



MARK PESTRELLA, Director

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

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IN REPLY PLEASE

REFER TO FILE: **EP-4**

October 23, 2018

TO: All Department Heads

FROM: Mark Pestrella *MP*
for Director of Public Works

ROADMAP TO A SUSTAINABLE WASTE MANAGEMENT FUTURE FOURTH ANNUAL REPORT: OCTOBER 2017 THROUGH OCTOBER 2018

On October 21, 2014, the Board of Supervisors adopted the Roadmap to a Sustainable Waste Management Future to decrease reliance on landfills. The Roadmap includes strategies and initiatives related to County Unincorporated Communities, Countywide, and County Operations that the County can implement to achieve the goals outlined in the Roadmap.

The Board directed Public Works to submit annual reports on the progress of the implementation of the Roadmap, which includes efforts from County departments. Your continued participation in the implementation of the Roadmap is appreciated. The attached Fourth Annual Report was submitted to the Board on October 22, 2018.

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

KYL:kp

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Attach.

cc: Chief Executive Office (Chia-Ann Yen)
County Counsel
Executive Office



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IN REPLY PLEASE

REFER TO FILE: **EP-4**
664054

October 22, 2018

TO: Each Supervisor

FROM: Mark Pestrella *GPW*
for Director of Public Works

**BOARD MOTION OF OCTOBER 21, 2014, AGENDA ITEM 34
ROADMAP TO A SUSTAINABLE WASTE MANAGEMENT FUTURE
FOURTH ANNUAL REPORT: OCTOBER 2017 THROUGH OCTOBER 2018**

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.

The Board directed Public Works to submit annual reports on the progress of the implementation of the Roadmap.

Attached is the fourth annual report for the period of October 2017 through October 2018. If you have any questions regarding this report, please contact me or your staff may contact Shari Afshari at (626) 458-4008 or safshari@dpw.lacounty.gov.

KYL:jl

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Attach.

cc: Chief Executive Office (Sachi A. Hamai, Chia-Ann Yen)
County Counsel
Executive Office

2018

Report to the Board of Supervisors

**Roadmap to a Sustainable
Waste Management Future**



October 18, 2018

Roadmap Participant List¹

Prepared in coordination with the Roadmap 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:

Agricultural Commissioner/
Weights and Measures
Animal Care and Control
Arts Commission
Auditor-Controller
Beaches and Harbors
Child Support Services
Children and Family Services
Consumer and Business Affairs
Fire
Medical Examiner – Coroner
Parks and Recreation
Probation
Public Social Services

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

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EXECUTIVE SUMMARY

The County of Los Angeles Board of Supervisors adopted the Roadmap to a Sustainable Waste Management Future (Roadmap) on October 21, 2014. This fourth 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, 2018.

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.

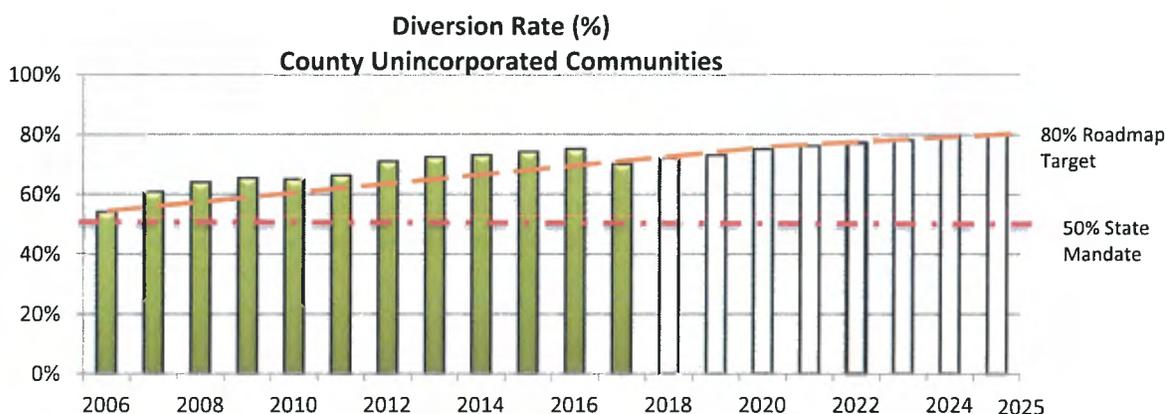
Progress Report

The County 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. These include strong economic activity in the unincorporated areas (with a corresponding increase in waste generation) and unstable Statewide recycling markets.

The diversion rate for 2017 was estimated at 70 percent, which accounts for significantly higher disposal quantities in 2017. It is anticipated that the full impact of China's restrictions on the importation of recyclable materials will be experienced in 2018, which will further negatively impact recycling rates.

Nevertheless, 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 has been implementing Organic Waste Management Plans for all three focus areas. The identification, monitoring, and education of large organic waste generators for compliance with Assembly Bill (AB) 1826 was further expanded to include multifamily residential complexes. Public Works initiated a 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, is implementing a 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. Public Works launched the Food DROP website (www.FoodDROPLA.com) in January 2018 to serve as a resource for businesses in the CUCs wishing to learn how to safely donate food, as well as to help them connect with partnering non-profits. Additionally, the County Sanitation Districts (Districts) completed construction of a Food Waste Processing System at the Puente Hills Materials Recovery Facility. This System is currently processing 250 tons per week of food waste from commercial and multifamily residential sources.



Conversion Technologies: The Districts are expanding their co-digestion project that converts food waste into electricity at their Joint Water Pollution Control Plant through anaerobic digestion. The facility is being upgraded to produce transportation fuel from food waste. At full development, the facility will process 550 tons per day of diverted food waste. Public Works also continues to assist the Sheriff's Department in researching and planning a potential in-vessel composting or small-scale anaerobic digestion project at the Pitchess Detention Center. The second phase of the CR&R Waste and Recycling Services anaerobic digestion project in Perris is now in operation, thereby increasing the facility's total processing capacity to 167,500 tons per year. 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 projects in the County.



Product Stewardship/Extended Producer Responsibility: In response to the Board motion of November 22, 2016, instructing the Extended Producer Responsibility (EPR) Working Group to consult with technical experts and have them review and provide input on the draft pharmaceutical and sharps waste stewardship ordinance, the EPR Working Group completed a report to the Board summarizing the technical experts' findings and recommendations. The report was submitted to the Board in December 2017.



Household Hazardous Waste and Electronic Waste: The expansion of Household Hazardous Waste and Electronic Waste (HHW/E-Waste) collection services at the Los Angeles County Environmental Collection Center at EDCO Signal Hill (EDCO Center) to twice a month has been very successful, increasing annual collection by more than 20 percent. The EDCO Center is a collaborative partnership between the County, EDCO Recycling and Transfer, the Districts, and the Cities of Long Beach and Signal Hill. Public

Works continues to utilize handheld electronic survey devices and has significantly reduced the use of paper surveys for gathering information during collection events.



Emergency Management and Regional Debris Management Planning: Public Works completed the Unincorporated Area Mass Debris Management Plan (UA Plan) for the CUCs. The UA Plan has been submitted to the California Office of Emergency Services (CalOES) for review. 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 in the CUCs.



Waste Prevention and Source Reduction: Multiple versions of the Bring Your Own (BYO) flyer were developed to demonstrate the variety of places reusable items could be taken. Public Works also conducted a BYO public education media campaign with Entravision, Pulpo, and Jose & La Suavecita Radio to encourage residents to take their own reusable items, such as bags, bottles, cups, plates, and utensils wherever they go, to help reduce landfill waste, and protect the environment. This campaign achieved more than 4.3 million audience impressions.



Construction and Demolition Debris: Public Works is developing proposed amendments to the County Ordinance to require a 70 percent recycling and reuse rate for construction and demolition projects. This would exceed the California Standards Building Code minimum required recycling rate of 65 percent for construction projects. Also, project specifications for County Capital Projects were modified to include language to encourage timely reporting by County contractors and to assess liquidated damages for contractors who do not comply with the Debris Recycling and Diversion requirements in the contract specifications.



Resource Recovery Centers: Public Works applied for a CalRecycle grant (HD31) to help fund the development of resource recovery centers at County-operated HHW/E-Waste permanent centers; the grant award is pending. Resource recovery centers will allow materials to be dropped off for donation or buyback and provide a place to co-locate synergistic diversion-related activities. The Department continues to research other reuse programs and work with the permanent center owners and operators to establish an effective reuse program.



Assessment and Evaluation: Public Works continues to conduct site visits of various County facilities through the existing Commercial and Industrial Recycling Program (CIRP). The CIRP contractor provides 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. The CIRP contractor conducted nine additional site visits of County facilities, including the Industry Sheriff Station, Probation Camp Rockey, Twin Towers Correctional Facility, Pamela Park, Los Verdes Golf Course, Athens Park, Public Works' Hollydale Yard, Pomona Health Center, and Social Services Pomona District Office. Resource Management Plans (RMPs) are being prepared for each facility to assist with implementing waste prevention and recycling programs, including programs to handle food waste and other organic waste. Public Works is offering assistance to these facilities in implementing the RMPs.

In addition to the CIRP program and site visits, the Scope of Work is being finalized for a comprehensive waste characterization study for CUCs. The contract is expected to be awarded in winter 2018, with sampling beginning in 2019. The findings of the study will help determine where best to target future waste reduction efforts.



Facilitating Sustainable Practices: Internal Services Department executed new waste hauling contracts for the Facility Ancillary Services Master Agreement (FASMA). In addition to trash, the new contracts require FASMA waste haulers to offer collection services for food waste, green waste, and recyclables. These additional services beyond regular trash collection will only be provided at the request of each County facility.



Local Green Business and Market Development: Public Works continued to serve as the Los Angeles County Recycling Market Development Zone (RMDZ) Program Administrator. To promote the RMDZ Program, Public Works launched an online and print advertising campaign. The RMDZ Program helps connect businesses that manufacture products using recycled-content feedstock or process materials for recycling with financial and marketing assistance.



Outreach and Education: Public Works has begun promoting organic waste management through the Generation Earth Program, which is County's secondary school environmental education program. A Food Rescue Guide was created and offered to secondary schools for students to explore ideas to set-up a Food Share or Food Donation project. Also, a special outreach campaign was conducted to promote the annual Battle of the Schools waste diversion competition to schools in CUCs. The Working Group continues to develop educational materials and outreach strategies, including artists working toward education and transformation, to inform County staff and the public on sustainable practices. Outreach and education campaigns have been conducted for specific programs/initiatives, such as the Beverage Container Recycling program, BYO Campaign, HHW/E-Waste, Illegal Dumping Prevention, and other programs as discussed in this report. The goal continues to be effective communication to appropriate stakeholders and target audiences.

INTRODUCTION/BACKGROUND

The County of Los Angeles Board of Supervisors adopted the Roadmap to a Sustainable Waste Management Future (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 identifies the following four broad strategies for the three Focus Areas (County Unincorporated Communities, Regional/Countywide, and County Operations): (1) Programs and Services, (2) Measuring Results, (3) Facilities and Infrastructure, and (4) Outreach and Education. In addition, 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.

The County Unincorporated Communities (CUCs) per capita disposal rate increased from 3.92 pounds per person per day (ppd) in 2014 to 4.67 ppd (70 percent diversion) in 2017. The disposal rate increase can be attributed to several factors including strong economic activity in CUCs and unstable Statewide recycling markets. Nonetheless, the CUCs remain in compliance with the State's 50 percent waste diversion mandate and per capita disposal target of 7.4 ppd.

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

PROGRESS OF INITIATIVES BY FOCUS AREA

The Roadmap Interdepartmental Working Group (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 of Supervisors 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:

- ❖ Explore and if feasible, develop and implement more aggressive reuse programs.
 - 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 and Milestones for the Next Annual Reporting Period

Public Works continued to advertise the materials exchange program, LACoMAX, a free service aimed at conserving landfill space by helping businesses, organizations, and institutions find alternatives to the disposal of valuable materials which are presently discarded as waste. To generate traffic and increase awareness of the program, various forms of advertising were utilized, such as tweeting information and links to current listings on the website, attending and providing informational flyers at community events in the unincorporated areas as well as including information in newsletters provided to residents. Ads for LACoMAX were included in various County publications, such as the *County Digest*, *Inside Solid Waste*, and quarterly community newsletters. In addition, we have surveyed previous program participants to learn how to improve the program. The survey indicated that website users found the website primarily via online search, successful exchanges took 30 days or less, and that modernizing the website was the most popular suggestion to improve LACoMAX. We will use this feedback to improve the website during the next reporting period. We will continue to encourage interdepartmental collaboration, such as working with other County departments to include the LACoMAX website on their department's website and Intranet pages.

Both the LACoMAX program and the Countywide Surplus Property Disposal Program (County Surplus Program) facilitate diversion of materials from going to landfills. The difference between the programs is that LACoMAX is available for businesses and individuals and the County Surplus Program is for County-owned property. Public Works continues to work with the Internal Services Department (ISD) to revise the Surplus Program Policy, to incorporate LACoMAX as the last step in the process 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.

Food Waste Recycling at Schools. In December 2017, the Smart Business Recycling Program consultants met with Aveson Elementary School administrators to discuss opportunities for increasing recycling and diversion for its campus. Based on an earlier waste audit conducted at the school in July 2017, the Smart Business Recycling Program identified the school administration as a potential candidate for food waste recycling. In collaboration with project leaders and administration at the school, the Smart Business Recycling Program solicited bids for food waste recycling services from haulers in December 2017. In January 2018, the school selected a hauler and bins were delivered to the cafeteria later that month. In Spring 2018, school staff, administrators, and students received extensive training and educational outreach material. The school began successfully diverting food waste for separate processing. Public Works is in the process of developing a Toolkit to capture lesson plans and outreach materials which may assist other schools interested in expanding their campus recycling efforts.

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:

- ❖ 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.

- ❖ Support voluntary take-back initiatives. Encourage and incentivize businesses and institutions to take back products and packaging they sell and are sold by others.

Accomplishments and Milestones for the Next Annual Reporting Period

A draft ordinance was presented to the Board of Supervisors for a Pharmaceutical and Sharps EPR Program in May 2016.

A motion was introduced on November 22, 2016, instructing the EPR Working Group consult with technical experts and have them review and provide input on the ordinance, and have the EPR Working Group prepare a report back to the Board of Supervisors summarizing the technical experts' findings and recommendations. The final report was submitted to the Board of Supervisors in December 2017.

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:

- ❖ 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.
- ❖ 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:
 - Creating incentives or requirements to meet specific diversion standards (e.g., 80 percent by 2025)
- ❖ Research the feasibility of implementing product bans or disposal bans where sustainable alternatives are readily available and reasonable.

Currently, Public Works administers exclusive trash collection and recycling contracts under two main types of systems within the CUCs.

Garbage Disposal District (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 service 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 non-exclusive commercial trash collection and recycling services and roll-off services through 36 non-exclusive commercial contracts.

Accomplishments and Milestones for the Next Annual Reporting Period

On January 11, 2018, the Board of Supervisors received a Staff Report from Public Works in response to the Board motion of August 1, 2017, to update and expand the November 2011 report, "Expanded Polystyrene Food Containers in Los Angeles County," to include all food service ware made of polystyrene, including Expanded Polystyrene (EPS) and rigid polystyrene along with other tasks. The following options were developed for the Board's consideration:

1. Continue to support legislation that would phase out the use of single-use items, such as EPS food containers on a Statewide basis.
2. Prohibit EPS food containers at food service retailers in the CUCs. This would require adoption of an ordinance.
3. Prohibit all or some EPS food containers at food service retailers in the CUCs. This would require adoption of an ordinance.
4. Require food service retailers in the CUCs to only provide straws and single-use utensils to customers upon request. This would require the adoption of an ordinance.
5. In collaboration with the Chief Sustainability Officer, direct Public Works to investigate strategies to encourage the CUCs to adopt sustainable practices, such as a recognition program for businesses that voluntarily use alternative food service ware products among other sustainable practices. This would not require the adoption of an ordinance.

Public Works continues to develop ways to improve its trash collection and recycling contracts. In 2018 six residential franchise and two garbage disposal district trash collection contracts were rebid. To align with the Roadmap's initiatives, the contracts included new and enhanced services and programs, such as offering the customers the option to choose smaller trash carts, expanding the list of acceptable recyclables to include plastics 3-to-5, juice boxes, mattresses, and separate manure collection and diversion. Building on the success of these efforts, these new tasks and enhanced services will be phased into all garbage disposal district and residential franchise trash contracts throughout the CUCs as old contracts expire.

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 edibles in CUCs.
 - 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 and Milestones for the Next Annual Reporting Period

Commercial Food Waste Collection Pilot Project. The Commercial Food Waste Collection Pilot Program is now in the second year of its term. The program began in July 2016. Though originally

projected to run for 12 months, the County saw that the pilot was successful in diverting large quantities of organic waste and worked with the County Sanitation Districts to lower the gate rate for organic waste and increase the Commercial Franchise Pilot Rebate Credit for participating haulers. In the second year of the program, the participating businesses have successfully diverted nearly 450 tons to-date. Since the start of the program, participating businesses have diverted nearly 950 tons of food waste, which was previously being disposed of in landfills. Through the pilot, this food waste is sent to the County Sanitation Districts' Puente Hills Materials Recovery Facility (PHMRF) for pre-processing, and is eventually anaerobically digested at the Sanitation Districts' Joint Water Pollution Control Plant (JWPCP) in Carson. Public Works will explore the possibility of extending the pilot for yet another year, in order to encourage additional organic waste processing in the CUCs.

Food Donation and Recovery Outreach Program (Food DROP) – During this reporting period, Public Works, in coordination with the Department of Public Health and other stakeholders, finished developing outreach material to educate businesses about the requirements of Assembly Bill (AB) 1826 (Mandatory Organics Recycling Law) and Senate Bill (SB) 1383 (Short-Lived Climate Pollutants Law), and to create resources to inform potential food donating businesses about the benefits of donation. In January 2018, Public Works soft launched the Food DROP website (www.FoodDROPLA.com), complete with informational resources concerning relevant laws, a map of current Food DROP non-profit partners, and a food donation tracking form. In March 2018, the Board of Supervisors declared March 5-9, 2018 as “Food Waste Prevention Week”, and as part of its proclamation, the Board encouraged businesses in the CUCs to work with local agencies to identify food donation options through Food DROP. By June 2018, ten businesses indicated interest in donating food. Public Works will work with these businesses to connect them with food recovery options and will continue to assess the needs of other large food waste generators. The mission of Food DROP is “To provide resources for businesses operating in the County Unincorporated Communities so that they may (1) safely donate their excess edible food to fight hunger, and (2) reduce food waste in Los Angeles County.” This program is geared toward food establishments in CUCs. The program includes the following components: free consultative services for safe food donation; a recognition program for participants; and eventually, a grant program to help fund food recovery infrastructure, and a food recovery campaign to raise the awareness of food insecurity in the County. 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:

- ❖ Revise the Construction and Demolition (C&D) Debris Recycling Ordinance.
 - Match new requirements established by the County’s Green Building Ordinance and State Green Building Code and incorporate more green building standards.
 - 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 and Milestones for the Next Annual Reporting Period

The revised C&D Ordinance is now anticipated to be completed by Winter 2018. The proposed revisions include: (1) raising the minimum requirement to 70 percent of mixed C&D material to be recycled or reused; (2) requiring a security deposit as an incentive for 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. The California Standards Building Code and the County Green Building Standards Code requires a minimum of 65 percent diversion for

construction projects. The County Ordinance must be updated to require 70 percent recycling reuse rate. Public Works has initiated the stakeholder engagement process starting with all Public Works' Divisions involved in construction projects, and is currently incorporating feedback from those meetings. Public Works identified key stakeholders, such as land developers, construction companies, demolition companies, C&D debris recycling facilities, and waste haulers, and will be scheduling external stakeholders' meetings and notifying the Board. External stakeholders input will be reviewed and incorporated into the final draft Ordinance prior to finalizing the Ordinance. Public Works will subsequently submit the revised C&D Ordinance to the Board of Supervisors for its consideration in Winter 2018, later than previously anticipated due to the time needed for coordination of meetings with stakeholders to reach a consensus. Once finalized, the C&D application will be available to the public online through the ENERGOV system, which we anticipate will reduce paper waste and will streamline the C&D permit application process.

The following data was gathered from April 20, 2005, to June 27, 2018, on C&D plans:

- 8,714 C&D plans approved of which 142 were County projects
- 4,720 of the 8,714 C&D approved plans submitted Final Compliance Reports
 - 3,359 C&D projects did not submit Final Compliance Reports
 - 635 C&D projects were exempted from submitting a Final Compliance Report
- 7 C&D projects were issued administrative monetary penalties
 - All 7 C&D projects paid the administrative monetary penalties

During calendar year 2017, for the CUCs, completed projects generated 47,000 tons of C&D debris and recycled 41,000 tons of C&D debris for an overall recycling rate of 87 percent. This number combines mixed and inert C&D debris. In addition, projects generated 3,000 tons of soil of which 100 percent was recycled. The recycling rate from C&D decreased by 1 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:

- ❖ Conduct an assessment of waste sectors that are sending waste to disposal facilities.
 - 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 and Milestones for the Next Annual Reporting Period

Public Works is finalizing the Scope of Work for the County's Waste Characterization Study for the Los Angeles County Unincorporated Areas Request for Proposals (RFP). The contract is projected to be awarded in late 2018, with work beginning in 2019. 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:

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

Accomplishments and Milestones for the Next Annual Reporting Period

Public Works completed eight mattress recycling collection events with over 964 mattresses collected during this reporting period. Public Works is evaluating the possibility of expanding the Mattress Collection Recycling program to include all CUCs and will continue to work with the MRC to evaluate the feasibility of supporting permanent collection centers on public or private property as available.

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:

- ❖ 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 and Milestones for the Next Annual Reporting Period

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 in 2018:

- Regional Planning continued additional research for the Green Zones Ordinance.
- Regional Planning conducted ground truthing activities in two pilot communities of unincorporated East Los Angeles and Florence-Firestone, in partnership with community-based environmental justice organizations, East Yard Communities for Environmental Justice and Communities for a Better Environment respectively. The ground truthing efforts focused on surveying of potentially impactful industrial uses. The outcomes and findings were provided at the community report-back meeting on August 11, 2018, and are also available at <http://planning.lacounty.gov/greenzones/groundtruthing>.
- Regional Planning and a consultant, University of Southern California Program for Environmental and Regional Equity and Occidental College, developed a draft EJSM that provides analyzed information on cumulative pollution impacts and community vulnerability within the County.

Public Works along with its technical consultant Alternative Resources, Incorporated (ARI) is preparing a summary of small-scale food waste processing technologies that can be installed at various sites. After the summary is completed, it will be posted on Public Works' SoCalConversion website and the information can be shared with businesses in the CUCs.

Initiative C: Local Green Business & Marketing Development in the County Unincorporated Communities

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

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

Accomplishments and Milestones for the Next Annual Reporting Period

During the past year, the County Zone Administrator met or had a conference call with nine companies to evaluate their business proposal to utilize recycled materials, etc. to create new products. One company qualified and received RMDZ loans to expand their business. Zone Incentive Funds (ZIF) that were provided by the California Department of Resources and Recovery (CalRecycle) were used to advertise the program throughout Los Angeles County. Advertisements were placed in the LATimes.com business section and the *Los Angeles Business Journal* in January 2018 and May 2018 to inform the business community of the program and to attract new green businesses to locate in the CUCs. Public Works will continue to use available ZIF funds to promote the program in the CUCs and on a countywide basis.

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:

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

Accomplishments and Milestones for the Next Annual Reporting Period

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. Public Works completed the UA Plan and presented it to the County of Los Angeles Emergency Management Council (EMC) on September 7, 2017. Subsequently, the UA Plan was submitted to the California Office of Emergency Services (CalOES) for review. Public Works is currently addressing comments received from CalOES on June 28, 2018. The UA Plan will ultimately be re-submitted 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:

- ❖ 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.

- ❖ Educate businesses on recycling programs that can help them reduce their disposal costs and increase their recycling rate.
- ❖ Develop a beverage container recycling outreach and education plan for multifamily residents in the CUCs.

Accomplishments and Milestones for the Next Annual Reporting Period

During this reporting period, Public Works continued to implement the strategies of the communications plan and the Beverage Container Recycling program 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.

This past year, Public Works conducted outreach site visits to 73 large multifamily residential properties of 20 units or more. These locations were identified on the basis of being large waste generators impacted by AB 341 and AB 1826. Public Works surveyed property managers or on-site staff to assess current recycling levels and needs. If properties were interested, Public Works distributed in-unit recycling bins and recycling bags to residents in order to encourage additional recycling. A total of 6,442 multifamily residential units were impacted by these visits. Public Works distributed over 800 bags to properties with on-site recycling, in order to assist residents in carrying recyclables to their recycling receptacles. Over 700 in-unit recycling bins were distributed to properties without source separated on-site recycling options, to assist residents in collecting recyclables for recycling at off-site recycling centers. Public Works is utilizing survey information from these site visits to assess compliance with AB 341 and AB 1826 requirements. Additionally, Public Works conducted outreach site visits to 47 businesses with permanent roll-off services. These locations were selected due to their high level of waste generation. Similar to the multifamily residential properties, property managers or on-site staff were surveyed to assess current recycling services and needs. Following the site visits, each location was provided with a customized findings report which outlined current collection details and recommendations to enhance recycling practices, in order to achieve compliance with relevant State recycling laws.

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:

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

Accomplishments and Milestones for the Next Annual Reporting Period

As mentioned in the CUC section, a draft ordinance was presented to the Board of Supervisors for a Pharmaceutical and Sharps EPR Program in May 2016. After the Working Group consulted with technical experts, a final report was submitted to the Board of Supervisors in December 2017.

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:

- ❖ 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 and Milestones for the Next Annual Reporting Period

In June 2018, SB 212 was amended to include specific language for a Statewide pharmaceutical and sharps manufacturer funded take-back program. There was language in the County's approved legislative agenda directly pertaining to supporting legislation like this. Multiple County Departments analyzed the bill. Ultimately the County Board of Supervisors unanimously approved a support in concept position at the June 26, 2018, Board meeting.

Public Works continues to participate in discussions with partner agencies and municipalities for the development of packaging EPR regulations and/or legislation Statewide.

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:

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

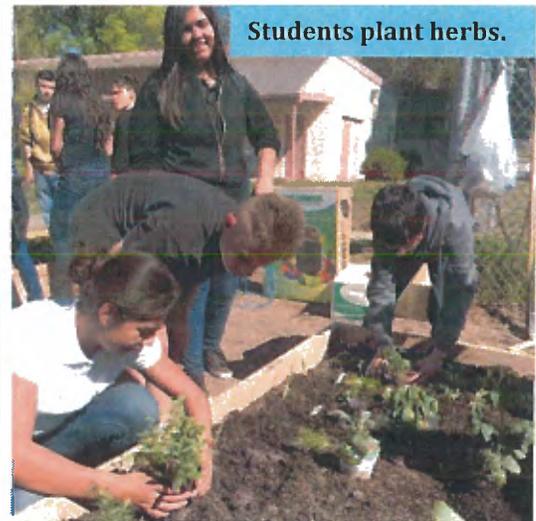
Accomplishments and Milestones for the Next Annual Reporting Period

In 2017, Public Works held 84 Beginner Workshops and 22 Advanced Workshops, and participated in 35 community events. More than 2,400 residents attended the workshops, and 780 backyard compost bins and 605 worm compost bins were sold to residents.



In continuing efforts to foster environmental stewardship amongst youth, Public Works created raised-bed gardens in 2017 at the following schools:

	School	District
1	Enterprise Elementary	Eastside Union
2	Chester W. Nimitz	Los Angeles
3	Roosevelt Elementary	San Gabriel
4	Lewis Elementary	Downey
5	Jefferson Elementary	Glendale
6	Multnomah Elementary	Los Angeles
7	Richard Henry Dana Middle	Wisburn
8	Robert Louis Stevenson Middle	Los Angeles
9	93rd St. School	Los Angeles
10	Valley Alternate Magnet	Los Angeles
11	Alma Fuente Public School	Charter School
12	Rosedell Elementary School	Saugus Union
13	Ninth St. School	Los Angeles



To promote environmental awareness, Public Works continued its development of large scale projects designed to benefit the community. Here is an update on three projects discussed in the 2017 Report:

Urban Greening Project	Location	Grant	Status
<p><i>Hillcrest Drive Elementary School:</i> Transform a huge asphalt section into a meadow, garden, shade trees, xeriscaping, amphitheater, walking path, and bioswales.</p>	City of L.A.	\$976,000	In design
<p><i>Buford Seed Project:</i> Replace a hazardous asphalt sump area prone to flooding into a raised-bed garden with xeriscaping and trees.</p>	Unincorporated Community of Lennox	\$75,000	In design
<p><i>Torrance Tree Project:</i> 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.</p>	City of Torrance	\$140,000	In design

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:

- ❖ 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.
 - Identify potential locations convenient to the community to increase participation and reduce the amount of toxic materials improperly disposed.

Accomplishments and Milestones for the Next Annual Reporting Period

The HHW/E-Waste Program held 67 temporary collection events throughout LA County during the 2017-18 fiscal year, in addition to 45 events held at the permanent collection centers. The Program continues to utilize handheld electronic survey devices and has significantly reduced the use of paper surveys for gathering information during collection events. A targeted public education and

outreach campaign was conducted in conjunction with the temporary collection event in Compton, held on Saturday, May 19, 2018, to encourage participation in this area where attendance has been historically low. The HHW/E-Waste event was very successful and attendance increased from 257 in 2017 to 320 in 2018.

The Public Works multi-media public education and outreach campaign, "Put it in the Box," launched in September 2017, and generated over 10 million audience impressions. This campaign encouraged residents to safely store and properly dispose of their HHW/E-waste.

The Conditional Use Permit for the Chiquita Canyon Landfill required the Landfill Operator to fund ten HHW and E-Waste events per year to be held by the Department of 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 on the Santa Clarita Valley. The Operator requested and was granted an extension until December of 2018 to decide on their option. For 2018, the Operator will be funding 10 HHW and E-Waste collection events.

Collection Statistics

- Approximately 13.8 million pounds of HHW/E-Waste were collected through HHW/E-Waste collection events in FY 17-18:
 - Approximately 3.7 million pounds of HHW/E-Waste were collected at **temporary** collection events.
 - Approximately 646,000 pounds of HHW/E-Waste were collected at the **Antelope Valley Environmental Collection Center**.
 - Approximately 941,000 pounds of HHW/E-Waste were collected through **EDCO Environmental Collection Center**.
 - 8.6 million pounds of HHW/E-Waste were collected through the cities **S.A.F.E.** centers.

Continued outreach and education have contributed to the increase in the total pounds collected and resident participation this year.

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, disposal of the materials; and administrative functions.

Temporary Event Costs

- Average operational cost per pound - \$0.75
- Average operational cost per event - \$41,500
- Average number of households participating per event - 689
- Average cost per household per event - \$60

The average operational cost has increased. The increase in participating households can be attributed to the additional collection events held, which provides residents more opportunities to dispose of their HHW/E-Waste.

Permanent Collection Center Costs

- Average operational cost per pound - \$0.47
- Average operational cost per event - \$17,000
- Average number of households participating per event - 369
- Average cost per household per event - \$45

The decrease in operational cost per event at the permanent collection centers can be due to many factors including the PaintCare Program, which allows residents to dispose of their paint at retail stores rather than permanent centers, the increase in temporary events that were held, and the additional operational day at EDCO.

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:

- ❖ Evaluate and modify, if needed, existing revenue streams to mitigate funding lost from waste reduction efforts and align incentives with waste reduction goals.
 - 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 in order to ensure adequate funding is available to carry out programs and policies.
- ❖ 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 and Milestones for the Next Annual Reporting Period

Through the agreement with the Mattress Recycling Council to fund mattress collection events during this reporting period, eight mattress recycling collection events were conducted with over 964 mattresses collected and recycled in the Antelope Valley where illegal dumping is prevalent.

Public Works continues to provide extensive feedback on legislative actions, regulatory changes, and incentives being proposed by CalRecycle through the State budget process. Public Works continues to correspond with the State Legislature to advocate for increased appropriations from the Greenhouse Gas Reduction Fund (GGRF) for waste diversion, including organic waste diversion, and for production of bioenergy or biofuels. Public Works also continues to actively have discussions with CalRecycle and other stakeholders to review viable options for additional funding. In addition, Public Works provides feedback on policies developed by the California Air Resources Board (CARB), such as the Low Carbon Fuel Standard (LCFS) program and the Low Carbon Transportation Investments and Air Quality Improvement Program (AQIP) Funding Plan. Policies such as these increase the financial viability of developing transportation fuels produced from recycled solid waste, thereby promoting the diversion of solid waste from landfills.

Public Works continues to seek grants and other funding opportunities. Below is a status of Public Works’ 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	Funded
HHW Grant HD 31	CalRecycle	\$100,000	Pending
City/County Payment Program Beverage Container Recycling 2017-18	CalRecycle	\$259,792	Pending

Strategy 3: Facilities and Infrastructure

Initiative A: Develop Conversion Technologies (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:

- ❖ Work with State and regional agencies 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.
- ❖ Continue to sponsor and support legislation to encourage the environmentally sound development of CTs and build a coalition of organizations to do so.
- ❖ Evaluate options to establish incentives in order to level the cost differential between CT facilities and landfills, or otherwise incentivize waste haulers to direct waste to such facilities.
- ❖ 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 and Milestones for the Next Annual Reporting Period

Public Works continues to assist technology developers actively looking to site CT facilities in the County through feasibility analyses, permitting assistance, grant application assistance, and more. Public Works continues to support efforts to include non-combustion thermal conversion of the organic byproducts of anaerobic digestion (AD) in the definition of biomass conversion. This would allow thermal conversion of digestate and biosolids to be considered diversion instead of disposal.

Public Works presents at various waste conferences on our CT Program and shares knowledge and resources with the goal of promoting CTs. Public Works also continues to promote its White Paper, a Comparative Greenhouse Gas (GHG) Emissions Analysis that compares the net GHG emissions of processing waste through a MRF and disposing residuals in a landfill with processing the residuals at an Integrated MRF with a CT. The Comparative Analysis shows the net environmental benefits of managing residual solid waste using AD and gasification at an integrated CT facility.

Public Works is planning to host a CT legislative workshop in 2019 to facilitate collaboration and action among stakeholders to advance CTs in Southern California.

Public Works, with assistance from our technical consultant Alternative Resources, Inc. (ARI), circulated a survey to gather feedback from stakeholders regarding CT resources including our SoCalConversion website, our technical services including feasibility studies, permit analyses, siting identification, and more to help facilitate the development of CTs. The survey was included with several

of Public Works' CT e-newsletters and was also circulated as an independent e-mail. ARI prepared a list of several recommendations on additional resources that could be made available to stakeholders that Public Works will begin implementing in the coming year.

Public Works, with assistance from ARI prepared a draft summary of air permitting requirements for thermal CT projects in the South Coast Air Quality Management Districts. The final version of the summary will be posted on Public Works' SoCalConversion website as a resource for CT project developers.

Public Works developed a revised list of potential CT sites in cities and CUCs that will be included in the Countywide Siting Element which is anticipated to be released for public review in early 2019.

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

Lancaster Landfill: Waste Management (WM) has expressed the intent to develop a full-scale composting operation.

Joint Water Pollution Control Plant: The County Sanitation Districts (Districts) is currently expanding its food waste co-digestion operation at the Districts' JWPCP in the City of Carson. The Districts purchased a DODA bio-separator food waste pre-processing technology to allow them to remove contamination from food waste received at the PHMRF. The capacity of the DODA is 165 tpd of food waste. The DODA currently processes 25-30 tpd of food waste on average. The food waste will be processed into a slurry and transported to JWPCP for co-digestion.

The Districts began receiving food waste at JWPCP through an existing contract at their front-end liquid food waste disposal station (LWDS), which has a capacity of 335 tpd. The Districts entered into new contracts with waste management companies, including Waste Management, Burrtec, and Insinkerator, to secure additional front-end food waste supplies. On July 11, 2018, the Districts' Board of Directors will consider approving an additional contract with Norchem. The Districts are currently designing an upgraded back-end food waste receiving station which will be able to receive 310 tpd. When the back-end food waste receiving facility is complete, the Districts will begin direct injection of the back-end food waste supply into five of the digesters and will use the LWDS to store the excess. In the future, the Districts expects to have a capacity of 550 tpd of food waste, with 310 tpd going to the back-end food waste receiving facility and 240 tpd going to the LWDS.

Currently, JWPCP uses the digester gas to generate electricity on-site. The Districts plan to begin converting digester gas into compressed natural gas (CNG) for vehicle fueling. To do so, they will develop biogas conditioning infrastructure and expand the vehicle fueling station. The Districts expects to be able to produce about 2,300 to 3,500 gasoline gallon equivalents of CNG per day. The Districts have completed the California Environmental Quality Act (CEQA) process to develop biogas conditioning infrastructure and expand the fueling station. To identify a technology provider for this project, the Districts released a Request for Qualifications (RFQ) and issued the project Request for Proposals (RFP) to four selected vendors and anticipates awarding the contract in August 2018. The Districts expect to complete the biogas upgrading equipment in April 2019 and complete a pipeline to convey biogas from the digesters to the upgrading equipment by June 2020.

Pitchess Detention Center (PDC): Public Works, along with ARI, is assisting PDC, a cluster of jail facilities in Castaic, to identify a suitable in-vessel composting or small-scale anaerobic digestion technology to process food waste at the facility. 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.

Perris Materials Recovery Facility, CR&R Incorporated: A local solid waste management company, CR&R Waste and Recycling Services, has begun operating the first two phases of its AD project in Riverside County. This project converts organic waste into renewable fuels used by their waste collection vehicles. The two phases have a total capacity of 167,500 tons-per-year (tpy). 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. CR&R has completed construction of an on-site organic waste MRF that is now fully operational. CR&R began injecting biogas from the AD operation into the pipeline in April 2018.

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

- Continue assisting the Sheriff's Department with identifying an in-vessel composting or small-scale anaerobic digestion technology to potentially install at PDC, including exploring grants and other funding sources to finance 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 by promoting the Comparative Analysis, hosting annual or biennial CT Conferences, and continuing to meet with technology providers and potential CT site owners.
- Continue to pursue policies and legislation facilitating CT project permitting, financing, and development in the County and Statewide.
- Continue to pursue policies and legislation 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.
- 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:

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

Accomplishments and Milestones for the Next Annual Reporting Period

Public Works prepared an Organic Waste Management Plan (Plan), which was finalized in March 2018 to determine if the County's 15-year needs can be met utilizing the existing organic waste processing capacity. The 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. In addition, the Plan discusses issues, challenges, and concerns related to organic waste such as separation and collection, contaminated waste and quarantined areas, land application, and chipping and grinding/mulching operations will be added to the final version of the Plan. Public Works is working with a 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. The BMPs will also be included in the annual updates to the Plan. To comply with the AB 876 annual reporting requirement, Public Works provided information on organic waste disposal and additional facility capacity needed to CalRecycle.

The Districts began expanding the co-digestion project at JWPCP in Carson into a commercial-scale AD facility that will eventually be able to process 550 tpd of food waste as described above.

Public Works monitored several CalRecycle workshops and provided significant feedback on the two draft versions of the SB 1383 regulations to help the County provide the appropriate organic waste collection services and ensure adequate capacity to process organic waste. Executive management and staff from both Public Works and CalRecycle met several times to discuss Public Works' comments and recommendations on the draft regulations. After CalRecycle releases the final version of the SB 1383 regulations in late 2018 or early 2019, Public Works plans to host a Solid Waste Forum to inform Public Works Directors and other key staff from cities in Los Angeles County and the surrounding area about regional and Countywide solid waste management issues, with a focus on the need to develop regional organic waste processing infrastructure. Speakers may include staff from local jurisdictions, State and local agencies, and the waste management industry.

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:

- ❖ 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.
- ❖ Continue to seek opportunities to expand the RMDZ to include additional interested cities in the County.

Accomplishments and Milestones for the Next Annual Reporting Period

The Los Angeles County RMDZ program has granted over 190 loans to qualifying businesses since 1993. During the past year, the County Zone Administrator met or had conference calls with nine companies who were looking for business assistance. One company qualified and received RMDZ loans to expand their business. The other companies did not qualify for an RMDZ loan but were provided with other business assistance resources. The company, Princess Papers in Vernon, CA, received \$1.9 million to purchase new equipment that will reduce waste and expand production of household paper products made from recycled paper.

Zone Incentive Funds were provided to assist in promoting and educating businesses on the RMDZ program. An ad campaign for the program in print and online was launched this past year. Advertisements for the program were placed on LATimes.com business section and the *Los Angeles Business Journal* to inform the local business community of the program. Also, ZIF funds were used to print 10,000 updated program brochures for circulation by the 19-member cities and Public Works. Public Works is exploring ideas to promote the program, including possibly collaborating with the City of Los Angeles RMDZ on a joint project targeting businesses in the region.

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:

- ❖ Partner with the County Sanitation Districts 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 and Milestones for the Next Annual Reporting Period

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. Public Works has applied for a CalRecycle grant (HD31) to assist in the development of the centers, awarded funds are pending. 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:

- ❖ 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.
- ❖ 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 and Milestones for the Next Annual Reporting Period

The Working Group continues 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 Los Angeles County 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 Los Angeles County residents and employees. The following are brief descriptions and highlights of the campaigns.

Beverage Container Recycling

- **Clippers:** During this reporting period, Public Works once again partnered with iHeart Media and the Los Angeles Clippers, AM 570 LA Sports Radio, and LA Clippers Radio, on a beverage container recycling campaign for the 2017-18 Clippers season to continue educating and increasing public awareness on the benefits and importance of beverage container recycling. The slogan “Recycling Beverage Containers is a Slam Dunk!” was used in on-air radio commercials, web banners, and social media postings on Twitter and Facebook. The PSA video from the previous year with Corey Maggette was refreshed and used on Clipper Vision to further increase public awareness. In addition, there was an outreach recycling challenge with the Jr. Clippers Youth League Camp where the winning teams were invited court side before a game to high five the players as they entered the court. The partnership increased awareness, consideration, and action to make an environmental difference.
- **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 2018 season to continue educating and increasing public awareness on the benefits and importance of beverage container recycling. The campaign was endorsed by 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.

The two partnerships through iHeart media with the Clippers and Dodgers allowed Public Works to run a year-long Beverage Container Recycling campaign communicating a more consistent recycling message and further broadening the targeted audience.

Illegal Dumping

- **Clippers:** To encourage residents to keep our communities clean and to stop/report illegal dumping, Public Works once again partnered with iHeart Media and the Los Angeles Clippers, AM 570 LA Sports Radio, and LA Clippers Radio. The slogan “Let’s keep it classy not trashy!” was used in radio spots, web banners, and social media postings on Twitter and Facebook.

Former Clipper Lamond Murray endorsed the Illegal Dumping campaign in a PSA aired on Clipper Vision in 20 games.

- **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.
- **Rams:** Public Works partnered with Entercom, the Los Angeles Rams, and 93.1 JackFM, the exclusive FM flagship station of the LA Rams, on an illegal dumping campaign to encourage residents to keep our communities clean and to stop/report illegal dumping. The media purchase included on air radio commercials, PSA video, mobile banner, digital banner, and social media posting on Twitter and Facebook. JackFM's morning show host Andy Chanley was the spokesperson for the campaign. As an added-value, Andy Chanley tweeted and broadcasted on Facebook live reminding residents to report and stop illegal dumping.

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

Household Hazardous Waste - Compton:

Public Works received a CalRecycle Grant to host and provide education and outreach for two HHW/E-Waste collection events in areas that have had historically low attendance. The first event was held in the Florence/Firestone community. Compton was identified as the second of those areas, and an HHW/E-Waste collection event was held in May 2018.

Through the grant, media partnerships were procured with local radio stations KJLH 102.3 FM and KWKW's La Mera Mera 980 AM. The KJLH purchase included radio broadcasts, on-site activation, digital banners posted on KJLHRadio.com containing the link to the County's CleanLA.com website, and social media postings on Facebook and Instagram. The La Mera Mera purchase also included: radio broadcasts, media interview, digital banners posted on radiodeportes.com containing the link to the County's CleanLA.com website, and social media postings on Facebook, Instagram, and Twitter to reiterate the message. The campaign educated residents on the environmental effects and proper disposal of HHW/E-Waste, encouraged participation in the HHW/E-Waste collection events, and fortified the message of sustainable and clean communities.

Holiday Recycling

As people celebrate with parties and gifts during the holidays, the production of waste increases. However, during the holidays, people's attitudes also change, and people are more willing to give. To capture this opportunity, Public Works negotiated a holiday public education media campaign with iHeart Radio and KOST 103.5 FM, who has a significant listenership during the holidays. Tips and tools were provided to help to 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. The campaign promoted and encouraged residents to give back to the environment by taking action to waste less, use reusable products, and to recycle during the holiday season.

BYO - Bring Your Own

Public Works solicited a Spanish public education media purchase with Entravision, Pulpo, and Jose & La Suavecita Radio to encourage residents and County employees to use reusable products, such as cups, utensils, plates, etc., instead of disposable, single-use items. The goal of the campaign is to drive behavior change leading Los Angeles County residents and employees to reduce landfill waste by bringing their own reusable items everywhere they go. The media purchase included on-air commercials; commercials with live on-air endorsements from radio hosts Piolin and Armida Y La Flaka; social media postings; and digital banners in Spanish and Asian languages were displayed with a link to the County's CleanLA.com website. A live on-air interview was conducted with a Public Works expert to remind residents about the importance of reducing landfill waste by bringing their own reusable items. More than 4.3 million audience impressions were garnered through this campaign.

Household Hazardous Waste:

The "Put it in the Box," campaign with iHeart Media (KOST 103.5 FM and KBIG 104.3 FM) and Entravision in Spanish focused on proper storage of HHW/E-Waste at home and encouraged participation at HHW/E-Waste collection events for safe and proper disposal. A special collection box was provided to residents, to serve as a storage tool, and to further enhance the message. At various outreach events The campaign concluded in December 2018 with more than 11 million impressions.

We will continue to procure media buys through existing program budgets and acquired grants to leverage multi-media campaigns in multiple languages to reach the 10 million Los Angeles County residents. With the exposure from the campaigns, we can amplify the Roadmap's message of sustainability. Through the regular Roadmap meetings, we will continue 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 goals of the campaigns are to promote simple lifestyle changes, and motivate residents to live more sustainably, by reducing the amount of waste entering the landfills, protecting the environment by properly disposing of household hazardous waste and electronic waste, and looking for alternative, safer products.

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.

- ❖ Newly Initiated Roadmap Element: Expand the Generation Earth Battle of the Schools program and encourage all schools serving the County Unincorporated Communities to participate.

Background

The Generation Earth program is Los Angeles County's countywide school environmental education program that is free to all public and private middle and secondary schools (Grades 6-12) in Los Angeles County. The program is administered by Public Works. The program educates students about environmental waste and water issues our society is facing today and inspires them to get out, take action, and make a difference in the future.

The program offers personalized assistance that connect students and teachers with opportunities to learn content, offer project resources such as community partners, education guides, and a variety of specialized workshops.

The program also offers the annual countywide Battle of the Schools waste reduction competition, which targets teachers, students, and campus communities to increase awareness of solid waste issues, reduce waste, and increase diversion of materials from landfills. The goal of the Battle of the Schools competition is for students to develop an awareness of and to take an active role in minimizing waste generated on their school campus. The winning schools are recognized during a school assembly presentation and receive a Battle of the Schools trophy for reducing the most waste on their school campus.

Accomplishments and Milestones for the Next Reporting Period

Several strategies were implemented to promote the Battle of the Schools competition. Three e-mail blasts were sent during the competition to 2,337 schools countywide which included 79 unincorporated area schools. Announcements were made at two Generation Earth teacher workshops and competition flyers were distributed to all attendees. Flyers were also mailed to school administrators.

Nineteen schools from CUCs were visited in-person and flyers were circulated to school administrators/teachers. Thirty-five schools participated in the Battle of the Schools competition, directly reaching 771 students and potentially impacting 15,405 students. A total of 47,981 pounds of materials were diverted. Three schools from CUCs participated in this year's competition.

Through the Generation Earth program, a Food Rescue Guide was developed and is available for students to explore ideas in setting up a campus Food Share or Food Donation project.

Public Works will continue to educate teachers and students through the Generation Earth Program and will continue to promote and encourage all schools serving CUCs 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:

- ❖ Identify areas of excess waste at County facilities and operations and create source reduction policies within the framework of the County's budget.
- ❖ Provide technical assistance, training, financing, and other resources for County Departments.
- ❖ Evaluate County purchasing practices:
 - ❖ 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.
- ❖ Explore and, if feasible, develop and implement more aggressive reuse programs.
 - ❖ 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.
- ❖ Identification of waste reduction opportunities at County facilities and develop Resource Management Plans (RMP) to assist these facilities to achieve sustainable operations.

Accomplishments and Milestones for the Next Annual Reporting Period

The Green Product Workgroup meetings continued to be placed on hold during this reporting period. Public Works conducted internal research on green purchasing practices.

The Commercial and Institutional Recycling Program (CIRP) consultant visited nine County departments during this reporting period and has prepared a Resource Management Plan (RMP) for each site visited. These RMPs provide recommendations for increased diversion, which have included 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 is preparing a waste-free events guide which will provide a simple checklist of activities and equipment necessary to prepare for and conduct a waste-free event. The following ideas to reduce waste were discussed with the Working Group: changing the type of products purchased; eliminating single-use products; product inventory strategies; and purchasing collection bins to divert certain waste from landfills.

During the next reporting period, Public Works will develop an online training program to educate County employees in waste reduction and diversion concepts and methods to incorporate sustainability in their tasks and projects.

Four hydration stations have been 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. The use of thousands of water bottles has effectively been reduced according to the counters at the four stations. Based on the success of the hydration stations, Public Works may recommend the installation of hydration stations at additional County facilities.

Public Works developed a sole-source lease contract with Bigbelly to purchase outdoor collection/compacting units for trash and recyclables. The dual units (trash and recyclables) will be placed at Public Works facilities. During the reporting period, a unit has been placed at the front entrance of the Public Works Headquarters building. The unit is powered 100 percent by solar energy, providing 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:

- ❖ Incentivize EPR, such as reduced packaging, in County procurement and contracts, giving consideration to vendors who utilize EPR.

Accomplishments and Milestones for the Next Annual Reporting Period

Discussions occurred during Roadmap meetings on ways County Departments could reduce waste from items they procure including the following suggestions: reduce packaging for purchased items; procure items that have a longer life; and procure items that include materials that can be recycled.

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:

- ❖ 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.
- ❖ Enhance the County Recycling Coordinator program and develop standardized reuse and recycling processes.

Accomplishments and Milestones for the Next Annual Reporting Period

The CDRP continues to work with departments to provide further technical assistance in implementing recycling and diversion programs.

The following ten County facilities continue to participate in the expanded beverage container recycling program: LASD (East LA Station); East Los Angeles Public Library; LAC/USC; Public Works' Waterworks Districts (Malibu and Lancaster); Belvedere Park; Burton Chace Park; City Terrace Park; Roybal Mental Health Center; and the Zev Yaroslavsky Family Support Center.

In November 2017, Public Works began using mobile food waste collection bins to provide food waste collection at special events hosted at Public Works Headquarters and certain large special events at Public Works field yards.

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:

- ❖ 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.
- ❖ Identify largest generators of food and organic waste among County facilities.
- ❖ Create a pilot program to be a model program that would be implemented at other County facilities.
- ❖ Encourage and incentivize organics collection or onsite management at venues with cafeterias, such as hospitals and detention centers.

Accomplishments and Milestones for Next Annual Reporting Period

ISD executed contracts with four waste haulers for the new Facility Ancillary Services Master Agreements (FASMA) for waste collection services at County Department facilities. In addition to trash, the new contracts require FASMA waste haulers to offer collection services for food waste, green waste, and recyclables upon request by a facility for an additional cost.

Public Works identified County Department facilities that fall under the Tier 3 compliance threshold, which requires facilities generating over 4 cubic yards per week of commercial solid waste to sign up for organic waste recycling services. In late 2018, Public Works will send letters to County Departments informing them of facilities that may fall under the Tiers 1, 2, or 3 compliance thresholds. The letter will also provide 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. In 2018, Public Works made several presentations at County Department Recycling

Coordinators meetings, Parks and Recreation meetings of staff, managers, deputy directors, and Community Development Commission/Housing Authority staff meetings to provide information about the new FASMAS for waste collection services and how County facilities could begin organic waste collection programs in compliance with AB 1826. Several 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.

In October 2017, Public Works implemented a pre- and post-consumer food waste recycling program in its Headquarters building cafeteria. The program began with a kickoff event to inform employees about the program. The program requires employees to dispose of food waste separately from other trash and beverage containers. In November 2017, Public Works began using mobile food waste collection bins to provide food waste collection at special events hosted at Public Works Headquarters and certain large special events at Public Works field yards. In April 2018, Public Works tested a pilot food waste collection program in a break room at Public Works Headquarters. In June 2018, Public Works provided food waste collection in every break room at Public Works Headquarters. The food waste collected throughout Public Works Headquarters is processed at the PHMRF to remove contamination and produce a food waste slurry. The slurry is transported to JWPCP for anaerobic digestion. Through the food waste collection program, Public Works Headquarters diverts an estimated 100 pounds of food waste per day.

Public Works also continued to provide outreach periodically throughout the year in the cafeteria and at special events to educate employees about the program. Prior to implementing the food waste collection program, Public Works developed signage and outreach materials to educate employees about the program. Public Works is currently developing a video to provide additional education to employees as the program expands to all break rooms. The signage, outreach materials, and video could potentially be used by other County facilities that develop source-separated food waste collection programs.

Public Works continues to implement a program to divert pre-consumer food waste from its Headquarters building cafeteria kitchen operations into on-site worm bins to produce compost and liquid fertilizer.

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. Public Works will also explore how to include donations from County facilities into the Food DROP.

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

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

- ❖ Revise the County's Contract Specifications to:
 - Include recycling and reuse rates for County projects that conforms with the diversion rate specified in the County Ordinance.

Accomplishments and Milestones for Next Annual Reporting Period

Project specifications for County capital projects were revised to require administrators of County projects to recycle or reuse C&D debris in accordance with the County Green Building Standards Code and for the County to assess liquidated damages on contractors who failed to comply with the contract specifications. We continued to work with divisions within Public Works being affected to incorporate a debris diversion rate that equals or exceeds the rate specified in the California Standards Building Code and the County Green Building Code. Work also continued to revise the County's C&D ordinance, which we anticipate will be completed by December 2018.

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:

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

Accomplishments and Milestones for the Next Annual Reporting Period

Site visits and waste assessments were conducted at the Industry Sheriff Station, Probation Camp Rockey, Twin Towers Correctional Facility, Pamela Park, Los Verdes Golf Course, Athens Park, Hollydale Public Works Yard, Pomona Health Center, and Social Services Pomona District Office through the Commercial and Institutional Recycling Program (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 first option year, and has increased its budget to conduct site visits and develop resulting Resource Management Plans providing recommendations to visited facilities for waste reduction and diversion.

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:

- ❖ Create a framework to monitor and measure the success of waste reduction programs targeted at County facilities.
- ❖ Establish benchmarks tied to waste reduction goals – disposal, recycling, and other diversion.
 - Look into ways to get more data for recycling and waste reduction such as collaboration with haulers and materials collection and processing facilities.
- ❖ Evaluate waste reduction practices for County employees through individual employee survey and to assess the reporting period performance of the Department Recycling Coordinators (DRCs).

Accomplishments and Milestones for the Next Annual Reporting Period

For the Food Recovery Challenge, Public Works set goals for 2017 to measure food waste from cafeteria food preparation, develop strategies to prevent food waste, and to increase the accuracy in recording the amount and type of food donated. Public Works also set a goal to implement an employee food waste collection program in the cafeteria along with continuing the on-site worm composting program. In 2017, the Public Works' cafeteria began preparing smaller quantities of food more frequently throughout the week to reduce food waste, and it was estimated that the cafeteria kitchen staff prevented 20 pounds of food waste through their efforts. An estimated 320 pounds of leftover edible was donated in 2017. After the implementation of the food waste collection program, Public Works diverted an estimated 3,400 pounds of food waste which was eventually co-digested at JWPCP. Public Works also diverted an estimated 1,200 pounds of food waste through on-site worm composting.

The 2018 diversion goals of the site for the Food Recovery Challenge are 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 is to donate 100 pounds of leftover edible food. The third goal is 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 worm composting program.

During the next year, Public Works plans to develop, an easy-to-use electronic system to collect diversion data from County facilities for materials, such as paper, batteries, and toner. The system will initially allow vendors to login and input weight information and dates of pick-up. The system will be tested at Public Works prior to offering access to other County departments. If successful, this system will be able to generate various types of reports.

The individual employee survey to assess individual waste reduction practices will be scheduled during the next reporting period. The CDRP reviewed the DRC surveys and continues to follow-up with departments to provide further technical assistance in implementing recycling and diversion programs.

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:

- ❖ Establish guidelines and enable County facilities that are large-quantity food waste generators to do their own composting where feasible.
- ❖ Create a list of County facilities that generate large amounts of food or green waste.
- ❖ 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.
- ❖ Investigate sites along with cost and permitting details to construct a County anaerobic digestion facility.

Accomplishments and Milestones for the Next Annual Reporting Period

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

Public Works is assisting the Sheriff's Department in analyzing options for an in-vessel composting or small-scale anaerobic digestion technology to process food waste at PDC. The technology would process approximately 2 tons per day of food waste generated on-site. 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, with assistance from ARI, is also providing guidance on the permitting requirements for this project.

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.

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

Public Works monitored several CalRecycle workshops and provided significant feedback on the two draft versions of the SB 1383 regulations to help the County provide the appropriate organic waste collection services and ensure adequate capacity to process organic waste. Executive management and staff from both Public Works and CalRecycle met several times to discuss Public Works' comments and recommendations on the draft regulations. The most recent draft regulations propose a requirement that jurisdictions annually procure a quantity of recycled organic waste products, including compost, that meets or exceeds a procurement target, based on the number of local government employees in the jurisdiction. Public Works has begun analyzing the feasibility of annually procuring and utilizing the proposed quantity compost at County facilities.

Strategy 4: Outreach and Education

Initiative A: Stakeholder Engagement & Empowerment at County Facilities

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

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

Accomplishments and Milestones for the Next Annual Reporting Period

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 solid waste management sustainability category for County departments in the County Green Leadership Awards Program, to motivate County facilities and operations to implement diversion programs and incorporate diversion and sustainability in their tasks and projects.

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:

- ❖ Work with County departments to implement sustainable practices, where fiscally feasible, based on feedback from waste surveys.
- ❖ Provide training for staff in advance of any new initiative impacting County-owned or operated facilities.
- ❖ 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.
 - Encourage recycling coordinators from each Department to meet routinely to share ideas, coordinate efforts, and provide progress reports.
 - Assign ISD or a partner department to oversee waste reduction for departments without facilities staff.

Accomplishments and Milestones for the Next Annual Reporting Period

Through the CIRP contract, an organics recycling infographic and FAQs were developed to educate recycling coordinators and facility management staff on the need of organics recycling and instructions on how to set up their facility with County contract haulers.

Public Works is currently developing a video to provide additional education to employees as the food waste collection program expands to all break rooms.

Meetings with DRCs are held twice a year to provide participants with resources and education on various County programs, such as the Beverage Container Recycling Program, and County policies related to recycling and sustainability. It was also an opportunity to share ideas and discuss challenges. At the meeting, DRCs were informed on how to start a beverage container recycling program and offered assistance with the process by receiving information on non-profit organizations and beverage container recycling bins.

Through DRCs, Public Works continues to educate all County staff on what they can do to help meet the Roadmap's diversion goals. A Department Recycling Program newsletter was developed to assist in communicating and implementing waste reduction and diversion programs at County Operations. The newsletter is sent via e-mail to DRCs to distribute to their Department staff. In addition, the newsletter is accessible through the DRCs website.

RELEVANT SOLID WASTE MANAGEMENT STATUS REPORTS

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

Conversion Technologies Update

Background

On January 27, 2015, a Board of Supervisors 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 of Supervisors 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 of Supervisors Offices, all CT updates to the Board of Supervisors will be within the Roadmap annual report.

CTs are critical to reducing our reliance on landfills and recovering energy, fuels, and other products from waste while reducing greenhouse gas emissions impacts from waste. CT facilities such as AD and biomass gasification facilities will provide the necessary organic waste recycling capacity to help businesses, multifamily residents, and County facilities comply with AB 1826 and, in future years, 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:

- Joint Water Pollution Control Plant (JWPCP): The County Sanitation Districts (Districts) have begun expanding their CT demonstration project for co-digesting food waste from PHMRF at the District's JWPCP in the City of Carson into a commercial-scale AD facility. The Districts purchased a DODA bio-separator food waste pre-processing technology to allow

them to remove contamination from food waste received at the PHMRF. The capacity of the DODA is 165 tpd of food waste. The DODA currently processes an average on 25-30 tpd of food waste. The food waste will be processed into a slurry and transported to JWPCP for co-digestion.

This year, a Liquid Waste Disposal Station (LWDS) with a capacity of 335 tpd of food waste began receiving food-waste at JWPCP. The Districts entered into new contracts with Waste Management, Burrtec, and Insinkerator to supply food waste for the LWDS. On July 11, 2018, the Districts' Board of Directors will consider approving a contract with Norchem to provide additional front-end food waste supply.

The Districts is currently designing upgraded back-end food waste receiving facilities at JWPCP with the ability to receive 310 tpd. When the back-end food waste receiving facility is complete, the Districts will begin direct injection of the back-end food waste supply into five of the digesters and will use the LWDS to store the excess. In the future, the Districts expects to have a capacity of 550 tpd of food waste, with 310 tpd going to the back-end food waste receiving facility and 240 tpd going to the LWDS.

Currently, the digester gas at JWPCP is used on-site to generate electricity. The Districts plan to convert digester gas at JWPCP to compressed natural gas (CNG) for vehicle fueling. The Districts expect to be able to produce about 2,300 to 3,500 gasoline gallon equivalents of Cng per day. The Districts have completed the CEQA process to develop the biogas conditioning infrastructure and expand the fueling station. The Districts released a Request for Qualifications to determine the technology provider for this project and issued a Request for Proposals to four selected technology providers. Also, the Districts expects to award a contract to the technology provider in August 2018, to complete the biogas upgrading equipment by April 2019, and complete a pipeline to convey digester gas to the upgrading equipment by June 2020.

- Pitchess Detention Center: Public Works, along with ARI, is helping the Sheriff's Department analyze in-vessel composting and small-scale AD technologies for potential installation at the PDC, a cluster of jail facilities in Castaic. The project would process approximately 1-2 tons per day total of food waste generated on-site and possibly 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. Public Works and ARI are also providing guidance on permitting requirements for this project.
- Perris Materials Recovery Facility, CR&R Incorporated: A local solid waste management company, CR&R Waste and Recycling Services, is currently operating the first two phases of an anaerobic digestion project processing 167,500 tpy in Riverside County. This project is designed to convert organic waste into renewable fuels for use by their waste collection vehicles. In April 2018, the facility began injecting biogas from its AD operation into the natural gas pipeline. This facility has plans to scale-up in four equal phases and ultimately digest up to 335,000 tpy.

Benchmarking and Milestones:

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

Timeframe	Milestone	Capacity (tpd)	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 met the first milestone of in-County capacity of 65 tpd and is ahead of schedule to achieve the next milestone of 200 tpd in-County waste conversion capacity by 2020.

Legislation

Public Works continues to actively pursue and support policy and legislation that encourages the development of CT facilities. Public Works continues to support efforts to include non-combustion thermal conversion of the organic byproducts of anaerobic digestion in the definition of biomass conversion. This would allow thermal conversion of digestate and biosolids to be considered diversion instead of disposal.

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 and legislation 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.
- 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 by promoting the Comparative Analysis, hosting annual

or biennial CT Conferences, and continuing to meet with technology providers and potential CT site owners.

- 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.

Elsmere Canyon Landfill Status Report

As directed by the Board of Supervisors 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 report. Public Works is currently taking the necessary steps to remove Elsmere Canyon Landfill from the Los Angeles County Countywide Siting Element's list of future landfill sites.

Since our last report, Public Works has revised the Preliminary Draft Siting Element to update 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 is currently preparing the environmental document prior to releasing the document 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 of Supervisors, and CalRecycle.

APPENDICES

Appendix A - List of Abbreviations

AB	Assembly Bill
AD	Anaerobic Digestion
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
EMC	County of Los Angeles Emergency Management Council
EPR	Extended Producer Responsibility
EPS	Expanded Polystyrene
FEMA	Federal Emergency Management Agency
Food DROP	Food Donation and Recovery Outreach Program
GDD	Garbage Disposal District
GGRF	Greenhouse Gas Reduction Fund
GHG	Greenhouse Gas
HHW/E-Waste	Household Hazardous Waste and Electronic Waste
ISD	Internal Services Department
JWPCP	Joint Water Pollution Control Plant
LACFRI	Los Angeles County Food Redistribution Initiative
LACoMAX	Los Angeles County Materials Exchange program
LASD	Los Angeles County Sheriff's Department
MRC	Mattress Recycling Council
MRF	Materials Redistribution Facility
OA MDMP	Operational Area Mass Debris Management Plan
PDC	Pitchess Detention Center
PET	Polyethylene Terephthalate
PHMRF	Puente Hills Material Recovery Facility
Ppd	pounds per person per day
RFP	Request for Proposals
RFQ	Request for Qualifications
RFQP	Request for Qualifications and Proposals

APPENDICES

RMDZ	Recycling Market Development Zone
RMP	Resource Management Plan
Roadmap	Roadmap to a Sustainable Waste Management Future
SBR	Smart Business Recycling
Tpd	Tons-per-day
Tpy	Tons-per-year
UA Plan	Unincorporated Area Mass Debris Management Plan
WM	Waste Management
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, non-government 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 (CRV) 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 there by 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) re-use, 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 MSW 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."