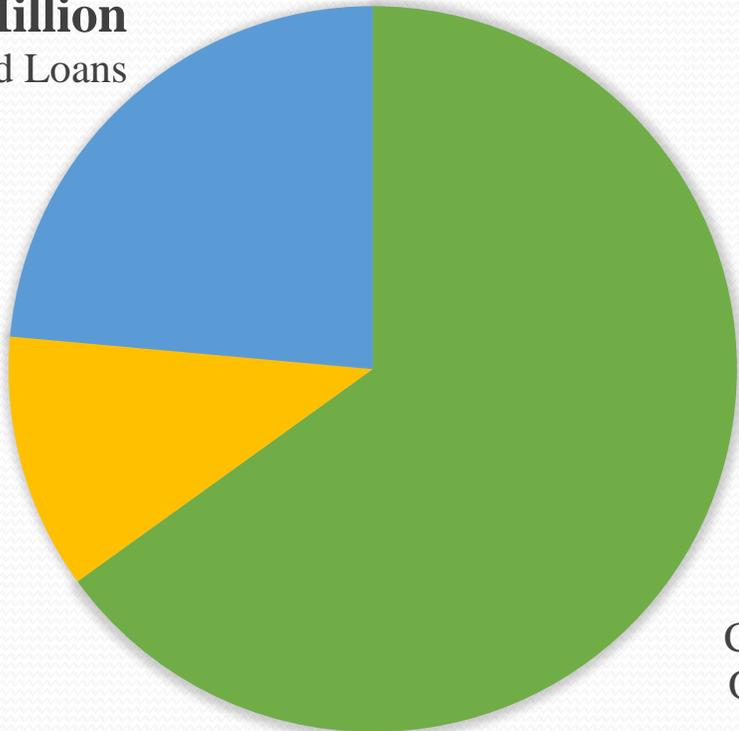
# 2005-06 vs 2014-15

2005-06

REVENUE: \$61.2 MILLION

EXPENDITURES: \$58.3 MILLION

**\$13.7 Million**  
Grants and Loans



**\$6.6 Million**  
Interagency  
Operations

**\$37.9 Million**  
CalRecycle  
Operations

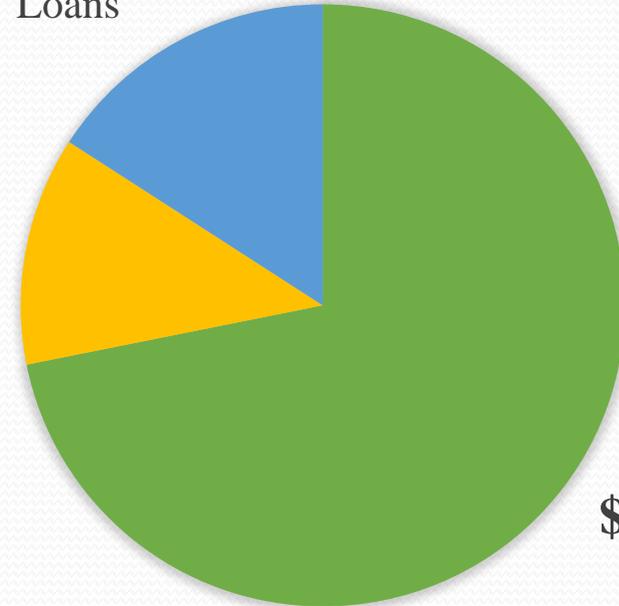
2014-15

REVENUE \$43.3 MILLION

EXPENDITURES **\$49.8 MILLION**

**\$7.9 Million**  
Grants and  
Loans

**\$6.1 Million**  
Interagency  
Operations



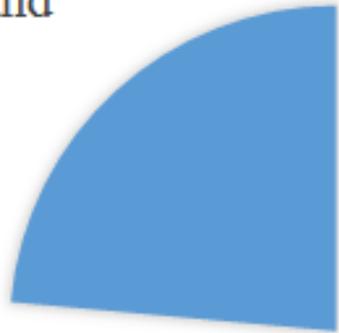
**\$35.7 Million**  
CalRecycle  
Operations

# Direct Impacts on Local Funding

2005-06

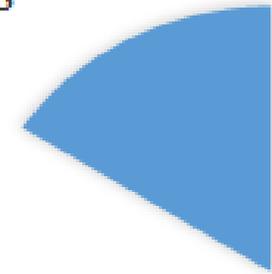
2014-15

**\$13.7 Million**  
Grants and  
Loans



-  HHW Grants **65%**
-  LEA Grants **20%**  
Purchasing Power
-  Solid Waste Trust  
Fund **20 %**  
Purchasing Power
-  RMDZ – No  
Appropriation
-  Reuse Assistance  
Grants

**\$7.9 Million**  
Grants and  
Loans



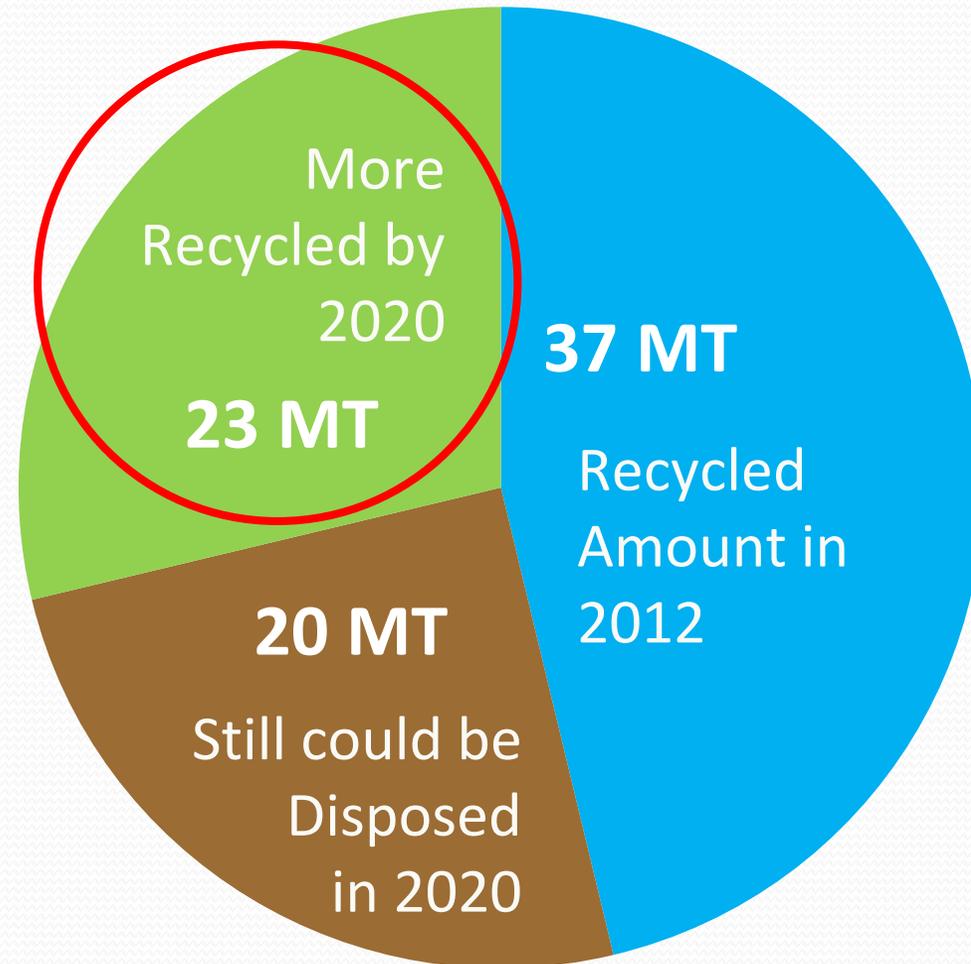
# Support for Achieving 75%

- As funding declines, money to support local recycling efforts sees the greatest decline
- In order to achieve the 75% goal, new funding is needed to support cities, businesses and markets to develop recycling infrastructure
- Updating the funding system presents the best opportunity to provide that support



# Mechanisms for Achieving California's Environmental Goals

# Projected 2020 Tonnage To Reach 75%



# Commodity Recyclables

- Fibers, plastics, glass ~30% of disposal
  - 9.4 million tons
- Much of what is now collected goes overseas
  - Only 1-2 million tons processed in California
- Cannot rely on export markets – need to handle domestically



# Organics

- 41% of disposal, ½ is food waste
- Has to be handled locally or regionally
- No way to get 75% without diverting most organics
- Other policy drivers for organics
  - AB 1826, AB 1594, AB 876, AB 1045
  - Five Pillars
    - Short-Lived Climate Pollutant strategy
    - Healthy Soils Initiative
    - Renewable energy
  - Scoping Plan



# Existing Organics Infrastructure

In-Vessel Digestion



Aerated Static Pile Composting



# Composting in California

- Approximately 160 compost facilities
- Approximately ~150 'chip and grind'
- Not evenly distributed around state
- Growth has plateaued
- Some unused capacity



# In-Vessel Digestion



- 8 stand-alone facilities using urban organics on-line, at least 9 under construction or planning
  - Capacity ~1 million tons per year
- Some food waste also currently used as feedstock at wastewater treatment plants with digesters
  - Some additional capacity

# Biomass

- 23 facilities
  - ~3 MT/year urban wood → 4000 GWh/year
- History of inconsistent financial support
  - ~ 10 (with ~ 3 MT capacity) already idle
  - ½ of remaining 23 at risk due to expiring contracts



# Major Challenges in Infrastructure Development



- Cost compared to landfilling
- Permitting – state, regions, districts
- Local land use decisions
- Viable markets and commodity values
- Quantification of co-benefits
- Grid interconnection/pipeline injection
- Financing new/expanded facilities

# Organics Infrastructure: Facility Needs

- # of facilities to handle additional 10 million tons
  - At 300 TPD → 100,000 TPY → ~100 expansions or new
  - At 500 TPD → 180,000 TPY → ~55 expansions or new
  - At 1000 TPD → 365,000 TPY → ~30 expansions or new
- So on order of 30-100 expanded or new facilities

# Organics Infrastructure: Overall Capital Investment Needs

- Typical costs for new composting facility
  - \$8-15 million for facility sized at 100,000 TPY
  - 100 facilities to get 10 million tons → \$800M-1.5 billion
- Typical costs for new in-vessel facility
  - \$30-50 million for facility sized at 100,000 TYP
  - 100 facilities → \$3-5 billion
- Assuming mix of technologies, total capital needs ~ \$2-3 billion

# Existing Funding for Capital Investments

- Several state programs
  - E.g., Energy Commission, CPCFA, tax credits
- CalRecycle programs
  - Greenhouse Gas Grants/Loans
    - FY 14/15 only – not guaranteed year-to-year
  - RMDZ loan program

# Organics Incentive Payments?

- CalRecycle funding of \$50-\$100M/year would push investments
- New concept: Complement existing capital investment grant/loan funding with incentives at back end for actual products
- Mechanism: use tip/generator revenue for incentive payments
  - ~\$50 million/year, for 5 years
- Year-long public process to develop and then begin implementing

# Potential Implementation Issues

- Eligibility – processes and products
- Verification of additional diversion and end-use market transactions
- Level of incentive payment(s) and how to set
- Timing and availability of payments
- Invoicing, accounting procedures
- Audits and enforcement
- Measuring progress towards sustainable commodities

# Questions

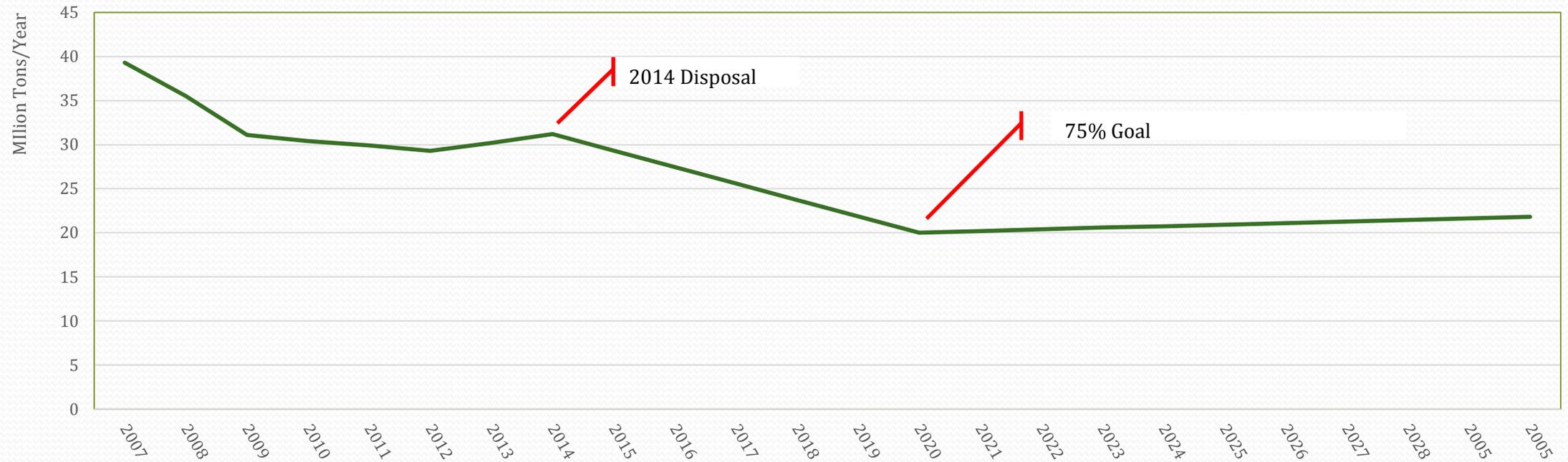
- Other remaining issues with incentive payment approach?
- How can state and local governments best collaborate to develop organics and commodity recyclables infrastructure?
- How can we determine when recycling markets and demand are sustainable?

Webcast Participants E-mail Questions to:  
[LEX.Office@CalRecycle.ca.gov](mailto:LEX.Office@CalRecycle.ca.gov)



# Sustainable Funding Strategies to Support California's Environmental Goals

# Achieving the 75 % Recycling Goal



Fee Paying Disposal 2014:  
31 Million Tons

Fee Paying Disposal 2020:  
16 Million Tons

# What Is Needed

- Financial incentives and support to achieve 75% (infrastructure)
- Resources to manage 75% infrastructure
- Diverse and sustainable funding



# Alternative Funding Explored

- Examples from other states
  - Minnesota's trash tax (9.75% - 17% of hauler service charge)
  - State disposal fees (\$0.12 - \$13.00)
  - Regulatory fees (permitting, facility fees)
  - Producer fees (packaging, single use items, etc. )
- A new approach proposed in the Legislature
  - Increase tip fee
  - Generator charge

# AB 1063 (Williams)

- Increase in the “tip fee” at landfills to \$4.00 *per ton*
- Establish a statewide *per household* charge on solid waste generation



# Safe and Sustainable Materials Management

- Short Term
  - Increasing the “tip fee” at landfills
- Long Term
  - Phasing in an adjustable Generator Charge on households



# Advantages of a Generator Charge

- Funding does not diminish as 75 % goal is achieved
- Links funding to oversight duties
- Enables a 5-year market incentive payment program
- Diversifies department funding

# How Generator Charge Could Be Collected

- Residential charge could be phased in first
  - Based on the number of residences per jurisdiction (Department of Finance data)
  - Jurisdictions design collection plan based on a variety of collection options
  - Possible options:
    - Assign waste hauler to collect
    - Property tax bill/parcel fee collection
    - Utility bill
    - Custom (approved by CalRecycle)
- Commercial charge could be phased in at a later date

# Questions

- How can the state help locals collect a generator charge?
- How can self-hauled waste be addressed by a generator charge?
- Alternative funding models?

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