

A high-angle photograph of the Golden Gate Bridge in San Francisco, showing its iconic red-orange towers and suspension cables against a clear blue sky. The bridge spans across the water, with the city skyline visible in the distance.

San Francisco's Mandatory Food Composting

**Jack Macy
Department of the Environment
City and County of San Francisco**

**USCC 19th Annual Conference
January 25, 2010**

Unique San Francisco Aspects

Each city has its own

San Francisco political structure

City and County

Committed Mayor and Board of Supervisors

Streamlined decision making to Lead by Example

San Francisco demographics

850,000 residents, 1.25 million daytime pop

17,347 capita per sq mi , 2/3rd in apartments

50% of residents don't speak English at home

San Francisco service provider

Recology Companies exclusive permitted collectors for residential and commercial - based on 1932 ordinance. No contract or franchise, regulated through city rate setting process like utility.

PAYT for nearly 90 years. Financial incentive to compost and recycle.



Composting Collection Designed For High Diversion With Recycling



Glass and Plastic
Aluminum and Steel
5%

Recyclable
Paper
25%



Food Scraps
20%



Plant Trimmings
5%

Compostable Paper
& Fiber 10%



Construction and
Demolition Waste
25%

Other
10%



All % numbers by
weight or tons



Easy to Use Color Coded Program

1 Recycle

Place all bottles, cans, foil, paper and cardboard in the blue cart - MAKING RECYCLING EASIER!



not accepted

in the blue cart:
 plastic bags
 Styrofoam
 mirrors, window glass or light bulbs
 ceramic dishes or cups
 plastics other than bottles
 juke boxes

2 Compost

Place all of your food scraps, food-soiled paper and yard trimmings in the green cart.



Use your kitchen pail to hold food scraps.

You can line kitchen pail with paper bag or newspaper.



Fill with food scraps — even meat and bones.

Paper bag and contents go in the green cart.



not accepted

in the green cart:
 plastic bags
 Styrofoam
 plastic flower pots or trays
 diapers
 kitty litter or animal foods
 rocks, stones or dirt

Your New Program Reduces Garbage!

As you can see, more things are recyclable than ever before. With your help we will:

- Protect our environment! Recycling more means less garbage being sent to the landfill.
- Reduce litter through the use of lid/dod carts.
- Make San Francisco the first large U.S. city to collect food scraps for composting city-wide.

3 Garbage

Place what is left over - non-recyclables - into the black cart.

No hazardous materials. For household hazardous waste information, call 415-554-4333.



Paper milk cartons can also be used to hold food scraps and are compostable!

Questions?

Call 415-330-1300 or visit www.sunsetscavenger.com

Kitchen Pails Provided – Can Use BPI Certified & Labeled Compostable Bags or Can Use Paper, Cartons or No Liner



可自然化解

COMPOSTABLES

RESIDUOS DE COMIDA
Y DEL JARDIN



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Department of the City and County of San Francisco



Sustainable San Francisco
SUSTAINABLE SAN FRANCISCO
SOLID WASTE DEPARTMENT
& RECYCLING DIVISION

- Food Scraps
- Food or Liquid-Soiled Paper
- Waxed cardboard
- Waxed paper milk & juice cartons
- Clearly labeled compostable plastics
- Paper Towels



Compostables Collected with Single Chamber Compactors - Weekly For Residents & Up to Daily for Businesses



可回收

RECYCLABLES

RECICLABLES



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WASTE MANAGEMENT COMPANY
WASTE TO ENERGY
& RECYCLING COMPANY



San Francisco's Zero Waste Goals & Policies

- **75% Landfill Diversion by 2010 Goal
(Achieved 77% diversion for 2008)**
- **“Zero Waste” to landfill or incineration by 2020 Goal**
- **Promote Highest and Best Use of Materials**
- **Require Consumer & Producer Responsibility (EPR)**
- **Styrofoam Ban – June 2007**
- **Plastic Bag Ban – November 2007**
- **Mandatory Recycling & Composting – October 2009**

Mandatory Recycling and Composting Ordinance

- Applies to all sectors
- Must have trash service
- Must provide composting and recycling
- Right size/color/location of containers
- Education for tenants and employees
- Work with janitorial staff
- Front of house for food vendors
- Separate correctly
- Fines Possible



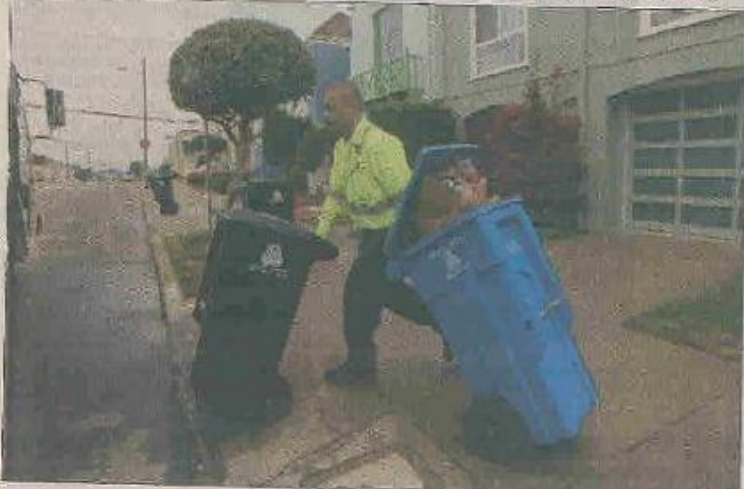
Media Attention on Mandatory

San Francisco Chronicle

***** 2:10 PUBLISHED WEEKLY FRIDAY, AUGUST 1, 2008

Mayor's idea: trash cops

Newsom proposes fining residents who don't sort compost and recycling



By Greg McWhorter

Angelo Meyers checks trash and recycling at his track on 40th Avenue. Collectors could take no enforcement action.

By John Cole
CHRONICLE STAFF WRITER

Garbage collectors would inspect San Francisco residents' trash to make sure pizza crates aren't mixed in with chip bags or wine bottles under a proposal by Mayor Gavin Newsom.

And if residents or businesses don't separate the refuse from the newspaper, they would face fines of up to \$1,000 and eventually could have their garbage service stopped.

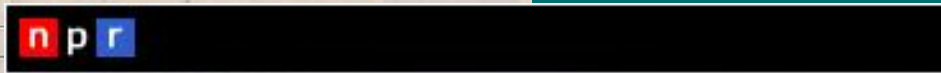
The plan to require proper sorting of refuse would be the nation's first mandatory recycling and composting law. It would affect garbage collectors to inspect the trash and ensure it is put into the right blue, black or green bins, according to a draft of the legislation prepared by the city's Department of the Environment.

The program is expected to limit the amount of trash and debris that goes into the city's only major landfill in Alameda County, where the refuse takes up costly space and decomposes to form methane, one of the most potent of greenhouse gases. It will also help San Francisco, which city officials say currently diverts

HOW TO SORT YOUR GARBAGE

BLUE CART (RECYCLING)		
Paper	Glass, aluminum	Plastic
Cardboard, cereal boxes (without metal), computer paper, paper, egg cartons, envelopes (with glue), Old, torn mail, brochures, magazines, newspapers, phone books.	Aluminum cans, aluminum foil, glass bottles and jars, rigid plastic cups and lids.	All plastic bottles (1-gallon, 2-gallon, 3-gallon), detergent, dish soaps, plastic cups and lids.
GREEN CART (COMPOST)		
Food	Paper	Plants
Fruit, vegetables, meat, poultry, fish, food, bones, rice, beans, pasta, bread, cheese, eggs, nuts.	Waxed cardboard, napkins, paper towels, paper plates, paper milk cartons, tea bags, coffee grounds and filters.	Flower trimmings, tree cuttings, weeds, grass, twigs and weeds.
BLACK CART (LANDFILL)		

Garbage, dishes and containers for use. 400-450-4500



ENVIRONMENT

Food Recycling Law A Hit In San Francisco

Morning Edition
Oct 21, 2009 | More on NPR.org

The new law requires residents to dispose of food waste in a separate bin, and many are thrilled.

San Francisco Mandatory Recycling and Composting Ordinance



Everyone in San Francisco is required to separate and put their recycling, composting, and trash in the right place.

The City and your recycling company offer a variety of free services and assistance including kitchen compost pails, consultations, container labels, signs, commercial building toolkits, educational materials, multi-lingual trainings, and more.

- For help setting up service and other assistance call
Recology Sunset Scavenger, (415) 330-1300
Recology Golden Gate, (415) 626-4000
- For help setting up zero waste events call
SFEnvironment, (415) 355-3700



Businesses

Property owners/managers, including of apartments, condos, TICs, food establishments, and events are required to provide color-coded, labeled containers in convenient locations: blue for recycling, green for composting, and black for trash. You must also educate tenants, employees, contractors, and janitors on what goes in each container. Food vendors that provide disposable food service ware or to-go containers must have blue, green, and black containers for use by customers and visitors, placed inside near a main exit.

Residential Property Owners

Blue recycling and green composting carts are free with your trash service. You may be able to lower your trash bill by recycling and composting more, and ordering a smaller black trash cart.

Recology provides apartment starter kits and pails for tenants to collect kitchen food scraps. Food scraps can also be placed in paper milk cartons, paper bags, or wrapped in paper before being placed in the green cart.

Renters

Ask your manager to sign up for composting, recycling, and trash service.

Renters can report unresponsive managers by using the anonymous form at SFEnvironment.org/mandatory

Enforcement

Residents and businesses are required to subscribe for adequate trash, recycling and composting service. We strive mainly to educate and assist. Fines may be given only in cases of blatant on-going non-compliance.

Recycling Theft

It is illegal for a third party to mix or take materials out of the recycling container provided by your collector. Please report recycling theft at RecologySF.com or by calling (415) 330-1300.



SFEnvironment
Our homes. Our city. Our planet.
A San Francisco Department of the Environment

SFEnvironment.org/mandatory
(415) 355-3700



To find out what
goes where:
SFEnvironment.org/ecofinder



For composting or recycling service:

Sunset Scavenger (415) 330-1300
Golden Gate Disposal & Recycling (415) 626-4000
SFRecycling.com

Composting and Recycling Now Required in San Francisco

(Chapter 19, San Francisco Environment Code)

For ordinance information: SFEnvironment.org/zerowaste

三藩市現在規定要實施堆肥及
回收

(「三藩市環境條例」第十九章)

查詢條例內容: SFEnvironment.org/zerowaste

Ahora es obligatorio en
San Francisco separar
el reciclaje y el abono de
la basura

(Capítulo 19, Código Ambiental de San Francisco)

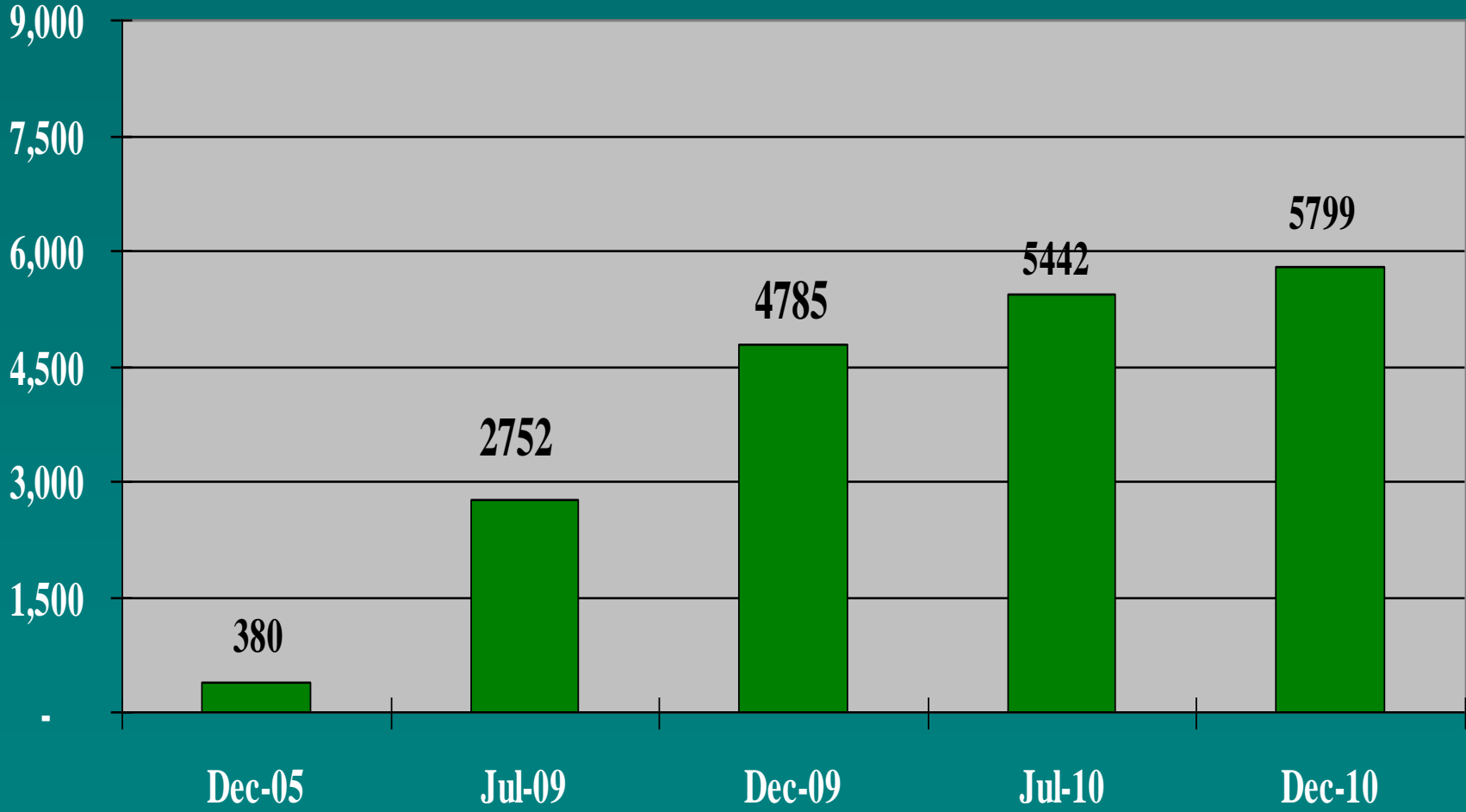
Para obtener información sobre la ordenanza:
SFEnvironment.org/zerowaste



Neighborhood Door to Door Outreach Campaign



Apartment Buildings Composting



Apartment Buildings are 6 units and above

Commercial Recycling & Composting Collection With Many Bin Types



3 Stream Color-coded Sorting



Commercial & City Department Assistance Provided

- On-site waste assessments and consulting
- Multi-Lingual staff and management training (inc. tenants, janitors)
- Sorting containers (deskside to 23 gal), signs and stickers
- Compliance tool kit of web & printed info
- Collection up to daily with wide range of collection containers (32 gal to 30 yard)
- Performance audits and diversion reporting



Office Building Food Service, Tenant Offices and Restroom Composting



Working Creativity with Space Constraints

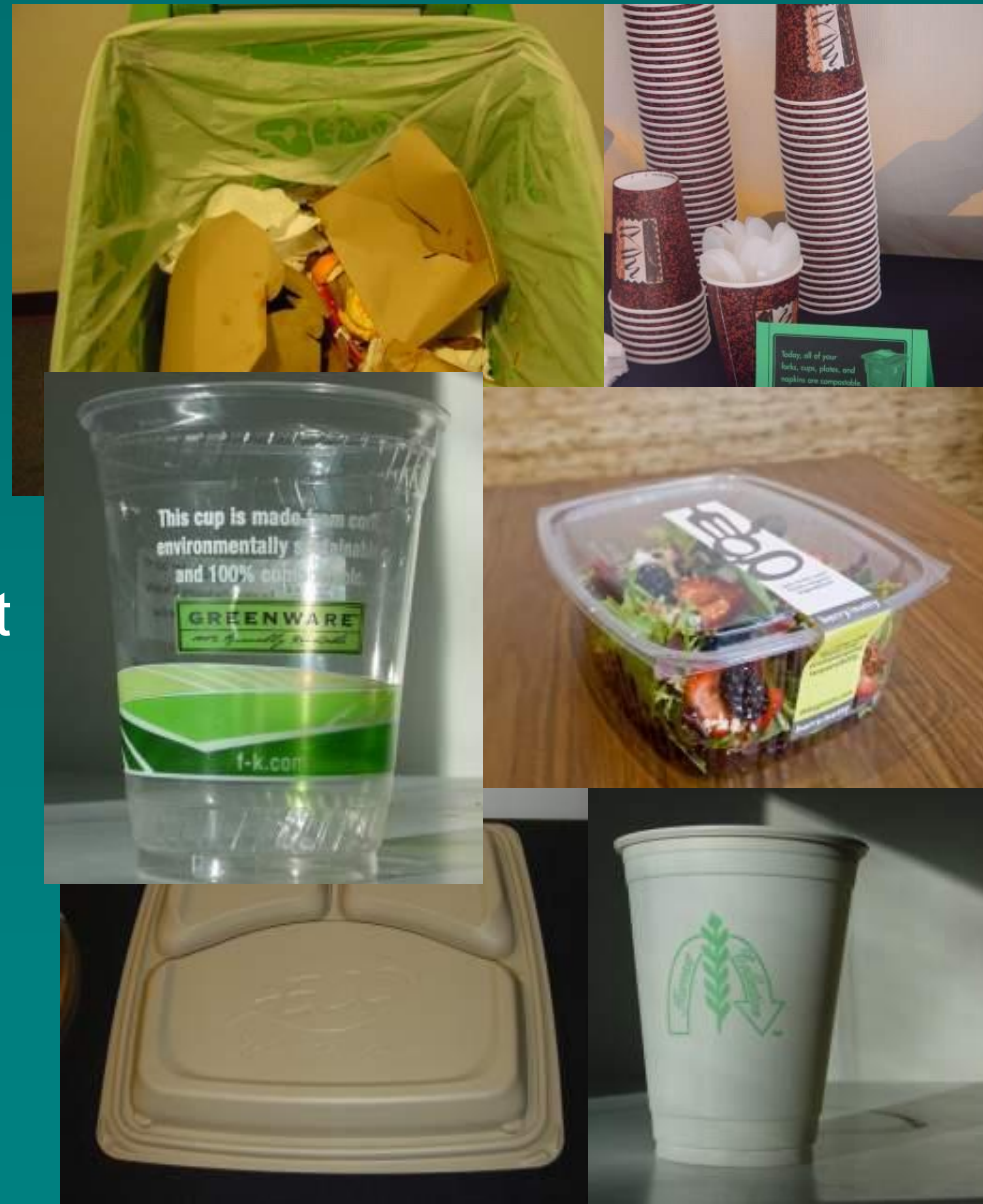


Monitoring Contamination, Give Feedback And Assistance To Ensure Quality Control



Food Ware Accepted as Compostable

- Paper or Plant Pulp/Fiber
 - Recycled Paper
 - Bagasse/Sugarcane
 - Poly coated paper allowed for now
- Compostable Plastics must meet ASTM D6400 and be labeled compostable, preferably with green print
 - PLA or PLA coated paper
 - PLA blends
 - Cereplast



Food Service/Event Signage

COMPOSTING ONLY

including food scraps, napkins, paper plates, compostable cups & compostable utensils



RECYCLING ONLY

including bottles, cans, clean paper, foil, and cardboard



WASTE ONLY



Public Sorting Station at Ferry Building



Front of the House: At Starbucks and at Burger King



City Government Facilities in San Francisco



Office buildings



Venues



49ers Stadium



Fire Stations



Hospitals



Street cleaning

Hospital Cafeteria Sorting Station

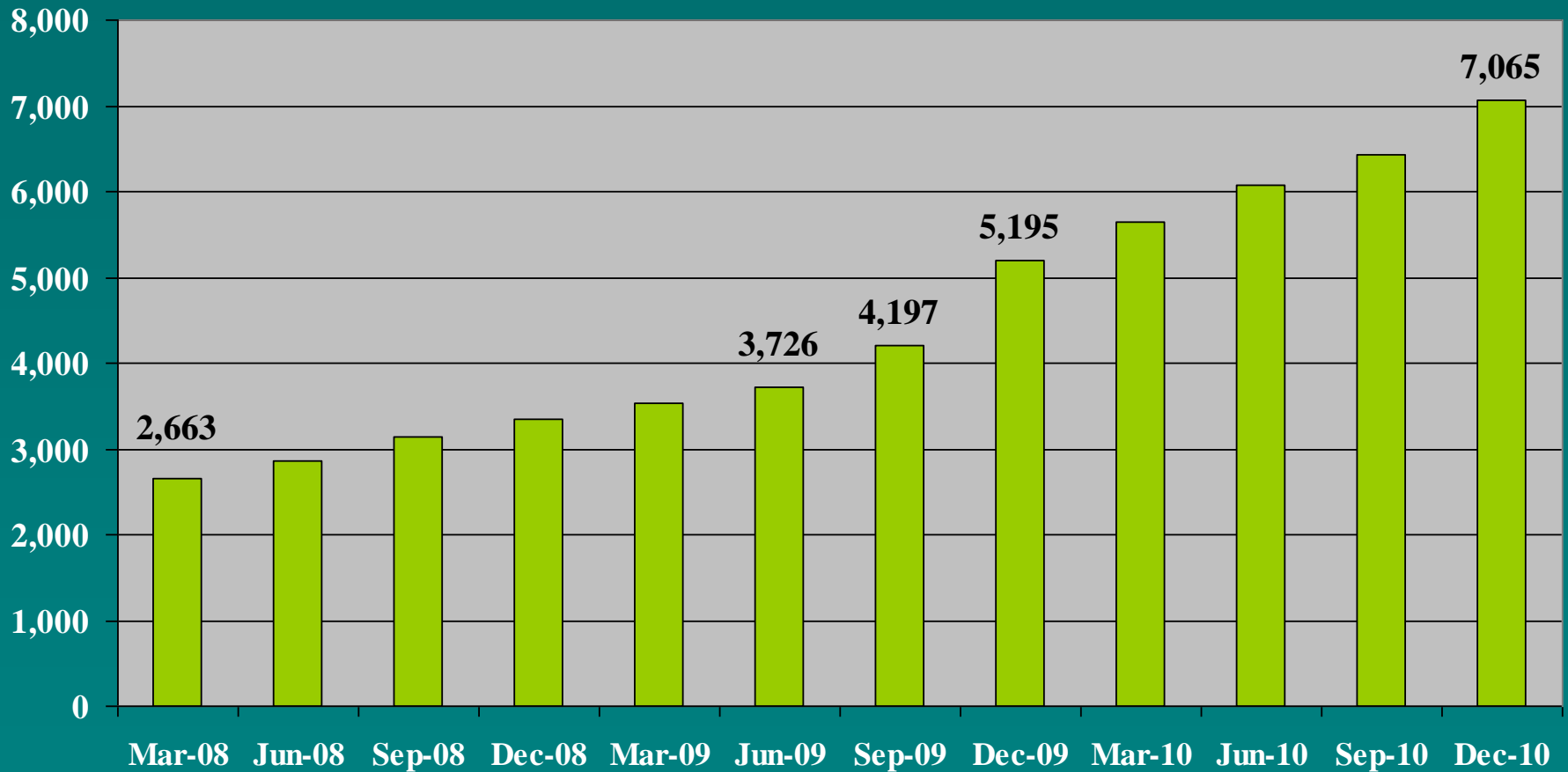


City Government Leading by Example

- 26,000 employees and over 1000 facilities
- 90% on composting program

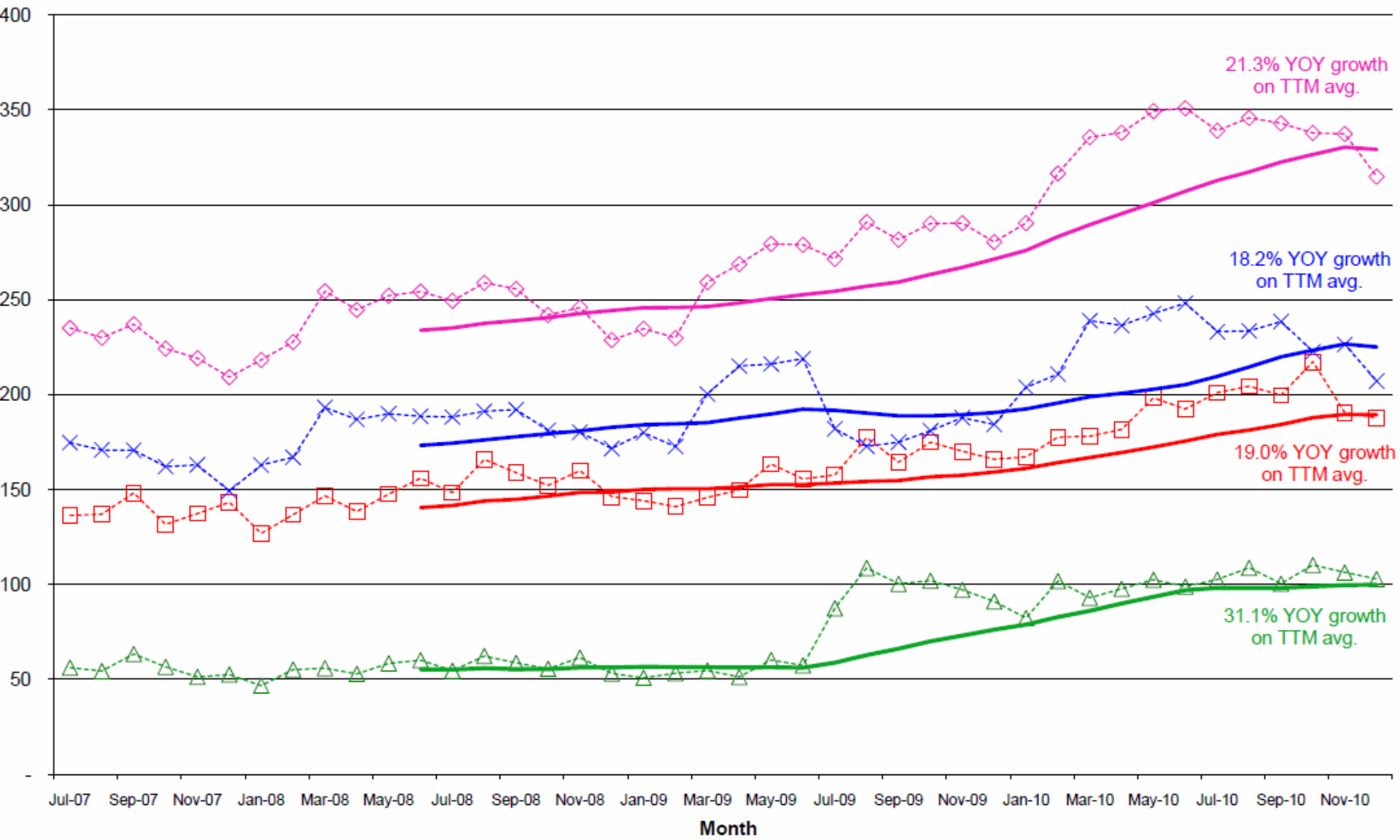


Commercial Composting Accounts



Recology San Francisco Region Inbound Organics Collection - Trend

TPD/5



21.3% YOY growth on TTM avg.

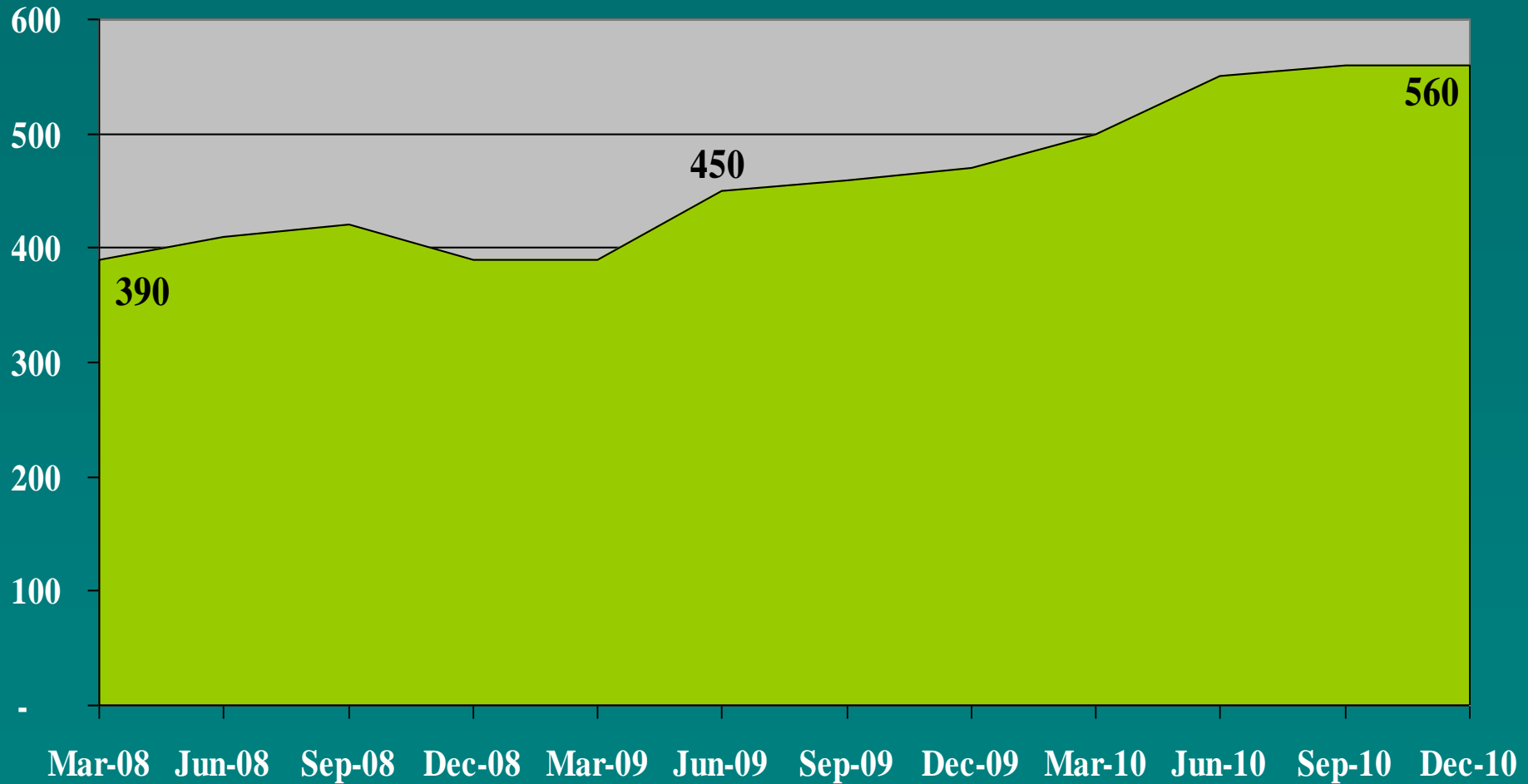
18.2% YOY growth on TTM avg.

19.0% YOY growth on TTM avg.

31.1% YOY growth on TTM avg.

--□-- Total RGG
 --◇-- Total RSS
 --X-- Fan 3 - RSS
 --△-- Commercial - RSS
 — TTM Avg. RGG
 — TTM Avg. RSS
 — TTM Avg. Fan 3 RSS
 — TTM Avg. Comm. RSS

Composting Collection Tons Per Day



Jepsen Prairie Organics using Engineered Compost Systems (ECS)



Nutrient Rich Compostable Food



Receiving, Shredding, Screening & Manual Sorting Out of Contaminants and 2nd Shredding of GW Feedstocks



Plastic Bags Primary Contaminant



Copyright Brad Wenner

CompDog & Pile Building



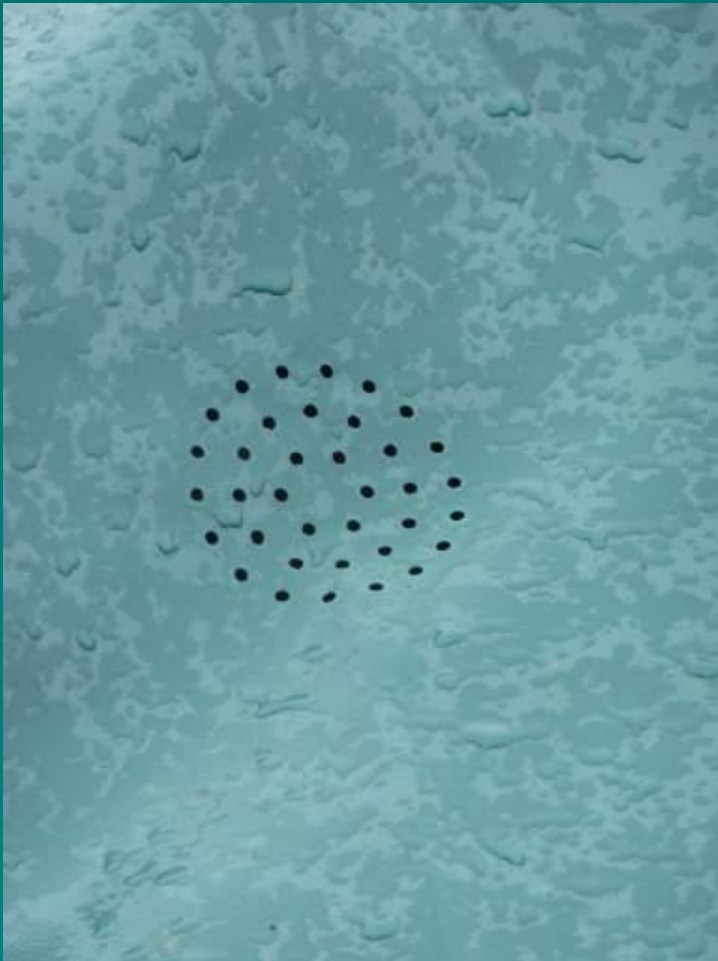
AC Cover



Aeration Vault Forming



Perforated Cover to Pull Air Through Pile into Duck Work



Aeration System



After 45 days Active Composting Compost Screened To 1/2 or 1/4 Inch



Custom Blending For Specific Markets and Organic Certified



Compost Used For Landscaping & Golf Courses



Compost Used On Organic Farms And Vineyards To Build Healthy Soils



Organic Produce Being Marketed Back to San Francisco



Diverting Food and Other Compostables From Landfill Sustains Soils and Closes Carbon & Nutrient Loop



Compost Up and Disposal Down

Disposal lowest on record (in 40 years)

Year	Landfill Disposal	Compost Collection	Diversion
• 2000	872,731	21,072	46%
• 2002	751,180	56,530	62%
• 2005	664,033	85,395	69%
• 2007	617,883	91,505	72%
• 2008	560,330	103,749	77%
• 2009	494,000	115,922	~>77%
• 2010	~450,000	141,271	~>77%

Carbon Emissions Savings & Benefits Through Composting Program

More than 757,000 tons of food scraps and plants have been composted since beginning of the program in 1996 in SF.

Resulting in:

- **Avoided creating 6,280 tons of methane gas in the landfill**
- **Sequestered, or put back into the soil, 62,200 metric tons of CO₂**
 - **equal to keeping nearly 12,100 cars off the road for one year**
- **Created a total CO₂E benefit of 194,000 tons**
 - **equal to reforesting 44 square miles of sustainable forest for 23 years or offsetting emissions from all vehicles crossing the Bay Bridge for 389 days (13 months)**

* Numbers based on a current adopted protocol set by the Climate Action Reserve and don't include benefits of reduced fertilizer, pesticide and irrigation use.

East Bay MUD WWTP Food AD Pilot

- 20+ tpd of shredded and screened SF commercial food scraps digested
- Food digested produces 3.5x energy than biosolids
- The biogas used to produce electricity to power the WWTP plant
- Provides a CO2 & Energy compliment to composting for food rich organics
- Working to expand program to digesting 120 tpd



San Francisco Working Toward Zero Waste for All

After chowing
Kung Pao
▶ A great recycling moment

Recycle paper, cartons, and more in this bin. There's a special sign on it that tells you what to recycle. It's green and has a recycling symbol on it. For more info, visit www.sfdirect.org. Call 311 for more info.

Use the blue cart and green cart for:
▶ Paper, plastic, cardboard
▶ Glass bottles
▶ Metal cans

When you're through with that apple, we'd love the core.

By putting food scraps in your green cart, you help San Francisco reach its goal of zero waste and fight global warming.

Where you toss food scraps makes a world of difference.

SFEnvironment.org

Facing the aftermath
▶ A great recycling moment

Maybe resident Harma knows how to throw a party. She's discovered that nearly everything, from paper plates to plastic containers, can go in her green or blue cart, making cleanup easy. Find out exactly what goes where at www.sfdirect.org.

Recycling changes everything.

Use the blue cart for:
▶ Plastic cups & containers
▶ Cans

Use the green cart for:
▶ Paper plates & leftovers

Where you toss paper makes a world of difference.

Put it in the blue cart.

SFEnvironment.org

A high-angle photograph of the Golden Gate Bridge in San Francisco, showing the red-painted steel towers and suspension cables against a clear blue sky. The bridge spans across the water, with the city skyline visible in the distance.

Thank You!

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