



MARK PESTRELLA, Director

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
<http://dpw.lacounty.gov>

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE REFER TO FILE: **EP-8**
10056-1-1

October 10, 2019

TO: Each Supervisor
FROM: Mark Pestrella
Director of Public Works

**BOARD MOTION OF OCTOBER 21, 2014, AGENDA ITEM 34
ROADMAP TO A SUSTAINABLE WASTE MANAGEMENT FUTURE
FIFTH ANNUAL REPORT: OCTOBER 2018 THROUGH OCTOBER 2019**

The Board adopted the Roadmap to a Sustainable Waste Management Future on October 21, 2014. The Roadmap lays out the general framework for the strategies and initiatives the County can implement to maximize the recovery of products, materials, and energy from waste that would otherwise be disposed of at landfills.

As directed by the Board, Public Works must submit an annual progress report on the implementation of the Roadmap. The Fifth Annual Report for the period of October 2018 through October 2019 is attached.

Since the Roadmap was adopted in October 2014, there has been a major paradigm shift in the waste management industry due to the urgency to combat climate change, new recycling laws, and mandates as well as the recycling crisis triggered by the China National Sword, which restricted imported recyclable materials. Public Works plans to update the Roadmap to address waste management in alignment with the state of the waste industry and our recently adopted County Sustainability Plan.

This effort will require a robust stakeholder engagement process with the Chief Sustainability Office, County departments, cities, the waste and recycling industry, businesses, residents, environmental organizations, and other stakeholders in the County. Over the next few months, we will be scheduling regular meetings with each of your offices to solicit feedback on our proposed initiatives as well as our comprehensive strategy for stakeholder engagement.

Each Supervisor
October 10, 2019
Page 2

If you have any questions regarding this report, please contact me or your staff may contact Shari Afshari at (626) 458-4008 or safshari@pw.lacounty.gov.

WB:rw

P:\Sec\2019 Roadmap Memo Supervisor.docx

Attach.

cc: Chief Executive Office
County Counsel
Executive Office
All County Departments

2019

**Roadmap to a Sustainable
Waste Management Future
Annual Progress Report**



October 10, 2019

Roadmap Participant List¹

Prepared in coordination with the Roadmap Interdepartmental Working Group, which includes the following County departments and special districts:

Chief Executive Office
Health Services
Internal Services
Office of Sustainability
Public Health

Public Works
Regional Planning
Sanitation Districts of Los Angeles County
Sheriff

Other Roadmap participating County departments:

Alternate Public Defender
Arts and Culture
Beaches and Harbors
Consumer and Business Affairs
Medical Examiner – Coroner
Mental Health
Probation
Public Health
Public Social Services
Regional Planning
Registrar-Recorder/County Clerk

¹ Participant list includes only those that have participated during the current reporting year.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
INTRODUCTION/BACKGROUND	7
PROGRESS OF INITIATIVES BY FOCUS AREA	7
County Unincorporated Communities	8
Strategy 1: Programs and Services	
Initiative A: Institutionalize Waste Prevention and Source Reduction	8
Initiative B: Advocate for Extended Producer and Manufacturer Responsibility	9
Initiative C: Make Sustainability Easy and Discourage "Trashing"	10
Initiative D: Recover Organics, including Food Waste, to the Highest and Best Uses	11
Initiative E: Maximize Diversion of Construction and Demolition Debris	12
Strategy 2: Measuring Results	
Initiative A: Waste Sector Assessment	13
Initiative C: Ensure Sustainable Funding and Alignment of Incentives with Program Goals	14
Strategy 3: Facilities and Infrastructure	
Initiative B: Organics Processing Infrastructure	14
Initiative C: Local Green Business and Marketing Development	15
Initiative E: Emergency Management/Mass Debris Management Plan	15
Strategy 4: Outreach and Education	
Initiative A: Communication Action Plan	16
Regional/Countywide	17
Strategy 1: Programs and Services	
Initiative A: Institutionalize Waste Prevention and Source Reduction.....	17
Initiative B: Advocate for Extended Producer Responsibility and Manufacturer Responsibility.....	17
Initiative C: Recover Organics, including Food Waste, to the Highest and Best Uses	17
Initiative E: Maximize Diversion of Household Hazardous Waste and Electronic Waste	19
Strategy 2: Measuring Results	
Initiative B: Ensure Sustainable Funding and Alignment of Incentives with Program Goals	21
Strategy 3: Facilities and Infrastructure	
Initiative A: Develop Conversion Technologies and Integrated Materials Recovery Facilities	22
Initiative B: Organic Processing Infrastructure	24
Initiative C: Local Green Business and Market Development	25
Initiative D: Resource Recovery Centers and "Re-stores"	26
Strategy 4: Outreach and Education	
Initiative A: Communication Action Plan	27
Initiative B: Stakeholder Engagement and Empowerment	28

County Operations

Strategy 1: Quality Programs and Services

Initiative A: Institutionalize Waste Prevention and Source Reduction 32
Initiative B: Advocate for Extended Producer and Manufacturer Responsibility 34
Initiative C: Make Sustainability Easy and Discourage "Trashing" 34
Initiative D: Recover Organics, including Food Waste, to the Highest and Best Uses 35
Initiative E: Maximize Diversion of Construction and Demolition Debris 36

Strategy 2: Measuring Results

Initiative A: Waste Sector Assessment 36
Initiative B: Evaluate and Measure the Success of Existing Programs and Consider New Programs..... 37

Strategy 3: Facilities and Infrastructure

Initiative B: Organics Processing Infrastructure..... 37

Strategy 4: Outreach and Education

Initiative A: Stakeholder Engagement and Empowerment 38
Initiative B: Leadership in Sustainability 39

RELEVANT SOLID WASTE MANAGEMENT STATUS REPORTS 40

Conversion Technologies Update 40
Elsmere Canyon Landfill Status Report 42

APPENDICES 44

Appendix A – List of Acronyms 44

DEFINITIONS 45

² The Table of Contents reflects only those initiatives with progress this reporting year. It is not inclusive of all of the initiatives in the Roadmap.

EXECUTIVE SUMMARY

The County of Los Angeles Board of Supervisors (Board) adopted the Roadmap to a Sustainable Waste Management Future (Roadmap) on October 21, 2014. This Fifth Annual Report on the Roadmap summarizes the activities, initiatives, and programs implemented by Public Works in coordination with the Roadmap Interdepartmental Working Group (Working Group) for the 12-month period ending on October 21, 2019.

The Working Group continued to work on the priorities and initiatives outlined in the Roadmap and has identified additional initiatives that can be implemented to further advance the Roadmap's efforts. The priority issues are described below and the progress on the Roadmap's strategies and initiatives within each focus area are discussed in detail in the body of the report.

Progress Report

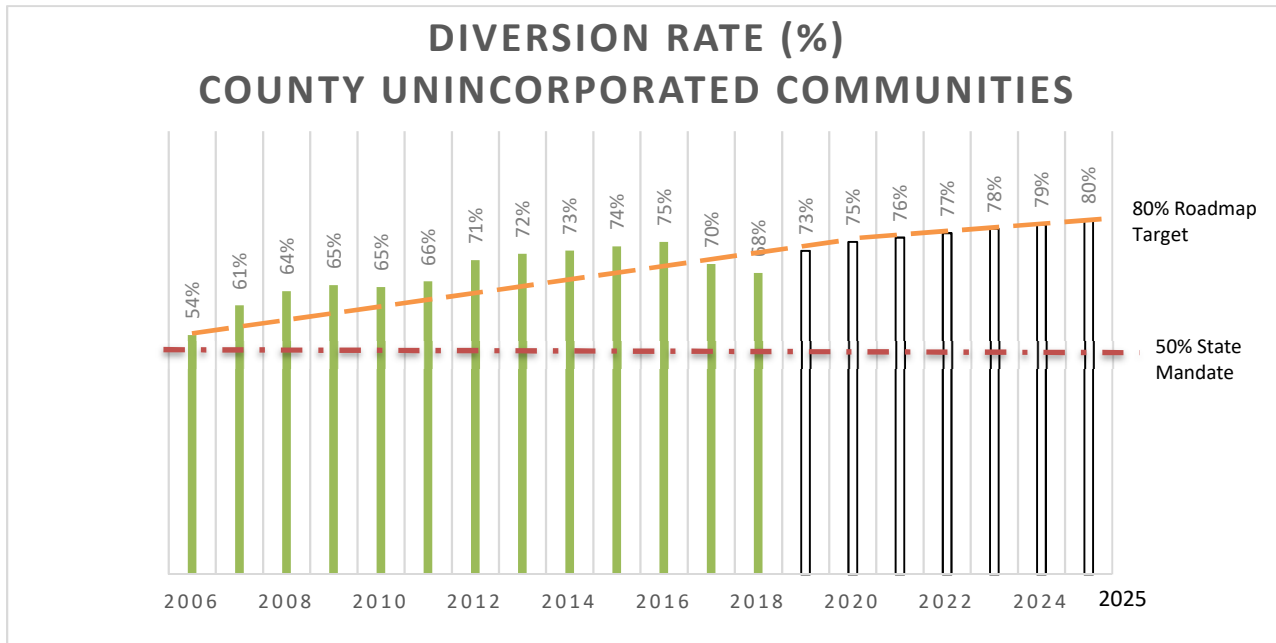
The County of Los Angeles continues to make progress toward implementing the initiatives outlined in the Roadmap. However, recent developments impacting the solid waste management system present strong challenges to continued progress and meeting the diversion targets established in the Roadmap. These include strong economic activity in the unincorporated areas (with a corresponding increase in waste generation) and unstable Statewide recycling markets, as a result of the China National Sword Policy.

For many years, the majority of the United States, the State of California, and the County of Los Angeles has heavily relied upon China for purchasing recovered recyclables such as mixed paper and mixed plastics. In 2017 China announced a policy, which would implement a ban on certain materials and very stringent contamination standards for the import of other separated recyclable materials, beginning in 2018. The ban caused a significant decline in commodity prices and markets for those materials, and the stringent contamination standards increased processing costs at existing material recovery facilities (MRFs), which were not designed to achieve such stringent standards. As a result of the China National Sword Policy, MRFs must now expend significantly more effort to recover less material that has a lower sales value.

In addition to higher costs for lower revenue, more material is being landfilled instead of recycled. As expected, the diversion rate for 2018 dropped 2 percent below the diversion rate for 2017 to approximately 68 percent. It is anticipated that China's restrictions on the importation of recyclable materials continues to negatively impact the County's diversion rate in 2019.

However, the continued implementation of Roadmap initiatives in the next few years, such as organic waste recycling and proposed revisions to the construction and demolition debris recycling ordinance, will help the County continue to make strides toward achievement of the Roadmap goal of 80 percent diversion by 2025.

The graph below depicts the Roadmap target diversion rates and progress to date.



PRIORITY ISSUES

The following is a highlighted summary of the progress to date on all 12 priority issues:



Organic Waste Management: Public Works' implementation of the Organic Waste Management Plans for all three focus areas is in progress. Public Works continues to identify, monitor, and educate large organic waste generators including multifamily residential complexes and food generating businesses for compliance with Assembly Bill 1826 (AB 1826). In addition, Public Works provided education and outreach to other County departments on how to comply with organics recycling laws, AB 1826 and Senate Bill 1383 (SB 1383) as well as the operation of the ongoing food waste collection program at its Headquarters to serve as a model for other County facilities. Public Works, in coordination with the Department of Public Health and other stakeholders, continued the implementation of the Food Donation and Recovery Outreach Program (Food DROP). The program facilitates and promotes the safe donation and distribution of excess edible food to reduce food waste in County unincorporated communities (CUCs) and helps feed food insecure individuals. In March, Public Works launched the "A Day Without Hunger" campaign and hosted several events to promote Food DROP.



Conversion Technologies: As directed by the Board, Public Works continues to advocate for changes in State law, policy, and regulation that would facilitate the development of Conversion Technology (CT) projects in the County. Existing CT projects developed by the County Sanitation Districts (Districts) and CR&R Waste and Recycling Services continued to expand. The Districts continued upgrades to their Joint Water Pollution Control Plant, which currently co-digests approximately 100 tons per day of food waste to create electricity and plans to be able to also produce transportation fuel from the food waste. Currently, the facility has the capacity to process 350 tons per day and is constructing receiving stations to expand to process up to 500 tpd starting in 2020. The CR&R Waste and Recycling Services Anaerobic Digestion Project in Perris, CA currently operates with a total processing capacity of 500 tons per day and plans to begin construction on a third phase next year to increase the capacity to 750 tons per day.



Product Stewardship/Extended Producer Responsibility: The County continues to work with CalRecycle to provide input and information for the development of Senate Bill 212 (SB 212) draft regulations. In 2018 the County of Los Angeles advocated for the passage of SB 212, which established a landmark Statewide Extended Producer Responsibility (EPR) Program for pharmaceutical and sharps waste. Because of the passage of SB 212, the County is no longer considering a local ordinance for pharmaceutical and sharps waste. Additionally, the County continues to support Statewide EPR legislation for solid waste management in general, and specifically for single-use packaging, single-use products, tobacco products, and batteries as well as solutions for existing EPR or semi-EPR legislation and regulations regarding mattresses and carpeting. The County is also exploring options for local policies to address packaging and products that are not recycled and/or end up as litter, largely due to the declining recycling markets caused by the China National Sword policy restricting the import of materials to China.



Household Hazardous Waste and Electronic Waste: Public Works continues to offer convenient opportunities, at no cost to residents to properly dispose of their Household Hazardous Waste and Electronic Waste (HHW/E-Waste) by hosting more than 60 temporary events and supporting 2 permanent centers. In 2018 more than 5,392 tons of HHW/E-Waste were collected and properly disposed of by recycling, incineration, reuse, and repurpose. Public Works has a partnership with 21 County libraries that are designated drop-off locations where residents can dispose of household batteries. Residents can dispose of sharps waste such as needles, lancets, or other devices used to administer medication intravenously at one of 21 drop boxes located at Sheriff's stations throughout Los Angeles County.



Emergency Management and Regional Debris Management Planning: Public Works completed the Unincorporated Area Mass Debris Management Plan (UA Plan) for the CUCs and is addressing comments received from the California Governor's Office of Emergency Services (CalOES). Lessons learned during the 2018 Woolsey Fire in Los Angeles and Ventura Counties, are being addressed and incorporated into the UA Plan, including the addition of a Private Property Debris Removal Program. In the meantime, the UA Plan will continue to be used following a declared disaster to provide policy and guidance for the removal and disposition of disaster debris located within road and flood rights of way in the CUCs.



Waste Prevention and Source Reduction: During this reporting period, Public Works conducted outreach site visits to 117 large food generating businesses in the CUCs to assess current recycling services and needs. The property managers were offered resources to enhance recycling practices to facilitate compliance with Assembly Bill 341 (AB 341) and AB 1826 State recycling laws. At County operations, Public Works launched a Community Trash Can Pilot Program at the Annex building of its Headquarters to significantly reduce the amount of plastic liners that are disposed daily. Participants are provided a personal mini-bin at their desks and share a communal full-size trash can placed in a convenient location. Public Works also continued to encourage residents and employees to bring their own reusable items (e.g., food/beverage containers) wherever they go (e.g., work, seminars, etc.) to reduce the amount of waste sent to landfills. Reusable promotional items were procured, and outreach events have been held at community events throughout the County to promote "Bring Your Own."



Construction and Demolition Debris: During this reporting period, six new construction and demolition (C&D) debris recycling facilities, located from Palmdale to Long Beach, were added to the list of facilities that recycle C&D debris within the County. As part of the permit requirements for any construction and/or demolition project, applicants are required to have a Recycling and Reuse Plan estimating the amount of debris generated and describing how that project debris will be recycled and/or reused. Keeping track of this material also ensures debris is properly managed and not dumped illegally elsewhere. During this reporting period, over 1,000 recycling and reuse plans have been approved. Public Works is also initiating outreach, following County Counsel review, regarding proposed revisions to the County C&D Ordinance. The Ordinance is expected to be revised by summer 2020, requiring a 70 percent recycling and reuse rate for construction and demolition projects, exceeding the California Standards Building Code minimum rate of 65 percent. The revised ordinance will also offer a refundable deposit for each project as financial incentive to comply with the new rate. County projects will also be required to comply by having administrators of County projects ensure that debris is recycled or reused in accordance with the revised ordinance.



Resource Recovery Centers: Public Works was awarded a CalRecycle Household Hazardous Waste grant (HD31) to help fund the development of Resource Recovery Centers (RRCs) at County-operated HHW/E-Waste permanent centers. This grant was awarded on June 11, 2018, and will expire on September 30, 2021. Public Works is in the initial phase of developing RRCs at two permanent HHW/E-Waste centers. The centers will maximize the reuse of eligible materials while helping the environment further and preventing less desirable disposal (e.g., landfills). Public Works continues to research other reuse programs and work with the permanent center owners and operators to establish an effective reuse program.



Assessment and Evaluation: The existing Commercial and Industrial Recycling Program (CIRP) contract provides the resources to help businesses and institutions, as well as County facilities, reduce solid waste generation and increase reuse and recycling efforts by conducting on-site waste assessments and recommending comprehensive step-by-step solutions to implement. Waste assessments have been conducted at a total of 24 County facilities from various departments such as Parks and Recreation, Probation, Sheriff, and more. After each visit, an extensive Resource Management Plan (RMP) is provided to the facility manager along with follow-up meetings and presentations. Numerous facilities have begun utilizing the financial evaluations in the RMPs to establish recycling programs that will save the facility money in the long-term.

In addition to the CIRP Program and site visits, a Waste Characterization Study contract for the CUCs was awarded on March 19, 2019. The findings of the study will help determine future waste reduction efforts.



Facilitating Sustainable Practices: Public Works created the County Operations Organics website to provide resources to assist County departments with starting organics recycling programs at their facilities. In December 2018 Public Works sent all County department facility managers and recycling coordinators a memo informing them of SB 1383 organics recycling requirements, detailed information regarding how the facilities they manage will need to comply with the law and waste diversion resources and tips. LAC+USC Medical Center launched a food-waste recycling program in March 2019. Public Works' Smart Business Recycling Program provided resources to Aveson Charter School in Altadena to establish a campus-wide recycling (organics, paper, CRV beverage containers, etc.) pilot project. This pilot project will serve as a model recycling program for other schools located in CUCs.



Local Green Business and Market Development: Public Works continued to serve as the County of Los Angeles Recycling Market Development Zone (RMDZ) Program Administrator. The County of Los Angeles RMDZ is the largest zone with 19 member cities and the CUCs. The RMDZ Program helps connect businesses that manufacture products using recycled-content feedstock or process materials for recycling with financial and marketing assistance. To enhance promotion of the program, Public Works distributed updated informational brochures to all member cities to share with local businesses, and is currently working with County Counsel to make changes to the program, including removing city membership fees to encourage participation by spring 2020.



Outreach and Education: Public Works continued to conduct outreach and education to encourage practicing the four Rs (Reduce, Reuse, Recycle, and Rethink). In addition, with the passing of SB 1383, organics recycling was a significant focus. Outreach material is being developed to help educate residents, businesses, and County departments about the requirements of SB 1383 and how to comply. Public Works continued to provide and

enhance environmental education to teachers and students at middle and high schools through the Generation Earth Program. Public Works hosted the annual Battle of the Schools waste diversion competition and provided waste diversion educational resources to students and teachers such as the Generation Earth Food Rescue Guide, that is available to schools through the program's website.

Recycling contamination is a significant issue. Contamination happens when items are placed in the incorrect system/bin. If recyclables are placed in the appropriate recycling bin, but contain food remnants, the food can contaminate the bin and its contents. Therefore, all the bin's content would need to be landfilled. To address this issue, Public Works continues to educate Los Angeles County residents on how to properly recycle by encouraging them to follow three easy steps: (1) Empty, (2) Clean, (3) Dry. Recyclables should be empty of its contents, clean (a quick rinse will do), and dry before being placed in the recycling bin. We communicate this message in a variety of ways, such as at community events, through newsletters, the Clean LA website/hotline and social media.

INTRODUCTION/BACKGROUND

The Board adopted the Roadmap on October 21, 2014, which established disposal reduction targets to divert 80 percent of waste from landfill disposal by 2025, 90 percent by 2035, and 95+ percent by 2045.

The Roadmap is broken down into three Focus Areas: County Unincorporated Communities, Regional/Countywide, and County Operations. Each focus area is further broken down into four broad strategies: (1) Programs and Services, (2) Measuring Results, (3) Facilities and Infrastructure, and (4) Outreach and Education. The Roadmap lays out the general framework for the strategies and initiatives the County can implement to maximize the recovery of products, materials, and energy from waste that would otherwise be disposed at landfills.

Many of the Roadmap initiatives are in line with the recently adopted Los Angeles Countywide Sustainability Plan, primarily Goal 9 of the Plan. Goal 9 focuses on the need to effectively manage the County's waste, water, energy, and material resources. Initiatives that are closely related to Goal 9 include adopting and advocating for extended producer responsibility, phasing out single-use plastics, and expanding the County's food donation program. Both the Roadmap and Sustainability Plan also prioritize recycling organic waste and developing conversion technologies to convert organic waste into renewable energy.

The County unincorporated communities (CUCs) per capita disposal rate shows a steady decline from 3.92 pounds per person per day in 2014 to 3.76 pounds per person per day in 2016. This may be attributed in part to the County's efforts and implementation of a vast array of waste reduction, recycling, and public education program. However, the per capita disposal rate increased to 4.68 pounds per person per day in 2017 and 4.8 pounds per person per day (68 percent diversion) in 2018. The disposal rate increase can be attributed to several factors including strong economic activity in CUCs and unstable Statewide recycling markets as a result of China National Sword Policy. Nonetheless, the CUCs remain in compliance with the State's 50 percent waste diversion mandate and per capita disposal target of 7.4 pounds per person per day.

The following report expands on the Roadmap's progress and accomplishments in each Focus Area in its fifth year of implementation.

PROGRESS OF INITIATIVES BY FOCUS AREA

The Roadmap Working Group continued to work on numerous initiatives since the last report. The following provides the progress and next steps for those initiatives advanced by the Working Group during this reporting period.

Complete descriptions of the priority issues and background information on initiatives discussed in previous reports can be reviewed by referencing the Roadmap to a Sustainable Waste Management Future webpage and the previous annual reports to the Board at <http://dpw.lacounty.gov/epd/Roadmap/index.cfm>.

County Unincorporated Communities

Strategy 1: Programs and Services

Initiative A: Institutionalize Waste Prevention and Source Reduction in County Unincorporated Communities

During this reporting period, the Working Group focused on the following key element of this Roadmap initiative:

- ❖ A2: Explore and if feasible, develop and implement more aggressive reuse programs.
 - A2.f: Promote reuse and repair for residents, businesses, and nonprofits with repair workshops (Repair Café and iFixit models); web-based directories for sharing reusable materials, such as the Los Angeles County Materials Exchange Program (LACoMAX), the County's free materials exchange network; thrift stores and repair shops; reuse depots like East Bay Depot for Creative Reuse; and/or Tool Lending Libraries.

Accomplishments

LACoMAX: Public Works continued to advertise the materials exchange program, LACoMAX, a free service aimed at conserving landfill space by helping residents, businesses, organizations, and institutions find alternatives to the disposal of valuable materials, which are presently discarded as waste. Various forms of advertising were utilized, such as tweeting information and providing informational flyers at community events in the CUCs. Also, program ads were included in County publications, such as the *County Digest*, *Inside Solid Waste*, and quarterly community newsletters. In addition, the program website was updated by adding features to send e-mail notifications to staff when a new post is submitted, circulate a reminder notice after two weeks to users who post items on the website, and invite website users to complete a short survey after an item is transferred to a new user and removed from the website. The most common items posted during this reporting period were building materials, electronics, and tires.

Public Works continues to evaluate how to incorporate LACoMAX into the Internal Services Department's Surplus Program Policy, to allow the public to take the materials the County cannot donate or sell through the County Surplus Program. This would allow others, such as artists and Do-It-Yourselfers to access materials to create artwork or make repairs, thereby diverting materials from being landfilled.

School Source Reduction and Recycling Programs: The County continued to offer waste consultation to schools in CUCs through the Smart Business Recycling (SBR) Program. The SBR provides resources to schools in CUCs looking to establish or expand their recycling activities. In 2018 the SBR Program consultants assisted Aveson charter school with establishing a campus-wide organics and recycling pilot project. The purpose of the pilot was to serve as a model recycling program for other schools. The consultants evaluated the waste stream generated on campus, distributed in-unit recycling containers, and advised staff on lunchroom and classroom recycling activities, which included recycling of papers, plastics, and organics. In spring 2018 teachers were provided lesson plans for students to learn about various waste and recycling topics. The lesson plans and activities will become part of a model School Recycling Toolkit that will be posted on the County's Smart Business Recycling Program website for other schools' use.

Business Waste Reduction Program: The Smart Business Recycling Program continued to perform waste audits and facilitate recycling and waste reduction to commercial accounts, including businesses and multifamily complexes with 20 or more units in the CUCs. During this reporting period, the program consultant visited 73 multifamily complexes and 134 large food service establishments to identify challenges with managing recyclables and organics, and provided recommendations to enhance recycling practices for compliance with AB 341 and AB 1826. The businesses were also encouraged to donate excess edible food to reduce food waste.

White Goods: Residential Garbage Disposal Districts (GDDs) and franchise haulers continued to provide bulky item pick-up upon request and annual clean-up events in the CUCs. White goods collected were donated to charitable organizations or thrift stores for repair and reuse, or recycled directly through scrap metal dealers.

Scrap Metal: Project Isaiah is a County Sheriff's program that recycles confiscated guns into rebar. During this reporting period, over 3,500 weapons were collected and melted. Gerdau Steel Mill in Rancho Cucamonga melted over 12,500 weapons collected from similar programs throughout Southern California.

Tire Recycling: Public Works field crews collected and recycled 276 tons of tires that were illegally dumped in County right of ways and abandoned properties.

Initiative B: Advocate for Extended Producer and Manufacturer Responsibility in County Unincorporated Communities

During this reporting period, the Working Group focused on the following key elements of this Roadmap initiative:

- ❖ B2: Explore the feasibility of establishing a County Extended Producer Responsibility (EPR) Ordinance for materials, such as pharmaceuticals and needles to ensure that collected items are properly managed in accordance with Federal, State, and local laws using environmentally sound practices.
- ❖ B3: Support voluntary take-back initiatives. Encourage and incentivize businesses and institutions to take back products and packaging they sell and are sold by others in their area (especially items that are toxic in their manufacture, use, or disposal, and/or are not currently reusable, recyclable, or compostable locally).

Accomplishments

SB 212: As a result of the passage of SB 212, the County is no longer considering a local ordinance for pharmaceutical and sharps waste. The County continues to work with CalRecycle to provide input and information for the development of the SB 212 draft regulations, which would ensure safe and proper management of pharmaceutical and sharps waste. Public Works also continues to explore opportunities for local EPR of other materials, such as batteries or other electronic waste and tobacco products.

Initiative C: Make Sustainability Easy and Discourage "Trashing" in County Unincorporated Communities

During this reporting period, the Working Group focused on the following key elements of this Roadmap initiative:

- ❖ C1: Prior to issuing new contracts, evaluate the sustainability of the existing solid waste collection system and modify, if necessary, considering:
 - C1.c: Effectiveness of the programs and policies in helping to meet and exceed the State's Waste Diversion mandates, other State and County priorities, and the disposal reduction targets established in the Roadmap.
- ❖ C2: Evaluate and implement, if feasible, alternative trash collection methods such as: reducing trash collection frequency; adjusting the size of bins; implementing a volume or weight-based trash collection system (pay as you throw); collecting additional organics in the green waste bin; and/or a 2-bin collection system (wet and dry) processed at a Materials Recovery Facility (MRF) for separation and recovery.
- ❖ C3: Explore and implement, if feasible, revisions to current and future Franchise and Garbage Disposal District waste hauler contracts to advance the goals of the Roadmap, while respecting existing contracts. Consider:
 - C3.b: Creating incentives or requirements to meet specific diversion standards (e.g., 80 percent by 2025).
- ❖ C6: Research the feasibility of implementing product bans or disposal bans where sustainable alternatives are readily available and reasonable.

Currently, Public Works continues to administer trash collection and recycling contracts under three main types of systems within the CUCs.

GDD System: Under this system, a County contracted waste hauler provides residential and commercial (i.e., dumpster/cart service) trash collection and recycling services within a distinct area. Seven GDDs are currently in operation providing service to approximately 300,000 customers.

Residential Franchise System: Beginning in 2007, the County gradually implemented a residential franchise system to replace the residential open-market system outside of the GDDs. Currently, 20 residential franchise agreements have been awarded, which provide trash collection and recycling services to approximately 700,000 customers. Under this system, the County signs an agreement with waste haulers authorizing them to provide exclusive cart services for individual communities.

Commercial Franchise System: The County also provides nonexclusive commercial trash collection and recycling services and roll-off services through 30 nonexclusive commercial contracts. Through this system, waste haulers are required to provide free recycling services (1 cubic yard capacity), discounted recycling services (quantities in addition to the first cubic yard is charged at only half the trash rate), free on-site recycling consultations, and options for bulky item pick-ups.

During this reporting period, Public Works verified the County's Residential and Commercial Franchises and GDDs waste collection, recycling, and disposal figures for calendar year 2018. In calendar year 2018, waste haulers collected approximately 692,000 tons of waste and diverted approximately 162,000 tons of recyclables, including green waste generated from curbside collection. Most of the residential franchises also include collection of E-Waste and sharps waste as well as

giveaways of mulch/compost at community events. Approximately 46.17 tons of E-Waste and clothing was collected from free Electronic and Clothing drop-off events held in selected franchise areas.

Accomplishments

New Trash Collection Contracts: Public Works continues to develop ways to improve its trash collection and recycling contracts. During this reporting period, six residential franchise and two GDD trash collection contracts were rebid. To align with the Roadmap's initiatives and new State laws, the contracts included new and enhanced services and programs, such as offering organics recycling, allowing the customers the option to choose smaller trash carts, expanding the list of acceptable recyclables to include plastics 3-to-5, aseptic cartons (juice boxes), mattresses, and separate manure collection and diversion.

Plastic Straw Ordinance: On December 4, 2018, the Board adopted the Plastic Straw Ordinance prohibiting businesses within the CUCs and County facilities that sell food and/or beverages from automatically providing single-use plastic straws and plastic stirrers to customers or making these items available to customers from a self-serve dispenser. Plastic straws and stirrers are items commonly provided to customers in abundance, often going unused and being disposed. Additionally, they are often found in litter and due to their light weight, end up in waterways polluting the marinelife. Providing items only upon request ensures customers are making conscious decisions about their waste, making sustainability attainable. The ordinance became effective on January 1, 2019. The County Department of Public Health (CDPH), Environmental Health Division, provides education and training on the requirements of the ordinance to food service business operators during routine inspections.

[Initiative D: Recover Organics, including Food Waste, to the Highest and Best Uses in County Unincorporated Communities](#)

During this reporting period, the Working Group focused on the following key elements of this Roadmap initiative:

- ❖ D1. Collaborate with waste haulers to develop organics collection and diversion programs in County unincorporated communities (CUCs), where feasible.
- ❖ D2. Explore and implement, if feasible, Food Donation and Recovery Outreach Program (Food DROP) for unused edible.
 - D2.a: Create a database of large food waste generators such as restaurants, cafeterias, hotels, and large event venues in CUCs.
 - D2.b: Explore and establish partnerships with food service providers, businesses, or nonprofits for development and operation of Food DROP.
 - D2.c: Educate businesses on Bill Emerson Good Samaritan Food Donation Act to address liability concerns.

Accomplishments

Commercial Food Waste Collection Pilot Project. Since July 2016, the County in partnership with the Puente Hills Material Recovery Facility (PHMRF) provides a rebate incentive to waste haulers that collect uncontaminated food waste diverted from commercial accounts and delivers the food waste to the PHMRF. Currently, one waste hauler is participating and providing food waste diversion services to four supermarkets. As of June 2019, the project has successfully diverted 1,572 tons of food waste, 770 tons during this reporting period. The food waste is sent to the PHMRF for pre-processing and is eventually anaerobically digested at the Districts' Joint Water Pollution Control Plant (JWPCP) in

Carson. To encourage additional organic waste processing in the CUCs, Public Works extended the pilot through November 2019 and maintained the rebate of \$60 per ton.

Food Donation and Recovery Outreach Program (Food DROP): In 2018 Public Works launched the Food DROP website (www.FoodDROPLA.com), complete with informational resources concerning relevant laws, a map of current Food DROP nonprofit partners, and a food donation tracking form. A food donation Toolkit on the Food DROP website provides businesses with the following information: overview about AB 1826 and SB 1383; County of Los Angeles Public Health's food safety guidelines; an interactive map to search for our food recovery partners; a tracking form to record food donations; and other helpful information so businesses can start donating excess edible food. The mission of Food DROP is to provide resources for businesses operating in CUCs so that they may (1) safely donate their excess edible food to fight hunger, and (2) reduce food waste in the County of Los Angeles. This program is geared toward food establishments in CUCs and includes the following components: free consultation services for safe food donation; a recognition program for participants; a food recovery campaign to raise awareness of food insecurity in the County; and eventually, a grant program to help fund food recovery infrastructure.

During the last quarter of 2018, Smart Business Recycling Consultants contacted 134 large food service establishments to survey how they currently manage organics and recyclables, and to connect these businesses with nearby local charities to donate edible excess food. Based on survey information, 26 businesses indicated that they currently donate edible food and another 40 businesses would like to start donating. Public Works is planning to meet with stakeholders to garner feedback on Food DROP and identify ways to expand participation to more food generators, including a large food recovery campaign named "A Day Without Hunger."

To date, the Food DROP Program has distributed 19 tons of edible food to 532 families. The program has also distributed five tons of edible food through ten charities. In total, 24 tons of edible food was donated to food insecure County residents. Food DROP will be an integral component in meeting the State's SB 1383 goal of diverting not less than 20 percent of edible food that is currently disposed toward human consumption.

Initiative E: Maximize Diversion of Construction and Demolition Debris in County Unincorporated Communities

During this reporting period, the Working Group focused on the following key element of this Roadmap initiative:

- ❖ E1: Revise the Construction and Demolition (C&D) Debris Recycling and Reuse Ordinance to:
 - E1.a: Match new requirements established by the County's Green Building Ordinance and State Green Building Code and incorporate more green building standards.
 - E1.b: Increase the diversion requirements to 70 percent for mixed C&D, and 100 percent for all asphalt and concrete, unpainted wood, glass, sediment, and green waste.

Accomplishments

C&D Debris Recycling and Reuse Ordinance Update: Public Works continues the stakeholder engagement process with all Public Works' divisions involved in construction projects to get their feedback on the proposed revisions to the C&D Debris Recycling and Reuse Ordinance, which include: (1) raising the minimum requirement to 70 percent of C&D material to be recycled or reused; (2) requiring a security deposit to incentivize businesses to comply with the recycling requirement, and; (3) ensuring County projects also comply with the recycling and reuse provisions in the Ordinance by making it a contract requirement. Public Works also identified key stakeholders, including land developers, construction companies, demolition companies, C&D debris recycling facilities, and waste

haulers. External stakeholders' meetings will be scheduled, and their input will be reviewed and incorporated into the final draft Ordinance. The revised ordinance is anticipated to be completed by summer 2020. Once finalized, the C&D application will be available to the public online through the EPIC-LA system, which we anticipate will reduce paper waste and streamline the C&D permit application process.

The following data was gathered from April 20, 2005, to June 27, 2019, on C&D plans:

- 10,235 C&D plans approved of which 142 were County projects
- 5,323 of the 10,235 C&D approved plans submitted Final Compliance Reports
 - 4,912 C&D projects did not submit Final Compliance Reports
 - 1,677 C&D projects were exempted from submitting a Final Compliance Report
- 20 C&D projects were issued administrative monetary penalties
 - All 20 C&D projects paid the administrative monetary penalties

During calendar year 2018 for the CUCs, completed projects generated 22,000 tons of C&D debris and recycled 20,000 tons of C&D debris for an overall recycling rate of 89 percent. This number combines mixed and inert C&D debris. In addition, projects generated 12,400 tons of soil of which 75 percent was recycled. The recycling rate from C&D increased by 2 percent compared to the last reporting period.

Strategy 2: Measuring Results

Initiative A: Waste Sector Assessment in the County Unincorporated Communities

During this reporting period, the Working Group focused on the following key element of this Roadmap initiative:

- ❖ A1: Conduct an assessment of waste sectors that are sending waste to disposal facilities.
 - A1.a: Conduct regular waste characterization studies for entire CUCs (all sectors) at 5- to 10-year intervals to determine material types being disposed, which could ultimately be recycled. Include MRFs and transfer stations as well as self-haul, scavenging, and recycling drop-off centers to determine accurate generation and diversion rates.

Accomplishments

Waste Characterization Study: In April 2019 the Board awarded Cascadia Consulting Group, Inc., the Waste Characterization Study for the County of Los Angeles Unincorporated Areas contract. In summer 2019 Cascadia began developing the project plan and tasks for the study, which will take approximately three years to complete. In support of the Roadmap's long-term disposal targets, this study will enable Public Works to examine the solid waste stream's composition, determine generation rates, and recommend the highest and best use alternatives for diverting major components of the waste stream.

As data from the waste characterization study becomes available, it will be used to assess the success of existing programs, evaluate the feasibility of implementing new programs in the CUCs, and assess how these new programs will assist in achieving the County's overarching goals. With an ongoing baseline of disposal and diversion measurements, we can evaluate whether different programs and policies are effective in achieving the long-term disposal reduction targets.

[Initiative C: Ensure Sustainable Funding and Alignment of Incentives with Program Goals in County Unincorporated Communities](#)

During this reporting period, the Working Group focused on the following key element of this Roadmap initiative:

- ❖ C4: Advocate for EPR to reduce County costs for collecting abandoned materials in road right of way, such as paint, carpet, furniture, and mattresses.

Accomplishments

Mattress Collection Recycling Program: During this reporting period, Public Works in partnership with the Antelope Valley Illegal Dumping Task Force and The Mattress Recycling Council (MRC), held 16 mattress recycling collection events in the Antelope Valley and Sierra Pelona Ridge regions, successfully securing more than 1,600 mattresses and box springs from these areas for recycling and landfill diversion. This is double the number of events held and a 66 percent increase in the number of units (mattresses and box springs) collected and recycled, through these events, in comparison to the number of mattresses and box springs collected during the previous reporting period. Public Works continues to evaluate the possibility of expanding the Mattress Collection Recycling Program to include more CUCs and will continue to work with MRC to evaluate the feasibility of supporting permanent collection centers on public or private property, as available. County of Los Angeles continues to support Statewide EPR legislation for solid waste management in general and specifically solutions for existing EPR or semi-EPR legislation and regulations regarding mattresses and carpeting.

Antelope Valley Environmental Pride Month Events: Public Works continued to conduct the Antelope Valley Environmental Pride Month Events, including community clean-ups, gardening workshops, tire collection events, mattress recycling collection events and free biannual 1-ton dump day events at Lancaster Landfill and Sunshine Canyon Landfill, and quarterly dump day events at Chiquita Canyon Landfill.

Strategy 3: Facilities and Infrastructure

[Initiative B: Organics Processing Infrastructure in the County Unincorporated Communities](#)

During this reporting period, the Working Group focused on the following key element of this Roadmap initiative:

- ❖ B1: Evaluate options to encourage the development of local organics diversion facilities, including composting, anaerobic digestion, and chipping/grinding operations, to assist businesses in the CUCs with AB 1826 compliance.

Accomplishments

Green Zones Program. The Department of Regional Planning is in the process of developing the Green Zones Program, which focuses on promoting environmental justice and encompasses multiple components, including zoning code amendments to address recycling and solid waste facilities. In the past year, Regional Planning worked with consultants on development of the Environmental Justice Screening Map (EJSM) and conducting ground truthing in the pilot communities. Below are some highlights on Regional Planning's progress during this reporting period:

- Regional Planning started developing the draft Green Zones Ordinance in coordination with other County departments, including Public Works as well as appropriate regional agencies. The ordinance will include zoning requirements and development standards for a range of industrial uses, including various recycling and solid waste facilities.
- Regional Planning has been finalizing the draft EJSM, which is anticipated for public release in late 2019. Upon completion, the EJSM will provide analyzed information on cumulative pollution impacts and community vulnerability within the County.
- Regional Planning continued engaging in various outreach events held by the County as well as other stakeholder meetings held by other regional agencies in order to coordinate on the environmental justice efforts relevant to the unincorporated areas in the County.

Small Scale Food Waste Processing Technologies: Public Works along with its technical consultant, Alternative Resources Incorporated (ARI), prepared a summary of small-scale food waste processing technologies that can be installed at various sites. This information will be posted on Public Works' SoCal Conversion website and shared with businesses in the CUCs.

[Initiative C: Local Green Business and Marketing Development in the County Unincorporated Communities](#)

During this reporting period, the Working Group focused on the following element of this Roadmap initiative:

- ❖ C1: Seek and encourage new green businesses and remanufacturing facilities to locate in the CUCs.

Accomplishments

Recycling Market Development Zone (RMDZ) Program: During the past year, the County RMDZ Administrator met with one business that did not have a site and had not decided if it would locate in an unincorporated community or a city. Zone Incentive Funds (ZIF) that were provided by the California Department of Resources and Recovery (CalRecycle) were used to print 10,000 updated program brochures that are being shared with business owners during community events and distributed to member cities to share with local businesses. Public Works will continue to use available ZIF funds to promote the program in the CUCs and on a Countywide basis. The County Zone Administrator is planning a direct-mail campaign to target manufacturing companies in the County of Los Angeles with the next round of ZIF funds, which will be fully available in 2020.

[Initiative E: Emergency Management/Mass Debris Management Plan for the County Unincorporated Communities](#)

During this reporting period, the Working Group focused on the following element of this Roadmap initiative:

- ❖ E1: Develop a Mass Debris Management Plan to maximize diversion of materials following emergencies and disasters for CUCs.

Accomplishments

UA Plan: Public Works completed the UA Plan, submitted it to CalOES for review, and is currently addressing comments received. The UA Plan will be used following a declared disaster to provide policy and guidance for the removal and disposition of disaster debris located within road and flood

rights of way; and allow the management of debris following a disaster to mitigate any potential threat to the lives, health, safety, and welfare of impacted communities and expedite recovery efforts. Many lessons learned during the 2018 Woolsey Fire that burned 1,643 structures and 96,949 acres of land in Los Angeles and Ventura Counties are being addressed and incorporated into the UA Plan. The UA Plan will be resubmitted to CalOES and to the Federal Emergency Management Agency (FEMA) for review and approval.

Strategy 4: Outreach and Education

Initiative A: Communication Action Plan for County Unincorporated Communities

During this reporting period, the Working Group focused on the following key elements of this Roadmap initiative:

- ❖ A1: Develop an outline for a unique communication plan, focused at the unincorporated community level based on demographics, resources, and commercial and industrial businesses in the targeted areas.
- ❖ A5: Educate businesses on recycling programs that can help them reduce their disposal costs and increase their recycling rate.
- ❖ A10: Develop a beverage container recycling outreach and education plan for multifamily residents in the CUCs.

Accomplishments

Communication Action Plan: Public Works continued to implement the strategies of the communications plan in the CUCs. The Working Group had various discussions on how to effectively expand education and outreach efforts to customers (residents and businesses) within the CUCs on waste reduction and recycling practices. Efforts to achieve this goal include focusing outreach on food waste reduction/prevention and sustainability, such as buying less, throwing less away, using reusables, coordinating with other County departments to disseminate recycling information to CUC residents and businesses, and coordinating with the business license application process to provide recycling information to business owners.

Educating Businesses on Recycling Programs: Public Works conducted outreach site visits to 117 large food generating businesses impacted by AB 341 and AB 1826. Public Works surveyed property managers or on-site staff to assess current recycling levels and needs. Following the site visits, surveys were completed and each location was provided with a customized finding report, which outlined current collection details and recommendations to enhance recycling practices to achieve compliance with relevant State recycling laws. The businesses also received a list of recommendations for reducing food waste at their businesses and information on how to safely donate their excess edible food.

Beverage Container Recycling Outreach and Education Plan: The Beverage Container Recycling Program consist of a multimedia campaign with the Los Angeles Dodgers and a recycling challenge with the Dodgers Foundation. For its fifth consecutive year, Public Works partnered with iHeart Media and the Los Angeles Dodgers on the Beverage Container Recycling campaign. Our goal was to increase the awareness of beverage container recycling and motivate residents to recycle beverage containers instead of throwing them in the trash. The campaign consisted of radio commercials, TV Public Service Announcement, freeway billboard, social media posts, LED in-game postings, digital banners, and a

recycling challenge with the Dodgers Foundation's little league teams. Dodgers third baseman Justin Turner was a spokesperson.

Regional/Countywide

Strategy 1: Programs and Services

Initiative A: Institutionalize Waste Prevention and Source Reduction at a Regional/Countywide Level

During this reporting period, the Working Group focused on the following key elements of this Roadmap initiative:

- ❖ A1: Evaluate with local municipalities and other public agencies opportunities to implement policies, such as EPR Ordinances.

Accomplishments

Bring Your Own (BYO): Through the BYO initiative, the County of Los Angeles continued to encourage its residents and businesses to refrain from using and/or encouraging the use of single-use items, and instead replace them with reusables such as cups, water bottles, straws, etc.

Initiative B: Advocate for Extended Producer Responsibility and Manufacturer Responsibility at a Regional/Countywide Level

During this reporting period, the Working Group focused on the following key element of this Roadmap initiative:

- ❖ B1: Be a strong advocate with partner agencies and municipalities for EPR policy, legislation, and programs regionally, Statewide, and nationally, particularly to drive improvements in product design that are environmentally sustainable.

Accomplishments

Public Works continues to participate in discussions with partner agencies and municipalities for the development of single-use plastic packaging and single-use priority plastic products for EPR legislation Statewide. Examples include our work with the County of Los Angeles Solid Waste Management Committee/Integrated Waste Management Task Force, National Stewardship Action Council, and California Product Stewardship Council on SB 54/AB 1080 and other complementary bills.

Initiative C: Recover Organics, including Food Waste, to the Highest and Best Uses at a Regional/Countywide Level

During this reporting period, the Working Group focused on the following key elements of this Roadmap initiative:

- ❖ C1: Utilize the existing Smart Gardening program to promote the diversion of organic waste Countywide.
- ❖ C2: Partner with school districts to ensure that every school in Los Angeles County has a garden.

Accomplishments

Smart Gardening (SG) Program: During this reporting period, Public Works conducted 99 Countywide Smart Gardening workshops free to the public, covering topics such as composting, water-wise gardening, grasscycling, integrated pest management, and drought-tolerant landscaping. Over 2,000 attendees benefited from these workshops and purchased approximately 600 backyard compost bins and 500 worm composting bins to produce compost at home. By using compost bins, residents are diverting tons of yard and food waste from landfill disposal, which helps the County achieve its diversion goals.

Besides the scheduled workshops, the SG Program also participated at 45 community events to promote sustainable practices.



School and Community Gardens: To promote environmental awareness, Public Works continued the development of large-scale projects to benefit the community and schools. The following projects were worked on during this reporting period:

Urban Greening Project	Location	Grant	Status
<u>Hillcrest Drive Elementary School</u> Project will transform a huge asphalt section into a meadow, garden, shade trees, xeriscaping, amphitheater, walking path, and bioswales. The project is expected to be constructed in spring 2020.	City of L.A.	\$976,000	In design
<u>Buford Seed Project</u> Project replaced a hazardous asphalt sump area prone to flooding into a raised-bed garden with xeriscaping and trees. The garden is used by students and teachers to learn about growing their own healthy fruits.	Unincorporated Community of Lennox	\$75,000	Completed
<u>Torrance Tree Project</u> Project will redevelop a weedy corner of Madrona Marsh Preserve, facing a busy intersection, with visible drought-tolerant landscaping to demonstrate the effectiveness of xeriscaping to improve property. The project is expected to be completed by 2021.	City of Torrance	\$140,000	In design



School Garden Program: The School Garden Program installed school gardens at Fishburn Elementary School in Maywood and McKinley Elementary School in San Gabriel. The School Garden Program provides an opportunity for students and teachers to work together, learn how to grow their own food, get exercise, and eat healthy. Students also learn sustainable practices such as backyard and worm composting and smart gardening techniques. Participation in the program instills pride in the students, school employees, and the community and also embellishes the environment. The gardens are an outside classroom where skills in math, science, art, health, physical education, and social studies come together for a fun learning experience.

Generation Earth Program: Generation Earth is a youth education program that works with teachers and students to implement environmental service learning projects on school campuses. During this reporting period, one recycling and environmental service learning workshop was conducted in the unincorporated Walnut Park community. A total of 38 environmental service learning projects from 27 schools located in the CUCs areas were implemented, working directly with 1,600 students, and potentially impacting approximately 35,700 students in grades 6th-12th.

[Initiative E: Maximize Diversion of Household Hazardous Waste and Electronic Waste at a Regional/Countywide Level](#)

During this reporting period, the Working Group focused on the following key element of this Roadmap initiative:

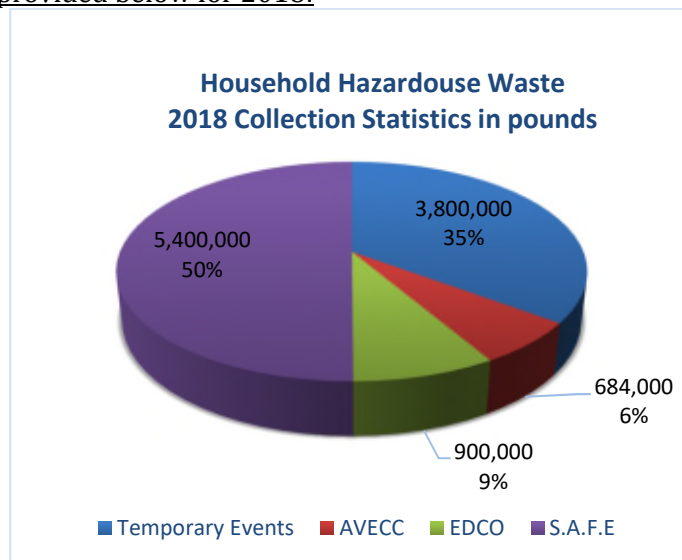
- ❖ E1: Work with cities and landfill operators to increase the number of permanent Household Hazardous Waste and Electronic Waste (HHW/E-Waste) collection centers where feasible.
 - E1.b: Identify potential locations convenient to the community to increase participation and reduce the amount of toxic materials improperly disposed.

Accomplishments

The HHW/E-Waste Program: In 2018 the HHW/E-Waste Program held 64 temporary collection events throughout the County of Los Angeles, in addition to 47 events held at the permanent collection centers. The program uses handheld electronic survey devices to gather information during collection events.

The CUP for the Chiquita Canyon Landfill required the landfill operator to fund ten HHW and E-Waste events per year to be held by Public Works. Instead of paying for five of the ten collection events, the permittee may instead fund the siting, development, operation, and staffing of a new permanent Santa Clarita Valley Environmental Collection Center at the facility or other location in the unincorporated areas in the Santa Clarita Valley. On November 30, 2018, the permittee informed Public Works of its intention to move forward to fully fund a new permanent Santa Clarita Valley Environmental Collection Center at the Chiquita Canyon Landfill for the collection of HHW/E-Waste. Since the permittee has not submitted any formal proposal of the center to date, the permittee is still being required to fund the ten HHW/E-Waste events each year.

Collection Data is provided below for 2018:



In total, the program collected over 5,392 tons of HHW/E-Waste in 2018. Continued outreach by the districts and surrounding cities in the Antelope Valley has attributed to the total amount collected and resident participation.

The HHW/E-Waste Program is funded by the Solid Waste Management Fund and costs approximately \$10 million annually. These costs include the routine operation of permanent centers; facilitation of temporary events including setup, collection, proper disposal of the materials, and administrative functions.

Temporary Event Costs

- Average operational cost per pound - \$0.71
- Average operational cost per event - \$42,500
- Average number of households participating per event - 730
- Average cost per household per event - \$58

Permanent Collection Center Costs

- Average operational cost per pound - \$0.57
- Average operational cost per event - \$19,000
- Average number of households participating per event - 359
- Average cost per household per event - \$54

There was a 12 percent increase in operational cost per event at the Permanent Collection Centers that can be due to various factors, such as an increase in resident participation, staff wages, and also disposal and transportation costs.

Strategy 2: Measuring Results

Initiative B: Ensure Sustainable Funding and Alignment of Incentives with Program Goals at Regional/Countywide Level

During this reporting period, the Working Group focused on the following key elements of this Roadmap initiative:

- ❖ B2: Evaluate and modify, if needed, existing revenue streams to mitigate funding lost from waste reduction efforts and align incentives with waste reduction goals.
 - B2.b: If revenues are projected to decline and programs cannot be realigned to mitigate this impact, identify options to augment revenue streams or accomplish the goals of the programs through other mechanisms to ensure adequate funding is available to carry out programs and policies.
- ❖ B5: Advocate for EPR to reduce County costs for operating collection programs at the Regional/Countywide level targeting “take back” materials, such as paint, pharmaceuticals, carpet, furniture, and mattresses.

Accomplishments

Mattress Recycling Program: Through the agreement with the Mattress Recycling Council to fund mattress collection events, 16 mattress recycling collection events were conducted during this reporting period with more than 1,600 mattresses and box springs collected and recycled in the Antelope Valley where illegal dumping is prevalent.

Public Works continues to advocate for Statewide funding for organics management and recycling infrastructure, programs, and services by educating decision-makers and commenting on proposed State legislation, State funding appropriations and allocations, the State budget, and State policy reports.

Public Works continued to seek grants and other funding opportunities. Below is a status of grant applications during this reporting period, in addition to the grants for the Smart Gardening Program previously mentioned in this report.

Type of Grant Application/Program	Grantor/Type of Grant	Amount	Status
Tire Cleanup Grant (TCU16)	CalRecycle	\$100,000	Awarded
HHW Grant HD 27	CalRecycle	\$75,000	Concluded
HHW Grant HD 31	CalRecycle	\$62,867	Awarded
HHW Grant HD 33	CalRecycle	\$100,000	Awarded
City/County Payment Program Beverage Container Recycling 2017-18	CalRecycle	\$259,792	Pending

Strategy 3: Facilities and Infrastructure

Initiative A: Develop CT and Integrated Materials Recovery Facilities at a Regional/Countywide Level

During this reporting period, the Working Group focused on the following key elements of this Roadmap initiative:

- ❖ A1: Work with State and regional agencies, such as CalRecycle, the Regional Water Quality Control Board, and the South Coast Air Quality Management District (AQMD), to streamline the permitting process for essential waste management facilities that are environmentally sound and technically feasible, including conversion technologies, MRFs, C&D processing facilities, transfer stations, etc., at the regional and State level.
- ❖ A2: Continue to sponsor and support legislation to encourage the environmentally sound development of CTs and build a coalition of organizations to do so.
- ❖ A3: Evaluate options to establish incentives to level the cost differential between CT facilities and landfills, or otherwise incentivize waste haulers to direct waste to such facilities.
- ❖ A4: Increase awareness of the www.SoCalConversion.org website as a one-stop portal for information regarding local project development, local ordinances, permitting processes, and general information and resources related to CT development.

Accomplishments

Through the Southern California Conversion Technology Project, Public Works continued to evaluate and promote the development of noncombustion CT in the County and surrounding region. Public Works scheduled presentations with technology developers who were actively looking to site CT facilities in the County and provided assistance through feasibility analyses, permitting guidance, grant applications, and more. For example, Public Works with assistance from ARI, prepared draft summaries of permitting requirements for anaerobic digestion and thermal CT projects that will be posted on Public Works SoCalConversion website as a resource for CT project developers. Public Works compiled a list of potential CT sites located in cities and CUCs that will be included in the Countywide Siting Element, which is anticipated to be released for public review in late 2019.

Public Works reviewed, provided comments, and/or took positions on legislation, regulations, and policies affecting the development of CT, such as efforts to provide diversion credits for technologies diverting organic waste from landfills while reducing greenhouse gases.

Public Works promoted and shared knowledge and resources about its CT program by presenting at several solid waste conferences. Public Works also circulated a monthly e-newsletter, which was also posted on the SoCalConversion website with events, news, and policy updates related to CT. Public Works used feedback from a stakeholder survey to implement initial changes to the SoCalConversion website and is considering additional changes. Several CT projects within the County are in various stages of development, including:

Lancaster Landfill: Waste Management (WM) has expressed the intent to partner with Agromin for the development of a small-volume dry anaerobic digester and a medium-sized covered aerated static pile composting operation at the landfill, initially processing up to 500 tons-per-day of food waste and green waste.

Joint Water Pollution Control Plant: The County Sanitation Districts (Districts) continued to expand its food waste co-digestion operation. Currently, the DODA pre-processing technology located at the PHMRF removes contamination from food waste, processing an average of 30 tons per day of food waste. After the contaminants are removed, the food waste is subsequently processed into a slurry and transported to JWPCP for co-digestion. Currently, JWPCP uses the digester gas to generate electricity on-site. The Districts plans to begin converting digester gas into Compressed Natural Gas (CNG) for vehicle fueling using newly-constructed biogas upgrading equipment, which is expected to be completed by 2020. The Districts also signed a contract to convert a portion of the biosolids from JWPCP to biofuel using pyrolysis and Fischer-Tropsch Technology at a facility in Rialto, California, that is expected to begin operating in mid-2020. Through several contracts, the Districts began receiving additional food waste at JWPCP at their front-end Liquid Waste Disposal Station, which has a capacity of 350 tons per day. Currently, JWPCP uses the digester gas to generate electricity on-site.

Pitchess Detention Center (PDC): Public Works along with ARI, is assisting the Sheriff's Department with performing cost analyses for in-vessel composting or small-scale anaerobic digestion technologies to process food waste at the PDC, a cluster of jail facilities in Castaic. Additional green waste and wood waste may be provided by the Department of Parks and Recreation from Castaic Lake State Recreation Area. The resulting soil amendment would be used at PDC and potentially at other parks and recreation facilities. Public Works also continues to consider and analyze the development of potential projects at other County facilities and on County-owned land parcels.

Perris Materials Recovery Facility, CR&R Incorporated: The first two phases of CR&R Waste and Recycling Services' AD Project in Riverside County are currently in operation, converting 167,500 tpy of organic waste into renewable fuels used by their waste collection vehicles. This facility has plans to scale-up in four equal phases and ultimately digest up to 335,000 tpy, which could allow the facility to process organic waste generated in CUCs. Construction of the third phase to expand the facility capacity to over 250,000 tpy is expected to begin next year. The facility also includes an on-site organic waste MRF and injects biogas from the anaerobic digestion operation.

The goal for the near future is to make significant advancement toward establishing commercial scale CT facilities. Public Works will:

- Continue assisting the Sherriff's Department with performing cost analyses for an in-vessel composting or small-scale anaerobic digestion technology to potentially install at PDC, including exploring grants and other funding sources to reduce the cost of such a project.
- Continue to assist technology developers actively looking to site CT facilities in the County through feasibility analyses, permitting assistance, grant application assistance, and more.
- Secure new feedstock, especially organics, for CT facilities by developing organic waste collection programs in alignment with anticipated SB 1383 regulations for residences and businesses.
- Continue to educate stakeholders, such as other jurisdictions, policymakers, legislators, environmental groups, community organizations, residents, etc., about CTs and promote CT project development in the County.

- Continue to pursue policies, legislation, and regulations facilitating CT project permitting, financing, and development in the County and Statewide.
- Continue to pursue policies, legislation, and regulations allowing thermal CTs to receive diversion credit instead of being considered disposal.
- Continue to pursue policies and legislation promoting the use of renewable natural gas produced from waste conversion, such as pipeline injection and vehicle fuel, including creating feasible technical standards and providing monetary incentives.
- Continue to collaborate with regional agencies to develop a streamlined permitting process for CT facilities in the County.

Initiative B: Organic Processing Infrastructure at a Regional/Countywide Level

During this reporting period, the Working Group focused on the following key elements of this Roadmap initiative:

- ❖ B1: Evaluate opportunities to encourage the development of regional organics diversion facilities, including composting, anaerobic digestion, and chipping and grinding operations.
 - B1.a: Explore opportunities for co-digestion of source-separated commercial organics at wastewater treatment plants with excess digester capacity.

Accomplishments

Public Works prepared the 2018 annual update to the County of Los Angeles Countywide Organic Waste Management Plan (Organics Plan). The Organics Plan discusses strategies that can be adopted to meet organic waste capacity needs, identifies markets for compost and other organic residuals, and analyzes options for mechanisms that jurisdictions may implement to ensure that commercial organic waste is collected and recycled in the most efficient and economical way. The 2018 update utilized current disposal data from 2018 and improved information from extensive surveys of organic waste processors both in and out of the County.

Public Works is continuing to work with our consultant, Tetra Tech, to analyze Best Management Practices (BMPs) for collection, processing and end-use methods of different types of organic waste, which could reasonably achieve the highest organic waste diversion rate, the most economic value, the highest greenhouse gas reduction, as well as market demand. During the next reporting period, Public Works with the assistance of Tetra Tech, expects to begin planning and coordinating future workshops with city representatives to discuss the findings of the BMPs report. To comply with the AB 876 annual reporting requirement, Public Works provided information on organic waste disposal and additional facility capacity to CalRecycle.

Public Works provided significant feedback on the two formal drafts of the proposed SB 1383 regulations to help the County provide the appropriate organic waste collection services and ensure adequate capacity to process organic waste. The SB 1383 regulations, anticipated to be adopted early next year, will most likely require jurisdictions to provide mandatory organic waste collection services to all residents, businesses, and County facilities by the year 2022. Executive management and staff from both Public Works and CalRecycle met several times to discuss Public Works' comments and recommendations on the draft regulations.

On November 1, 2018, Public Works coordinated and hosted the first County of Los Angeles Solid Waste Management Summit for Public Works Directors. The event was attended by representatives of the 88 cities, CalRecycle, the Districts, and waste industry to discuss challenges and solutions, share information, and coordinate efforts. The topics of discussion focused on organic waste recycling and the China National Sword policy. Public Works is planning to host at least one additional workshop with cities in 2019 to facilitate collaboration and action among stakeholders to advance the development of infrastructure specifically to divert organic waste from landfills in Southern California.

On February 20, 2019, Public Works in collaboration with CalRecycle, hosted a Southern California regional SB 1383 Public Education meeting at Public Works Headquarters. Regional jurisdictions and organizations attended the meeting to provide feedback to CalRecycle regarding the educational resources the State should invest in to assist local jurisdictions tasked with educating policymakers, consumers, and generators about organic waste recycling.

Although significant additional organic waste recycling infrastructure will be needed to meet the SB 1383 regulations, some projects are currently being considered for development. For example, Waste Management has expressed the intent to develop a covered aerated static pile composting system at the Antelope Valley Landfill in Palmdale called the Palmdale Organic Waste Recycling Center to manage 300-500 tons per day of food waste and green waste.

Initiative C: Local Green Business and Market Development at a Regional/Countywide Level

During this reporting period, the Working Group focused on the following key elements of this Roadmap initiative:

- ❖ C1: Work with partner cities in the Recycling Market Development Zone (RMDZ) to encourage new green businesses and remanufacturing facilities to site facilities in the County.
- ❖ C2: Continue to seek opportunities to expand the RMDZ to include additional interested cities in the County.

Accomplishments

The County of Los Angeles' RMDZ Program has granted more than 190 loans to qualifying businesses since 1993. During the past year, the County Zone Administrator met or had conference calls with three companies who requested business assistance. The businesses are located in the Cities of Santa Fe Springs, South Gate, and Torrance. The companies did not qualify for an RMDZ loan, but were provided with other business assistance resources.

In October 2018, rPlanet Earth, a PET plastics recycler and recipient of a RMDZ loan, held a grand opening celebration to inaugurate its new 302,000 square-foot plastic recovery and production facility in Vernon, CA. CalRecycle and Public Works staff attended the event and presented rPlanet Earth with a check for \$2 million.



CalRecycle and Public Works staff pose with a check for \$2 million presented to rPlanet Earth.

Public Works is currently working with County Counsel to remove the cities membership fee to incentivize other cities to join the program. Public Works plans to launch a direct-mail campaign targeting manufacturing businesses in County of Los Angeles with the next round of ZIF funds, which will be fully available in 2020.

Initiative D: Resource Recovery Centers and “Re-stores” at a Regional/Countywide Level

During this reporting period, the Working Group focused on the following key element of this Roadmap initiative:

- ❖ D1: Partner with the County Sanitation Districts of County of Los Angeles and municipalities in the County to facilitate the development of Resource Recovery Centers, as described in the Priority Issues section, at all publicly owned transfer stations and landfills.

Accomplishments

The two County operated HHW/E-Waste permanent centers are in consideration to develop Resource Recovery Centers on-site for public reuse of viable products acquired at collection events. The County was awarded a CalRecycle grant (HD31) to assist in the development of the centers. Public Works continues to research other reuse programs and work with the permanent center owners and operators to establish an effective reuse program. When construction of the new permanent HHW/E-Waste collection facility at Chiquita Canyon Landfill is complete, Public Works anticipates including that facility in the reuse program as well.

Strategy 4: Outreach and Education

Initiative A: Communication Action Plan at a Regional/Countywide Level

During this reporting period, the Working Group focused on the following key element of this Roadmap initiative:

- A1.b: Brand the campaign slogan (e.g., “Don’t Waste Your Waste”) and encourage cities to adopt and include in their websites as a consistent slogan.
- A1.c: Establish partnerships to build on and promote other sustainability programs and partner with jurisdictions or agencies, as appropriate, to leverage resources and amplify the message of sustainability.

Accomplishments

The Working Group continued to identify programs and resources that can be incorporated or assist in developing outreach material or messaging to help meet the diversion goals set in the Roadmap.

The slogan “Sustainable is Attainable” and the Roadmap logo, developed by the Working Group, have been consistently used in all outreach material. The hashtag, #SustainableIsAttainable, is currently being used on Twitter to continue to increase visibility and expand its branding. The logo and slogan are also being used on program material, giveaways, and equipment, such as County Library Battery Recycling Program receptacles, and other campaign material. The Working Group continued to develop outreach material and messaging to help meet the diversion goals set in the Roadmap. The increased exposure of the Roadmap logo and slogan through partnerships and campaigns has amplified the Roadmap’s message of sustainability.

During this reporting year, Public Works continued to procure and launch numerous campaigns promoting a more sustainable County of Los Angeles with a variety of partners. Each campaign focused on behavior changes and practices highlighting Roadmap initiatives on a Countywide scale reaching the 10 million plus County of Los Angeles residents and employees. The following are brief descriptions and highlights of the campaigns.

Public Works collaborated with County Public Health, City of Burbank, and the Burbank Unified School District to give a presentation on waste reduction and recycling to approximately 30 school district Nutritional Directors on Friday, April 12, 2019, at San Gabriel High School. Compliance with State waste diversion mandates, organics recycling, and how to create a Share Table and Food Donation Program were highlighted during the presentation.

Beverage Container Recycling:

The Los Angeles Dodgers: During this reporting period, Public Works once again partnered with iHeart Media, the Los Angeles Dodgers, and AM 570 LA Sports Radio, the exclusive English and Spanish flagship station of the Dodgers, on a beverage container recycling campaign for the 2019 season to continue educating and increasing public awareness on the benefits and importance of beverage container recycling. The campaign was endorsed by the Dodgers’ third baseman Justin Turner with the slogan “Recycling Beverage Containers is a Double Play,” which was used in on-air radio commercials, web banners, and social media postings on Twitter and Facebook. As in previous years, an outreach recycling challenge was implemented with the Dodgers Foundation Rebuilding Baseball in Inner Cities at Dodger Dream Field parks. The winning team was recognized on the field.

Illegal Dumping:

The Los Angeles Rams: To encourage residents to keep our communities clean and to stop/report illegal dumping, Public Works partnered with ESPN LA and the Los Angeles Rams. The slogan “Let’s keep it classy not trashy!”, was used in radio spots, web banners, and social media postings on Twitter and Facebook. The message was also advertised on the LA Live LED board. All-pro Rams punter Johnny Hekker, endorsed the Illegal Dumping campaign.

The Los Angeles Dodgers: To encourage residents to keep our communities clean and to stop/report illegal dumping, Public Works once again partnered with iHeart Media, the Los Angeles Dodgers, and AM 570 LA Sports Radio, the exclusive English and Spanish flagship station of the Dodgers. The media purchase included radio spots, web banners, in-game banners, and social media postings on Twitter and Facebook. The Spanish portion of the campaign was endorsed by Dodgers outfielder Enrique (Kike) Hernandez.

The partnerships allowed Public Works to educate residents on how to dispose of waste properly and utilize the illegal dumping prevention programs administered by County of Los Angeles.

Holiday Recycling: During the holidays, the production of waste increases. County of Los Angeles residents were encouraged to “give back” to the environment by reusing or purchasing reusable products, recycling more, and wasting less through a multimedia campaign with iHeart Radio and KOST 103.5 FM, who has a significant listenership during the holidays. Tips and tools were provided to help residents reuse products, recycle more, and waste less, demonstrating that “Sustainable is Attainable.” The media campaign included on-air commercials, commercials with live on-air endorsements from KOST’s evening drive host Mark Wallengren, social media postings, a contest on the portal and website; and digital banner displays with a link to the County’s CleanLA.com website.

BYO: Public Works continued promoting the BYO Program to encourage County of Los Angeles residents and employees to reduce landfill waste by bringing their own reusable items everywhere they go. Outreach was conducted at community events throughout the County. To further promote the program, Public Works procured reusable promotional items, such as water bottles, tumblers, stainless steel utensils, and silicon and stainless steel straws. The County will continue to encourage the use of reusables instead of single use items through various methods including media campaigns, community events, and social media.

HHW: HHW events were advertised in various ways including flyers that were provided to local cities, churches, schools, and other community groups located in close proximity to each event. Information about upcoming events was also posted on cities’ event calendars, websites, and social media outlets including community apps such as NextDoor. Upcoming event information is available on the CleanLA.com website and distributed at community events. Public Works will continue to work with the Roadmap Working Group to identify programs and resources to continue to improve outreach. Through media campaigns, County will encourage residents to change their behavior by using alternative household products instead of hazardous materials and continue to promote proper disposal of household hazardous waste and electronic waste.

[Initiative B: Stakeholder Engagement & Empowerment at a Regional/Countywide Level](#)

During this reporting period, Public Works focused on ways to encourage school participation for the Battle of the Schools competition.

- ❖ B2: Expand the Generation Earth Battle of the Schools Program and encourage all schools serving the County unincorporated communities to participate.

Accomplishments

The 2018-19 Battle of the Schools competition continued to challenge schools and students to compete to divert materials from the landfills. Several methods were utilized to effectively promote the Countywide competition and increase outreach efforts to public and private middle and high schools in the County.

Promotion methods consisted of in-person school visits, and e-mail blasts during the competition to 2,125 schools Countywide and 85 unincorporated area schools. Announcements were made during two Generation Earth teacher workshops to encourage teachers to register their students for the competition. Flyers were also mailed to school administrators and distributed at various community events.

To increase participation from schools in CUCs, Public Works conducted in-person visits to 48 schools in CUCs compared to 19 schools visited in 2017.

A total of 37 schools participated in the 2018-19 Battle of the Schools competition compared to 35 schools in the 2017-18 competition. Two schools participated from the CUCs.

2018-19 Battle of the Schools School Participation List:

Participating School Name	City Name
Francisco Bravo Medical Magnet High School	Los Angeles
Bell Gardens High School	Bell Gardens
Contreras Learning Center-Academic Leadership Community	Los Angeles
Macy Intermediate School	Monterey Park
Maywood Center for Enriched Studies	Maywood
Alliance College-Ready Middle Academy #8*	Los Angeles (Unincorporated Belvedere)
Suzanne Middle School	Walnut
Walnut Park Middle School*	Huntington Park (Unincorporated Walnut Park)
Environmental Charter Middle School-Gardena	Gardena
The City School	Los Angeles
Will Rogers Middle School	Lawndale
Environmental Charter High School	Lawndale
School for the Visual Arts and Humanities	Los Angeles
Animo Inglewood Charter High School	Inglewood
Dorsey High School	Los Angeles
Hamilton High School	Los Angeles
George K. Porter Middle School	Granada Hills
Van Nuys Middle School	Van Nuys
Lakeview Charter High School	Sylmar
John Marshall High School	Los Angeles
PUC Community Charter Early College High School	Sylmar
Santa Monica High School	Santa Monica
Larchmont Charter School	Hollywood
El Camino Real Charter High School	Woodland Hills
Helen Bernstein High School	Los Angeles
Nick G. Parras Middle School	Redondo Beach
Los Coyotes Middle School	La Mirada

Philip Magruder Middle School	Torrance
Franklin Classical Middle School	Long Beach
Jefferson Leadership Academics Middle School	Long Beach
Lakewood High School	Lakewood
Jefferson High School	Torrance
Alverno High School	Sierra Madre
John Muir High School	Pasadena
Arcadia High School	Arcadia
Pasadena High School	Pasadena
John F. Kennedy High School	Granada Hills

*Unincorporated Communities Schools

	Battle of the Schools 2018-19	Battle of the Schools 2017-18
Students directly reached	1,172	808**
Students potentially impacted	47,939	46,589**
Pounds of diverted material	76,086 lbs	48,104 lbs**

**Total reflects corrected 2017-18 data.

A Food Rescue Guide was also introduced through the Generation Earth Program to assist teachers and students on how to develop and implement a campus food share or food donation project. The guide is available for teachers and students to access on the Generation Earth website.

In 2018, fourteen schools reported using the Generation Earth Food Rescue Guide and implemented an on-campus food waste diversion project. The schools chose the food rescue project after noticing the large amounts of uneaten food being thrown away and learning about food insecurity. The students implemented a food share table at their campus or donated excess food to local community organizations.

In 2018, nineteen schools reported implementing a food composting program. Students diverted their campus food waste from being landfilled by composting it on their school campus. By doing so, students gained knowledge on waste diversion, decomposition, and soil generation.

Schools that completed a food waste diversion project:

Participating School Name	Food Diversion Project	City
John Marshall High School	Food Rescue	Los Angeles
John Marshall High School	Food Composting	Los Angeles
Jefferson Middle School	Food Rescue	San Gabriel
Environmental Charter Middle School – Gardena	Food Rescue	Gardena
International Studies Learning Center	Food Rescue	South Gate
Jane Addams Middle School	Food Rescue	Lawndale
John F. Kennedy High School	Food Rescue	Granada Hills
Larchmont Charter School at Selma	Food Rescue	Los Angeles
Larchmont Charter School at Selma	Food Composting	Los Angeles
Los Coyotes Middle School	Food Rescue	La Mirada

Los Coyotes Middle School	Food Composting	La Mirada
Nick G. Parras Middle School	Food Rescue	Redondo Beach
Nick G. Parras Middle School	Food Composting	Redondo Beach
Philip Magruder Middle School	Food Rescue	Torrance
Philip Magruder Middle School	Food Composting	Torrance
San Fernando Institute of Applied Media	Food Rescue	San Fernando
University High School	Food Rescue	Los Angeles
Van Nuys Middle School	Food Rescue	Van Nuys
Van Nuys Middle School	Food Composting	Van Nuys
Will Rogers Middle School	Food Rescue	Lawndale
Alverno High School	Food Composting	Sierra Madre
Bell Gardens High School	Food Composting	Bell Gardens
Corpus Christi School	Food Composting	Pacific Palisades
Environmental Charter High School	Food Composting	Lawndale
Franklin Classical Middle School	Food Composting	Long Beach
Gaspar de Portola Middle School	Food Composting	Tarzana
Jack London Community School	Food Composting	Valley Glen
John R. Wooden High School	Food Composting	Reseda
Milken Community High School	Food Composting	Los Angeles
PUC Lakeview Charter High School	Food Composting	Sylmar
STEM Academy of Hollywood	Food Composting	Hollywood
Viewpoint School	Food Composting	Calabasas
Westridge School for Girls	Food Composting	Pasadena



Parras Middle School – Students composting.



Magruder Middle School - Students emptying food waste bins.



Magruder Middle School - Compost Bins

Public Works will continue to provide and enhance its environmental education to teachers and students through the Generation Earth Program and will continue to promote and encourage all schools in the County of Los Angeles to participate in the annual Battle of the Schools competition.

County Operations

Strategy 1: Quality Programs and Services

Initiative A: Institutionalize Waste Prevention and Source Reduction at County Operations

During this reporting period, the Working Group focused on the following key elements of this Roadmap initiative:

- ❖ A1: Identify areas of excess waste at County facilities and operations and create source reduction policies within the framework of the County's budget.
- ❖ A2: Newly Initiated Roadmap Element: Develop templates for programs and policies and implement them at County facilities and operations.
- ❖ A3: Provide technical assistance, training, financing, and other resources for County departments to ensure their success.
- ❖ A4: Evaluate County purchasing practices:
 - A4.b: Review and make enhancements to the County's Green Purchasing Policy to purchase products that are recyclable, compostable, reusable, repairable, and locally manufactured or grown. Publish a list of products that meet these standards.
- ❖ A6: Explore and, if feasible, develop and implement more aggressive reuse programs.
 - A6.a: Consider policies to discourage use of single-use water bottles in favor of reusable water bottles; incorporate hydration stations at County facilities to encourage employees and visitors to bring reusable water containers.

Background

In implementing the Commercial and Institutional Recycling Program, Public Works with the help of consultants, conducted site visits to County facilities located throughout the County to identify waste reduction opportunities and develop Resource Management Plans to assist facilities in utilizing the latest information and technology for increasing efficiency, cost-effectiveness, and productivity of sustainable operations.

Accomplishments

Green Product Working Group: The Green Product Working Group meetings continued to be placed on hold during this reporting period. Public Works revised the policy and will circulate it to the Working Group to obtain feedback during the next reporting period. Public Works plans to reconvene the Green Product Working Group meetings during the next reporting period.

Commercial and Institutional Recycling Program (CIRP): The CIRP consultant visited three facilities (Public Library Headquarters, and Fire Stations 81 and 131) during this reporting period and is preparing a RMP for each site visited. Overall, 24 site visits have been conducted through the CIRP contract. During this reporting period, RMPs for seven facilities were completed, bringing the overall count to ten RMPs (Los Angeles County Museum of Art, Via Dolce Beach Maintenance Yard, Carson/Gardena Animal Care & Control Center, Frank Bonelli Regional Park, Central Juvenile Hall, MacLaren's Children's Center, Antelope Valley Rehabilitation Center, Industry Sheriff Station, Probation Camp Rockey, and Pamela Park). The RMPs provide recommendations for increased diversion, including changes in operations and services, additional equipment, and other ways to divert more materials from being landfilled while potentially reducing costs, energy, and resource consumption. The CIRP consultant will continue to visit County facilities and large venues during the next reporting period.

The CIRP consultant also completed the waste-free event guide that provides a simple checklist of activities and equipment necessary to prepare for and conduct a waste-free event. Public Works is considering posting the guide on the County website, showcasing it at environmental outreach events, and distributing it to County departments through the Roadmap County Operations Subcommittee and the County Departmental Recycling Program. Two ideas that were discussed during a brainstorming session of a Working Group meeting are providing foods not requiring utensils at office gatherings and donating excess edible food to local charities.

The CIRP consultant is currently preparing an online training to educate County employees in waste reduction and diversion concepts, and methods to incorporate sustainability in their daily tasks and projects.

Community Trash Can Pilot Program: Public Works launched an Employee Community Trash Can Pilot Program at its Headquarters, Annex building, in June 2019. The implementation of this program is helping to significantly reduce the number of trash can liners (plastic bags) that are discarded daily. The participating employees are offered a desk mini-bin. Community trash cans are established in work areas conveniently located to facilitate and ensure employee participation. From June to October 2019, the program saved 8,512 trash can liners. During the next reporting period, the program is projected to reduce the use and disposal of 25,536 trash can liners. Public Works anticipates expanding the program to other Public Works facilities, including its Headquarters Building during the upcoming months.

Hydration Stations: There is a total of four hydration stations installed at Public Works Headquarters. Hydration stations are similar to water fountains with the addition of a spigot allowing for reusable water bottles to be easily refilled and displaying a counter to make users aware of the equivalent

number of standard size water bottles that were not wasted. In 2018 the counters recorded a projected 76 percent increase of bottle savings to 107,350.

Bigbelly Bins: Public Works currently has a sole-source lease contract with Bigbelly for the purchase and maintenance of outdoor collection/compacting units for trash and recyclables. During this reporting period, 39 dual units (trash and recyclables) were placed in key locations throughout the Belvedere GDD. A unit continues its placement at the front entrance of the Public Works Headquarters building. These units are powered 100 percent by solar energy and provide five times more capacity than standard receptacles. Other benefits of the units include a decrease in odors and litter overflow, and reduction in collection frequency.

Initiative B: Advocate for Extended Producer and Manufacturer Responsibility at County Operations

The Working Group continued to address Initiative B this year. During this reporting period, the Working Group focused on the following key element of this Roadmap initiative:

- ❖ B1: Incentivize EPR, such as reduced packaging, in County procurement and contracts, considering vendors who utilize EPR.

Accomplishments

Discussions continued during Roadmap meetings on ways County departments could reduce waste from items they procure including reducing packaging for purchased items and procure items that include materials that can be recycled.

During this reporting period, County departments procured over 3,530 tons of recycled content paper versus about 18.9 tons of nonrecycled content paper, and nearly 4.4 tons of remanufactured laser toner cartridges. Nonrecycled content paper was procured due to business/operation reasons (i.e. artwork/graphic printing).

The County also has ordinances to restrict use of single-use plastic bags, polystyrene food containers, and stop automatically provide plastic straws to customers for businesses operating in CUCs and at County Operations.

Initiative C: Make Sustainability Easy and Discourage "Trashing" at County Facilities

During this reporting period, the Working Group focused on the following key elements of this Roadmap initiative:

- ❖ C1: Provide for recycling at public venues where feasible and funded, such as beaches, libraries, hospitals, parks, internal County functions, and employee events; provide more public recycling receptacles placed adjacent to public trash receptacles.
- ❖ C3: Enhance the County Recycling Coordinator Program and develop standardized reuse and recycling processes.

Accomplishments

The County Departmental Recycling Program (CDRP) continued to work with several departments to provide further technical assistance in implementing recycling and diversion programs. This past year, CDRP, managed by Public Works, provided 158 paper and cardboard bins, 36 beverage containers, and 23 battery recycling bins to several County facilities, including the Board Office, County Counsel Office, Office of the Assessor, Department of Children and Family Services, Department of Health Services, Department of Mental Health, Department of Parks and Recreation, Probation Department,

Department of Public Health, Public Library, Public Works and Sheriff's Department. County agencies recycled over 968 tons of paper and cardboard, 266 tons of scrap metal, nearly 135 tons of radiographic film waste, 1,586 pounds of batteries, and nearly 1,180 pounds of CRV beverage containers.

The CDRP also continued to promote recycling to all departments during biannual Departmental Recycling Coordinators meetings and through quarterly newsletters. Currently, Public Works is working on the development of a web-based system for County Recycling Coordinators to request and track the status of the recycling equipment online.

Public Works also continued the collection of food waste and beverage container recycling at large events held at Headquarters and at field yards, including the Safety Awards.

Initiative D: Recover Organics, including Food Waste, to the Highest and Best Uses at County Facilities at County Operations

During this reporting period, the Working Group focused on the following key elements of this Roadmap initiative:

- ❖ D1: Explore and implement, if feasible and funded by the Board of Supervisors through a department's annual budget appropriations, food waste/organics collection, food drops, and composting programs at specific County facilities.
 - D1.a: Identify largest generators of food and organic waste among County facilities.
 - D1.b: Create a pilot program to be a model program that would be implemented at other County facilities.
- ❖ D2: Encourage and incentivize organics collection or onsite management at venues with cafeterias, such as hospitals and detention centers.

Accomplishments

Public Works identified County department facilities that are likely to fall under the Tier 3 threshold for compliance with AB 1826, which requires facilities generating over 4 cubic yards per week of commercial solid waste to sign up for organic waste recycling services. In 2018 Public Works sent a memo to all County Department Facility Managers and Recycling Coordinators informing them of facilities that may fall under the Tiers 1, 2, or 3 compliance thresholds. The memo provided instructions on how to comply with the law, including how to implement a food waste recycling program based on the hauler, and how to ensure that green waste is recycled in addition to food waste, and included information on anticipated SB 1383 requirements.

Public Works created a County Operations Organics website to provide additional resources to assist County departments with starting organics recycling programs at their facilities. LAC+USC Medical Center began a food waste recycling program in March 2019. Several other County departments are coordinating the logistics of how to set up organic waste collection services at their facilities before subscribing to organic waste collection services.

Scrape Your Plate Program: In 2017 Public Works implemented a pre- and post-consumer food waste recycling program in its Headquarters building cafeteria kitchen and dining area. The program was later expanded to include break rooms as well as at special events at Headquarters and at field facilities. The food waste collected is co-digested by the Districts to produce renewable electricity. Through the food waste collection program, Public Works diverts an estimated 100 pounds of food waste per day. An estimated 5 pounds per day of pre-consumer food waste from the cafeteria kitchen operations is deposited into on-site worm bins to produce compost and liquid fertilizer.

In December 2018 the U.S. Environmental Protection Agency (EPA) awarded Public Works a 2018 Food Recovery Challenge Regional Award in recognition of its efforts to reduce and recycle food waste. Public Works continues to provide outreach periodically throughout each year and is currently developing a video to provide additional education to employees and other County departments about the program.

Public Works is the lead County agency with Public Health assisting in the Food Donation and Recovery Outreach Program (Food DROP). The Food DROP continues to canvass further partnerships.

Initiative E: Maximize Diversion of Construction and Demolition Debris at County Facilities

During this reporting period, the Working Group focused on a newly added sub-element of this Roadmap initiative:

- ❖ E4: Newly added sub element: Revise the County's Contract Specification to include recycling and reuse rates for County projects that conforms with the diversion rate specified in the County Ordinance.

Background

The proposed revisions for the Construction and Demolition Debris Recycling and Reuse Ordinance include plans to implement a refundable deposit fee to be paid before a project can be approved a Recycling and Reuse Plan. This refundable deposit is intended as a financial incentive for projects to comply with the revised ordinance. However, County projects will be exempt from paying a refundable project deposit. The respective project managers of County projects will enforce compliance with the revised ordinance as detailed in the project's specifications. County projects will still be required to apply for a Recycling and Reuse Plan and submit monthly reports until the project is completed.

Accomplishments

Project specifications for County capital projects were revised to require administrators of County projects to recycle or reuse construction and demolition debris in accordance with the latest County Green Building Standards Code. Public Works may assess liquidated damages on contractors who fail to comply with the contract specifications.

Strategy 2: Measuring Results

Initiative A: Waste Sector Assessment at County Facilities

During this reporting period, the Working Group focused on the following key element of this Roadmap initiative:

- ❖ A1: Develop a methodology, schedule, and budget to conduct waste generation and disposal surveys at County operations.

Accomplishments

Site visits and waste assessments were conducted at the Public Library Headquarters and Fire Stations 81 and 131 through the CIRP contract. Additional County facilities and large venues will be identified for the CIRP contractor to conduct site visits and/or waste assessments over the next year. The list is constantly being updated in consideration of inquiries received from County departments. The CIRP contract has been extended for its second option year.

Initiative B: Evaluate and Measure the Success of Existing Programs and Consider New Programs at County Facilities

During this reporting period, the Working Group focused on the following key elements of this Roadmap initiative:

- ❖ B2: Establish benchmarks tied to waste reduction goals – disposal, recycling, and other diversion.
 - B2.a: Look into ways to get more data for recycling and waste reduction such as collaboration with haulers and materials collection and processing facilities.

Accomplishments

Public Works' 2018 diversion goals for the Food Recovery Challenge were to prevent 300 pounds of food from being wasted by continuing daily cafeteria food preparation to reduce leftovers, and to measure food waste by category to identify additional prevention methods. Another goal was to donate 100 pounds of leftover edible food. The third goal was to recycle 70,000 pounds of food waste by continuing the food waste diversion program in the cafeteria, break rooms, and special events as well as continuing the on-site worm composting program.

In 2018 Public Works continued food waste reduction practices in the cafeteria, preventing over 300 pounds of food waste from being generated. Due to these food waste reduction practices, the Public Works cafeteria did not generate any leftover food for donation. Almost 18,000 pounds of food waste was collected from the cafeteria kitchen, dining area, break rooms, and special events and sent to the Districts for anaerobic digestion. An additional 1,200 pounds of food waste from the cafeteria kitchen was composted on-site in the worm bins.

Strategy 3: Facilities and Infrastructure

Initiative B: Organics Processing Infrastructure at County Facilities

During this reporting period, the Working Group focused on the following key elements of this Roadmap initiative:

- ❖ B1: Establish guidelines and enable County facilities that are large-quantity food waste generators to do their own composting where feasible.
 - B1.a: Create a list of County facilities that generate large amounts of food or green waste.
 - B1.b: Identify at least two micro-composter pilot project opportunities, including required funding, at County facilities that would foster interdepartmental collaboration and help meet the solid waste management needs of one or more large County departments.
 - B1.d: Investigate sites along with cost and permitting details to construct a County anaerobic digestion facility.

Accomplishments

Public Works has identified County facilities under the Tier 1, Tier 2, and Tier 3 of AB 1826 compliance thresholds as described above on page 35.

Public Works provided permitting guidance and is currently analyzing the economic feasibility of an in-vessel composting or small-scale anaerobic digestion technology to process 2 tons per day food waste generated on-site at PDC. Green and wood waste generated from the Department of Parks and Recreation Castaic Lake State Recreation Area could be processed in this technology as well.

Public Works along with ARI, prepared a summary of small-scale anaerobic digesters, dehydrators, and in-vessel aerobic composters that could be used to process food waste, green waste, and wood waste on-site at County facilities. ARI is currently updating the summary to include liquefier technologies. After the summary is completed, it will be distributed to County departments and posted on Public Works' SoCalConversion website.

As part of its efforts to increase in-County CT capacity, Public Works has continued to conduct feasibility and economic analyses to facilitate the development of potential CT projects at County facilities and on County-owned land parcels. Public Works provided significant feedback on the two formal drafts of the proposed SB 1383 regulations, which will likely require the County to ensure adequate capacity to process organic waste. Public Works has begun analyzing the feasibility of developing organics recycling infrastructure at County facilities.

Public Works continues to implement on-site worm composting as described above on page 37.

Strategy 4: Outreach and Education

Initiative A: Stakeholder Engagement and Empowerment at County Facilities

During this reporting period, the Working Group focused on the following key element of this Roadmap initiative:

- ❖ A1: Incorporate incentives, awards, contests, etc., to encourage employee participation in sustainability programs.

Accomplishments

The CIRP contract continues to provide resources to help businesses and institutions, such as County facilities achieve large-scale waste diversion and recycling as well as implement environmentally sustainable practices and zero-waste programs. Over the next year, Public Works will discuss development of a recognition program to motivate County employees who manage facilities and operations to implement diversion programs and incorporate diversion and sustainability in their tasks and projects.

Through the CDRP, County employees are encouraged to participate and implement sustainable programs. County Department Recycling Coordinators (DRC) receive information through various avenues including a quarterly newsletter; regular email communications of new processes and relevant legislation; and regular meetings.

Public Works continues to encourage its employees to implement sustainable practices by promoting BYO at work and highlighting various relevant events such as Earth Day and America Recycles Day. Other County departments are also encouraged to do the same through the CDRP.

Initiative B: Leadership in Sustainability at County Facilities

During this reporting period, the Working Group focused on the following key elements of this Roadmap initiative:

- ❖ B1: Work with County departments to implement sustainable practices, where fiscally feasible, based on feedback from waste surveys.
- ❖ B3: Provide training for staff in advance of any new initiative impacting County-owned or operated facilities.
- ❖ B4: Establish an internal Sustainability Ambassador program for County employees to be responsible for monitoring recycling and composting bins in their designated work area and provide information on upcoming sustainability training available to County staff.
 - B4.a: Encourage recycling coordinators from each department to meet routinely to share ideas, coordinate efforts, and provide progress reports.
 - B4.b: Assign ISD or a partner department to oversee waste reduction for departments without facilities staff.

Accomplishments

Through the CIRP contract, Public Works created a County Operations Organics website to provide additional resources to assist County departments start organics recycling programs at their facilities.

Public Works is continuing to develop a video to provide additional education to employees and other County departments about our food waste collection program.

Public Works continued to host meetings with DRC twice a year to provide participants with updates, resources, and education on various County recycling programs and ordinances, such as the Beverage Container Recycling Program, Paper Recycling Program, Toner Cartridge Recycling Program, Battery Recycling Program, BYO Single-Use Reduction And Recycling Program, Scrape Your Plate Food Waste Recycling Program, Commercial Organic Waste Recycling Ordinance, and the Single-Use Plastic Straw Ordinance. County policies related to recycling and sustainability are reviewed at these meetings. During the meetings, DRCs shared ideas, discussed challenges, and received feedback on the progress of coordinating their department's recycling programs. County agreement recycling vendors were also invited to provide updates on the recycling industry. In addition, DRCs were informed on how to start a beverage container recycling program and offered assistance with the process by receiving information on nonprofit organizations and beverage container recycling bins.

Public Works continues to educate all County staff on how they can help meet the Roadmap's diversion goals through the DRCs. Also, CDRP newsletters that assist in communicating and implementing waste reduction and diversion programs were sent via e-mail to DRCs to distribute to their Department staff. In addition, the newsletter is accessible through the DRC's website.

After the adoption of the Plastic Straw Ordinance, as described above on page 11, Public Works sent a letter to all County department's facility managers informing them about the new requirements and providing resources to assist County departments in complying with the ordinance.

Public Works coordinated with County Public Health to give a presentation about the Roadmap, waste diversion strategies, and specifically the County's employee waste diversion programs on Thursday, August 29, 2019. More than 300 County Public Health employees were educated about the County's

waste diversion programs and how they can help decrease waste generation by using reusable items and recycling at work and at home.

RELEVANT SOLID WASTE MANAGEMENT STATUS REPORTS

The Board directed that the Roadmap Annual Progress Report serve to consolidate other solid waste management status reports including the CT in County of Los Angeles Six-Month Status Update and the Status Report on Removal of Elsmere Canyon Landfill from the County of Los Angeles Countywide Siting Element. These reports are included below:

Conversion Technologies Update

Background

On January 27, 2015, a Board Motion instructed Public Works to provide semi-annual reports that include clear benchmarks for measuring the actual progress being made toward establishing viable CT projects, including the amount of waste to be diverted, financial viability, project status, and significant impediments that will allow the Board to meaningfully assess the efficacy of CTs in meeting the County's goal of a sustainable waste management future. It was decided in 2016 by the Board offices, all CT updates to the Board will be within the Roadmap Annual Progress Report.

CTs can be used to divert waste that cannot feasibly be reduced, reused, or recycled from landfills. In addition, CTs can recover energy, fuels, and other use products from post-recycled or residual solid waste while reducing greenhouse gas emissions from fossil-based fuels and energy as well as from waste disposal. CT facilities such as anaerobic digestion and biomass gasification facilities will provide the necessary organic waste recycling capacity to help businesses, residents, and County facilities comply with AB 1826 and SB 1383. Significant progress has been made in the development of CT projects in the County.

Project Development Highlights:

A number of CT projects within the County are in various stages of development, including:

- **JWPCP:** The Districts continue to expand their food waste co-digestion operation at JWPCP. The existing Liquid Waste Disposal Station at JWPCP has a capacity of 350 tons per day of food waste and receives food waste through various contracts. Currently, the digester gas at JWPCP is used on-site to generate electricity. The Districts plans to use excess digester gas to produce 2,300 to 3,500 gasoline gallon equivalents of Compressed Natural Gas (CNG) per day for vehicle fueling using newly-constructed biogas conditioning infrastructure. The Districts expect to complete the biogas conditioning infrastructure in 2020 and will also expand the fueling station. The JWPCP also co-digests source-separated food waste received at the Districts PHMRF. The Districts continue to use a DODA pre-processing technology with a capacity of 165 tons per day to remove contamination from food waste at the PHMRF. The DODA currently processes an average of 30 tons per day of food waste. The food waste is processed into a slurry and transported to JWPCP for co-digestion. The Districts have signed a contract to convert a portion of the biosolids from JWPCP to biofuel using pyrolysis and Fischer-Tropsch Technology at a facility in Rialto, California that is expected to begin operating in mid-2020.

- **PDC:** Public Works along with ARI, provided permitting guidance and is currently performing a cost analysis for a potential in-vessel composting or small-scale Anaerobic digestion technology to process 1-2 tons per day of food waste generated on-site at PDC, a cluster of jail facilities in Castaic. The technology may also be used to process green waste and wood waste generated on-site and from nearby County facilities such as the Department of Parks and Recreation Castaic Lake State Recreation Area.
- **Perris Materials Recovery Facility, CR&R Incorporated:** CR&R Waste and Recycling Services' anaerobic digestion facility is currently operating in Riverside County with a capacity of 167,500 tons per year of organic waste. This facility converts organic waste into biogas, which is either used to produce renewable fuels for use by their waste collection vehicles or injected into the natural gas pipeline. The facility also includes an on-site organic waste MRF. This facility has plans to scale-up in four equal phases and ultimately digest up to 335,000 tons per year. CR&R expects to begin construction on the third phase next year, which will increase the capacity to over 250,000 tons per day.

Benchmarking and Milestones:

Last year, Public Works established the following numerical milestones to measure progress in implementing the CT Program.

Timeframe	Milestone	Capacity (Tons Per Day)	Status
7/31/2015	County Sanitation Districts anaerobic digestion co-digestion at Carson facility	65 (can be expanded in the future)	Completed
12/31/2015	Construction of Perris anaerobic digestion facility	230	Completed
12/31/2020	In-County conversion technology capacity (projection)	200	Completed
12/31/2025	In-County conversion technology capacity (projection)	500	On-track
12/31/2035	In-County conversion technology capacity (projection)	3,000	On-track

The County has met the milestone of 200 tons per day of in County capacity and is on track to achieve the next milestone of 500 tons per day in-County waste conversion capacity by 2025.

Legislation

Public Works continues to actively pursue and support policy, legislation, and regulations that encourage the development of CT facilities, such as efforts to provide diversion credits for technologies diverting organic waste from being landfilled while reducing greenhouse gases emissions.

Next Steps

To make significant advancement toward establishing commercial-scale CT facilities, Public Works will:

- Continue to facilitate the development of CTs in the County by working with stakeholders to identify barriers and create solutions to those barriers, such as sponsoring legislation or advocating for legislative and policy changes.
- Continue to pursue policy, legislation, and regulations facilitating CT project permitting, financing, and development in the County and Statewide.
- Continue analyzing in-vessel composting and small-scale anaerobic digestion technologies for installation at PDC.
- Secure new feedstock, especially organics, for CT facilities by developing organic waste collection programs in alignment with anticipated SB 1383 regulations for residences and businesses.
- Continue to educate stakeholders, such as other jurisdictions, legislators, policymakers' environmental groups, community organizations, residents, etc., about CTs and promote CT project development in the County.
- Continue to collaborate with regional agencies to develop a streamlined permitting process for CT facilities in the County.
- Continue to assist technology developers actively looking to site CT facilities in the County through feasibility analyses, permitting assistance, grant application assistance, and more.
- Continue assisting the Sheriff's Department with performing cost analyses for an in-vessel composting or small-scale anaerobic digestion technology to potentially install at PDC, including exploring grants and other funding sources to reduce the cost of such a project.
- Continue to pursue policies, legislation, and regulations allowing thermal CTs to receive diversion credit instead of being considered disposal.
- Continue to pursue policies and legislation promoting the use of renewable natural gas produced from waste conversion, such as pipeline injection and vehicle fuel, including creating feasible technical standards and providing monetary incentives.

Elsmere Canyon Landfill Status Report

As directed by the Board on October 21, 2014, the Status Report on the Removal of Elsmere Canyon Landfill is now provided annually as part of this Roadmap to a Sustainable Waste Management Future Annual Progress Report. Public Works is currently taking the necessary steps to remove Elsmere Canyon Landfill from the County Countywide Siting Element's list of future landfill sites.

Public Works continues to revise the Preliminary Draft Siting Element using the base year of 2017, including disposal projections covering the planning period beginning 2017 through 2032, and to include the impacts of current legislation, such as mandatory commercial recycling (AB 341), diversion of organic waste from landfills through organics recycling programs (AB 1826), and through the reduction of short-lived climate pollutants, such as methane (SB 1383), and prohibition on local disposal limits (AB 845) on the Countywide diversion and disposal quantities.

Public Works continues to prepare the environmental document prior to releasing it to the public for review. The revised Siting Element and its environmental documents will undergo additional reviews by the public in compliance with statutory and regulatory requirements, including approvals by cities, the Board, and CalRecycle.

APPENDICES

Appendix A - List of Acronyms

AB	Assembly Bill
BYO	Bring Your Own
BMPs	Best Management Practices
C&D	Construction and Demolition
CalOES	California Office of Emergency Services
CalRecycle	California Department of Resources and Recovery
CDRP	County Department Recycling Program
CEC	California Energy Commission
CEO	Chief Executive Office
CEQA	California Environmental Quality Act
CIRP	Commercial and Institutional Recycling Program
CNG	Compressed Natural Gas
CRV	California Refund Value
CT	Conversion Technologies
CUCs	County Unincorporated Communities
Districts	County Sanitation Districts of Los Angeles County
DRCs	Department Recycling Coordinators
EPR	Extended Producer Responsibility
Food DROP	Food Donation and Recovery Outreach Program
GDD	Garbage Disposal District
HHW/E-Waste	Household Hazardous Waste and Electronic Waste
ISD	Internal Services Department
JWPCP	Joint Water Pollution Control Plant
LACoMAX	Los Angeles County Materials Exchange program
MRC	Mattress Recycling Council
MRF	Materials Redistribution Facility
PDC	Pitchess Detention Center
PHMRF	Puente Hills Material Recovery Facility
Ppd	pounds per person per day
RFQP	Request for Qualifications and Proposals
RMDZ	Recycling Market Development Zone
RMP	Resource Management Plan
Roadmap	Roadmap to a Sustainable Waste Management Future
SBR	Smart Business Recycling
UA Plan	Unincorporated Area Mass Debris Management Plan
ZIF	Zone Incentive Funds

DEFINITIONS

Below are definitions of terms not previously defined in the Roadmap document:

Term	Definition
AB 341	Mandatory Commercial Recycling Law. As of July 1, 2012, California requires all businesses that generate four (4) or more cubic yards of garbage per week and multifamily dwellings with five (5) or more units to recycle. The specific statutory language for the law (Assembly Bill 341) can be found in the State's Public Resources Code: PRC Division 30, Part 3, Chapter 12.8, Section 42649.
AB 1826	Requires businesses, including commercial or public entities, that generate specified amounts of organic waste to arrange for recycling services for that material beginning April 1, 2016, through January 1, 2020. The law also requires each jurisdiction to implement an organic waste recycling program to divert organic waste from the businesses subject to this mandate. Each jurisdiction is required to report beginning August 1, 2017, on its progress in implementing the organic waste recycling program.
Anaerobic Digestion	A series of biological processes in which micro-organisms break down biodegradable material in the absence of oxygen.
Biogas	A gas resulting from the operation of an in-vessel digester at an in-vessel digestion operation or facility that is composed primarily of carbon dioxide, hydrogen, and methane.
Biomass	Any organic material not derived from fossil fuels, such as agricultural crop residues, bark, lawn, yard and garden clippings, leaves, silvicultural residue, tree and brush pruning, wood and wood chips, and wood waste, including these materials when separated from other waste streams. "Biomass" or "biomass waste" does not include material containing sewage sludge, industrial sludge, medical waste, hazardous waste, or either high-level or low-level radioactive waste.
Biosolids	Nutrient-rich by-product of wastewater treatment that may be applied directly to land if Federal and State rules are followed.

California Product Stewardship Council	The California Product Stewardship Council (CPSC) is a network of local governments, nongovernment organizations, businesses, and individuals supporting policies and projects where producers share in the responsibility for managing problem products at end of life commonly known as extended producer responsibility (EPR).
Compost	The product resulting from the controlled biological decomposition of organic wastes that are source separated from the municipal solid waste stream, or which are separated at a centralized facility. Compost includes vegetable, yard, and wood wastes which are not hazardous waste.
Compostable	Composed of materials such as vegetable matter, paper, cardboard, and plastics that must (1) break down to carbon dioxide, water, inorganic compounds, and biomass at a rate similar to paper, (2) disintegrate into small pieces within 90 days, so that the original product is not visually distinguishable in the compost, and (3) leave no toxic residue.
Composting	Defined in PRC, Section 40116.1, as "the controlled or uncontrolled biological decomposition of organic wastes." Further defined in CCR, Title 14, Section 17225.14, as "a controlled microbial degradation of organic wastes yielding a safe and nuisance free product."
Conversion Technologies	Refers to a wide array of technologies capable of converting post-recycled or residual solid waste into useful products, green fuels, and renewable energy through non-combustion thermal, chemical, or biological processes. Conversion technologies may include mechanical processes when combined with a non-combustion thermal, chemical, or biological conversion process.
County	The County of Los Angeles including the Board of Supervisors as the legislative and executive body of county government, and any designated agency responsible for solid waste management.
County Green Purchasing Policy	Los Angeles County Policy P-1050, Purchase of Environmentally Preferable Products, established objectives for the purchase of products commonly used by County departments. Under this Purchasing Policy, the County developed a 5-year plan to phase-in categories of certified goods. Easy to adopt purchasing categories (e.g., paper, cleaning supplies) were implemented and a pricing advantage for green products is in place.

Countywide	The incorporated cities within the County and the unincorporated areas of the County.
CRV	California Redemption Value is a deposit paid on sales of certain recyclable beverage containers in California.
Digestate	The solid and/or liquid residual material remaining after organic material has been processed in an in-vessel digester.
Disposal	The final deposition of solid waste onto land, into the atmosphere, or into the waters of the state; the management of solid waste through landfill disposal or transformation at a permitted solid waste facility; the final deposition of solid wastes onto the land; "the management of solid waste through landfilling or transformation at permitted solid waste facility.
Diversion	The act of diverting one or more designated materials from a solid waste stream. Diversion typically occurs at the point of generation. Normally, diversion is used to divert recyclables for separate collection, but it may also be used to prevent certain materials from being managed with the rest of a solid waste stream.
Expanded Polystyrene	A rigid transparent thermoplastic that has good physical and electrical insulating properties and is used especially in molded products, foams, and sheet materials.
Extended Producer Responsibility (EPR)	A mandatory form of product stewardship that includes, at a minimum, the requirement that the producer's responsibility for their product extends to the post-consumer management of that product and its packaging. There are two related features of EPR policy: (1) the shifting of management and financial responsibility upstream to the producer and away from municipalities, and (2) to provide incentives to producers to incorporate environmental considerations in the design of their products.
Household Hazardous Waste (HHW)	Solid waste generated by residential generators that exhibit the characteristics of a hazardous waste as established by United States Environmental Protection Agency (USEPA) hazardous waste regulations (USEPA 1980.) These wastes are exempt from the Resource Conservation and Recovery Act (RCRA) hazardous waste regulatory requirements but may be included in State regulations.
Hydration Station	Is a water fountain that provides a filtration unit designed to facilitate the filling of reusable water bottles and thereby promote reuse and eliminate the need for disposable plastic water bottles.

Landfill	A waste management unit at which waste is discharged in or on land for disposal. It does not include surface impoundment, waste pile, land treatment unit, injection well, or soil amendments.
Materials Recovery Facility (MRF)	A solid waste facility where solid wastes or recyclable materials are sorted or separated, by hand or by use of machinery, for the purposes of recycling, composting, or use as feedstock for alternative technology facilities.
Organic	Material containing carbon and hydrogen. Organic material in [municipal solid waste] includes the biomass components of the waste stream as well as hydrocarbons usually derived from fossil sources (e.g., most plastics, polymers, the majority of waste tire components, and petroleum residues).
Pay as you throw	In communities with pay-as-you-throw programs (also known as unit pricing or variable-rate pricing), residents are charged for the collection of municipal solid waste—ordinary household trash—based on the amount they throw away. This creates a direct economic incentive to recycle more and to generate less waste.
Recovery	Refers to any waste management operation that diverts material from the waste stream and which results in a product with a potential economic or ecological benefit. Recovery mainly refers to the following operations (1) reuse, (2) material recovery such as recycling, (3) biological recovery such as composting, and (4) energy recovery such as fuel production.
Recycling	The process of collecting, sorting, cleansing, treating, and reconstituting materials that would otherwise become solid waste, and returning them to the economic mainstream in the form of raw material for new, reused, or reconstituted products, which meet the quality standards necessary to be used in the marketplace.
Removal	Defined in CCR, Title 27, Section 20164, as “the act of taking solid wastes from the place of waste generation either by an approved collection agent or by a person in control of the premises.”
Residual Solid Waste	Refers to the post-recycled content or remaining solid waste after Municipal Solid Waste has gone through the recycling, source reduction, and reuse method.

SB 1383	Requires the California Air Resources Board to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants (SLCPs), including a reduction in methane by 40 percent below 2013 levels by 2030. Also requires CalRecycle to adopt regulations to achieve a 50 percent reduction in the level of the Statewide disposal of organic waste in landfills below the 2014 level by 2020, and a 75 percent reduction below the 2014 level by 2025. The bill requires the regulations to include a requirement to recover at least 20 percent of edible food that is currently disposed of for human consumption by 2025.
Scavenging	Defined in CCR, Title 27, Section 20164, as “the uncontrolled and/or unauthorized removal of solid waste materials, or recyclable material at a solid waste facility.”
Sharps	Means hypodermic needles, pen needles, intravenous needles, lancets, and other devices that are used to penetrate the skin for the delivery of medications.
Solid Waste	All putrescible and nonputrescible solid, semisolid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, dewatered, treated, or chemically fixed sewage sludge which is not hazardous waste, manure, vegetable or animal solid and semisolid wastes, and other discarded solid and semisolid wastes. “(b) ‘Solid waste’ does not include any of the following wastes: (1) Hazardous waste, as defined in Section 40141. (2) Radioactive waste regulated pursuant to the Radiation Control Law (Chapter 8 [commencing with Section 114960] of Part 9 of Division 104 of the [HSC]). (3) Medical waste regulated pursuant to the Medical Waste Management Act (Part 14 [commencing with Section 117600] of Division 104 of the [HSC]). Untreated medical waste shall not be disposed of in a solid waste landfill, as defined in Section 40195.1. Medical waste that has been treated and deemed to be solid waste shall be regulated pursuant to this division.
Solid Waste Disposal	Refers to the final deposition of solid waste onto land, into the atmosphere, or into the waters of the state, as defined in PRC, Section 40192; or the management of solid waste through landfilling or transformation at a permitted solid waste facility.

Solid Waste Management	A planned program for effectively controlling the generation, storage, collection, transportation, processing and reuse, conversion or disposal of solid wastes in a safe, sanitary, aesthetically acceptable, environmentally sound, and economical manner. It includes all administrative, financial, environmental, legal and planning functions as well as the operational aspects of solid waste handling, disposal and resource recovery systems necessary to achieve established objectives.
Sustainable	Ability to meet the needs of the present without compromising the ability of future generations to meet their own needs.
Toxic/Hazardous	Chemical hazards and toxic substances pose a wide range of health hazards (such as irritation, sensitization, and carcinogenicity) and physical hazards (such as flammability, corrosion, and reactivity).
Transfer Station	Refers to a facility that receives unprocessed waste, temporarily stores it, and ships it off-site to another facility.
Waste	Material eliminated or discarded as no longer wanted, useful, or required.
Waste-Free/ Zero-Waste	Optimally manage and reduce solid waste by diverting from waste stream and maximizing recycling opportunities to eventually achieve 95 percent landfill diversion.
Waste Stream	Refers to the total flow of solid waste from homes, businesses, institutions, and manufacturing plants that must be recycled, reused, composted, converted to useful products or disposed of in a landfill; or any segment thereof, such as the "residential waste stream" or the "recyclable waste stream."