

SB 1383: SHORT LIVED CLIMATE POLLUTANTS



WASTE CONNECTIONS
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THE BENEFITS OF METHANE CAPTURE

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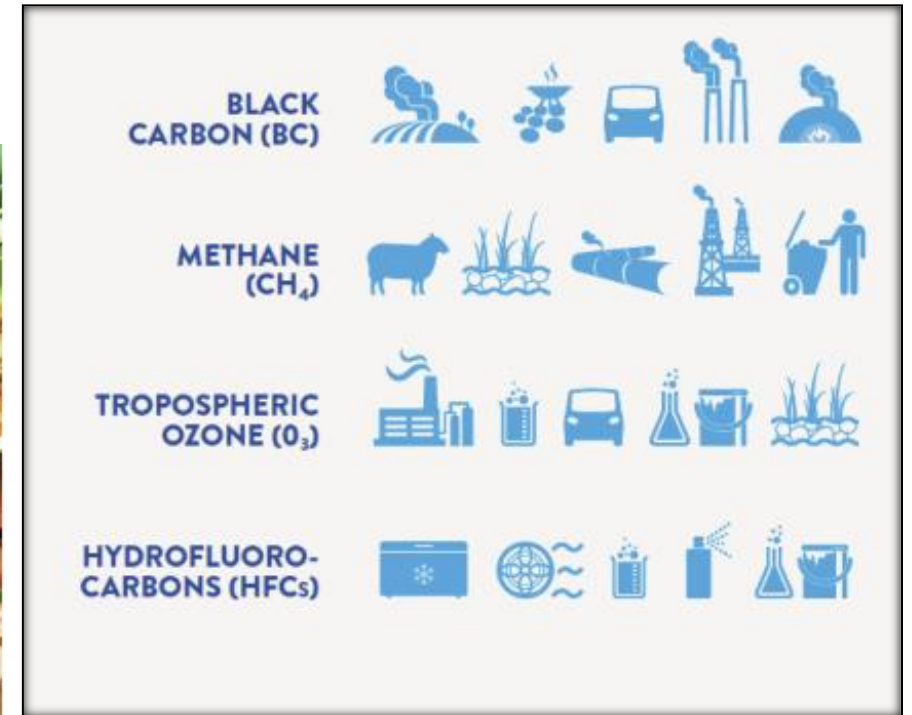
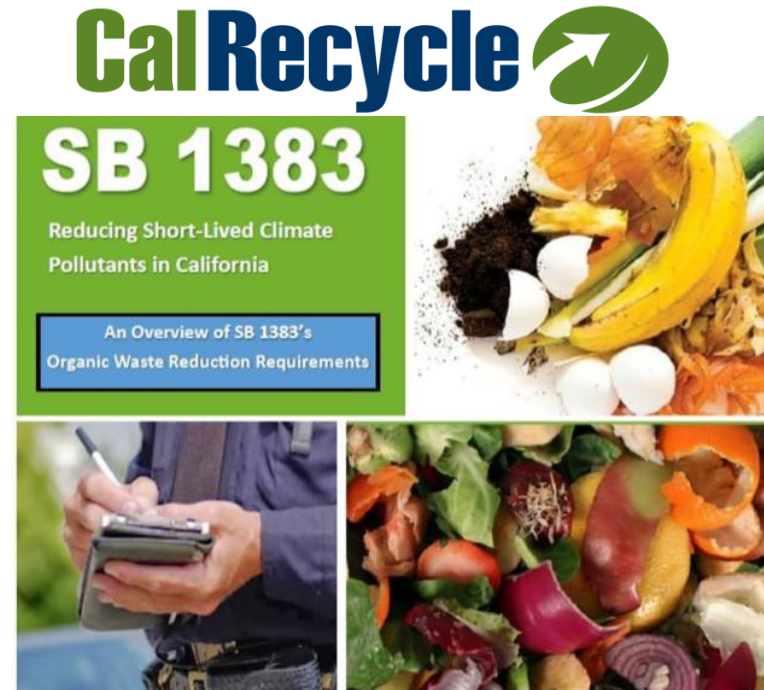
WHAT ARE SHORT-LIVED CLIMATE POLLUTANTS?

Short-lived climate pollutants (SLCP) are powerful climate forcers that have relatively short atmospheric lifetimes.

These pollutants include greenhouse gases, methane, hydrofluorocarbons and black carbon.

They are especially strong over the short term.

Acting now to reduce their emission can have an immediate beneficial impact on climate change and public health.

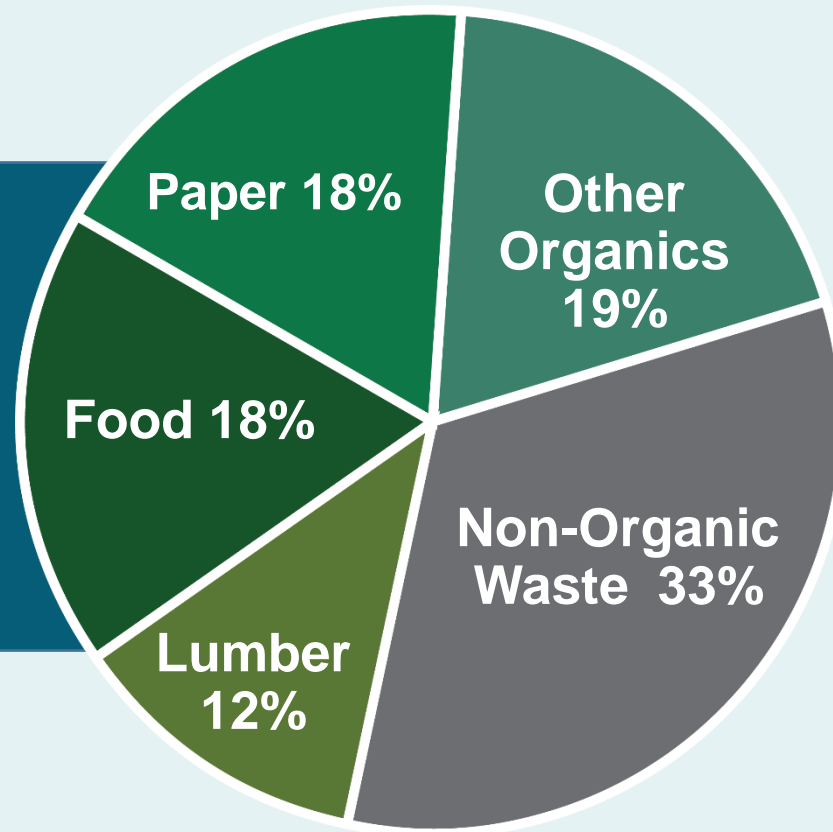


In response to this concern SB 1383 was signed into law and took effect in January of 2022 (Lara, Chapter 395, Statutes of 2016) .

It is the most significant waste reduction mandate to be adopted in California in the last 30 years.

ORGANIC WASTE IS THE LARGEST WASTE STREAM IN CALIFORNIA AND COMPRISES 2/3 OF THE WASTE STREAM

CALIFORNIA DISPOSED OF APPROXIMATELY **27** MILLION TONS OF ORGANIC WASTE IN 2017



CALIFORNIA'S WASTE STREAM

IN CALIFORNIA, MILLIONS ARE

FOOD INSECURE

1 IN 8 CALIFORNIANS

1 IN 5 CHILDREN



CALIFORNIA THROWS AWAY

MORE THAN 6 MILLION TONS

OF FOOD WASTE EVERY YEAR!

TRAININGS AND COMMUNITY OUTREACH ARE KEY TO THE SUCCESS OF SB 1383



COMPOST

BPI Certified Compostable Bags to collect food scraps are OK! Use your kitchen pail to collect food scraps. Empty the pail contents including the compostable bag into your green compost cart daily and place the cart out for collection every week. DO NOT place kitchen pails at the curb for collection.

Include the Food! It's as Easy as 1-2-3

- EVERY MEAL: put food scraps in the kitchen pail
- EVERY DAY: empty the pail (and the compostable bag) into the green compost cart
- EVERY WEEK: roll your cart out to the roadside for collection.

Every Meal



Every Day



Every Week



KEEPING RESOURCES OUT OF THE LANDFILL

DRIVER & AUDITOR TAGS

OOPS

The items checked below were found in your Recycling Cart and do not belong there!

Los elementos marcados a continuación se encontraron en su bote de reciclaje y no pertenecen allí!

RECYCLING

-  **STYROFOAM™ ITEMS** belong in garbage
HIELO SECO va en la basura
-  **PLASTIC BAGS** belong in garbage
BOLSAS DE PLÁSTICO va en la basura
-  **PAPER CUPS** belong in garbage
COPAS DE PAPEL va en la basura
-  **WAXED CARDBOARD** belongs in garbage
PAPEL CUBIERTO DE CERA va en la basura
-  **COMPOSTABLE PLASTIC** belongs in garbage
PLÁSTICO COMPOSTABLE va en la basura
-  **E-WASTE** call for information
DESECHOS PELIGROSOS llamar para de información
-  **GLASSWARE** belongs in garbage
CRISTALERÍA va en la basura
-  **OTHER/OTRO**

Please remove these items and we will empty your cart on your next service day. If you would like the cart emptied sooner, we can return for an additional fee. Elimine estos artículos y vaciaremos su carrito el próximo día de servicio. Si desea que el bote se vacíe antes, podemos regresar por una tarifa adicional.

RECYCLING RECYCLING RECYCLING

WHAT SHOULD GO IN YOUR RECYCLING CART

LO QUE DEBE IR EN SU BOTE DE RECICLAJE



Mixed Paper, Unwaxed Cardboard, & Paperboard
Papel Mixto, Cartón y Papel Sin Cera



Paper Cartons & Aseptic Packaging
Cajas de Papel y Envases Asépticos



Plastic Bottles, Jugs & Tubs
Botellas de Plástico, Recipientes, y Jarras



Glass Bottles & Jars
Botellas y Frascos de Vidrio



Metal Cans & Containers
Contenedores y Latas de Metal

OOPS

The items checked below were found in your Compost Cart and do not belong there!

Los elementos marcados a continuación se encontraron en su bote de composta y no pertenecen allí!

COMPOST

-  **GLASS** belongs in recycling
VIDRIO en el reciclaje
-  **PLASTIC BAGS** belong in garbage
BOLSAS DE PLÁSTICO va en la basura
-  **PET WASTE** belongs in garbage
DESECHOS DE MASCOTAS va en la basura
-  **DIAPERS** belong in garbage
PANALES va en la basura
-  **COMPOSTABLE PLASTIC** belongs in garbage
PLÁSTICO COMPOSTABLE va en la basura
-  **POISON OAK** belongs in garbage, bagged
HIEDRA VENENOSA va en la basura, en bolsa
-  **DIRT/ROCK** requires a temporary debris box for disposal
TIERRA/ROCA llamar para alquilar una caja de escombros
-  **OTHER/OTRO**

Please remove these items and we will empty your cart on your next service day. If you would like the cart emptied sooner, we can return for an additional fee. Elimine estos artículos y vaciaremos su carrito el próximo día de servicio. Si desea que el bote se vacíe antes, podemos regresar por una tarifa adicional.

COMPOST COMPOST COMPOST

WHAT SHOULD GO IN YOUR COMPOST CART

LO QUE DEBE IR EN SU BOTE DE COMPOSTA



Food Scraps & Food-Soiled Paper
Restos de Comida Papel Sucio con Restos



Plant Trimmings
Plantas

Only BPI certified plastic bags are allowed. Solo se permiten bolsas de plástico certificadas por BPI.

UNDERSTANDING BENEFITS OF COMPOST KEY TO SUCCESS OF SB 1383



Compost use is climate change management.

Carbon is critical to soil function and productivity and a main component of and contributor to healthy soil conditions.

Carbon farming practices sequester carbon and reduce GHG emissions.

Carbon farming optimizes carbon capture on working landscapes.

Carbon farming practices improve the rate at which CO₂ is removed from the atmosphere and stored in plant material and soil organic matter.

Compost, a readily available resource for high organic matter, is produced here with your partnership.

Our compost is certified organic with OMRI and CDFA. Most vineyard and crop farmers will not purchase compost without these certifications.

Procurement and community give backs are a requirement of SB 1383. 6

LANDFILL GAS

RESOURCE RECOVERY: LANDFILL GAS

Resource recovery also extends to our landfills, where we deploy gas recovery systems and provide renewable energy to many of the communities we serve. We have installed gas collection systems for the capture of landfill gas generated at over 53 of our solid waste landfills, often in advance or exceeding regulatory requirements. Our gas recovery systems create the opportunity to convert landfill gas to a renewable energy source and mitigate the environmental impact. At 27 of these landfills, we have beneficial reuse facilities, either through electric generation or Renewable Natural Gas (RNG) recovery. These facilities generate electricity for local households, fuel local industrial facilities, and/or create RNG that can power alternative fuel vehicles. These projects create marketable environmental attributes such as carbon emission credits, Renewable Energy Credits (RECs) or Renewable Identification Numbers (RINs).

Our nine RNG facilities, including one of the largest in North America, provide pipeline-grade methane for use by the transportation industry and represent an area of future growth. We estimate that there are opportunities for new RNG systems or conversions to RNG at 15 to 20 of our landfills.



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53

of our solid waste landfills have gas collection systems installed

27

Landfills have beneficial reuse facilities, either Renewable Natural Gas (RNG) or electric generation

~300K

Homes our landfills provide enough energy to power annually

28

301

LANDFILL METHANE GAS TO ELECTRICITY

2014 Clover Flat Landfill launched a landfill gas to electricity program and converted our name to Clover Flat Resource Recovery Park.

We are processing and recovering more materials than we landfill. The site is permitted to accept waste until 2047.

It took 4 years to get the facility up and running and to receive permits and power purchase agreement with PG&E.

Parts of the Landfill Gas to Electricity System include:
flare, gas wells, conveyance system, condensate removal, engine, power line to switch gear



CLOVER FLAT
RESOURCE RECOVERY PARK



LANDFILL METHANE GAS WELLS



Wells are installed to pull methane gas out of the landfill

Today there are 27 wells and 5 more are planned for installation this year

Each well produces 10-15 standard cubic feet of gas per minute

A well will produce gas for ~10 years

LANDFILL METHANE GAS FLARE

The gas flare system was installed in 2000 to capture and clean burn the methane.

This is a requirement by the air district once the landfill reaches one million cubic yards of material.

Today the flare is used when the engine goes down for maintenance or there is a power shut down from PG&E.



LANDFILL METHANE GAS SKID FOR CONDENSATE REMOVAL

The gas from the wells is collected and conveyed through thick HDPE pipe and is sent to the Gas Skid for pre-treatment before it enters the engine.

Condensate is removed and collected and sent to a wastewater treatment plant or reused on the lined area of the landfill for dust control.

After the condensate is removed, the gas is transferred to the engine to be converted.



LANDFILL METHANE GAS ENGINE

The Jenbacher Engine is completely self contained, 1175 horsepower, 848 KW.

There are 16 interior cylinders, water cooled, and is complete combustion technology.



LANDFILL METHANE GAS TO ELECTRICITY SWITCH GEAR

Once converted through the engine the electricity is sent to the Switch Gear.

This is the connection point to PG&E located at the base of Clover Flat Road and Silverado Trail.



LANDFILL METHANE CONVERTED TO RENEWABLE POWER IN OUR COMMUNITY

Clover Flat Resource Recovery Park powers the equivalent of 1000 homes in Calistoga.



OUR VISION OF THE CIRCULAR ECONOMY



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ZERO WASTE

We believe our sustainability initiatives align with and support the efforts of our customers and the communities we serve.

We regularly work with customers to increase resource recovery and facilitate their pursuit of zero waste goals. Whether providing services like composting of yard waste and food waste or supporting the introduction of new technologies, such as anaerobic digesters, we partner with communities and industrial customers to advance their objectives to reduce their reliance on landfills, decrease waste disposal costs and reduce emissions.

Contact Information

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