



# Organics Recycling Program

CR&R Anaerobic Digestive Facility





# Agenda

1. Why are we here?
2. Proposed Organics Recycling Program
3. Cost
4. The Future of Landfills
5. Next Step



# Why are we here?

## Zero Waste Discussion

2010

- CMSD Strategic Goal No. 2.5 – Encourage Zero Waste

2011 – 9 meetings regarding Zero Waste

- May 23 – Recycling Committee – Promoting Zero Waste
- June 20 – Recycling Committee – Zero Waste presentation by Debbie Morris, HF&H Consultants
- August 22 – Recycling Committee – Zero Waste Strategic Plan, City of Oakland



Why are we here?

## Zero Waste Discussion

*“Zero waste efforts, just like recycling efforts before, will change the face of solid waste management in the future. Instead of managing wastes, we will manage resources and strive to eliminate waste.”*

*-Institute for Local Self Reliance*



Why are we here?

## Definition of Zero Waste

“Zero Waste is a goal that is ethical, economical, efficient and visionary, to guide people in changing their lifestyles and practices to emulate sustainable natural cycles, where **all discarded materials are designed to become resources for others** to use.”

Source: Zero Waste International Alliance



Why are we here?

## Definition of Zero Waste

“Zero Waste means designing and managing products and processes to systematically avoid and eliminate the volume and toxicity of waste and materials, conserve and recover all resources, and **not burn or bury them.**”

Source: Zero Waste International Alliance



Why are we here?

***Zero waste is NOT about  
getting to zero.***

***It is about being on the path  
to zero.***



# Why are we here?

## Zero Waste Discussion

2011

- September 19 - Recycling Committee– Zero Waste, Developing key objectives within control of influence of CMSD
- October 24 – Recycling Committee – Discuss potential items for November 2, 2011 - Zero Waste Workshop
- November 2 – Board Special Meeting – Zero Waste, Presentation from CR&R and HF&H Consultants
- November 30 – Board of Directors Meeting – Zero Waste Strategies



# Why are we here?

## Zero Waste Discussion

### 2011

- December 12, 2011 – Recycling Committee – AB 341, State of California required to meet 75% diversion goal by 2020
- December 14, 2011 – Board Special Meeting – Formulate Zero Waste Plan to include Community-Wide Survey

### 2012 – 2 meetings regarding Zero Waste

- March 22 – Board of Directors Meeting – Solid waste that included CR&R anaerobic digestive facility.
- September 11 – Board Special Meeting – AB 341, State of California required to meet 75% diversion goal by 2020



# Why are we here?

## 2012 Community Survey

Wanted to engage with residents their opinion on the environment and solid waste collection services

- Do you want to divert more waste away from landfills?
- Are you willing to pay more?
- Surveyed, 1,000 residents
- Statistically valid sample size



# Why are we here?

## 2012 Community Survey

- 81.6% support increasing trash diversion away from landfills from 54% to 75%.
- 66.8% prefer a single container for mixed waste
- 41.6% of supporters believe protecting the environment is the reason for reducing the amount of trash
- 43.5% of opposition fear cost increase would result



# Why are we here?

## 2012 Community Survey

- 41.4% would be willing to pay more for trash services if the District could reduce the amount of trash going to the landfills.
  - 37.1% unwilling to pay more
  - 21.5% unsure/refused
- 72.9% would be willing to spend \$1 to \$5 more a month



Why are we here?

## Zero Waste Discussion

2013 – 5 meetings regarding Zero Waste

- January 10 – Special Board Meeting – Solid Waste Technology presented by CR&R
- April 10 – Special Board Meeting – Options for getting the District to Zero Waste
- October 1 & 29 – Special Board Meeting – CR&R anaerobic digestive facility
- November 21 – Board of Directors Meeting – Organics Recycling Program



# Why are we here?

## What are the drivers?

### 1. District Mission:

*“Protecting our community’s health and the environment by providing solid waste and sewer collection services.”*

### 2. April 10, 2013 Board established a goal of achieving 75% diversion by 2015 and 90% by 2020.

### 3. State mandate to achieve 75% diversion by 2020

- Repealing green waste as alternative daily cover (ADC) at landfills
- Requiring organics to be source separated & prohibited from landfills
- 16% of waste disposed in Calif. consist of food (5.6 million tons per year)\*

\*Source – CalRecycle at [www.calrecycle.ca.gov](http://www.calrecycle.ca.gov)

# Why are we here?

## What are the drivers?

State wants to reduce disposal at landfills by 43 million tons

Repealing green waste as alternative daily cover (ADC) at landfills



41.90 % Diversion

Not enough composting facilities

Demand will drive prices up

# Proposed Organic Recycling Program

## How the program will work

- Households will receive one 64 or 32 gallon organic cart.
- Standard service: 2 – 64 gallon mixed waste carts and 1-64 gallon organic cart.
- Households can request one additional organic cart with no additional monthly fee.
- Households may have 2 mixed waste carts and 2 organic carts with no additional monthly fee.
- A 3<sup>rd</sup> mixed waste and/or 3<sup>rd</sup> organic cart will cost \$8.00 a month per additional container.





# Proposed Organic Recycling Program

- How the program will work

What goes in the organic cart?

## **Green Waste –**

👍 Grass clippings

👍 Tree branches, twigs, stumps

👍 Leaves

👍 Weeds

👍 Bushes & shrubs

# Proposed Organic Recycling Program

- How the program will work

What goes in the organic cart?

## Food Waste

- |              |               |                           |
|--------------|---------------|---------------------------|
| 👍 Fruits     | 👍 Rice        | 👍 Coffee grounds          |
| 👍 Vegetables | 👍 Beans       | 👍 Pasta                   |
| 👍 Meat       | 👍 Cheese      | 👍 FOG (Fats, Oil, Grease) |
| 👍 Poultry    | 👍 Bones       |                           |
| 👍 Seafood    | 👍 Frozen food | 👍 Plastics                |
| 👍 Eggshells  | 👍 Tea bags    |                           |





# Proposed Organic Recycling Program

## How the program will work

- Household that generate no green waste
  - A. Replace organic cart with 32 gallon food waste cart
  - B. Exempt from the program and keep both existing mixed waste carts.
- Household that generates neither food scraps or green waste.
  - A. Exempt from the program and keep both existing mixed waste carts.
- Households with limited storage space may also be exempted.

# Proposed Organic Recycling Program

## How the program will work

- Kitchen pails available to residents

Avoid odors by using 100% compostable plastic bags





# Proposed Organic Recycling Program

## How the program will work

- Organic curb placed out in the curb on regular trash day
- One additional CR&R truck will be added to the fleet of 9 existing trucks to pick up organics.
- Mileage will double from 4,050 to 8,100 miles a week
  - Total weight of solid waste materials will not increase. – 41,000 tons
- The additional truck will be powered by compressed natural gas (CNG) and/or renewable natural gas (RNG).
- Organic truck will arrive at CR&R's transfer station in Stanton.
- Organics will be loaded into semi truck trailers and transported to CR&R's anaerobic digestive facility in Perris.



# Proposed Organic Recycling Program

## How the program will work

- The organics will be converted into renewable clean gas (RNG to power CR&R's fleet).
- Organics converted to soil amendments (liquid and solid)
- Any residuals at the transfer station or the AD will be disposed of at OC landfills.
- Recyclables in the mixed waste carts will continue to be delivered to CR&R's Material Recovery Facility (MRF).
- Recyclables are separated, bailed and shipped to various markets and trash will go to OC landfills.



# Proposed Organic Recycling Program

How the program will work

75% Diversion by 2015



# Proposed Organic Recycling Program

## How the program will work

- Glass, plastics, aluminum cans, magazines, newspapers are in every day of our lives – inconvenient to separate
- Most people do not garden and/or mow the lawn every day
- Many residents have paid gardeners
- Kitchen pails available to residents
- A change in behavior



# Proposed Organic Recycling Program

What other options are available for organic recycling?

- Composting
  - Limited facilities, most are permitted for mulching
  - Many facilities not permitted to accommodate demand when ADC is appealed
  - Limited food composting facilities in Southern California.
    - Coachella Valley Composting Facility – Burrtec (126 miles)
    - Lancaster Reclaimable Anaerobic Composter – Waste Management (101 miles)
    - Victor Valley Regional Composting – Athens (92 miles)
    - Green Energy Facility – CR&R (61 miles)
  - CMSD's composting program cannot accept meat, poultry, seafood, eggshells, bones or FOG.



# Proposed Organic Recycling Program

Why do organics have to be separated?

- Anaerobic digestion (AD) is a process where microorganisms break down organic material in the absence of oxygen.
- The break down of organic material cannot occur if organics are contaminated from trash material (e.g. Styrofoam, plastic grocery bags, clothing, broken glass, plaster, dry paint cans, window glass, etc.)



# Proposed Organic Recycling Program

Do I have to separate food scraps?

- No. Residents can throw food scraps in their mixed waste carts.
- The survey tells us that majority of residents want to do their part to help reduce the amount of trash.
- Throwing food scraps in a separate organic container gives them that option.
- First and only community in OC that will have the ability to use food waste as a sustainable resource.



# Proposed Organic Recycling Program

## Community Outreach

- CR&R will conduct at least 3 public outreach workshops.
- Describe the new program in CMSD's newsletter at least twice a year.
- Flyers about the program available at several public facilities such as City Hall, libraries, community centers.
- Possible TV coverage from local news stations (e.g. KTLA Morning News with Gayle Anderson)
- KOCI 101.5 FM radio station
- Mesa Water invoice inserts.
- CMSD's booth at Concerts in the Park and Fish Fry



## Costs

### Hauler Rate:

\$2,297,593 @ \$8.9054 per property owner - **Currently**

\$2,527,213 @ \$9.7954 per property owner (organic carts)

**\$ 229,620**

### CRT Recycling/Disposal Rate:

\$2,137,266 @ \$51.97 per ton for 41,125 tons - **Currently**

\$1,431,981 @ \$51.97 per ton for 27,554 tons (67%)

**\$ 970,344 @ \$71.50 per ton for 13,571 organic tons (33%)**



## Costs

CRT Recycling/Disposal Rate:

\$1,431,981 @ \$51.97 per ton for 27,554 tons (67%)

\$ 970,344 @ \$71.50 per ton for 13,571 organic tons (33%)

\$2,402,325

2,137,266 – Current cost

**265,059**



## Costs

Hauler Rate:	\$229,620
CRT Recycling/Disposal Rate:	<u>\$265,059</u>
	\$494,679
Kitchen Pails	8,000
Community Outreach	<u>2,000</u>
<b>TOTAL:</b>	<b>\$504,679</b>

**\$1.95 per month**

	AD Implementation		2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
	2013-14	2014-15							
Expenses	5,306,894	5,615,535	5,809,265	5,809,265	5,939,973	6,073,623	6,073,623	6,073,623	6,210,280
Annual Charge	4,644,000	4,644,000	4,644,000	4,644,000	4,644,000	4,644,000	4,644,000	5,547,000	5,805,000
Additional Container Charge	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Property Tax	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Investment	54,000	54,000	53,000	50,000	46,000	40,000	33,000	25,000	15,000
Contributions	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
Other	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
Total Revenue:	5,098,000	5,098,000	5,097,000	5,094,000	5,090,000	5,084,000	5,077,000	5,972,000	6,220,000
Net:	<b>(208,894)</b>	<b>(517,535)</b>	<b>(712,265)</b>	<b>(715,265)</b>	<b>(849,973)</b>	<b>(989,623)</b>	<b>(996,623)</b>	<b>(101,623)</b>	<b>9,720</b>
Fund Balance	4,150,594	4,082,117	3,701,228	3,119,852	2,529,633	1,797,456	916,912	20,492	19,058
<b>Net Balance</b>	<b>4,041,700</b>	<b>3,664,582</b>	<b>3,088,963</b>	<b>2,504,587</b>	<b>1,779,660</b>	<b>907,834</b>	<b>20,289</b>	<b>18,869</b>	<b>28,778</b>
Occupancy Rate:	21,500								
	18.00							21.50	22.50
	8.9054 Hauler Rate	(9.1554 - 0.25 = 8.9054) From Nov 2013 through Oct 2014							
	9.7154 Hauler Rate	(8.9054 + 0.81 = 9.7154) Effective Nov 2014							
	51.97 CRT Disposal Rate	(52.22 - 0.25 = 51.97)							
	71.50 AD Disposal Rate								
		67% of CRT disposal tonnage @ \$51.97 a ton							
		33% of AD disposal tonnage @ \$71.50 a ton							

		AD Implementation							
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Expenses	5,306,894	5,615,535	5,809,265	5,809,265	5,939,973	6,073,623	6,073,623	6,073,623	6,210,280
Annual Charge	4,644,000	4,644,000	4,773,000	4,773,000	4,966,500	4,966,500	5,069,700	5,069,700	5,147,100
Additional Container Charge	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Property Tax	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Investment	54,000	54,000	53,000	50,000	46,000	40,000	33,000	25,000	15,000
Contributions	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
Other	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000
Total Revenue:	5,098,000	5,098,000	5,226,000	5,223,000	5,412,500	5,406,500	5,502,700	5,494,700	5,562,100
Net:	(208,894)	(517,535)	(583,265)	(586,265)	(527,473)	(667,123)	(570,923)	(578,923)	(648,180)
Fund Balance	4,150,594	4,082,117	3,701,228	3,250,142	2,791,516	2,387,683	1,838,766	1,381,521	911,624
Net Balance	4,041,700	3,664,582	3,217,963	2,763,877	2,364,043	1,820,560	1,367,843	902,598	263,445
Occupancy Rate:	21,500 18.00	18.00	18.50	18.50	19.25	19.25	19.65	19.65	19.95
	8.9054 Hauler Rate	(9.1554 - 0.25 = 8.9054) From Nov 2013 through Oct 2014							
	9.7154 Hauler Rate	(8.9054 + 0.81 = 9.7154) Effective Nov 2014							
	51.97 CRT Disposal Rate	(52.22 - 0.25 = 51.97)							
	71.50 AD Disposal Rate								
	67% of CRT disposal tonnage @ \$51.97 a ton								
	33% of AD disposal tonnage @ \$71.50 a ton								



# Proposed Organic Recycling Program

- No long term commitment – 6 year evergreen
- Conversion technology rate (\$71.50) guaranteed lowest rate.
  - If CR&R negotiates a lower rate with any OC agency, then that rate shall become the rate of the District.
- Separating green waste (grass clippings, leaves, branches, weeds).
- **No separating of recyclables (glass, plastics, aluminum cans, newspaper, tin cans)**
- Give residents an opportunity to recycle food waste. No fines or penalties for throwing food waste away with trash.



## Proposed Organic Recycling Program

- Divert at least 75% of the District's waste stream.
- Residents with three or four mixed waste carts can save \$96 to \$192 a year.
- Help extend the lifespan of landfills.
- CMSD trash trucks will be powered by Renewal Natural Gas (RNG), the cleanest burning fuel on the market
- No other community in OC has a curbside food waste collection program.
- Proactive to changes in solid waste regulations.



# The Future of Landfills

AD or conversion technology the future in U.S and Calif.

- Conversion technology already in use in Japan, Israel and Europe where landfill space is extremely limited.
- Not In My Backyard (NIMBY) issues for new landfills, composting facilities and/or transfer stations in California
  - Gregory Canyon Landfill (NE San Diego County)
    - 20 years and counting
    - Gregory Canyon Ltd. has spent \$67 million since early 1990's
    - Fought and won 19 lawsuits
  - Puente Hills Landfill (City of Industry) – Closed 10/13/13
    - Largest landfill in the world
    - Rail solid waste to Mesquite Landfill in El Centro, CA
    - Tipping fee \$100+ a ton



## What's Next?

- Next Town Hall Meeting – Saturday, February 8<sup>th</sup> at 9:00 am
  - Back Bay High School – 390 Monte Vista Avenue, Costa Mesa
- Board of Directors Meeting – Tuesday, February 25<sup>th</sup> at 5:30 pm
  - Sonora Elementary School – 966 Sonora Road, Costa Mesa
- Possible start date November 2014