

Appendix 23

Sacramento County Airport System

Sacramento International Airport (SMF)

Sacramento, California

Sacramento County Airport System is focused on increasing landfill diversion from Sacramento International Airport (SMF). To this end, SMF provides recycling opportunities for passengers, employees, and food and beverage concessionaires (including food waste).

SMF is required to comply with State of California commercial organics and single stream recycling mandates outlined in Assembly Bill 1826 and Assembly Bill 341, respectively. Locally, the Sacramento Solid Waste Authority requires businesses to collect recyclables and organics and inform employees and tenants of recycling requirements. The Sacramento County Airport System has a resource stewardship policy which speaks to SMF's dedication to responsible resource stewardship and minimizing material consumption. SMF has conducted waste stream composition studies and has a goal to increase landfill diversion to 35% or greater by 2020. SMF is in the process of developing a Sustainability Management Plan which will shape additional policies and objectives.

SMF's recycling and waste diversion program is managed by a dedicated Recycling Coordinator in the Planning and Environment section. The Coordinator monitors and tracks the program's achievements and challenges. The coordinator is supported by the Planning and Environment section and a Waste Management Working Group.

SMF's Parks Maintenance section administers the waste and recycling hauling contracts; waste activities are funded by the Parks Maintenance section; the Central Warehouse; and the Planning and Environment section. Janitorial activities are the responsibility of Airport staff as well as janitorial contractors. SMF contracts with private waste and recycling hauling companies for transport of these materials; these companies provide annual data pertaining to the quantity of materials generated, recycled, composted, and landfilled. SMF's diversion rate is reported to Sacramento County; the amount of food waste diverted is advertised on SMF's website and wall graphics.

To reduce waste to the landfill, SMF has rightsized the garbage bags/bin liners used in cans and bins throughout the facility. This effort is anticipated to divert about 22,430 pounds of plastic compared to the previous bags. The bags used at SMF also represent reuse as they are made from repurposed irrigation hose. During landscaping activities, reusable burlap sacks are used for tree and shrub clippings instead of plastic bags. Reusable tumbler cups were distributed to employees who participated in recycling training; these reduce consumption of single-use disposable cups and bottles.

Airport employees recycle aluminum, cardboard, glass, paper, and plastic through a single stream program via bins available in offices and other work areas. SMF also recycles pallets, cooking grease, tires, and materials from construction projects. Paper towels and printer paper purchased by SMF contains recycled content. An Airport Operating Procedure dedicated to recycling directs employees on proper management of these materials (attached at the end of this case example). Employees on every shift were provided training on recycling; the containers and collection areas they use are labeled and signed. A presentation used by the Recycling Coordinator and Airport staff during employee training is attached at the end of this case example. Most employees have access to water coolers and dishwashers which facilitate use of durable dishes.

Training on recycling opened a dialogue between the Recycling Coordinator and other Airport employees. Through this interaction, SMF learned that custodial staff were using the same carts to service waste and recycling bins. As a result of this observation, the custodial staff began using double carts to ensure the materials were segregated appropriately. They also began using different color bags (white or clear for recycling and black for trash) to distinguish between the streams.

Passengers in the terminal can use recycling and waste containers located throughout the facility. SMF provides liquid collection stations at the entrance to the security checkpoint queuing area. The recycling stations in the food court feature five containers, including receptacles for landfill-bound waste, recyclables, and liquids, as well as a bin designed for collection of pizza boxes (Figure 1). SMF provides a separate collection for pizza boxes because they are bulky and can quickly take up available space in the recycling containers. Collecting them separately reserves space in the recycling containers for smaller items and reduces the frequency at which the recycling containers need to be serviced (emptied). SMF also provides containers in parking and other exterior areas (Figure 2). Information about recycling is shared with passengers through container labels and other signage.

Prior to the adoption of Assembly Bill 1826 which requires organics recycling, SMF participated in a pilot program for pre-consumer food waste collection and diversion. This program allowed SMF to address logistical challenges and tenant's concerns prior to implementation of a full program.

Most of SMF's tenants participate in SMF's waste and recycling program, including concessionaries, retail, and airlines. These services are included in their lease rates. At this time, Airport terminal food and beverage tenants in one of SMF's concourses are required, through their leases, to recycle commingled recyclables and pre-consumer food waste organics. The lease agreements specify proper waste and recycling management as a performance standard; noncompliance is a violation of this agreement and can result in a fine. Each food and beverage tenant has identified a recycling champion to assist other employees with waste management. The Recycling Coordinator is a resource for the champions and restaurant managers and provides support for tenant employee training. A presentation used by the Recycling Coordinator and Airport staff during concessionaire training is attached at the end of this case example.

The Recycling Coordinator also conducts weekly inspections to monitor restaurant compliance. These inspections provide the opportunity for instantaneous feedback, including compliments and corrections. Through these efforts, the Recycling Coordinator has fostered productive relationships with the tenants.

SMF also provides recycling area signage tailored to concessionaire operations (Figures 3 and 4). These posters feature full color photographs of actual packaging and other items identified as recyclable or waste. Communication, monitoring, and training have increased tenant participation, reduced contamination, and increased recycling.

There are no commercial composting facilities in Sacramento County. SMF's food waste is processed at an anaerobic digester where it is converted to natural gas and electricity. The digester does not accept food soiled paper or compostable packaging. The landfill used by SMF utilizes a methane gas recovery system and produces electricity from this source.

Looking forward, SMF is preparing to launch a food donation program and install additional food waste compactors. SMF is working to integrate sustainable waste management into the activities of other Airport sections and is evaluating a furniture donation program.



Figure 1: Terminal food court recycling station, courtesy of Sacramento International Airport



Figure 2: Exterior waste and recycling containers, courtesy of Sacramento International Airport



Figure 3: Concessionaire back of house recycling signage, courtesy of Sacramento International Airport

LANDFILL (TRASH)



Figure 4: Concessionaire back of house waste signage, courtesy of Sacramento International Airport



AIRPORT OPERATING PROCEDURES

Airports' Recycling Program

AOP NO: 50-06

Original Date: September 12, 2014

SMF
MHR
SAC

PURPOSE:

This Airport Operating Procedure (AOP) clarifies and standardizes the requirements and procedures for recycling for the Department of Airports ("Airports"), tenants, and on-site contractor operations.

POLICY STATEMENT:

In order to reduce waste disposal costs, conserve natural resources, and comply with the State laws and County ordinances, all staff with Airports, tenants, and on-site contractors are required to participate in the Airports Recycling Program. In addition to recycling, Airports staff, tenants, and on-site contractors are encouraged to reuse materials when possible to further reduce disposal costs, purchasing costs, and conserve natural resources.

PROCEDURES:

The protocols for recycling various types of materials are detailed here.

- 1) Mixed Recyclables:** The Airports Recycling Program includes the following main categories of materials that can be mixed together in the recycling containers:
- Paper: White, colored, copy, fax, newspaper, magazines, envelopes.
 - Cardboard and Paperboard.
 - Metals: Aluminum, steel, and bi-metal cans.
 - Glass: All colors of bottles and jars.
 - Plastic: All numbers 1-7 (see Attachment 1)

Instructions for Mixed Recyclables:

- a) Refer to the Airports Recycling Program poster (Attachment 2) for a detailed listing of which materials can and cannot be placed in the mixed recycling containers.
- b) Empty liquids from recyclable containers before placing into recycling containers when possible.
- c) Rinse off food from recyclable metal, glass, and plastic containers before placing into recycling containers.
- d) Caps, lids and labels do not need to be removed from recyclable metal, glass, and plastic containers before being placed in recycling containers.

- e) Staples, paper clips, binder clips, tape, rubber bands, sticky notes and tabs, and spiral binding do not need to be removed from paper items before being placed in recycling containers.
 - f) Recycling containers for mixed recyclables are located throughout the public and tenant spaces at SMF. A recycling container is located in the terminal lobby at SAC.
 - g) Recycling compactors and dumpsters are made available to tenants who subscribe to Airports recycling service.
 - h) All mixed recyclables shall be placed in a recycling container, collected and placed into a recycling compactor or dumpster.
 - i) Lids on all recycling dumpsters must be kept closed except while in use.
 - j) Do not overfill dumpsters. Contact the Maintenance Call Center at 874-0311 to report an overfilled dumpster.
 - k) Scavenging of recyclables is prohibited. In accordance with County code, it is unlawful (and unsafe) to collect or remove any salvageable materials from a recycling or trash collection container.
 - l) Do not place trash or other prohibited items (examples: appliances, batteries, biohazardous waste, construction and demolition debris, electronics, fluorescent tubes and bulbs, green waste, hazardous waste, ink and toner cartridges, non-empty aerosol cans, scrap metal, used antifreeze/coolant, used oil and oil filters, and used tires) into the containers, compactors, or dumpsters for mixed recyclables. These materials are collected through separate programs.
- 2) Cooking grease:** Cooking grease collection containers are available to restaurant tenants in Terminal A, Terminal B, and Concourse B at SMF. Tenants not in SMF Terminal A, Terminal B, or Concourse B at SMF and at SAC are responsible for obtaining their own grease collection containers and service. It is required that fats, oils, and grease (known as FOG) are collected and not put down the drain.
- 3) Green Waste:** Green waste includes grass, leaves, and tree and shrub trimmings. Grass clippings and leaves on turf shall be mowed using mulch mowers, leaving clippings on site as mulch, and not bagged or discarded. Suitable tree branches and shrub trimmings shall be chipped with wood chipper and recycled back as mulch for tree groves and other landscaped areas.
- 4) Scrap metal:** Scrap metal consists of recyclable and non-recyclable materials left over from replacement parts of equipment or vehicles, building supplies, surplus materials or other non-usable metals. Scrap metal for recycling generated by Airports shall be stored in a designated area and container in Area 13 at SMF. Scrap metal generated by MHR, SAC, F72, and MCC may be transported to SMF's designated area. The proper storage and recycling of scrap metal generated by tenants shall be the responsibility of each tenant. Under no circumstance shall scrap metal be disposed of in the trash or recycling compactors or dumpsters.
- 5) Used Tires:** Used tires are also known as waste tires, scrap tires, and junk tires. Used tires for recycling that are generated by Airports are stored in a designated area

in Area 13 at SMF. Used tires for retreading/recapping that are generated by Airports are stored in a designated location by the Airports Equipment Maintenance Shop at SMF. Used tires generated at MHR, SAC, F72, and MCC may be transported in an Airports vehicle to SMF. Up to nine (9) used tires may be transported in one vehicle at a time without registering as a Waste Tire Hauler. The storage and recycling of used tires generated by Airports tenants are the responsibility of each tenant. Used tires must be stored in a manner to prevent mosquito breeding. Refer to the Used Tire Storage poster for additional details.

- 6) **Construction and Demolition (C&D) Debris:** Commonly generated C&D debris includes, but is not limited to, asphalt, concrete, brick, wood, metal, wallboard, and roofing material. All C&D debris generated by any Airports project must be recycled. This includes C&D generated by Airports staff, tenants, and construction contractors.
- 7) **Universal Waste:** Commonly generated Universal Wastes generated by Airports include, but are not limited to, dry-cell batteries, non-empty aerosol cans, electronics, and mercury containing tubes and light bulbs.
 - **Batteries:** Battery collection procedures are detailed in AOP 10-09.
 - **Non-empty Aerosol Cans**
 - **Electronic Waste:** Commonly generated electronic wastes include, but are not limited to, computer equipment, cell phones, TVs, and DVD players. Electronic waste generated by Airports must be sent to County Surplus. Tenants are responsible for the proper disposal of electronic waste that they generate. Information on the most current local and free electronic waste recycling sites is available from Airports Planning and Environment Section.
 - **Mercury-Containing tubes and light bulbs**
- 8) **Hazardous Waste:** Some hazardous wastes are recyclable, such as used oil, used oil filters, used anti-freeze/coolant, and wet-cell lead-acid and sulfuric-acid batteries. These recyclable hazardous wastes generated by Airports are to be stored in their designated locations. Proper storage and disposal of all hazardous waste generated by tenants is the responsibility of each tenant.

RESPONSIBILITY:

It is Airports' responsibility to provide and maintain recycling infrastructure such as compactors, towable bins and other receptacles as required. It is the responsibility of all Airports, tenant, and contractor employees to comply with the collection procedures of recyclable materials.

It is the responsibility of the Planning and Environment Section to maintain the poster on mixed recyclable materials. Project Managers in Design and Development will incorporate these guidelines into construction plans and specifications. The Properties Section will incorporate these guidelines into lease and concession agreements. Facilities will incorporate these guidelines into the appropriate maintenance and operations agreements.

Airports tenants who subscribe to their own trash service with four (4) cubic yards or greater of garbage collection service per week are required to have a recycling program in accordance with the local ordinance. The ordinance allows businesses to either arrange for their trash hauler to also take their recyclables or self-haul their recyclables to a recycling facility. Tenants, who subscribe to their own trash/recycling service, are responsible to provide Airports with waste generation and recycling figures for each calendar year starting January 1, 2015.

It is the responsibility of Airport Concessionaires to comply with the procedures of this document as stated in Article 3, General Conditions, Trash and Garbage section of their agreement.

Concessionaires are responsible to take appropriate action in handling waste and recyclable materials for proper transportation and disposal away from Airport resulting from, or associated with, Concessionaire's use of their Leased Premises.

It is the responsibility of construction contractors to provide Airports with waste generation and recycling figures for each project starting January 1, 2015.

All tenants and on-site contractors are responsible for their own proper handling, storage, and disposal of prohibited materials.

Date

John Wheat
Director of Airports

Author: Waste Management Working Group

Attachments: A (Plastics 1-7)
B (Airports Recycling Program poster)

Attachment A

Plastics 1-7



PETE

HDPE

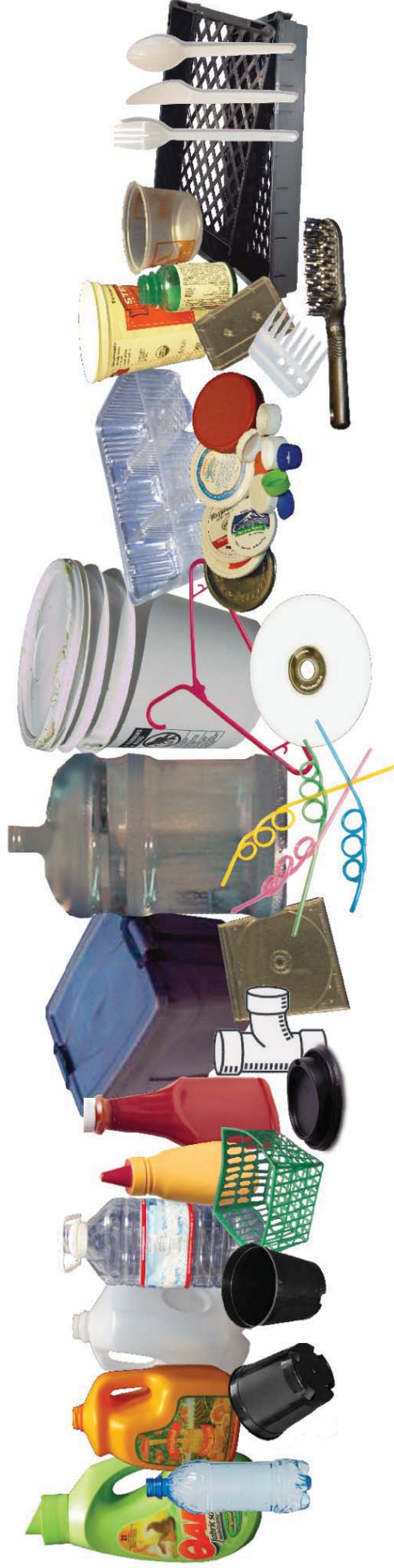
V

LDPE

PP

PS

Other



SMF Recycling Training

County Department of
Airports:

Bree Taylor
Tiffany Pham





Why Recycle?

It's the LAW!

- ▶ AB 341 (Chesbro, 2011) – large venue (e.g. airports) with more than 4 cubic yards must have recycling program
- ▶ AB 1826 (organics recycling, 2016) – entities with 8 cubic yards or more must have organics recycling



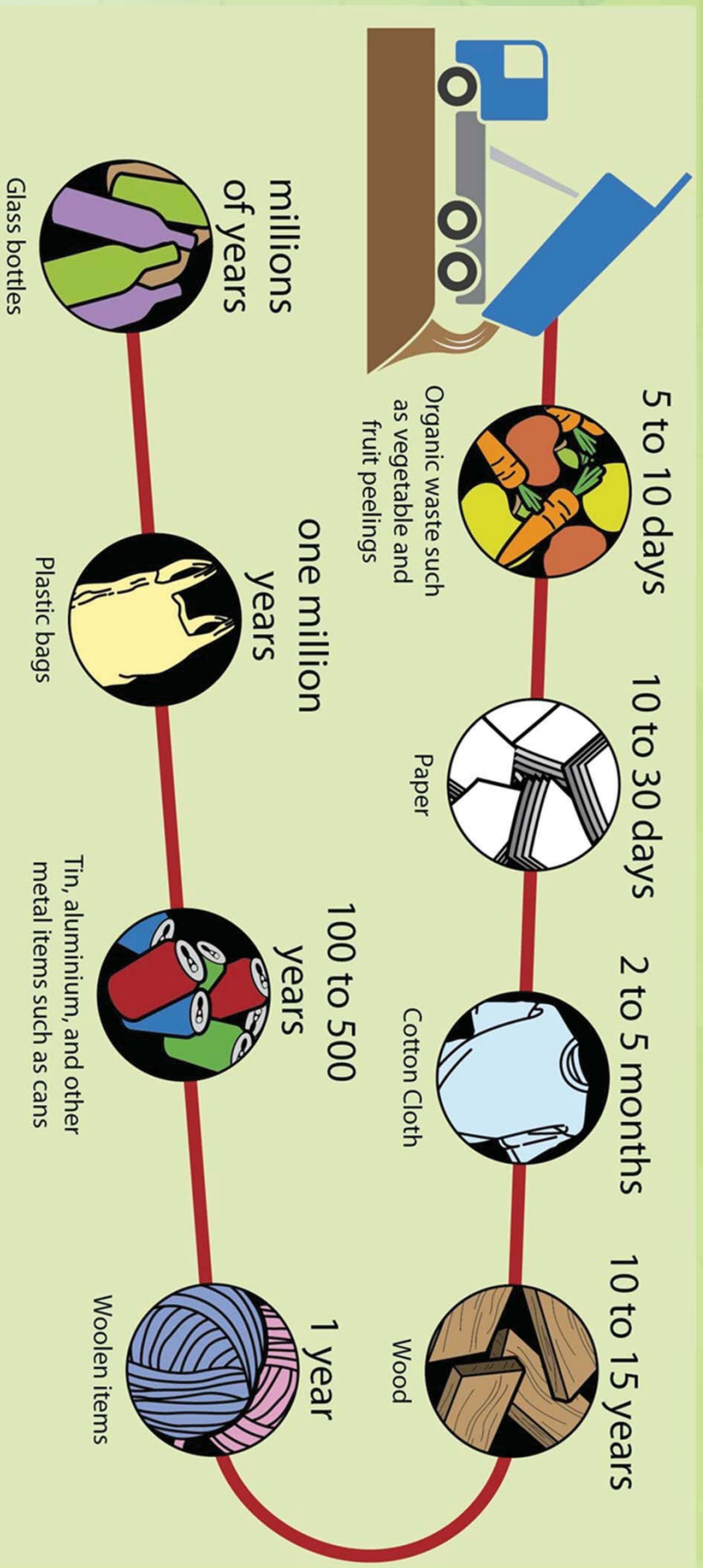
Yolo County Landfill



Methane gas



How long does it take to break down in the landfill?





Place material in grey bin



Custodial/P/RIDE takes material to compactor, where it is ready for shipment to the Yolo County Landfill



Trash is thrown into the landfill. The amount of time it takes to break down depends on the material. Plastic, glass, and aluminum take 100+ years to degrade.





The recycled material is used for various products and resold in stores.



Place recyclable material in blue bin



Custodial/PRIDE takes recyclable material to compactor, where it is ready for shipment to the Material Recovery Facility



Material is pelletized, sanitized, and processed. The ground up material is made into new products and containers.



Sorted material is compacted and prepared for shipment to the proper processing facility



Waste is sorted based on material at MRF. Unacceptable waste is sent to the landfill.

1. Reduce
2. Reuse
3. Recycle

buy only what
you need -
need what you
buy!

REDUCE
THE AMOUNT OF
MATERIALS
YOU USE, WHICH



REDUCES
THE AMOUNT
OF WASTE
YOU CREATE.

REUSE
MATERIALS
WHEN POSSIBLE.



RECYCLE
WHENEVER
POSSIBLE.



RETHINK
THE MATERIALS

YOU
USE

AND
THOSE

YOU
THROW
AWAY

3 types of waste disposal at SMF

- ✓ recyclables – blue bin,
- ✓ landfill (trash) – gray/black bin,
- black bag
- ✓ food waste- yellow bin





Plastic Containers #1-7



Soda Bottles



Glass Bottles



Aluminum, Steel and Tin Cans

Printed on recycled paper

Recyclables



Office Paper



Cardboard



Newspaper



RECYCLE



Plastics 1-7



PETE

HDPE

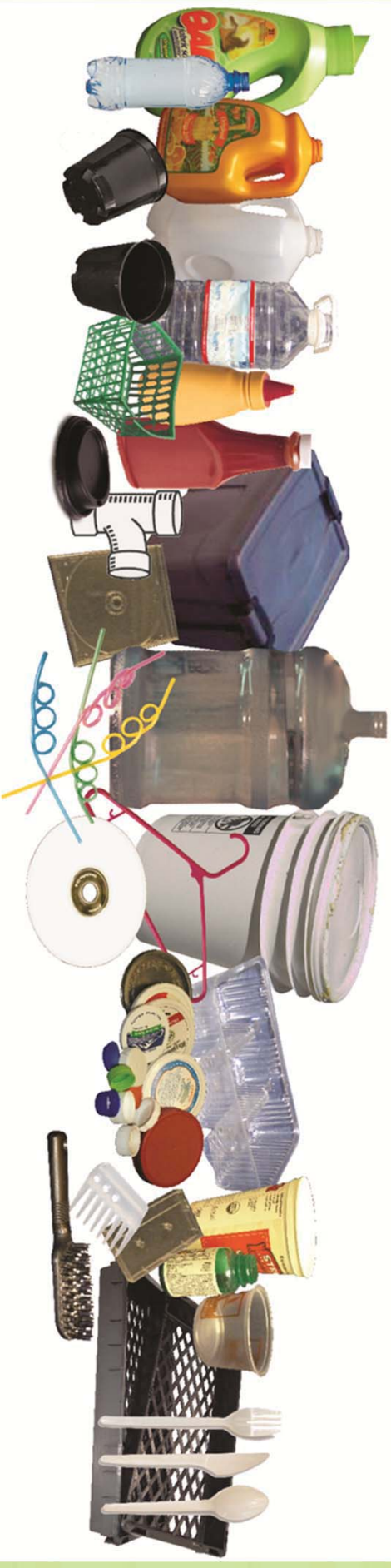
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LDPE

PP

PS

Other





Concessions Recycling Training

County Department of Airports:
Bree Taylor, Tiffany Pham, Adam Little





Why RECYCLE?

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Venues & Stadiums

(arenas, stadiums, convention centers)



Raley Field,
City of West
Sacramento



Why RECYCLE?



Landfills cause:

- Air pollution
- Soil & water contamination

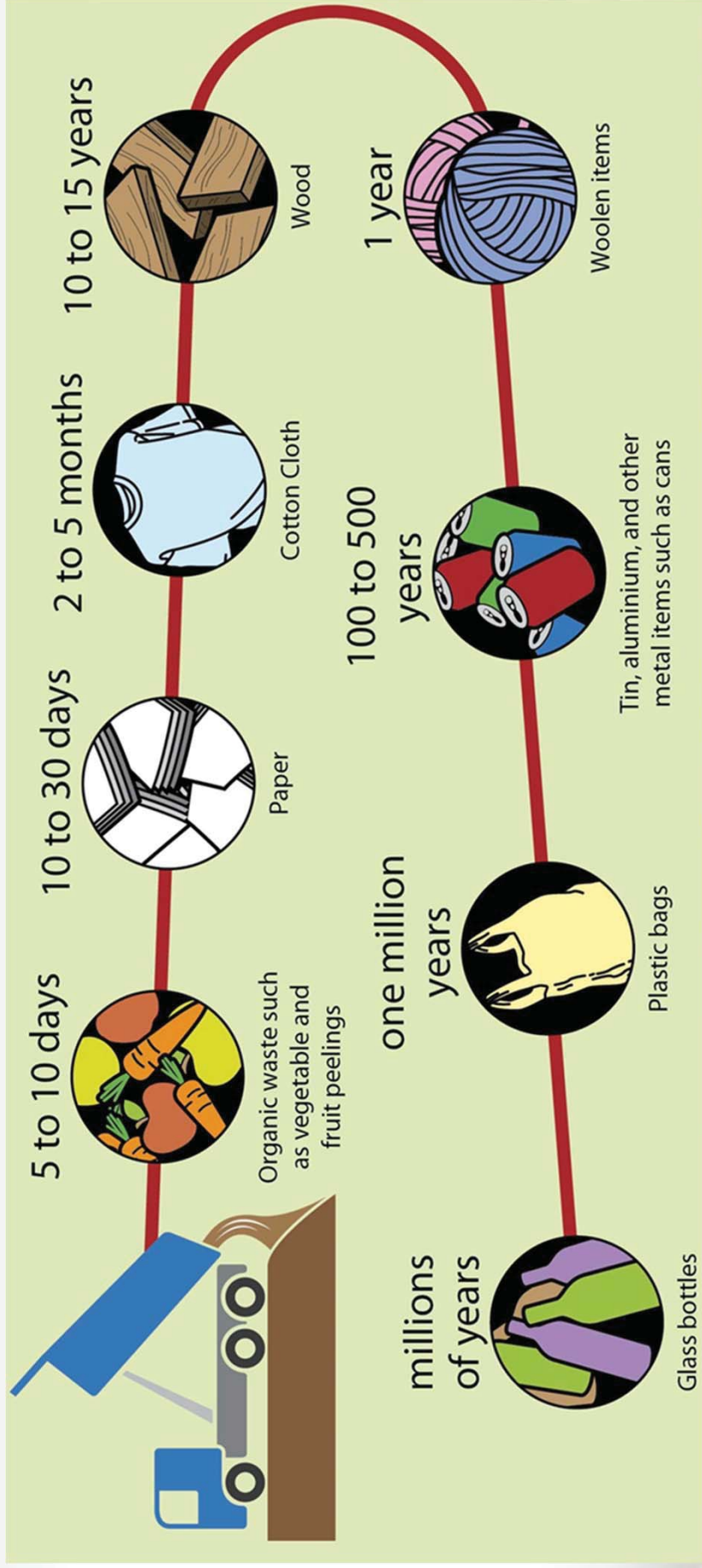
1 new landfill every year
without recycling!

Yolo County Landfill

Methane gas



How long does it take to break down in the landfill?



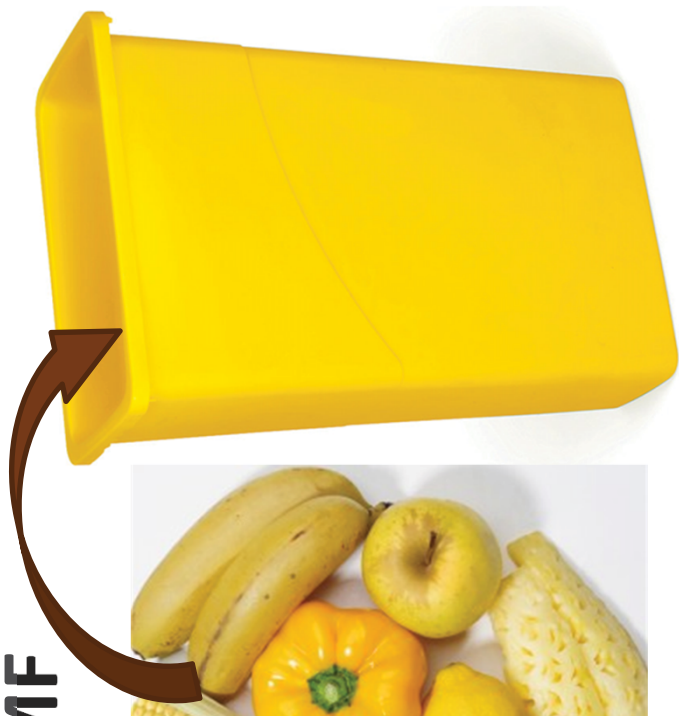
How to keep waste out of the landfill?

1. Reduce
2. Reuse
3. Recycle





3 types of waste at SMF



✓ food waste
- yellow

✓ recyclables
- blue

✓ landfill (trash) -
gray



Remember: Bag your waste properly!



What **CAN** go into Food Waste?

What CAN be digested:		
Liquids	Yellow & brown grease	Cooking oil
		
Meat	Plate Scrapings	Bones
		
Dairy Products	Baked Goods	Kitchen Trimmings



What **CANNOT** go into Food Waste?

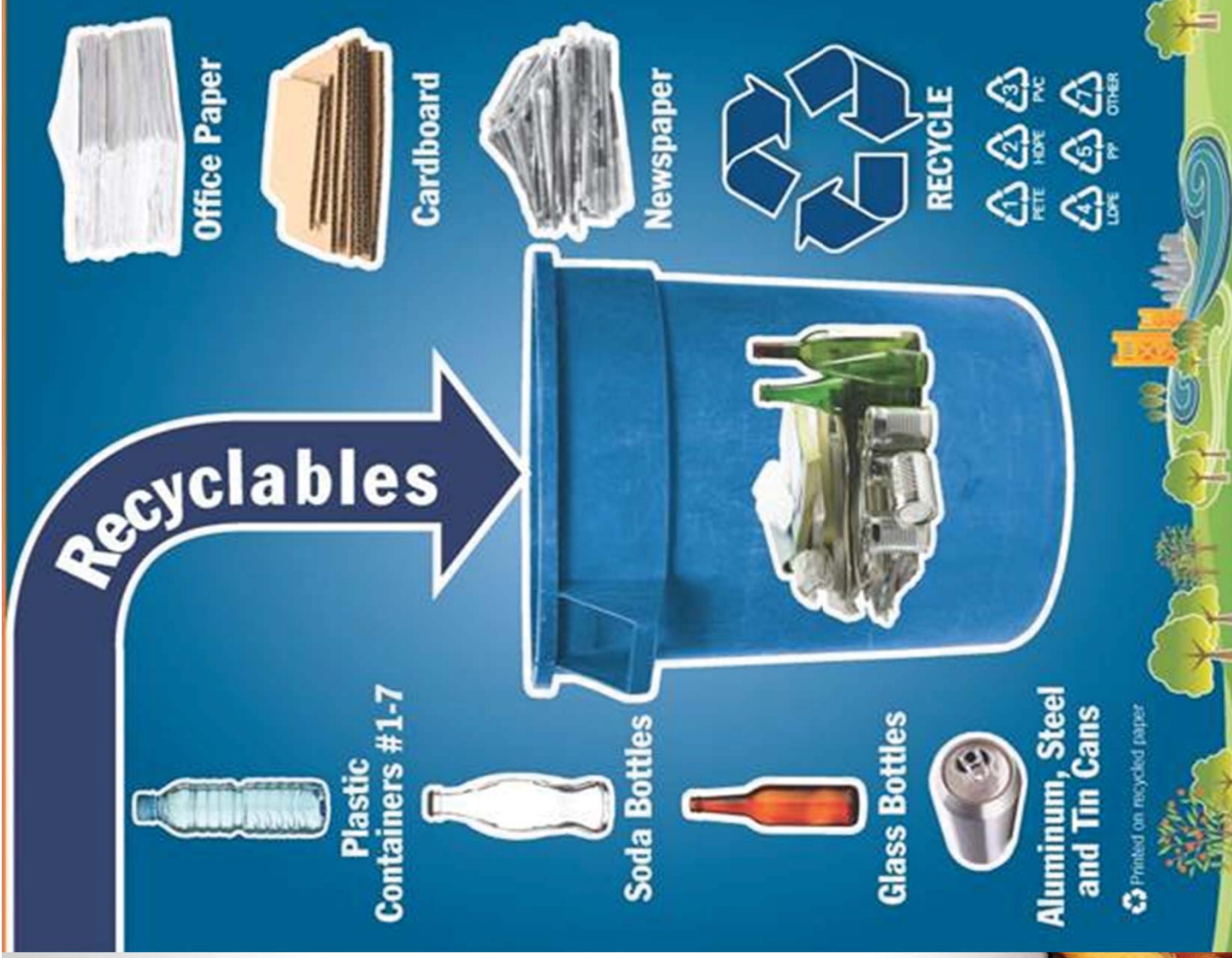
- Plastic
- Aluminum
- Glass
- Receipts
- Plastic-lined cartons, cups, etc



What happens to the food when it leaves SMF?



What to
put in the
blue bin?



Recyclables

Office Paper

Cardboard

Newspaper

Plastic Containers #1-7

Soda Bottles

Glass Bottles

Aluminum, Steel and Tin Cans

RECYCLE

1 PETE HDPE PVC
2 3
4 LOVE TP OTHER
5 6 7

Printed on recycled paper

The poster features a central blue recycling bin filled with various items. A large blue arrow labeled 'Recyclables' points into the bin. Surrounding the bin are illustrations of acceptable items: stacks of office paper, cardboard boxes, newspapers, plastic containers (numbered 1-7), soda bottles, glass bottles, and aluminum, steel, and tin cans. To the right of the bin is a 'RECYCLE' symbol and a list of plastic resin codes (1-7) with their corresponding abbreviations. At the bottom right, there is a small recycling symbol and the text 'Printed on recycled paper'. The background of the poster is blue with a green landscape illustration on the right side.

What to put in the blue bin?

Plastics 1-7



PETE

HDPE

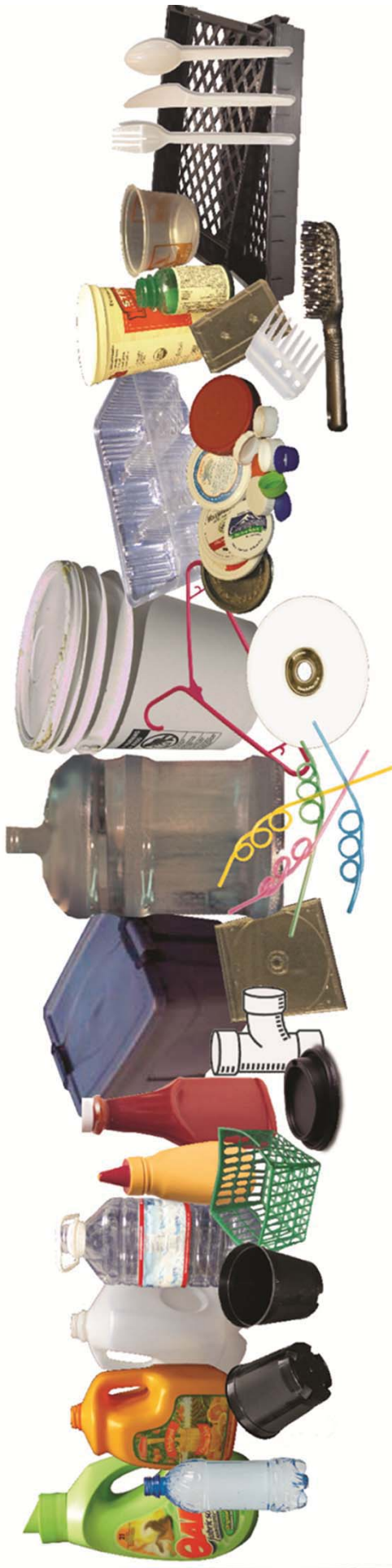
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LDPE

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PS

Other

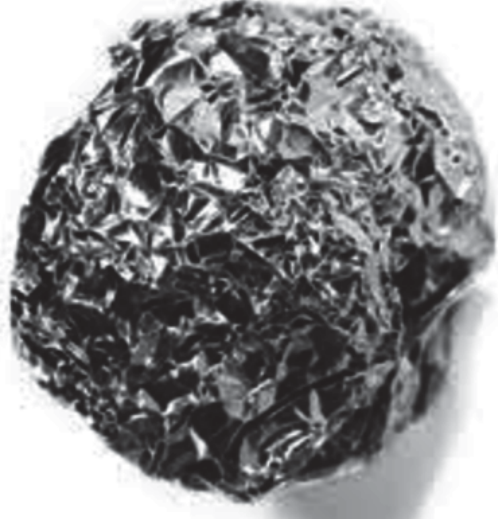


What DOES go into the landfill?

- Receipts
- Plastic wrappers
- Aluminum foil
- Paper cups (soda and coffee cups)
- Gloves



Where do these items go?



What is wrong with this photo?



What is wrong with this photo?

